PROJECT EVALUATION SUMMARY (PES) - PART I

Project Symbol (PTS)

1. PROJECT TITLE

BASIC EDUCATION

2. PROJECT NUMBER 263 0139

3. MISSION AND/OR OFFICE USAID/Cairo

4. EVALUATION NUMBER (Enter the number assigned by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 85-5

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES

A. First PIO/A or Equivalent FY 81

B. Final Obligation Expected FY 88

C. Final Input Delivery FY 88

6. ESTIMATED PROJECT FUNDING

A. Total $ 164 m

B. U.S. $ 85 m

7. PERIOD COVERED BY EVALUATION

From (month/yr.) Jan. 1983

To (month/yr.) May, 1984

Date of Evaluation Review Nov. 1984

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
On Wed. 11/28/84, the Basic Education Project Committee agreed upon the following action decisions based on the evaluation report, "Study of USAID Contributions to the Egyptian Basic Education Program, First Annual Report, 10/84":		
1. Hold tri-partite meeting (MOE, USAID, Creative Associates) to discuss "implications and recommendations" from first Annual Evaluation Report, Vol II, pp 73-77 and agree on what resulting actions could be forthcoming.	MOE/USAID	Feb 1, 1985
2. Hold bilateral discussions (MOE/USAID) on the nature of the evaluation to accompany the planned extension of the Basic Education Project by USAID.	MOE/USAID	June 15, 198
3. Prepare a short paper on actions taken or planned relative to report implications and recommendations (Vol II, pp 73-77)	USAID	Sept.15, 198
In addition, the subject of Basic Education financial accounting and record keeping at the National Investment Bank (NIB) was examined by the AID mission in September and October 1984. The conclusion was drawn by the mission that accounting records were accurate but that reporting to AID was inadequate in that actual expenditures were not reported. Corrective measures were suggested to the Bank and full compliance is expected.	NIB/MOE/ USAID	Jan. 15, 198

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify)
- ☐ Other (Specify)

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. [XX] Continue Project Without Change

B. ☐ Change Project Design and/or ☐ Change Implementation Plan

C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER BANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Mahmoud Gamal El Din, HRDC/ET
Stephen H. Grant, HRDC/ETS
Adolph Y. Wilburn, HRDC/OD/ET
Bernard D. Wilder, AD/HRDC
George Laudato, AD/DPPE
Arthur M. Handly, DD

12. Mission/AID/W Office Director Approval

Signature

Typed Name Frank B. Kimball

Date 12-27-84

Basic Education (263-0139)	USAID/Cairo

PROJECT DESCRIPTION
The project purpose is to expand the capacity and increase the relevance, efficiency and effectiveness of basic education (grades 1-9) through (1) construction of 5279 classrooms in ten governorates, (2) provision of instructional materials and equipment for over 2000 schools, (3) technical assitance in education planning, cost analysis, teacher education, and curriculum design and (4) evaluation

AUTHORIZATION DATE AND U.S. LOP FUNDING AMOUNT	PES NUMBER	PES DATE	PES TYPE
8/19/81 $ 85 million	85-5	December 1984	[X] Regular [ ] Other (Specify) [ ] Special [ ] Terminal
ABSTRACT PREPARED BY, DATE	ABSTRACT CLEARED BY, DATE		
NShafik, DPPE/PAAD December 1984	SGrant, HRDC/ET December 1984		

The Basic Education Project is one of two Mission projects in which a contract has been awarded for a Life of Project evaluation. Over four years, the same team of evaluators will collect the same type of data annually concerning key contributions by AID to the Basic Education Program; it is not an evaluation of the whole GOE Basic Education Program.

The first annual report, based on visits to 174 schools, confirms the validity of the project's hypothesis that the construction of accessible schools, the provision of instructional materials, equipment, and technical assistance will increase enrollment rates and contribute to GOE efforts to improve the quality of education. The average net impact of new schools opened in the fall of 1983 was to add 7 boys and 14 girls to grade one and 50 boys and 23 girls to grades two through six. The construction component is generally ahead of schedule: 1141 classrooms have been copmpleted and 3430 have been started to date. $40 million worth of commodities have been procured. Delays were experienced in the technical assistance component due to an ambitious work plan, short time frame, insufficient staff, and differing perceptions of roles by the contractor and the GOE.

The team reported many findings and submitted several recommendations to enhance project goal achievement. The report provides both intensive anthropological and extensive statistical data on variables that determine school-sending readiness of rural communities. These data include crowding of existing schools, enrollment trends of boys and girls, indicators of village economic levels, pre-existing formal and informal facilities, and attitudes of community leaders. The selection of school sites can be improved with the knowledge of factors such as the increase in female enrollment when schools are community-based and the effect of the distance of primary schools.

Instructional practices can be improved through greater emphasis on measuring student performance and through instructor training in practical courses, encouragement of innovative practices, certification of technical teaching assistants, improved equipment inventory and maintenance, and the recruitment of local women teachers. Areas for additional study include the relevance of basic education courses to local needs, educational alternatives at the secondary level, curriculum supervision, recruitment and training of female teachers.

<u>Lessons Learned</u>: (1) A life of project evaluation contract can be effective both in the short term to point out weaknesses and to stimulate corrective measures and in the long term to develop reliable impact data. (2) Careful planning and collaboration can insure that construction activities remain on schedule. (3) Although the evaluation's findings are tentative, the report identifies variables that seem to be related to community school sending readiness. These indices include crowding of existing schools, enrollment trends of boys and girls, village economic levels, pre-existing formal and informal facilities, attitudes of community leaders. (4) The Project's policy of focusing on grades 1-9 schools versus 1-6 schools is valid due to evidence of a probable shortage of preparatory and secondary level facilities in the near future. (5) Schools that are community-based tend to have the greatest impact on female enrollment.

EXECUTIVE SUMMARY

INTRODUCTION

This is the first annual report of a four-year study of USAID contributions to the Egyptian Basic Education Program toward the construction of new schools, the provision of new equipment, and the provision of technical assistance to the Ministry of Education [MOE]. The USAID assistance is part of an unusually comprehensive, cooperative project designed to facilitate the development of the Basic Education Program and the extension of schooling to unserved populations. This study consists of four independent, but closely related, sub-studies: (1) the Intensive Study of New-School Communities, (2) the Extensive Study of the Impact of New Schools, (3) the Study of New Equipment, and (4) the Study of Technical Assistance. This report treats each of these studies in turn and then discusses cross-connections among them.

CHAPTER I: STUDIES OF NEW SCHOOLS

The MOE chose to begin building schools, with USAID assistance, in governorates where rural enrollments and enrollments of girls were particularly low. In the first phase of the project, the governorates participating in the program were Kafr il Sheikh, Beheira, Assiut, Sohag, and Qena. In discussions surrounding the choice of new-school locations, many questions arose about the factors that stand in the way of childrens' attendance in school--social factors, distance, economics, and others. These concerns, along with the need to assess the direct impact of the schools on enrollment and literacy, form the background for these studies.

Two closely related studies of new school construction are being conducted, one called The Intensive Study of New-School Communities, and the other called The Extensive Study of the Impact of New Schools. The former is quantitative and anthropological, drawing its data from interviews with village leaders, school officials, and parents of school children. It is aimed at understanding the factors that influence children's enrollment and attainment in school. The latter is quantitative and statistical, drawing its data from governorate and school records. It is aimed at assessing the impact of the new schools on enrollment and literacy. (See Volume I, pp. 11-17.)

INTENSIVE STUDY OF NEW-SCHOOL COMMUNITIES

In the 1983 data collection period, eight intensive sites were studied in the governorates of Assiut, Beheira and Qena. In 1984, two further sites will be added to the sample. Eight of the sites were chosen to represent prototypical combinations of variables that affect school sending--accessibility of educational opportunities, occupational possibilities, value placed in education, socio-economic level of the community, and association with urban or rural contexts. Environments with hypothesized positive characteristics encouraging educational participation were called, for convenience, "urban" villages and those with negative characteristics "rural" villages. "Mixed" villages fell in-between. Two sites in the governorate of Assiut were chosen for special study of girls' enrollment in single-sex schools. Care was taken to match the main characteristics of villages in Upper Egypt with villages in Lower Egypt. (See Tables I-1 through I-3.)

In each site, a representative sample of households having school age children was interviewed. Each site visit began with a community-leader

Table I-1: Intensive New-School Study Sites

	Intensive Site	Markaz	Governorate	Region	Date of New School Opening
1	Manshiya	Hosh Isa	Beheira	Lower Egypt	October 1983
2	Kafr Nekla	Mahmoudia	"	"	October 1983
3	Monshaat il Awkaf	Kafr il Duwar	"	"	October 1984
4	Khutaba	Negada	Qena	Upper Egypt	October 1983
5	Nag Dahi	Nag Hamadi	"	"	October 1983
6	Nag il Taref	Luxor	"	"	October 1984
7	Ghaneyem	Ghaneyem	Assiut	Upper Egypt	October 1983
8	Beni Rafa	Manfalut	"	"	7 1984
9	Fadli	Sidi Salem	Kafr il Sheikh	Lower Egypt	October 1984
10	Nag il Hareef	Akhmim	Sohag	Upper Egypt	October 1983

Table I-2: Characteristics Assumed to Affect Enrollment and Grade-Level Attainment

Variable	Negative Effect	Positive Effect
1. Spatial variables in the distribution of school populations	far / dispersed	near / concentrated
2. Occupational Variables	agricultural	touristic / industrial commercial
3. Value in education	few or no nearby schools; existing schools not long established	many schools long established
4. Socio-economic level	poor	self-sufficient / affluent
5. Urban / rural	rural / far from cities	urban / near cities

Table I-3: Summary of Intensive Site Characteristics

Data Obtained from Community Leaders' Estimates

Variable	Manshiya	Kafr Nokla	Monshaat il Awkaf	Khutaba	Nag il Taref	Nag Dahi	Ghaneyem	Beni Rafa
Spatial								
Attendance area (bulk of students)	dispersed	concentrated	concentrated	dispersed	dispersed	concentrated	concentrated	concentrated
No. of related villages	17	3	4	3	10	0	8	5
Distance range to new school	0 - 3.5	0 - 2	0 - 2	0 - 1	0 - 3	0	0 - 2.5	0 - 4.5
Occupational Structure								
Head of household (% engaged in)								
agriculture	95	90	50	74	70	34	90	75
commerce	-	5	1	5	10	1	5	15
industry	-	3	40	1	-	50	-	-
government	5	2	2	15	5	10	5	5
other	-	-	7 (driver, mechanics, milk products)	5	15 (touristic)	5 (crafts)	-	-
Value in Education								
Year oldest related primary school est.	1964	1955	1954	1963	1948	1911	about 1930[1]	before 1950
No. of related schools (primary and prep)	4	7	14	5	7[2]	3	3	11
Distances to rel. schls from new sch. village in kilometers	3 - 10	2	2 - 6	4 - 10	.25 - 6	1	.25	.25-5
Socio-economic level (percent)								
high	-	1	-	-	2	-	-	-
above average	20	10	-	-	30	-	10	5
average	30	10	99	40	50	25	50	10
below average	-	80	-	-	15	75	-	25
poor	50	-	1	60	3	-	40	60
Urban Contact								
kilos to nearest city	10	2	4	9	6[3]	8	11[4]	0[5]
frequency of visit	infrequent	frequent	frequent	infrequent	frequent	frequent	infrequent	infrequent
ease of visits:								
roads	poor	poor	mixed	poor	good	good	good	good
transportation	poor	poor	poor	poor	good	good	good	good
television access	few	most	half	few	most	many	most	most
newspaper readers	few	few	few	very few	many	many	most	half

1 = New school will be preparatory school for girls.
2 = Close schools are Al-Azhar schools.
3 = Trip to city requires ferry ride as well as road transportation.
4 = Ghaneyem is considered an urban area (medina)

interview, the object of which was to determine community factors that might bear on enrollment and attainment. Next, a household survey was conducted. This survey had two purposes: first to compile an historical record of family school-sending behavior, and second, to investigate the relationship of variables, such as sex of child, economic level, and school distance, on enrollment and attainment. (See Volume I, pp. 18-31.)

Sample Profile

Age and Sex Composition

The proportions of ages and sexes in the sample were representative of the 1976 census. A broad range of economic levels was found, representative of the rural, mixed and urban village categories. The economic levels of villages were comparable in the Upper and Lower Egypt samples. More than three-quarters of the sample families in the urban villages lived within 0.5 kilometers of the new school. Just over one-half of the families in the rural villages lived within the same distance. Many people who live outside this radius contend not only with physical distance, but also with a psychological sense of separation from the village where the new school is located. (See Volume I, pp. 33-44.)

Occupational structures

Ninety-six percent of the older-generation women (parents and grandparents of the school-age children) were housewives. Only a very small number were wage earners. Nursing and teaching were mentioned as possible occupations for women, but none in the sample worked in these capacities.

Forty-five percent of the older-generation men were farmers, twenty-three percent government employees, and seven percent unskilled laborers. The rest represented a wide range of occupations. All community leaders reported the desire of villagers to find modes of earning income that provide an alternative to agriculture.

The relationship between agriculture and the community underlies the motivational responses of villagers to education. In families where agriculture is still the dominant occupation, and sufficient land is still available to meet family needs, the relevance of an education that takes children from the land may be questioned. In families under pressure to diversify their incomes, where diminishing land makes people anxious for the futures of their children, long-term education may seem the most certain way to what seems like the only viable alternative--a guaranteed government job. For a few villages, another possibility is industrial work or skilled manual labor, but increasingly these kinds of jobs are also requiring minimal literacy skills, and thus education.

For families under economic pressure, the case to educate seems not so urgent for daughters who "grow up to contribute to another man's household," unless a connection is made between education and marriage choices, which when good, reflect well on the entire family.

From the parents' experience, there is little precedent for leaving the village to seek the kinds of opportunities an extended education offers. Still, people in almost every household can give specific examples of village children who have gone outside the community to pursue careers requiring high degrees of educations. Most of those sending their children to school said they would have no objection if their male children left the village for work. It was rare to hear them express the same hope for girls. Girls should ideally become teachers and work within the village, if they work at all, or they can marry and follow their husbands to a new location. (See Volume I, pp. 44-51.)

Illiteracy

Eighty-eight percent of the women and 56 percent of the men in the older generation were completely illiterate. In rural villages, these percentages were higher and in urban villages lower. In the younger generation (children

presently of school age), the rate of illiterate girls was 65 percent and boys 36 percent. Between the two generations of males in the same families, illiteracy had been reduced 20 percent. For females there was a 23 percent reduction. (See Volume I, pp. 51-53.)

Formal Education

Nineteen percent of the sample's older generation attended some formal education, fourteen percent attended preparatory level or higher, and eight percent attended secondary level or higher. Of the younger generation, 49 percent attended some formal education, eighteen percent attended preparatory level or higher, and eight percent attended secondary level or higher. Between the generations, there has been a 30 percent increase in primary-level participation, a four percent increase at preparatory level, and no increase at secondary or higher levels.

Females of the older generation participated in educational programs at the primary level in all the sites, but at very low levels of enrollment. Only one female in the older-generation sample attended secondary level. The largest disparity between male and female enrollment in the older generation occurred in urban villages, where ratios of boys' enrollment were relatively high. Since few of the older generation boys in rural villages enrolled, the differences between boys and girls there were smaller.

In the younger generation, despite dramatic increases in participation for both boys and girls, the disparity between ratios of boys and girls enrollments has grown. Between the generations, the percentage increases for boys were 34 percent at primary, 13 percent at preparatory and four percent at secondary level while for girls the comparable percentages were 24, six, and two. Girls' enrollment as a rule has not kept up with the advances of boys.

Enrollment of boys has increased most in rural villages and least in urban villages. For girls the converse was true.

Data on the educational attainment of the two generations supports the case that a strong momentum for education is underway in Egyptian villages, but we find different categories of villages advancing at different rates. The earlier, large increases in enrollments in urban villages have slowed, while enrollments in the mixed villages have surged ahead. In the next decade, one would expect the rural villages to take their turn if they are provided with easily accessible facilities. (See Volume I, pp. 53-62.)

Expected Levels of Education

In 60 percent of the cases, parents who were interviewed expected their boys to go on to university level. In 39 percent, girls were also expected to reach such levels. Boys were not expected to drop out after primary, preparatory or secondary school, and only about two percent of the girls were expected to drop out at these levels.

Small percentages of parents expected their children to take specialized training, particularly secondary commercial (eight percent of boys and seven percent of girls) and industrial (four percent of boys). Agricultural training was not popular. Five percent of girls and three percent of boys were expected to go to teacher-training institutes.

Parents seek first of all status professional employment that comes with university degrees, but as the time approaches for the child to enter secondary level, children may end up in technical training. Parents seldom consider technical training at the outset. (See Volume I, pp. 62-65.)

Relationships Between Parent-Identified Variables and Enrollment and Achievement

Social Norms

The reasons parents gave for not sending children to school were combined into three general categories: a) social norms, b) accessibility of schools, and c) economic reasons. Social norms can be defined as what people consider appropriate behavior for a child with respect to the child's sex, age, intended occupation, and social-class background.

Of the older generation, 11 percent used the excuse of social norms for not sending boys to school in urban villages; 18 percent use this excuse in mixed villages and 19 percent in rural villages. In the younger generation, excuses based on social norms for boys were very few. For girls in the older generation 45 percent used social norms as a reason for not attending school. In the younger generation, the percentage dropped to 13. Although norms have loosened considerably for girls, a stable core in all environments still maintains a sense of the inappropriateness of girls' enrollments. In general, boys are more likely to be withheld from school for reasons of family circumstance, and girls for normative reasons.

Historical trends show how norms have changed. The four identifiable stages for boys are:

1) an initial period when no one enrolled;

2) a second period when an accessible school was introduced and a handful of stalwart students not only entered, but almost all continued to preparatory level and beyond;

3) a third stage when a larger pool of applicants entered school with a concomitant lowering of the overall level of commitment and ability and a subsequent drop-out of substantial numbers of the cohort;

4) a final stage that finds larger numbers entering the system with a more general acceptance of the necessity for longer periods of attendance. The last stage in most villages has only recently been reached and has therefore not yet had time to show its full potential.

The pattern differs for girls primarily in timing and tentativeness. There is usually a preliminary enrollment of boys that builds to higher levels as time passes. Then, after a lag of a decade, more or less, a few girls pioneer female participation in educational institutions. Another delay of a year or two occurs before there is a more consistent pattern of female enrollment. It appears necessary for a critical mass of boys and a few girls to enroll in order to soften community opinion before substantial numbers of girls can enter the system.

Boys' levels of enrollments show evidence of being affected within a few years by the establishment of new facilities, while girls' levels of enrollments seem to bear little immediate relationship except when the new school is established directly in the community of residence.

Disparities between boys' and girls' ratios of enrollments and attainment of age-appropriate grade levels in school show up across all sites, despite major advances in girls' participation. In the younger generation only 15 percent of eligible age males have not enrolled while 54 percent of girls have not entered the system. This difference is more or less constant across urban and rural settings and in Upper and Lower Egypt.

These figures make clear, as expected, that the largest potential untapped reservoir of recruits for the educational system is found among girls. Among males, it is only in rural villages that sufficient numbers exist out of school to constitute a large pool of candidates. There, enrollments are already rising on their own. (See Volume I, pp. 65-87.)

Economic Reasons

Parents gave economic reasons for keeping children home from school much less frequently for girls than for boys. Between the generations, economic reasons decreased as an explanation for boys' non-participation, but the pattern was not a simple one. When the occupational returns of education were viewed as compensating for economic costs, even poor familites sent boys to school. However, in many areas the cost of educational participation are not yet viewed as occupational investments by parents.

The proportions of children enrolled and attaining age-appropriate grade levels generally rose as the economic levels of their families increased. The girls levels tended to rise so precipitously in several villages that it would be fair to say that, in such environments, a minimum economic base must exist in a family before girls are well assured of being placed in school. (See Volume I, pp. 87-100.)

Accessibility of Facilities

Accessibility of facilities is seen as having three components: (1) the actual availability of the facility, (2) the distance children must go to attend school, and (3) crowding that prevents admission or causes a child to leave early. Accessibility has declined as a reason for non-participation from 38 percent for males and 30 percent for females of the older generation to five percent for males and 10 percent for females of the younger generation.

The concept of distance turned out to be as much a psycho-social dimension as a physical one. In several sites parents noted their reluctance to send girls to nearby schools if those schools were in distinctly different, "stranger" communities.

Crowding seems to have a special effect on girls enrollment. In some communities, parents voluntarily witheld girls in order that spaces would be secured for boys of the community.

In general, there was a relationship between distance and enrollment. Boys and girls living close to schools had somewhat higher levels of enrollment than those living farther away--up to three kilometers. But, when no close schools are available, many parents sent children much longer distances rather than not send them at all. (See Volume I, pp. 100-110.)

Benefits of Education

Villagers are not accustomed to answering questions that are speculative or deal with future events, so their answers about future benefits of education must be taken with caution. The most frequently mentioned benefit was preparation for an occupation; second was the benefit of functional literacy in helping people cope with everyday life; third was improved status. Fourth, for girls, was the chance to marry better, and for boys preparation for householder responsibilities.

The vast majority of parents were not able to comment on the school courses their children took. They were more interested in certification of school-level achievements than in the specific content of courses. (See Volume I, pp. 116-117.)

Family Decision Making

Decision making about school sending takes place in rural villages in the context of family groups and not as individual choices about individual children. Parents often make decisions for the benefit of the family as a whole and do not necessarily think that every individual child has the right or the need for education.

Among the families surveyed, only seven parents, sent no age-eligible child to first grade. Community norms supporting some level of education for children are broadly accepted in Egyptian villages. Who should go to school and who should stay at home seems to be the current question, rather than whether children should go at all.

Most families (95 percent) enrolled at least one male child, but a high ratio (40 percent) sent no eligible female to school. (See Volume I, pp. 118-122.)

Family Strategies of Enrollment by Economic Level

Generally, as the socio-economic level of families increases, few families are found with no eligible children enrolled and more families enroll all their eligible children. The ratio of families enrolling at least one boy in most villages reaches 100 percent in households of average and above-average economic level. Girls' enrollment also increases with economic level, reaching its high point in above-average households, except in conservative villages where fewer girls in above-average households go to school.

Persistence in school is mildly associated with economic level for boys, but not, apparently, for girls. (See Volume I, pp. 122-129.)

Predications From Family Decision Making

Enrollments

From past evidence, the future guarantees high rates of enrollments of males in most households and in all villages. Room for improvement in male enrollments is present in poor and below-average households and in rural villages. Here we would expect to find the most impact of new facilities simply because a greater potential for increase exists in these areas. It will be important to determine the extent to which new facilities attract this last major pool of male recruits.

In all villages, girls' enrollments have a considerable way to go before universal education is achieved. The greatest potential for overall impact on enrollments by AID-funded facilities at the moment is clearly in the area of girls' enrollments. In general, the largest pool of potential girl recruits for the educational system remains in the poor or below-average households. (See Volume I, p. 130.)

Grade Level Attainment

In all villages, and for the vast majority of households, boys and girls do not achieve age-appropriate grade levels. There is relatively little difference between the sexes in this respect. It is expected that new, more easily accessible facilities, especially at the preparatory level, can have a major impact on holding children longer in school and moving them through the system more efficiently. One would expect, therefore, that the impact of new schools will be seen most clearly in the holding power they exert on school-going populations.

EXTENSIVE STUDY OF THE IMPACT OF NEW SCHOOLS

Background

As the extensive study of new schools began, new schools were being rapidly constructed, staffed and prepared for opening in five governorates: Kafr il Sheikh, Beheira, Sohag, Assiut, and Qena. Education officials in each governorate were keeping lists of the schools, their construction time tables, and their expected opening dates. A number of schools were scheduled to begin operation in 1983, more in 1984 and still others in later years. For the extensive study, the research team drew a representative sample of schools in each governorate, from among those to be opened in 1983 and 1984.

This report focuses on the impacts on enrollment attributable to the new schools that opened in 1983. Subsequent reports will assess the impact of 1984 new schools on enrollment and also will examine the impact of both 1983 and 1984 new schools on literacy. (See Volume I, p. 139.)

Method

Selection of New-School Sites

From the lists of 1983 new-school sites in each governorate, the research team chose four sites at random, a total of 20 sites. (See Volume I, p. 139.)

Selection of Comparison Sites

With the assistance of Mr. Mahmoud Gamal el Din of USAID, the research team reviewed the site maps for each governorate and identified additional sites that fulfilled MOE and AID criteria for new schools, but where new schools were not likely to be opened before the Fall of 1986. A total of 20 such sites were identified, four in each of the above listed governorates. These formed a sample against which to compare the impacts of the new schools. (See Volume I, p. 140.)

Identification of Related Schools

As shown in Figure i-1, "related schools" were those schools nearest the new-school site to which some youngsters might already have been going. In order to assess the net impact of a new school one has to know how the enrollment in related schools changed when the new school opened.

The first step in identifying related schools was to determine the location of each selected school on the map. The second step was to examine the map together with governorate officials and ask the officials to identify all possible schools to which children, who might later attend the new school, might presently be going. (See Volume I, pp. 140-141.)

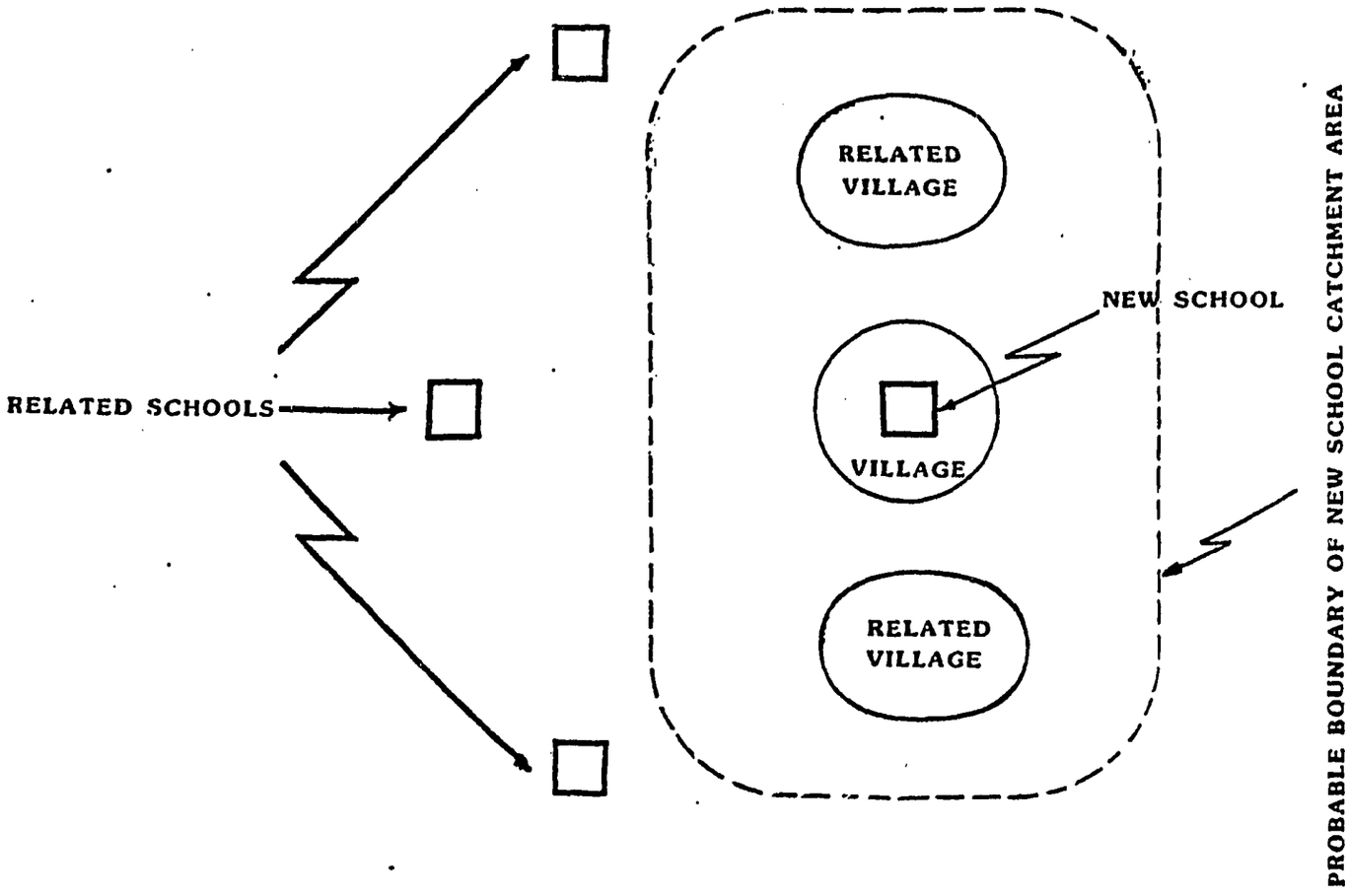

FIGURE i-2: DIAGRAM OF TYPICAL NEW-SCHOOL SITE

Research Strategy

In order to assess the impact of a new school, one needs to know the total enrollment of all its related schools. Then one needs to estimate what the total enrollment of those schools would have been in the absence of the new school. Given that, one can compare "expected" total enrollment with the actual total enrollment when the new school is included. The difference is the new school's net effect.

To estimate the expected enrollment in the absence of the new school a time-series analysis was used. Records of enrollment in all the related schools for each site were examined for the past five years from 1978 to 1982. From the trends in these records, projections of enrollment for 1983 could be made. Then the actual enrollments, including those in the new school, could be compared with the projections. (See Volume I, pp. 141-142.)

Data Collection

For each related school, governorate education officials examined the records for each school year from 1978-79 to 1982-83 and recorded the enrollment of boys and girls in each grade in each year. These data were collected from governorate records.

We have available for analyses at this time data from eighteen 1983 new-school sites representing four governorates, Assiut, Beheira, Qena and Sohag, and fourteen comparison sites in the same governorates. (Tables I-21 and I-22.) (See Volume I, pp. 142-145.)

Methods of Analyses

Separate analyses were made of each of the following:

Enrollment of Boys in Grade one
Enrollment of Girls in Grade one
Enrollment of Boys in Grades two through six
Enrollment of Girls in Grades two through six

TABLE I-21

1983 NEW SCHOOL SITES

GOVERNORATE	ID NUMBER	MARKAZ	SCHOOL NAME	STATUS
ASSIUT	811*	GHANEYEM	TALIIM IL ASASI BIL GHANEYEM	Incomplete Data
	802	IL BADARY SOUROUR	ESBET SOUROUR IL TALIIM	Analyzed
	842	ABOU TEIG	NAZLET ABOU KAIB IL IBT	Analyzed
	852	IL BADARY	IL MAMAYIA IL TALIIM ASASI	Excluded
	892	AHNOUB	ARAB IL KADYN IL EID	Excluded
BEHEIRA	911*	IL MAHMOUDIYA	KAFR NEKLA	Analyzed
	921*	HOSH ISA	MANSHIYA	Analyzed
	932	EDCO	ESBET SITTA W' SABAA	Analyzed
	942	SHOUBRA KHIET	IL SANADIDI	Analyzed
	952	ITAY IL BAROUD	IL IBRAHIMIYA	Analyzed
	982	SHOUBRA KHIET	IL KOMI	Analyzed
KAFR IL SHEIKH		DATA NOT AVAILABLE		
QENA	611*	NAQADA	IL KHUTABA	Analyzed
	621*	NAG HAMADI	NAG DAHI	Analyzed
	632	QENA	NAG IL GEBEEL	Analyzed
	642	KOUSE	NAG HAMED AHMED RAMADAN	Analyzed
	652	ABOU TISHT	IL MOAISERA	Analyzed
	662	ARMANT	NAG IL BEKALA	Analyzed
SOHAG	711*	AKHMIIM	NAG IL MAREF IL IBT BNAGA	Analyzed
	712	AKHMIIM	NAG AHMED ISMIAL BIL SOOMA SHARQ	Analyzed
	722	SOHAG	NAG IL ARAYA IL IBT ELMOUS	Analyzed
	732	SOHAG	NAG MALROD IL IBT ELMOUS	Analyzed
	742	TAHTA	NAG SHONWARY	Incomplete Data

*Intensive study site

TABLE I-22
COMPARISON SITES

GOVERNORATE	ID NUMBER	MARKAZ	VILLAGE NAME	STATUS
ASSIUT	824	MANFALUT	IL MAWANKA	Analyzed
	844	ABU TEIG	NAZLET BAKOUR	Analyzed
	854	IL BADAN	AMIR ABD IL WARAS	Analyzed
	884	SEDFA	ELMACAF IL SHARQI W' GARBI	Analyzed
BEHEIRA	914	MAHMOUDIYA	ISBET ZABRA HANEM	Analyzed
	924	HOSH ISA	ISBET ABU YOUSEF	Incomplete Data
	954	ITAY IL BAROUD	ISBET ABU IL FADEEL	Analyzed
	974	HOSH ISA	ISBET IL MANI	Analyzed
KAFR IL SHEIKH	DATA EXCLUDED FROM PRESENT ANALYSIS			
QENA	624	NAG HAMADI	ZELTEN	Analyzed
	634	QENA	NAG ALI ABU ZEID	Analyzed
	644	KOUSE	NAG ABU HOMMOUS	Analyzed
	654	ABU TISHT	NAG IL TOUD	Analyzed
SOHAG	714	AKHMIIM	NAG IL SAHAF	Analyzed
	724	SOHAG	NAG IL ARAB	Analyzed
	734	SOHAG	NAG ADFA	Analyzed
	744	TAHTA	NAG HAMOUDA	Incomplete Data

One might expect the main impact of a new school to be on initial enrollments in grade one. A net increase in grade-one enrollment would represent entirely new children coming into the school system. However, a new school might also have an impact on enrollment in grades two through six. A net increase in these grades would represent increased holding power--children who remained in school because the new school was close, rather than dropping out because the related school was far away.

The method of analysis was as follows. We have: 1) first identified the schools to which youngsters in the new-school catchment area might be going; 2) made time-series charts of the total enrollments in these schools separately for boys and girls, and for grade one and grades two through six (combined); 3) used these charts to project what the enrollment would have been if the new school had not been constructed, using a straight line projection; 4) recorded the actual total enrollment for the school year 1983-84 both with and without the enrollment of the new school.

The amount by which enrollment in the related schools fell below the projection measured the degree to which children left them to come to the new school. The amount by which enrollment of all the schools, including the new one, fell above the projected enrollment measured the net effect of the new school. (See Figures I-24 and I-25 and Table I-23 for an example of the method). (See Volume I, pp. 144-153.)

Results

On the basis of this small sample of cases, (18 new school and 14 comparison sites) new schools which opened in the Fall of 1983 were found to have had significant impacts in increasing net enrollments for boys and girls in grades two through six and for girls, but not boys, in grade one.

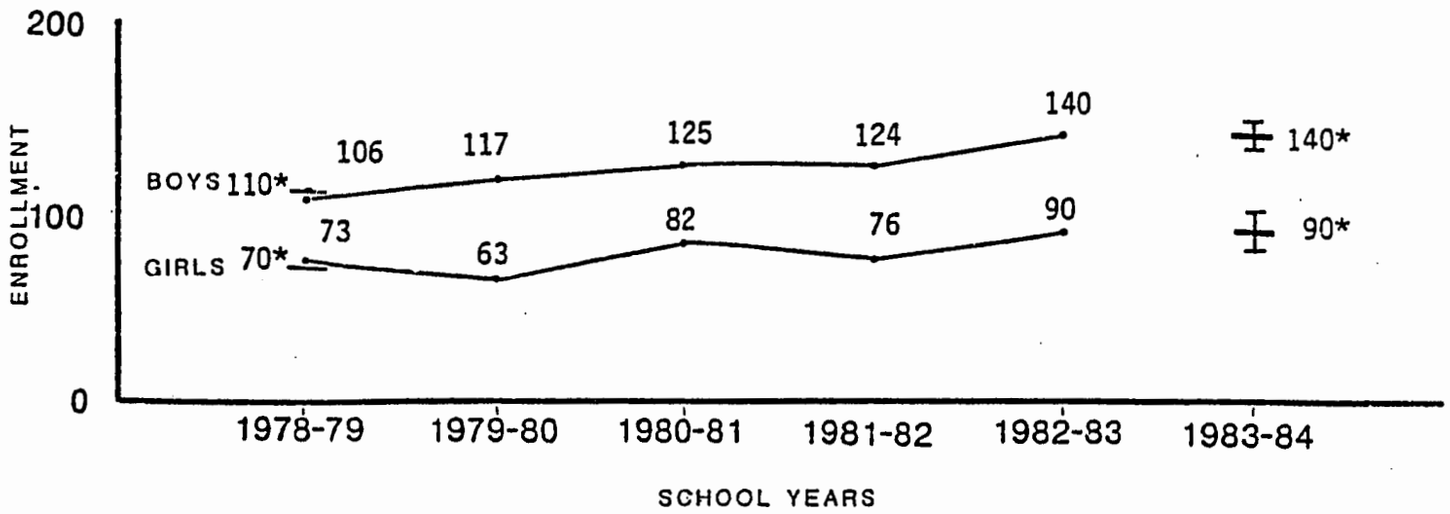

FIGURE I-24: TRENDS IN TOTAL ENROLLMENT FOR GRADE ONE IN SCHOOLS RELATED TO NAG DAHI (621)

*** = Straight line intercepts. The vertical bar marks the envelope of uncertainty (see text).**

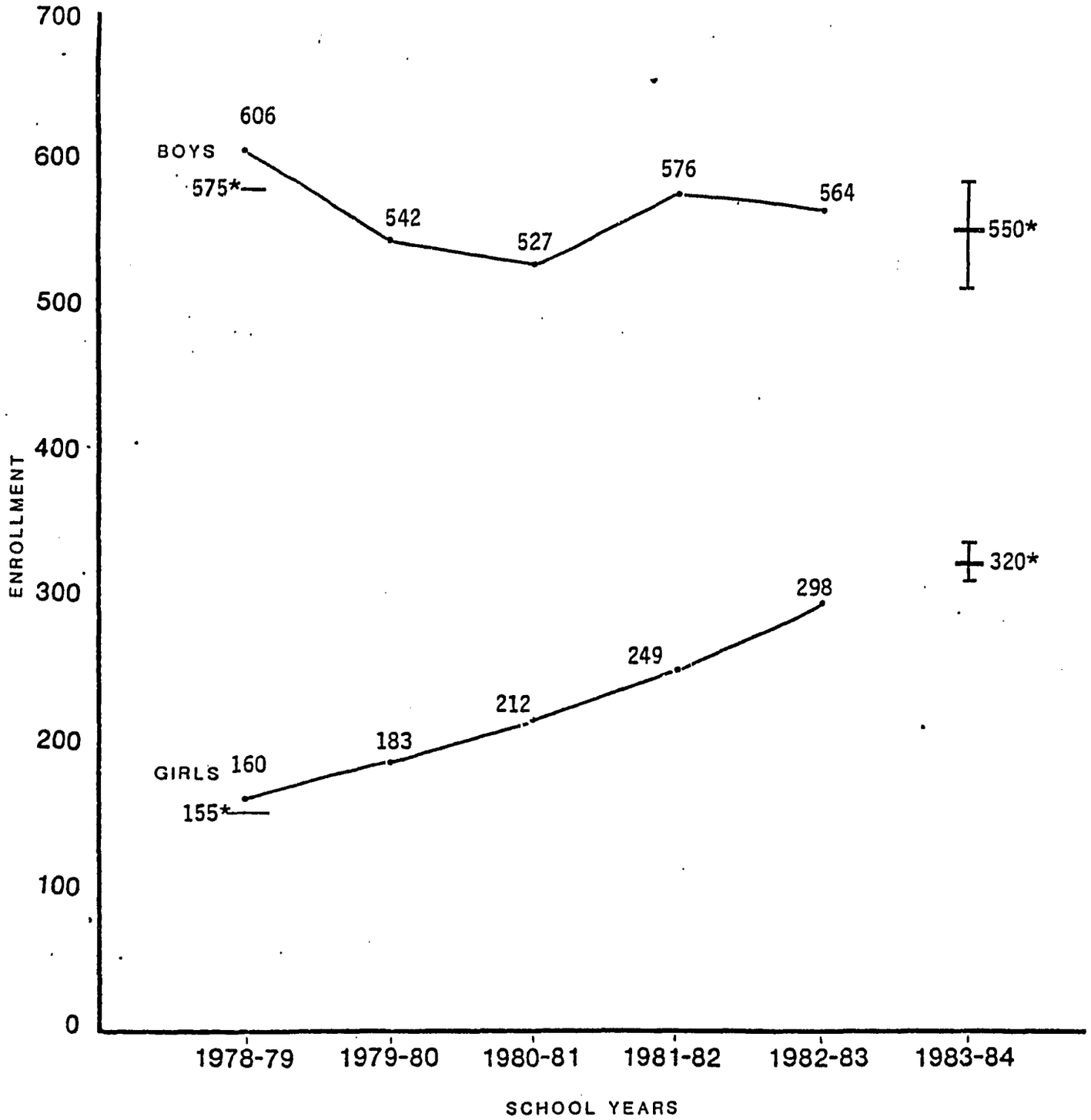

FIGURE I-25: TRENDS IN TOTAL ENROLLMENT FOR GRADES 2 THROUGH 6 IN SCHOOLS RELATED TO NAG DAHI (621).

*** = Straight line intercepts. The vertical bar marks the envelope of uncertainty (see text)**

TABLE I-23

EFFECTS OF 1983 NEW SCHOOL IN NAG DAHI

	PROJECTED ENROLLMENT IN 1983-84	ENVELOPE OF UNCERTAINTY	ACTUAL ENROLLMENT NOT INCLUD-NEW SCHOOL	ACTUAL ENROLLMENT INCLUDING NEW SCHOOL	NOTABLE IMPACT
Grade 1					
Boys	140	135-145	127	150	Yes
Girls	90	80-100	87	103	Yes
Grades 2-6					
Boys	550	510-585	489	595	Yes
Girls	320	310-335	254	319	No

On the average, in its first year, each new school added
7 boys to grade one,
14 girls to grade one,
50 boys to grades two through six,
23 girls to grades two through six

to the enrollments from its catchment area.

On the average, these are satisfying effects to see in such a small sample with the chosen evaluation methodology. However, there was great variability among the sites, and several actually showed negative net impacts due to variability of the estimates of expected enrollments (Figures I-26 through I-28).

A preliminary analysis of sites where particularly high impacts were found suggests that, by using findings from the intensive study, it may be possible to predict impacts of new schools in future sites. Examination of indices that may help to predict impact will be a major emphasis in the coming year's analysis. (See Volume I, pp. 154-168.)

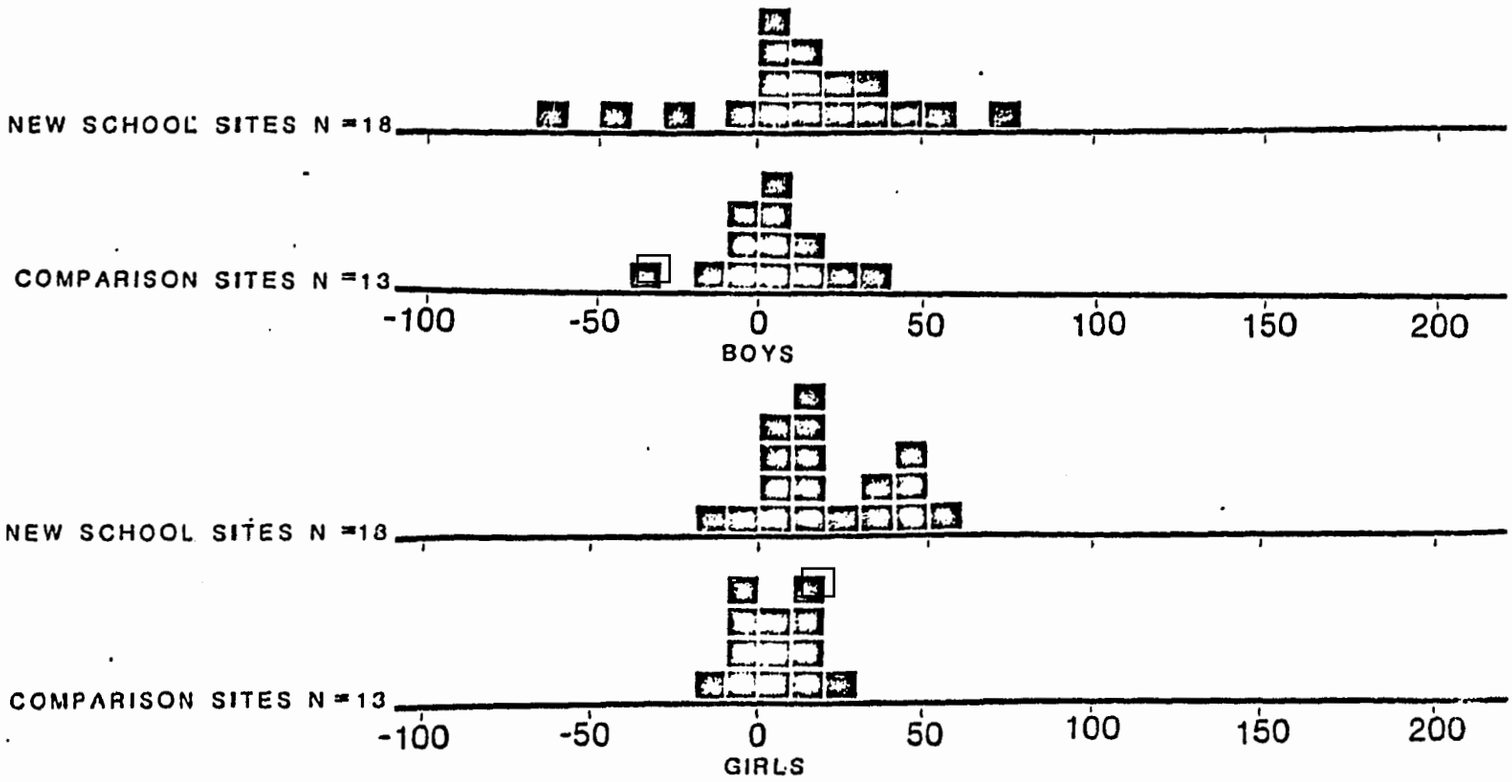

FIGURE I-26: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON BOYS AND GIRLS IN GRADE ONE

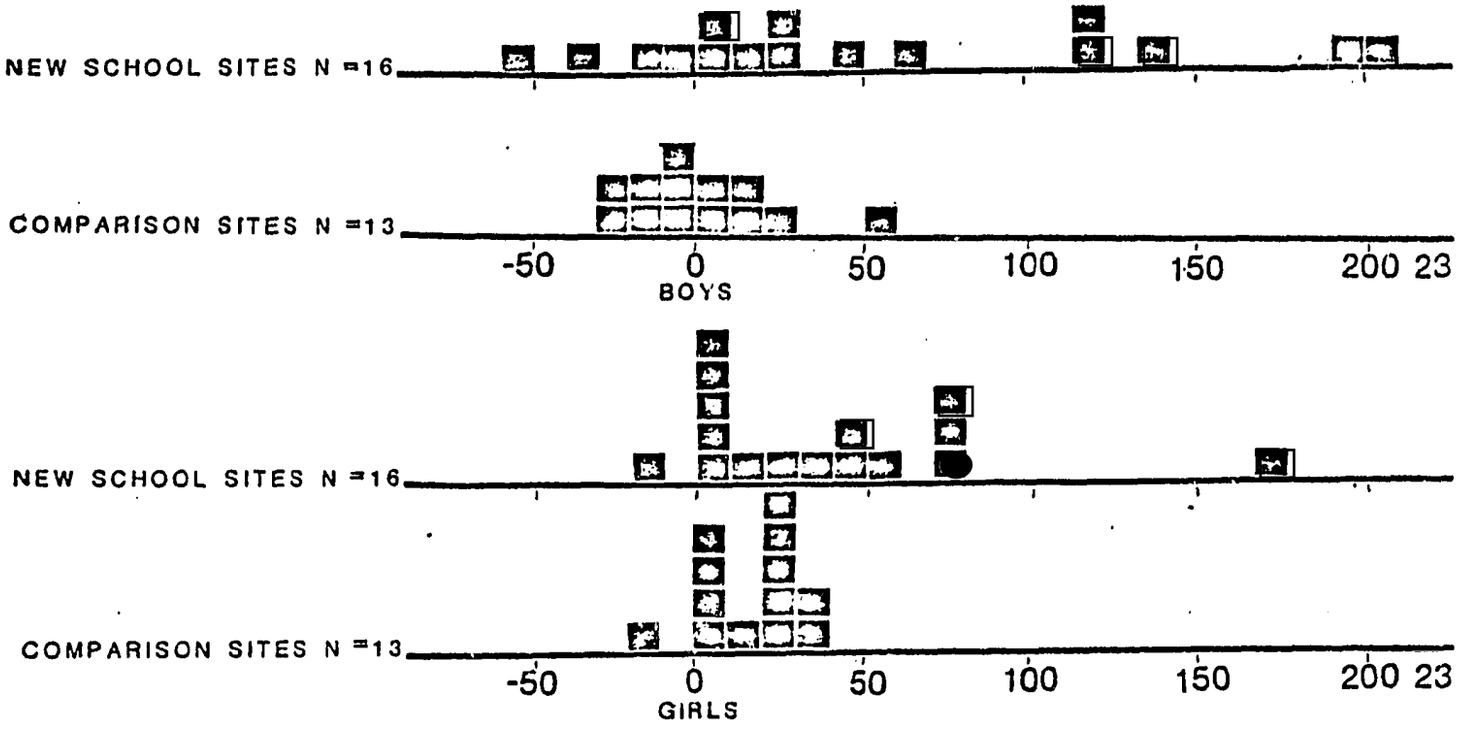

FIGURE I-27: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON BOYS AND GIRLS IN GRADES TWO THROUGH SIX

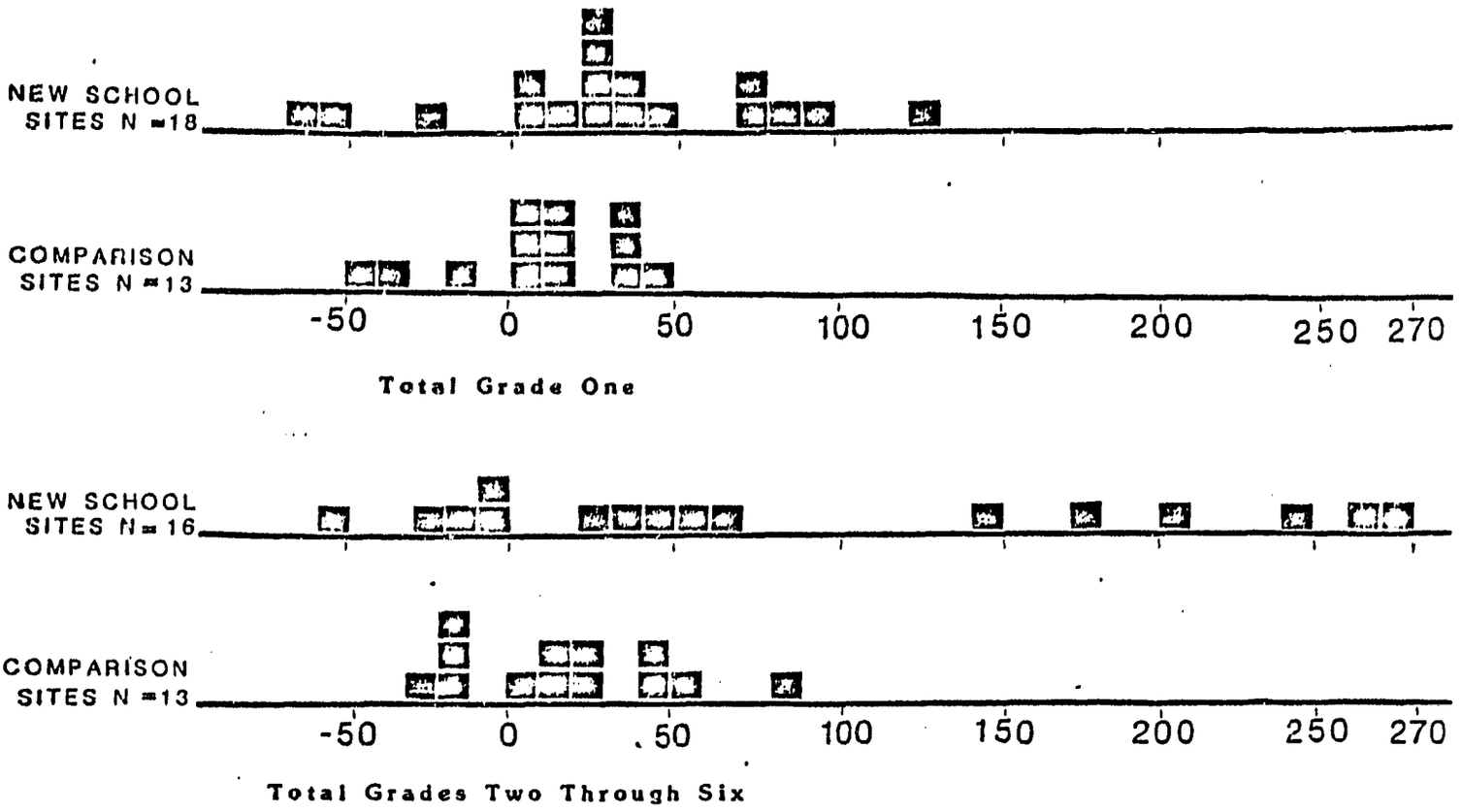

FIGURE I-28: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON ALL STUDENTS IN GRADES ONE THROUGH SIX

CHAPTER II: STUDY OF NEW EQUIPMENT

BACKGROUND

With the advent of the Basic Education program, it became imperative to provide equipment for teaching the practical courses in primary and preparatory schools and to upgrade the equipment in the science classrooms as well. As part of the general agreement between AID and the Government of Egypt to support the Basic Education Program, the commodities import program was used to supply the requisite equipment. The Ministry assembled meetings of supervisors in the practical courses, science and social studies, and charged them with drawing up lists of equipment needs. After the lists were decided upon, a system was devised for tendering, purchasing, receiving, storing, and distributing the equipment to the schools. (See Volume II, p. 4.)

APPROACH

The first-year study of equipment was a descriptive and qualitative study designed to provide a modest but in-depth look at the use of USAID equipment--the kind and extent of its instructional uses, the constraints which might inhibit its use, its suitability for intended uses, and other administrative or logistical problems with regard to equipment storage, recordkeeping, replacement, repair, that might exist.

Information from this intensive study is to be used to assess the feasibility of designing a subsequent, more extensive study of the impact of new equipment on practical skills learning in Basic Education courses.

Information was obtained through interviews with officials in the central ministry in Cairo, their counterparts in the governorate offices, and in the

schools. The team scheduled its visits concurrently with those of the Intensive Study of New Schools, in November and December of 1983, and returned to the same sites again for follow-up visits in March, 1984. (See Volume II, p. 5.)

SAMPLE

Schools were not selected at random. Rather, the sample was drawn from the same sites chosen for the Intensive Study of New-School Communities. In addition, governorate officials nominated nearby schools where particularly good examples of teaching the practical courses might be found (Table II-1). (See Volume II, pp. 8-11.)

PROCEDURES

In February and March 1983, preliminary visits to governorates of Beheira, Assiut and Qena were conducted for the purpose of choosing sample schools; gathering of school-background information; and collecting background data from governorate officials and headmasters about how the equipment program operated.

In November and December 1983, the intensive study was conducted, including visits with governorate officials in charge of planning, and visits to schools, with the guidance of the governorate officials. School visits consisted of interviews with the headmasters; visits to classes; and interviews with teachers of the practical courses. (See Volume II, pp. 9-15.)

FINDINGS AND CONCLUSIONS

Equipment

It seems clear from our observations in the classroom, from teacher interviews, and from interviews with headmasters, that more equipment would be

Table II-1: Schools Visited by Location and Level

	Beheira		Assiut		Qena	
Locations	Primary	Preparatory	Prim.	Prep.	Prim.	Prep.
Manshiya*	1	-	-	-	-	-
Hosh Isa	-	2	-	-	-	-
Kafr 1 Nekla*	1	-	-	-	-	-
Mahmoudiya	2	-	-	-	-	-
Damanhour	1	2	-	-	-	-
Kafr il Duwar	1	1	-	-	-	-
Beni Rafa	-	-	1	1	-	-
Assiut	-	-	2	3	-	-
Ghaneyem	-	-	1	1	-	-
Khutaba*	-	-	-	-	1	-
Naqada	-	-	-	-	1	1
Nag Hamadi	-	-	-	-	1	1
Qena	-	-	-	-	2	2
Luxor	-	-	-	-	1	1
Total	6	5	4	5	6	5

Schools Visited:
Primary 16
Preparatory 15

Schools were located in four villages, six small cities, and four medium-sized cities.

*New 1983 opening schools (no data collected in 1983-84 site visits).

extremely useful--particularly in agriculture--if instruction is to offer the students adequate opportunity to use the equipment themselves rather than only observe it in use. However, some shortages might be alleviated by more imaginative scheduling and grouping practices within the classes.

The majority of agriculture and science teachers at both primary and preparatory levels judged the equipment they had to be inadequate in kind. A sample of those teachers will be interviewed to see whether or not other kinds of equipment should be added to the list, or whether some could be deleted with new equipment substituted.

There seems no doubt but that the central purchasing and distribution system works quite well, though officials in Upper Egypt would prefer having a warehouse closer to them than Damanhour--perhaps in Assiut. Officials are keeping accurate inventory records at both the governorate and school levels. However, redistribution within the governorates was sometimes a problem. For example, if one school has two mobile science labs and another has none, the governnorate officials could transfer the extra lab to the other school. A school that receives a ten-year supply of chemicals could share that supply with others that are lacking. Perhaps officials do now have the discretion to carry out such redistribution. If so, they remained silent about it or were confused. It seems that a redistribution procedure within each governorate, keyed to governorate and central inventory records, would provide these local officials with the logistical flexibility they need to be more fully responsive to the schools' needs.

The lack of budgets in the schools for equipment repair, maintenance, or replacement will prove more and more inhibitory of equipment use over time. Few schools have personnel trained in equipment maintenance or repair. A

modest investment in equipment maintenance would be wise to safeguard the large investment made to date by AID in the commodities-equipment supply program.

The research team was concerned about the future when funds may not be available from USAID or other external sources for the purchase of equipment from abroad. We suggest, therefore that USAID and the Ministry give serious attention to studying the feasibility of having the needed school equipment and tools manufactured in Egypt through a combination of private enterprise and state participation. This private/state system should include the technical schools. These schools now manufacture some school furniture. There may be some equipment or supply items that they could also manufacture and thus provide valuable training experiences as well. It may be that a modest investment now could have long-term beneficial pay-off. (See Volume II, pp. 15-25 and p. 34.)

Facilities

There is a clear and present need in the schools for workshops, especially for industry courses, and for more storage space. No schools had enough storage space, and every school could easily use more storage cabinets. (See Volume II, p. 14 and p. 36.)

In-Service Training

In-service training needs were high, both for teachers and for headmasters. However, it is not clear what the mix or distribution of the in-service training should be. Teachers and headmasters responded to questions about improving instruction by saying that more training and longer training was required. Many teachers unfamiliar with the equipment they were using could have benefited from instruction in equipment use itself. This was particularly true of

industry teachers. Headmasters reported that they needed training in the particulars of basic education itself--not just its theory and philosophy--in the equipment that is used in basic education classes, and in how they might help teachers do a better job of teaching.

In the team's view, teachers and headmaster training programs need to be redesigned--expanded, made more practical, and conducted in actual school settings where good models of effective and efficient ways of teaching the practical courses can be observed and learned. Successful teachers and headmasters could be used as trainers and paid extra for their work.

Innovative Methods

We felt from our observations and interviews that improving instruction was so vital in the Basic Education courses that in-service education, as important as it is, would not suffice. We therefore spoke with officials in the governorates about the importance of establishing a system that promotes the development and use of new teaching methods in the schools. To be effective it is essential that the methods be developed, tested and revised within classes in regular basic education schools, not in model schools. A sustained program of this type would make Basic Education more effective, consistent, and efficient.

Teachers could test and practice innovative methods; then they could instruct other teachers in the use of techniques they found successful. Over a relatively short time, a more exciting mix of instructional techniques than one now sees might appear in the classroom, and teachers might become more excited about teaching the practical courses. (See Volume II, pp. 25-32 and pp. 36-38.)

Use of Technical Assistants

Officials in each of the governorates asked us to make the recommendation that the classroom technical assistants be permitted to function as teachers and be assigned to teacher training institutes for a study program so they might earn their teaching degree while teaching. Not only would this help fill the shortage of teachers, particularly for industry courses in the primary schools (carpentry and electricity, for example), but in addition, it would bring into the teacher labor force those already skilled in the use of the equipment and in its techniques. (See Volume II, p. 38.)

Assessment

In the opinion of most, unless students in the practical courses are examined as rigorously as they are in their other courses, and unless their test scores are used in some way that is significant to them, both the students and the teachers will not take these courses as seriously as they do others. Additionally, with the current system, it is almost impossible to know with any certainty, whether the practical courses are building the attitudes, the knowledge, and the skills that they were designed to produce.

In order to know whether the practical courses are meeting their objectives, the teachers must measure the students' attainment and growth over the five years in which they are enrolled in the practical courses. A consistent, objective system of measuring student performance, particularly in the skill areas, needs to be developed and implemented.

SPECIFIC RECOMMENDATIONS

On the basis of our study of new equipment, we would make the following specific recommendations now:

1. An explicit examination should be made of the official system and of popular practices in the governorate offices and in the schools for the distribution, assignment, redistribution, inventory, maintenance, repair, storage, and replacement of equipment and materials so that a more effective and efficient system could be designed, developed, tested, and implemented in the governorates.

2. A revised, more effective, and more efficient in-service training system should be devised based on an examination of the current in-service training system for teachers of practical courses and for headmasters. That system should use effective Basic Education schools as training sites and successful teachers and headmasters as trainers.

3. A system should be established for developing and testing innovative methods of teaching the practical courses in Basic Education in each of the governorates. It should include a communication system for sharing the results among the governorates and within each one, and a subsystem for implementing the adoption of these new proven methods in other schools through training programs, support services, appropriate supervision, and an incentive system to encourage headmasters and teachers to participate.

4. The brief paper on Practical Subjects by Dr. Abo Bakr Abdeen Badawi (see Volume II, Appendix) should be amplified, with studies as scholarly and thoughtful as his. These could serve as a basis for a re-examination of instruction in the practical courses and as the basis for some "clinical" experimentation of the re-examined model in actual school settings, consistent with recommendation number three above.

5. A consistent and objective student performance assessment system for the practical courses needs to be designed, tested, revised, and implemented on a nationwide basis. It should include a requirement that the results of the measures have consequences of importance to students and teachers to ensure that they are taken seriously and administered fairly and properly. Such an assessment system must contain objective ways of measuring the practical skills as well as the acquisition of knowledge (often referred to as the "theoretical" portion of the courses).

6. We suggest that AID and the Ministry consider using the Technical Assistance contract to implement the programs described in the five foregoing recommendations. (See Volume II, p. 39.)

CHAPTER III: STUDY OF TECHNICAL ASSISTANCE

BACKGROUND

Once the school construction and commodities programs were established and operating well, AID and Ministry officials turned their attention to the matter of how to provide the Ministry with appropriate expertise in technical areas such as curriculum development or teacher education, on an on-call basis over a period of time long enough to ensure adequacy of input. A decision was made to set up a three-year, host-country, time-and-effort contract through the Ministry of Education for the provision of technical assistance in support of the Basic Education Program.

In the Spring of 1983, the Ministry completed negotiations with the winner of the competition, the Academy for Educational Development. Specifically, in response to a statement of priorities of the Ministry, the Academy was to provide three basic services:

1. State-of-the-art information [on priority topics];
2. Qualified consultants [to work on these same priority topics]; and
3. Management structure and coordination [for the entire process].

A sub-contract with TEAM/MISR's Arab Center for Cultural and Educational Development provided access to a "larger pool of qualified Egyptian education experts." TEAM/MISR was also to assist in formulating the requirements for

work orders and act as the Academy's agent in selecting, contracting, and coordinating the efforts of Egyptian consultants to the project. (See Volume II, pp. 41-42.)

APPROACH

The study of technical assistance is designed:

- to assess the amount, nature, and utility of the impact of the technical assistance at the policy and operational level of the Ministry and its governorate offices;
- to determine what were the programs' effects, if any, on other institutions in Egypt's educational system--such as the schools' of educations' pre-service education programs and the teacher training institutes' programs; and
- to determine what impact the program would have on actual school practices.

The overall approach is to interview key technical assistance providers, key recipients of that advice, and key department staff in curriculum, teacher training, educational planning, and cost analysis, together with others who might be affected by the technical assistance.

Document analysis will play a prominent role in guiding the interview studies, and, when appropriate and feasible, observations of practice will be made in the schools and in administrative offices at the Ministry and Governorate levels. (See Volume II, p. 143.)

DIMENSIONS OF TECHNICAL ASSISTANCE

The effectiveness of a large-scale technical assistance program may be related to the degree to which the delivery system is designed to emphasize certain system characteristics.

Some systems are designed to increase the recipient's capacity to identify and solve problems, while others are designed to emphasize direct problem solution. Some are intended to be flexible, so they may be updated or renewed periodically as needs and conditions change, while others operate as fixed systems and implement only the original plan.

Often a technical assistance delivery system is designed to have a process rather than a content-orientation. Usually the process-oriented design also has a capacity-building aim, whereas the content-oriented system most frequently is used to provide direct aid.

Needs assessment strategies differ, as well. Typically, the capacity-building approach will emphasize helping the client organization assess or reassess its own needs. On the other hand, a direct-aid, fixed-approach design usually takes the client organization's statement of need at face value and proceeds to the solution with little or no attempt to redefine or reassess the needs.

System designs also differ on the dimension of reactivity. Some are designed to be deliberately proactive, to take direct initiative with their assistance recipients on addressing the problems identified. Reactive systems, on the other hand, respond only to requests for help formulated and presented by the recipient organizations.

It is useful to analyze technical assistance systems on a set of idealized dimensions such as those listed above. Consequently, as we follow each work order and its consequent activities through the system that has been established between the Academy and the Ministry of Education, we will attempt to examine how the efforts surrounding each work order are affected by the properties of the technical assistance delivery system as it was designed, and as it is modified in practice over time. (See Volume II, pp. 47-50.)

ORGANIZATION OF THE TECHNICAL ASSISTANCE PROJECT

The design of the technical assistance delivery system and its formal organizational structure were the products of Work Order No. 1. Service delivery was not to be informal or casual but rather formal and deliberative.

The structure includes an Executive Committee, chaired by the First Undersecretary of State for Education, and a Technical Secretariat. The Executive Committee has the ultimate "within project" authority for policy, procedural matters, and project evaluation. It relies on the Technical Secretariat for technical opinion and advice.

The Technical Secretariat acts as a bridge between the executive committee and project management, rendering advice and opinion on task requirements, and reviewing and recommending approval or rejection of expert personnel nominated for work teams. Figure III-1, copied from one of the Academy for Educational Development project director's early working papers, shows the flow cycle of project activities.

The Academy's project director prepared and presented the Ministry with Working Paper No. 2, dated May 1984, which laid out an overall plan for the conduct of the project's work (see Volume II, Appendix).

The working paper lists seven successive stages through which project activities would flow. The seven stages were described as follows:

1. "Basic studies" stage in which two "mutually complementary" studies were to be conducted--one on goals and standards for basic education and the other on the economics of basic education.

2. A preparatory stage in which questionnaires, interview guides, and other field research tools were to be developed, field research plans and experiments designed, and pilot interviews conducted with appropriate officials.

Project Implementation Process

Figure III-1: Showing the flow cycle of project activities

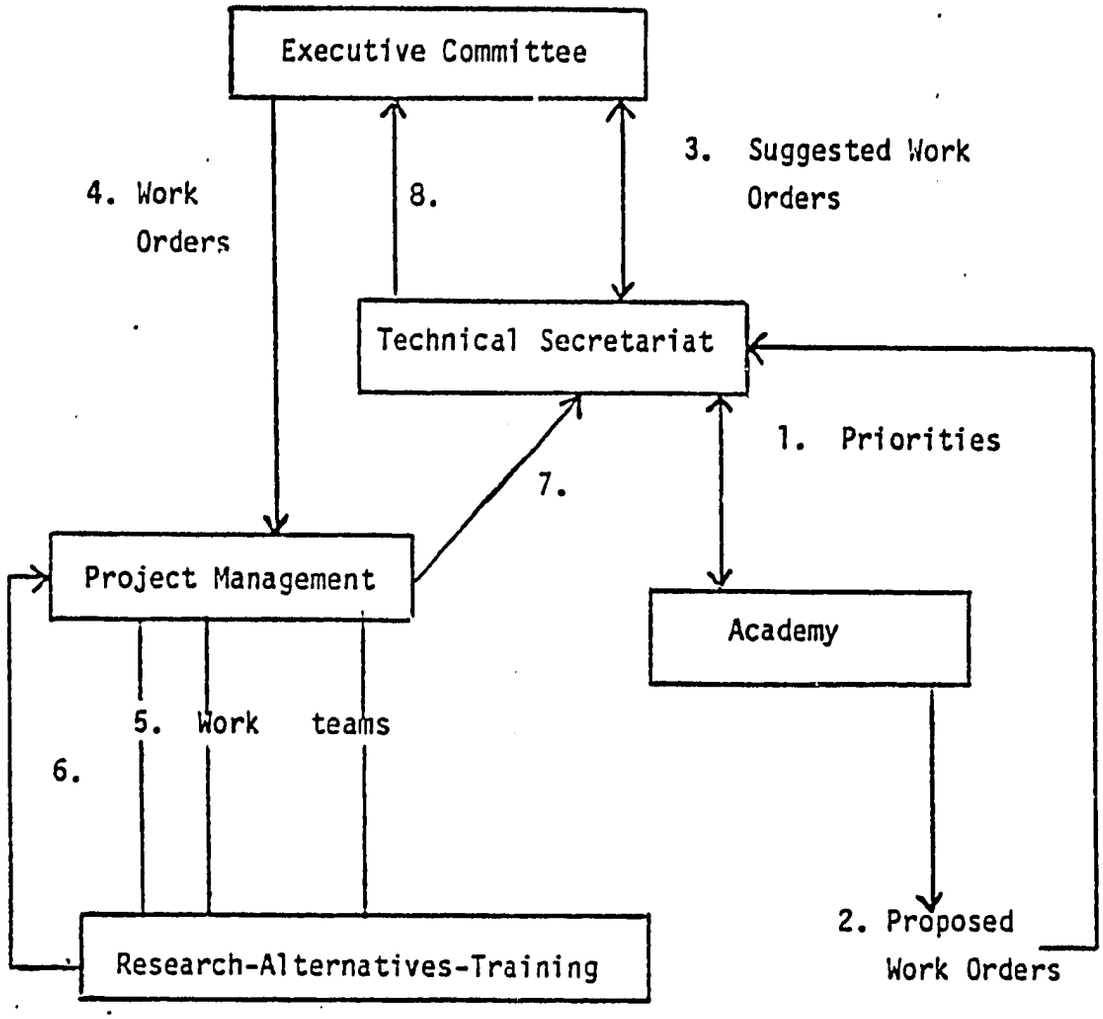

Figure III-1

3. Preliminary pilot-testing: a period for the trying out of ideas, curricula, and instructional materials in a sample of traditional and experimental schools and a time to be used for the training of field researchers.

4. Conduct of field surveys.

5. Field-survey results are to be analyzed and used for the preparation of formal models for
   - training of trainers;
   - training of instructors and administrators in the schools;
   - conducting training workshops in curriculum and instructional materials preparation;
   - training of staff to produce instructors' manuals.

6. Testing of the formal models in limited settings and revisions as appropriate based on test results, and

7. Presentation of the final results of the project in the form of curricula developed and tested--...to the Ministry of Education in final versions." (See Volume II, pp. 50-54.)

TECHNICAL ASSISTANCE--FIRST YEAR WORK SCHEDULE

Contents of the Work Order

Work Order No. 1 authorized the work that resulted in the design of the technical assistance system, its organizational structure, and the general operating procedures that were laid out to govern project work.

Work Order No. 2, "Assessing the State-of-the-Art of Basic Education" was to review the focus and content of the curriculum (see the Appendix for the work orders).

A. Objective:

To assess the state-of-the-art of Basic Education and develop a model for delivery systems.

B. Description of Services:

The Contractor shall appoint a committee of 3 consultants and 3 Egyptian experts who will establish philosophical bases and legal requirements for Basic Education by:

1. Reviewing and examining all relevant studies, reports, experiments, policies, and laws related to Basic Education in Egypt.

2. Assessing the curriculum for Basic education in light of No. 1 above.

3. Suggesting alternative models for curriculum and delivery systems.

4. Establishing criteria for selecting, preparing, and training Basic Education teachers and school administrators.

Work Order No. 3, "The Educational Economics of Basic Education," (the other of the two "mutually compatible" basic studies), was to yield data on three general areas:

1. The student population, its size, age--grade distribution, ways to reduce dropouts and grade repetitions, and way to make optimal use of physical resources through studies of class sizes and numbers of school shifts;

2. To prepare projections for the coming development plan based on the variety of planning assumptions; [and]

3. To rationalize the Ministry's budget for basic education through developing an integrated system that ties in the numbers of teachers, students, administrators, equipment, and supportive staff, with alternatives developed on a cost-effectiveness basis.

Aside from the potential for its immediate application within the next MOE budget cycle, and preparation of the next five year development plan, the most lasting impact of Work Order No. 3 was seen to be its counterpart to the Computer-Based Planning System. The economics results were intended to feed into Phase II of that system.

Work Order No. 4, "School Designs," called for a team to

1. Survey a sample of current basic education school buildings in relation to meeting the needs of basic education, curricula and activities, and suggest alternatives;

2. Survey local raw materials that can be used in the construction of new schools to reduce costs and be more adaptive to the environment;

3. Design alternate models for a nine-grade basic education school (urban/rural); [and]

4. Present criteria for selecting materials, sites, and requirements for different models for basic education schools."

The findings, recommendations, and new models for school designs generated by the architecture group, were intended to feed directly into the AID/MOE school construction program.

Work Order No. 5, "Computer-Based Planning Model for Basic Education," called for a team of specialists to carry out the following five phases:

Phase I: Establishing Data Bank Procedures and Developing Strategies.

(6 months: June 83 - December 1983)

Basic gathering and analysis of data including establishment of level of accuracy by governorate and district, with regard to students, teachers, adminitrators, salaries, financial support, supplies, and facilities.
Preliminary research on available options for Basic Education.

Phase II: Model Design and Modification.

(3 months: January 84 - March 1984)

Formulation of a planning Model for Egypt based on available data and administrative structure.
Custom programming on existing Ministry of Education computer or compatible microcomputers for Arabic and/or English presentation and preliminary testing with actual data from governorate and districts.
(Installing Hardware).

Phase III: Full Implementation and Presentation.

(4 months: April 84 - July 1984)

Loading of model with tested data from all governorates and districts for all categories, and development of major alternatives in terms of student mix, student/teacher ratio, teacher salaries and qualifications, levels of material support, school location and condition.
Presentation of complete model with major options to MOE officials and to other government agencies if MOE so desires.

Phase IV: Training.

(5 months: August 84 - December 1984)

Completion of technical training for a selected group of 10 MOE personnel in maintenance of Model, updating information, and continued training of five other MOE personnel to become trainers of governorate personnel including key administrators, selected teachers and other governorate and district level personnel.

Phase V: Follow Up and Monitoring.

(6 months: January 85 - June 1985)

Monitoring the operation of the system and the outputs of the model. Help in discussing technical matters related to the maintenance and updating of the Model.

Work Schedule

Figure III-2 contains the initial schedule derived from the work orders. (See Volume II, pp. 54-59.)

FIRST-YEAR ACCOMPLISHMENTS

Figure III-3 shows that for reasons over which the Technical Assistance Project management had little control, the first year's schedule had fallen severely behind. (See Volume II, pp. 60-61.)

FIGURE III-2

TECHNICAL ASSISTANCE FIRST-YEAR WORK SCHEDULE

Work Orders	Start Work	Draft Report Due	Final Report Due
#2 Assessing the state-of-the-art of Basic Education (curriculum and teacher education)	early August 1983	early September 1983	early October 1983
#3 Educational Economics of Basic Education	early Oct '83	early Nov '83	early Dec '83
#4 School Design for Basic Education	early Aug '83	early Sep '83	early Oct '83
#5 A Computer-based Planning Model for Basic Education			
Phase I - Establishing data bank procedures and developing strategies	early June '83	early Dec '83	N.A.
Phase II - Model design and modifications	Jan '83	end of Mar '83	N.A.
Phase III - Full implementation and presentation	April '83	July '84	end of July '84
Phase IV - Training	Aug '84	Dec '84	N.A.
Phase V - Followup and monitoring	Jan '85	end of June '85	N.A.

FIGURE III-3

TECHNICAL ASSISTANCE PROJECT WORK SCHEDULE
PLANNED VS ACTUAL (AS OF JUNE 2, 1984)

Work Orders	Start Dates		First-Draft Due Dates		Final Report Due Dates	
	Planned	Actual	Planned	Actual	Planned	Actual
#2: Assessing the State of the art of Basic Education (curriculum and teacher education)	early Aug. '83	mid Dec '83	early Sept. '83	mid Jan '84	early Oct. '83	Mar. '84
#3: Educational Economics of Basic Education	early Oct. '83	* mid May '84	early Nov. '83		early Dec. '83	
#4: School Designs for Basic Education	early Aug. '83	mid May '84	early Sept. '83		early Oct.' 83	
#5: A computer-based Planning Model for Basic Education						
Phase I - Establishing Data bank procedures and developing strategies	beginning June '83	mid May '84	early Dec. '83		N.A.	
Phase II - Model Design and modification	beginning Jan '84		end of Mar. '84		N.A.	
Phase III - Full implementation and presentation	beginning Apr. '84		end of July '84		end of July '84	
Phase IV - Training	beginning Aug. '84		early Dec. '84		N.A.	
Phase V - Followup and monitoring	beginning Jan. '85		end of June. '85		N.A.	

*The preparation of technical papers by the two Egyptian experts began in Feb. '84. The American expert arrived in Egypt May 16 to begin the "in country" phase of his work.

VIEWS OF PROCESS--FIRST YEAR

The following is an outline of the process stages through which the technical assistance work effort, as presently designed, should ideally flow from the inception of the system itself to the final disposition of a work product by the Executive Committee.

FIRST-YEAR WORK ACTION STAGES

A. Design stage

- Design TA system in consultation with MOE officials.
- Propose System to MOE.
- Negotiate System with MOE.
- MOE approves.
- MOE appoints committees.
- Committees meet, are charged with responsibilities.

B. Needs assessment

- Needs assessment could happen at this point, or if already accomplished, should be considered and accepted or modified.
- Translate priorities into formal work orders which contain objectives, describe services to be performed, including person-power needs, estimate levels of effort, and stipulate activities and deliverables, and budget.

C. Work specification

- Negotiate work orders, making any changes called for.
- MOE approves work orders and authorizes project management to proceed.

D. Expert selection

- From expert candidate pool--Americans, Egyptians and MOE, select and nominate three candidates for each two positions, both Egyptian and American.

- Names submitted for approval.
- After approval, experts hired, schedules modified as necessary, all travel, logistics plans arranged.

E. Pre-Visit Preparation

- Prepare general background and other briefing materials for experts if necessary; counterpart experts or MOE staff prepare specific papers, reports or data analyses.
- Collect information needed for experts to use.
- Brief American and other experts, provide necessary materials pertinent for work to be done.

F. Team(s) begin work

- Send American experts to Egypt.
- Form teams in country; redefine work if necessary.
- Prepare definitive work schedules and assignments, and begin work.
- Team completes in-country work and preliminary draft report, makes oral report to MOE and AID before departure of American experts.

G. Technical Review I

- Preliminary report submitted to the Technical Secretariat.
- Technical secretariat reviews, evaluates preliminary report and prepares a critique for experts to use in preparing final report.
- Critique sent to experts.

H. Final Report Preparation

- Experts revise preliminary draft, prepare final report.
- Final report submitted to Technical Secretariat.

I. Technical Review II

- Technical Secretariat reviews, evaluates final report, prepares recommendations for action of Executive Committee.

J. Executive Action

- Executive Committee meets and takes action on the final report.

WORK FLOW STATUS

It may be instructive to compare what has happened so far in the Technical Assistance Project with the sequence outlined above. The discrepancies will suggest where processes need to be improved. The following is a description of Work Flow Status, as of May 31, 1983:

A. Design stage -- completed in May 1983.

B. Needs assessment -- no specific needs assessment was made. MOE's statement of priorities was accepted by the contractor except for the study of school administration and school mapping. A new topic area, computer-based planning, was added. Priorities were translated into work orders in May 1983.

C. Work specification -- completed in May 1983.

D. Expert selection -- experts were named early by the Academy but approvals by MOE were held up until it was too late to begin work as planned on in the original schedule; this was a serious problem.

E. Pre-Visit Preparation -- this was an area of difficulty for the first two teams in Egypt (Work Orders No. 2 and 3). It was seemingly remedied for the two later teams.

F. Team(s) begin work -- all teams began work, though starts were much delayed. In-country work, preliminary draft report, and oral report to MOE/AID were completed by the first two work teams (Work Orders No. 2 and 3).

G. Technical Review I -- completed for Work Order No. 2 only.

H. Final Report Preparation -- completed for Work Order No. 2 only.

I. Technical Review II -- completed for Work Order No. 2 only.

J. Executive Action -- completed for Work Order No. 2 only.

As noted above, Work Order No. 2 is the only one we have observed through all its process stages.

It is difficult to estimate what damage, if any, has been done to the Ministry's program plans by the first-year delays. Certainly much time has been lost. Major revisions may have to be made in the plans for follow-up

activities in the curriculum and teacher education program (Work Order No. 2), if they are to occur within the current contract.

It is tempting to speculate about what might have been done differently to have both improved the work process and the reception of Work Order No. 2. Clearly, the work plan was ambitions, the time allowed very short, the team short-handed. There were no meetings of the teams with the Technical Secretariat, either early on to discuss and modify the work plan if necessary, nor at the end of the visit to explain and discuss the accomplishments fully.

The Technical Secretariat's judgment that the final report of Work Order No. 2 met only "minimal specifications" probably resulted from their misunderstanding of what to expect in the report. The wording of the work statement was general enough to be susceptible to varying interpretations, not only as to the amount of emphasis to place on each aspect of the work, but also as to how detailed, specific, and operational it should be. Unfortunately, it seems that little or no attempt was made to refine the tasks further or to make them more specific and operational. Nor did the Technical Secretariat and the work team meet to clarify their understandings of exactly what was to be done.

The process problems that occurred in the first year may not necessarily repeat themselves. Presumably, some resolution mechanism will be initiated to handle the conflicts that may again arise in the course of the work, especially with regard to issues concerning the quality of the work and whether it meets expectations.

Perhaps more management time devoted to the project in Egypt would alleviate some of the process problems. Certainly more frequent discussions between project staff and the Technical Secretariat and the Executive Committee on quality criteria would help matters greatly. It would also be useful to set up conflict resolution procedures.

To an outside observer, in the first year the technical assistance delivery system seems to have operated as a limited system. It employed a content approach, working on primarily client-identified needs. The system was fixed, reactive, and emphasized direct aid, not capacity building. According to the early interviews with senior MOE and AID officials, this was the approach desired by the Ministry, but it caused problems.

Some of the process problems sprang, in part, from the lack of clear communication among the partners as to the details of the work and its aims and objectives. All parties concerned should make a major effort to clarify these and other issues in a review of the project and its future planned activities so as to enable it to forward with a mandate that is clearly understood. (See Volume II, pp. 62-70.)

CHAPTER IV: COMBINED IMPLICATIONS AND RECOMMENDATIONS FROM THE FOUR SUB-STUDIES

Summaries of each of the sub-studies of USAID Contributions to the Egyptian Basic Education Program have been given at the end of each of their reports in chapters one and two (Volume I) and three and four (Volume II). In this chapter, we present a general summary of implications derived from a birds-eye view of the four studies taken together (see Figure IV-I). As the four-year study continues, these lists of implications will hopefully become more complete, better articulated, and more thoroughly informed through further research and through conversations with officers of USAID and the Ministry of Education. The following is a brief review of the implications from the first year of study.

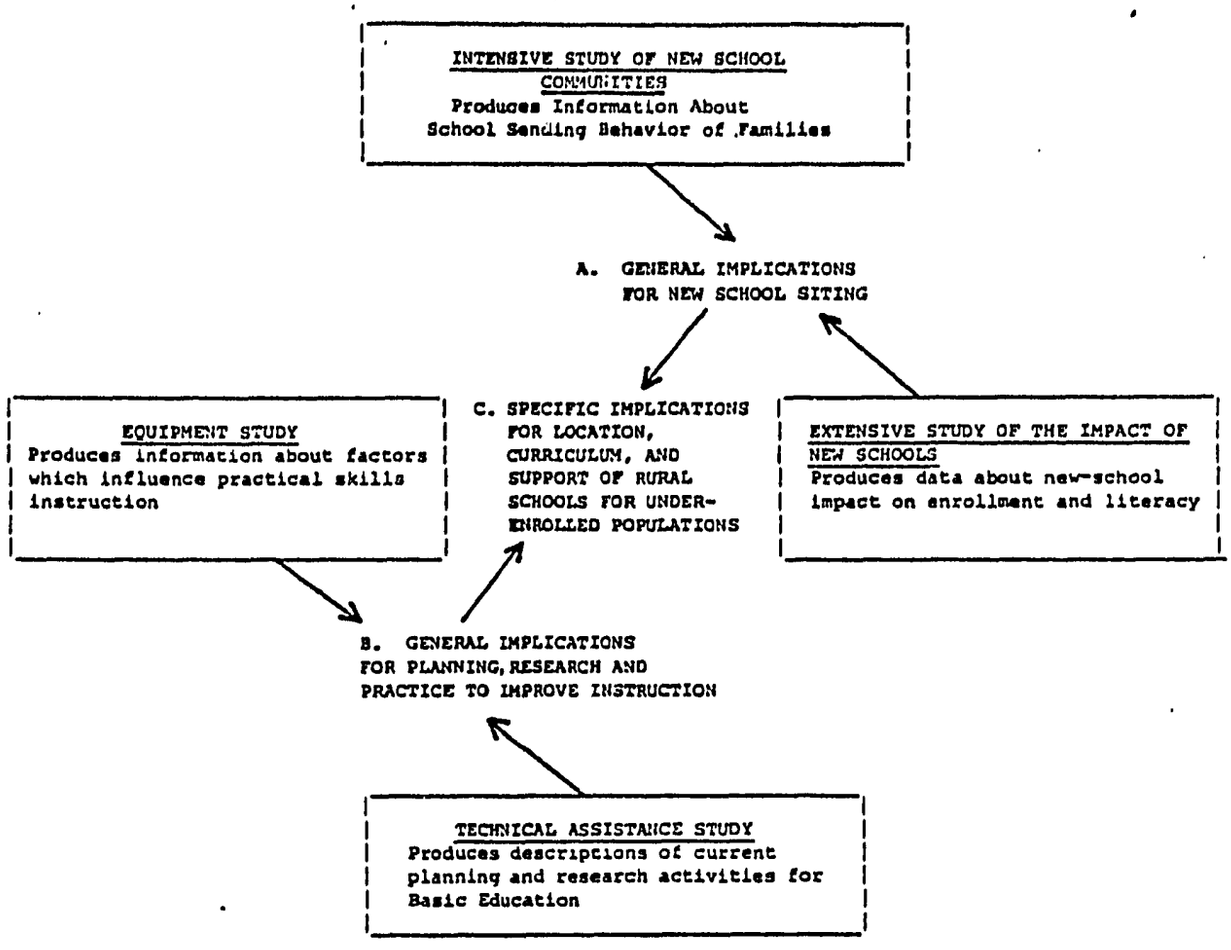

Figure IV-1: Cross connections among the sub-studies of USAID constitutions to the Basic Education Program

GENERAL IMPLICATIONS FOR NEW SCHOOL SITING

1. School-Sending Readiness. It appears feasible to develop convenient and inexpensive indices of the school-sending readiness of rural communities--indices that could be used in future facilities planning for grades one through nine. These indices, our preliminary findings show, relate to such factors as crowding of existing schools, enrollment trends of boys and girls, indicators of village economic levels, pre-existing formal and informal facilities, and attitudes of community leaders.

2. School Shortages. All evidence points to a severe shortage of facilities at the preparatory and secondary level in rural areas in the near future. The policy of building grade one to nine schools in local communities, as opposed to one to six schools, appears valid and important. Communities should be encouraged to add on grade levels in successive years until the full nine years of basic education are achieved in the new school.

3. Girls' Enrollments. To have the greatest impact on girls' educational participation, schools should be community-based. Rather than coming from the surrounding countryside into bigger facilities, girls are most likely to come to smaller community-based institutions. Consideration needs to be given to the effects of school crowding on the expandability of girls' enrollments, a factor that tends to constrain the potential for increases more for girls than boys. In some communities, girls' schools serve to guarantee a certain minimum number of spaces for girls as well as encourage the enrollment of girls from more conservative households.

4. Effects of Distance. Arbitrary measures of the distance primary schools should be located from each other should be used more as a measure of equitable distribution of resources than as a strategy to increase enrollment.

Distances less than two kilometers between schools should be considered valid points to locate schools in cases where communities are ripe for rapid increases in enrollment and at present do not have adequate facilities.

GENERAL IMPLICATIONS FOR INSTRUCTIONAL PRACTICE

1. Assessment of Student Performance. In order to ensure that students and teachers take the practical courses seriously, and in order to evaluate whether the courses are building the attitudes, knowledge, and skills they were designed to produce, a consistent, objective system of measuring student performance needs to be developed and implemented. Such a system seems to be desired by most teachers and administrators.

2. Training. Training and supervision of teachers in the practical skills courses appears to be a problem in rural schools. Training headmasters to be leaders in the Basic Education curriculum might be a solution. Such training could be carried out through a system of exemplary schools.

3. Program Development. Imaginative solutions to problems of instruction in practical skills courses might be stimulated by encouraging governorates to support innovative projects, by creating a vehicle for sharing the results, and by providing incentives to schools for developing innovative programs.

4. Certification of Technical Assistants. Problems of teacher shortages in basic education courses may be alleviated by allowing technical assistants who are not fully certified to teach these courses while earning their degrees at the same time.

5. Inventory of Maintenance and Equipment. Improved governorate-level systems of inventory and maintenance of equipment are needed, and in the long

run it would appear that equipment for the practical courses might better be produced by Egyptian manufacturers than come from overseas.

6. The Recruitment of Women Teachers. Enrollment in rural villages might be substantially stimulated by recruiting and training local women as primary school teachers. In some cases incentives might be offered to induce women to enter teaching fields; in others, exceptions may be required to permit local women to enter teacher training institutions with lower than the required admission scores.

IMPLICATIONS FOR RESEARCH AND POLICY STUDY

The following is a list of areas in which the study project staff feels a need for more information. Much of this information may already be known by others, but some may suggest new studies.

1. Local Relevance of Basic Education Courses. Many rural villagers are turning toward education in the hope that it will help their children move out of agricultural occupations into other employment. How should the curriculum in rural schools respond to this perceived need? Can educational planning be more closely connected to community development activities? Problems of relevance in the school curriculum in rural villages are illustrated by the discrepancy between parents' hopes that education will provide their children alternative employment to farming and educators' desires to locate practical courses according to the occupational environments in which schools are located. Decisions that commercial courses typically should not be taught to rural children may not be entirely valid as far as parents are concerned, especially in rural communities within commuting distance of urban areas. In other words, what are the implications of curriculum decisions in rural

schools? More generally, what theory guides the development of Basic Education as a whole (see Appendix C to Technical Assistance Work Order No. 2)?

2. Educational Alternatives at the Secondary Level. Most rural villagers desire few educational alternatives other than primary level education or a full course of general studies through the university. What viable alternatives are available and how can their costs and benefits be communicated to students and parents in such a way that more will seek them?

3. Curriculum Supervision. How can the activity of instructional leadership be strengthened in rural schools?

4. Recruiting and Training Women Teachers. What are the factors that influence the training and recruitment of women teachers for rural schools?

RECOMMENDATIONS FOR RURAL SCHOOLS SERVING UNDER-ENROLLED POPULATIONS

Briefly, the following are tentative recommendations.

Recommendation 1: In siting schools, follow a mixed strategy of placing some schools in communities that are "ripe" for enrollment increases and others in communities where a new school might not immediately be filled up, but where it might itself stimulate change in chronic low levels of enrollment. This way the effect of new-school facilities can be both immediate and long-term. In the long run, a mixed strategy might meet MOE goals of universal education more rapidly than a policy of building schools only where there is immediate need.

Recommendation 2: Place small schools in local, psychologically defined communities rather than creating consolidated schools serving more than one community.

Recommendation 3: Gradually extend the new-school grade levels where appropriate to full nine-year Basic Education Schools.

Recommendation 4: Recruit and train local women teachers, providing special incentives or exceptions where necessary.

Recommendation 5: Train and support the headmaster or headmistress of the school as its instructional leader.

Recommendation 6: Develop initial enrollment campaigns around the new school through community leaders.

Recommendation 7: Choose Basic Education offerings as carefully as possible to meet the range of needs in rural communities, which may not always be solely related to instruction in agriculture.

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STUDY OF USAID CONTRIBUTIONS TO THE EGYPTIAN BASIC EDUCATION PROGRAM

FIRST ANNUAL REPORT

Volume I: Studies of New Schools

OCTOBER 1984

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STUDY OF USAID CONTRIBUTIONS TO THE EGYPTIAN BASIC EDUCATION PROGRAM

(Contract No. 263-0139-C-00-3009-00)

FIRST ANNUAL REPORT

VOLUME I: STUDIES OF NEW SCHOOLS

Submitted to: USAID/Cairo

October, 1984

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ACKNOWLEDGEMENTS

We wish to express our gratitude to His Excellency, Mustafa Kamal Helmy, Minister of Education; to His Excellency Mansur Hussein, Vice Minister of Education; to the Honorable Hamid Suliman, General Manager of the General Administration of Planning and Follow-Up, Ministry of Education; to Mr. Hassan Harass, Consultant to the Ministry of Education; to Mr. El Sawi Abdel Sawi Samie Ahmed and Mr. Azem El Saidi of the General Administration of Planning and Follow-Up, Ministry of Education; and to the education officials of the governorates of Kafr il Sheikh, Beheira, Assiut, Sohag, and Qena, whose devotion to the quality of Egyptian education made this study possible. We also gratefully acknowledge the help of our hard working research assistants, Said Ali il Deeb and Gamal Abdel Fateh, and the other field researchers who accompanied us in the data collection.

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INTRODUCTION

CONTEXT OF JDY

This is the first annual report of a four-year study of USAID contributions to the Egyptian Basic Education Program. The purpose of the study has been to collect information and develop theory that will help USAID and Ministry of Education (MOE) officials assess the impact of USAID contributions on the Egyptian Basic Education Program and plan future contributions to it, specifically in the areas of construction of new schools, provision of equipment for use in Basic Education classes, and provision of technical assistance to the Ministry of Education.

The study officially began in January 1983. Preliminary site visits were made in February 1983, and the first major data collection effort, involving site visits to villages where new schools were located and to schools where materials and equipment were being utilized, took place in November and December 1983. This report presents findings drawn from those site visits, from follow up visits that took place in the Spring of 1984, and from data collected from Ministry of Education officials and records throughout the year.

The methods and hypotheses that have guided the study have been described in detail in a document entitled Scope of Work, May 1984, submitted to USAID Cairo. These methods and hypotheses will be briefly reviewed again as the first year's findings are presented below.

Figure i-1 shows the overall pattern of USAID contributions to Egyption Basic Education toward which the study has been directed. The construction of new schools, which began as a USAID Project in 1982, has been a major effort, involving extensive joint planning by USAID and MOE officials concerning the

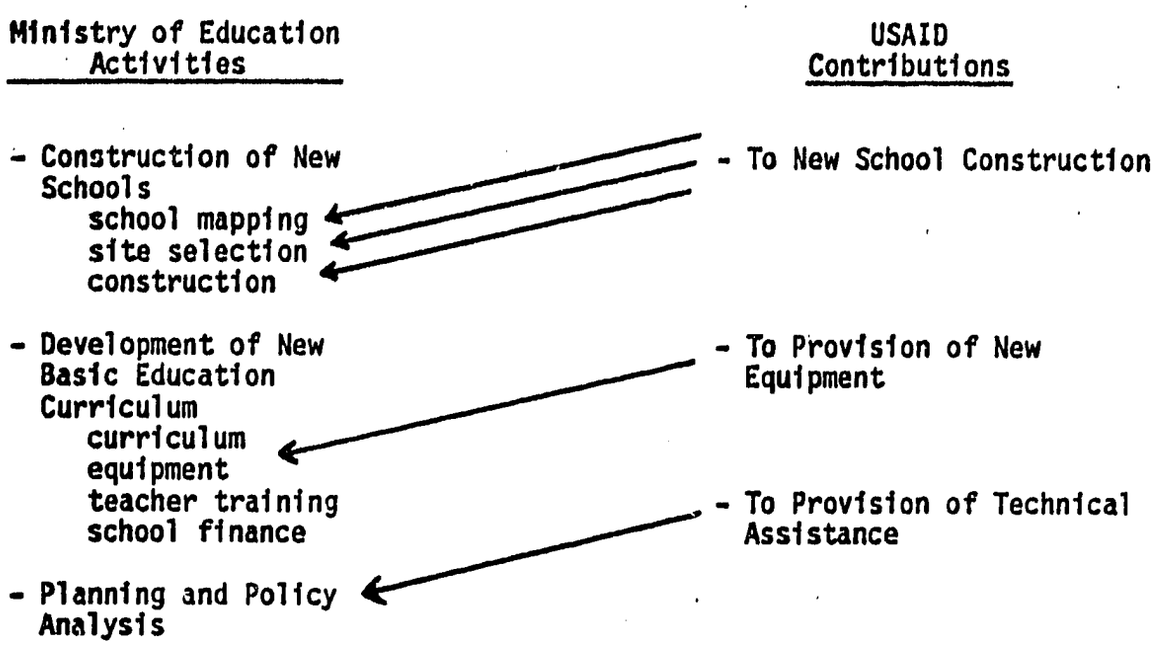

Figure i-1: Pattern of USAID Contributions to Egyptian Basic Education
January 1983 - July 1984

choice of rural sites where schools would be likely to have an impact on increasing enrollment and literacy, particularly of girls and other educationally disadvantaged groups; creation of detailed maps of the local school regions (markaz) as a tool for determining sites of new schools; and close cooperation between USAID and MOE officials in financing and following up the construction of approximately 550 new schools.

Provision of new equipment, which began as a USAID project in 1981, has also been a major assistance project designed to support Ministry goals of increasing equity and access and enhancing the relevance and effective outcomes of the Basic Education curriculum. It has been carried out by MOE officials with USAID financial support.

The technical assistance program, which began in 1983, is a host country contract provided by USAID to the MOE for the purpose of obtaining consultation and assistance on all aspects of the Basic Education Program, as determined by MOE priorities. In the first year, technical assistance work began in the areas of curriculum and teacher education, educational economics, school designs, and computer-based planning.

One can see from the Figure i-1 that the USAID contributions have taken place, and are continuing to take place, in a large and complex context which is at the heart of the Egyptian education system. The USAID assistance is part of an unusually comprehensive cooperative project designed to facilitate the development of the Basic Education Program and the extension of schooling to unserved populations. The initial emphasis has been on increasing rates of literacy and numeracy, particularly among rural children and girls. The components of the overall effort include:

- providing more accessible, more attractive schools in areas where enrollments are particularly low;

- changing the curriculum to include practical skills courses useful to a broad range of students;
- providing equipment for the practical skills courses;
- providing teacher training to support the new curriculum;
- solving problems of organization and school finance necessary to support these objectives.

In order to carry out an adequate and helpful asssessment of USAID contributions to this ambitious project, it has been necessary for the Creative Associates' staff to develop to the greatest extent possible a comprehensive understanding of the Basic Education Program as a whole and its place in the evolution of Egyptian education. It has also been essential that the project staff develop close communication and mutual understanding with MOE officials responsible for carrying out the enormous task of overseeing the development of Egyptian schooling. We hope this first annual report may become a significant element of that communication.

To carry out this study, Creative Associates has brought together a project team with a unique combination of skills and experience:

Dr. Wells Hively, project leader, is an expert in education evaluation theory with long experience in education research and project design.

Dr. Nadia Makary, project coordinator, is a professor of statistics at Cairo University with considerable experience in Egyptian education research whose students have provided the essential core of field research and data processing.

Dr. Wade Robinson, senior project advisor, is an experienced educational administrator and education policy analyst--director of the 1979 study team for Egyptian Basic Education and Creative Associates representative in Cairo.

Dr. Andrea Rugh is an anthropologist specializing in Middle Eastern society and educational development, who was also a member of the 1979 Basic Education study team.

This study consists of four independent, but closely related sub-studies. Two of these studies bear on the USAID contributions to new school construction, one deals with new equipment, and one with technical assistance. This report treats each of these studies in turn and then discusses cross-connections between them. The report of each sub-study begins with a brief description of the context in which the specific USAID contribution has taken place. We turn now to a sketch of the overall background of the Egyptian Basic Education Program.

GENERAL BACKGROUND

Compulsory free elementary education was proclaimed in the Egyptian constitution, Article 19, in 1923. However, lack of facilities and financial support prevented the early provision of broad educational opportunities for the population in general. It was not until the Revolution of 1952 under Gamal Abdul Nasser that a serious attempt to provide a broad-based educational system began. The five-year plan for 1955-60 included within its provisions the goal of promoting universal primary education within a 10-year period. And indeed, in the period between 1956 and 1966, a number of impressive advances in education took place.

In Law #213 of 1956, education from grades one through six was declared compulsory and subsequently a number of measures were taken to encourage voluntary compliance with the provision; in 1962, the system was declared tuition free; and between 1956 and 1966 school facilities were built across Egypt to provide for the rapidly expanding enrollments. However, in the 1970s the system struggled to keep up with the popular demand for education. Between 1967 and 1977, a decade of military spending and economic depression halted the construction of school facilities, resulting in severe overcrowding and general decline in the quality of Egyptian education. By the end of the 1970s, 60 percent of elementary schools and 30 percent of preparatory schools had a two-shift school day.

Despite adverse conditions in the decade of the 1970s, enrollments in primary and preparatory levels increased overall, 13 and 69 percent, respectively. In 1976, 43.5 percent of all Egyptians had experienced some schooling (including 29 percent of women). By the school year 1978-79, 68.2

percent of relevant-age primary school and 59 percent of preparatory school children were enrolled. Of these enrolled children, females comprised 40 percent.

Despite general important advances in the educational system, access to education is still not equally available to all Egyptian children. Major disparities are still found between males and females, urban and rural, and Upper and Lower Egyptians. In 1977-78, from among 6 to 12 year olds, 90 percent were enrolled in urban areas and 62 percent in rural. Of these, 94 percent of males enrolled in urban areas and only 75 percent in rural areas; girls enrolled 86 percent of the time in urban and 46 percent in rural areas. Girls ratios of total enrollments have remained a fairly static 35 to 40 percent between 1965 and 1979. However, the absolute numbers of females out of schools has been increasing as a result of an ever expanding population base.

Education plays a significant role in Egyptian life. It affects social mobility, the level and distribution of income, and the quality and quantity of the work force. Education contributes to a well-informed citizenry and to the realization of the full potential and self-esteem of individuals. Because of the important consequences to the nation and to its citizens, the MOE laid plans in the early 1980's to overcome the deficiencies hindering the expansion of school enrollment and attainment, especially among less-advantaged populations of the country.

In 1981, compulsory education was extended from six to nine years, under a Basic Education curriculum that was to increase the efficiency and skill level of students in both academic and practical course areas. With the cooperation of USAID, the MOE also embarked on an ambitious program to increase the number

of institutional facilities available to school children, under the assumption that lack of facilities was a main hinderance to educational participation.

NEW SCHOOL CONSTRUCTION

The 1950s and early 1960s saw an extraordinary volume of school construction as Egypt set about accomplishing the goal of universal free education. This activity was interrupted by the large share of the Egyptian budget allocated to national defense in the late 1960s and early 1970s. Attention returned to school building in the late 1970s, which by that time had fallen seriously behind population growth. On September 20, 1982, Minister Helmy announced that the five-year plan to meet the new needs of an expanded student body envisioned the construction of almost 2,000 primary and preparatory schools with annual allocations increased for education to LE 102 million from a then current rate of 71 million. Although it was an unusual step for USAID, which ordinarily does not provide funding for "bricks and mortar," an agreement was reached between USAID and MOE for an extensive new school- building program aimed specifically at reaching educationally disadvantaged rural populations.

To make most effective use of limited resources, MOE chose to begin building schools in governorates where rural enrollments and enrollments of girls were particularly low, identifying in the first phase of the project the governorates of Kafr El Sheik, Beheira, Assiut, Sohag, and Qena. Specific sites within the governorates were chosen after the MOE prepared up-to-date school maps that identified the areas most lacking in facilities. A basic criterion set a two-kilometer minimal distance between location of a new school and already existing facilities.

MOE officials worked with local citizens to obtain donations of land for the schools, and construction was financed by USAID in such a way as to ensure rapid completion of the buildings. A standard school building design was used, the basic module being classrooms for grades one through six, expandable to grades one through nine, electricity, water facilities, and indoor toilets. This initial design resulted in an easily constructed, inexpensive, and utilitarian school. (New designs are the subject of one of two current technical assistance studies.) School construction in the first five governorates will be followed by construction in five additional governorates where work already has been completed on up-to-date school maps.

In discussions surrounding the choice of new school locations for this ambitious project, many questions arose about the factors that facilitate or stand in the way of children's attendance in school--social factors, distance, economics, and so forth. These concerns, along with a need to assess the direct impact of the new schools on enrollment and literacy, form the background for these studies.

STUDY APPROACH

This part of the report presents findings from two closely related sub-studies, one called "The Intensive Study of New-School Communities," the other called "The Extensive Study of the Impact of New Schools." The former is qualitative and anthropological, drawing its data from interviews with village leaders, school officials, and parents of school children, and is aimed at understanding the factors that influence children's enrollment and attainment in school. The latter is quantitative and statistical, drawing its data from governorate and school records, and aimed at assessing the impact of the new schools on enrollment and literacy.

The specific USAID Mission concerns that guided the studies may be summarized in the following project hypotheses developed by Creative Associates with the concurrence of USAID officials:

PROJECT IMPACT HYPOTHESES

Hypothesis A.1: The opening of AID-financed new schools will measurably increase the enrollment of students.

Hypothesis A.2: The opening of AID-financed new schools will measurably increase the literacy and numeracy of school age children.

Hypothesis D.1: The opening of AID-financed new schools will particularly increase the acceptance, enrollment, literacy and desired skills of disadvanteged populations (girls, rural, and poor children).

CONTRIBUTING-VARIABLE HYPOTHESES

School Construction: A relationship exists between the project goals of enrollment, attendance, and development of desired skills and the following:

1. The distance a school is located from the home of a student. Up to a certain point, distance may act as a difficulty factor affecting regularity of attendance and drop out. Ultimately, a point is defined, which may be called opportunity threshold, beyond which students cannot travel.

2. The degree of crowding of the school. Overcrowded schools may seek ways to limit enrollment. Triple shifts reduce hours of study time; very large classes may reduce effectiveness and comfort of teachers and children.

3. The availability of furniture, conditions of sanitation, state of building repair, availability of electricity, availability of teacher residences, and other factors which may be separately considered or taken together as "adequacy of facilities."

EXOGENOUS VARIABLE HYPOTHESES

A relationship exists between the project goals and the following uncontrollable variables, all of which may have a differential impact on the project goals with respect to the disadvantaged subgroups (girls, rural, and poor children).

1. Variables in the Basic Education System:

   a. Level of training of teachers, turnover, absentee rate, etc.;

   b. Curriculum content and required teaching methods;

   c. Curriculum materials and equipment available from other than AID financing; and

   d. Examination procedures and requirements.

2. Extra-school variables:

   a. Family status

      i. Socio-economic level both within a community and across communities;

      ii. Parents' educational attainment; and

      iii. Occupational status of parents.

b. Parental perceptions of how to allocate family resources:

i. Allocations for present and future training; (willingness or unwillingness to pay school costs over extended periods);

ii. Allocations in the family work force (distribution of tasks to various family members that assign or preclude taking advantaage of educational opportunities);

iii. Allocations for future long-term goals, such as employment, marriageability, further training; and

iv. Need to disperse risk (by providing different opportunities for children).

c. Parental perceptions of the relevance of educational training:

i. At different school levels;

ii. With individual child's capabilities;

iii. As status enhancer;

iv. As means to attain present or future goals;

v. As obstacle to attaining present or future goals;

vi. As directly related to needed skills in child's environment;

vii. As preparation for other training program entry; and

viii. In competition with other alternative opportunities, such as job openings, other informal or nonformal educational programs, or training provided by a parent in a home or by other at work.

d. Parental perceptions of socio-economic constraints or opportunities:

i. Age related (over an age continuum and as a differential in family decisions about all children);

ii. Sex-role related (what parents conceive of as appropriate activities for their daughters or sons);

iii. Distance as protection and protection-related (what distances are too great for boys or girls to go to school and what are the thresholds if they have protectors who go with them);

iv. Institution related (punishments, attitudes of teachers, supervision);

v. Concepts of appropriate time to assume adult responsibilites (marriage, employment); and

vi. School mates (concept of appropriate people to be with or inappropriate people as related to sex and status or people who will enhance future opportunities).

e. Community level constraints or opportunities:

i. Economic activity rate levels;

ii. Well-developed short-term or long-term presence of education;

iii. Significant levels of employment opportunity requiring specific levels of education;

iv. Labor structure dependence or independence of child labor; and

v. Influx and outflux levels of population.

NEW-SCHOOL SITES

An explanation of terms will be helpful. Figure i-2 shows a diagram of a typical new-school site. The term "site" refers to the whole area surrounding the location of a new school (everything shown in the diagram). Usually the name of the site is the same as the name of the new school. If the school has not yet been named, the site is named for the village where the school will be located. The village where a new school is located is called the "focal" or "new-school" village. Often there are other villages nearby that do not have schools themselves and from which children may come to the new school. These are called "related villages."

Almost always there are pre-existing schools within a few kilometers of the new-school village. Some children from the new-school village (and the related villages) have already been attending these schools, often traveling considerable distances in order to do so. These are called "related schools." After the new school opens, many children may stop attending the related schools and come to the new school instead. In addition, other children who have never attended school may come to first grade in the new school. The area from which children will probably come to the new school is its "catchment area."

The present report of the "Intensive Study of New-School Communities" makes use of data from eight carefully selected, prototypical new-school sites in three governorates: Assiut, Beheira and Qena. The report of the "Extensive Study of the Impact of New Schools" makes use of data from additional new-school sites chosen at random from four governorates, Assiut, Beheira, Qena and Sohag. How these choices were made will be described below. We turn now to the report of the intensive study of the communities.

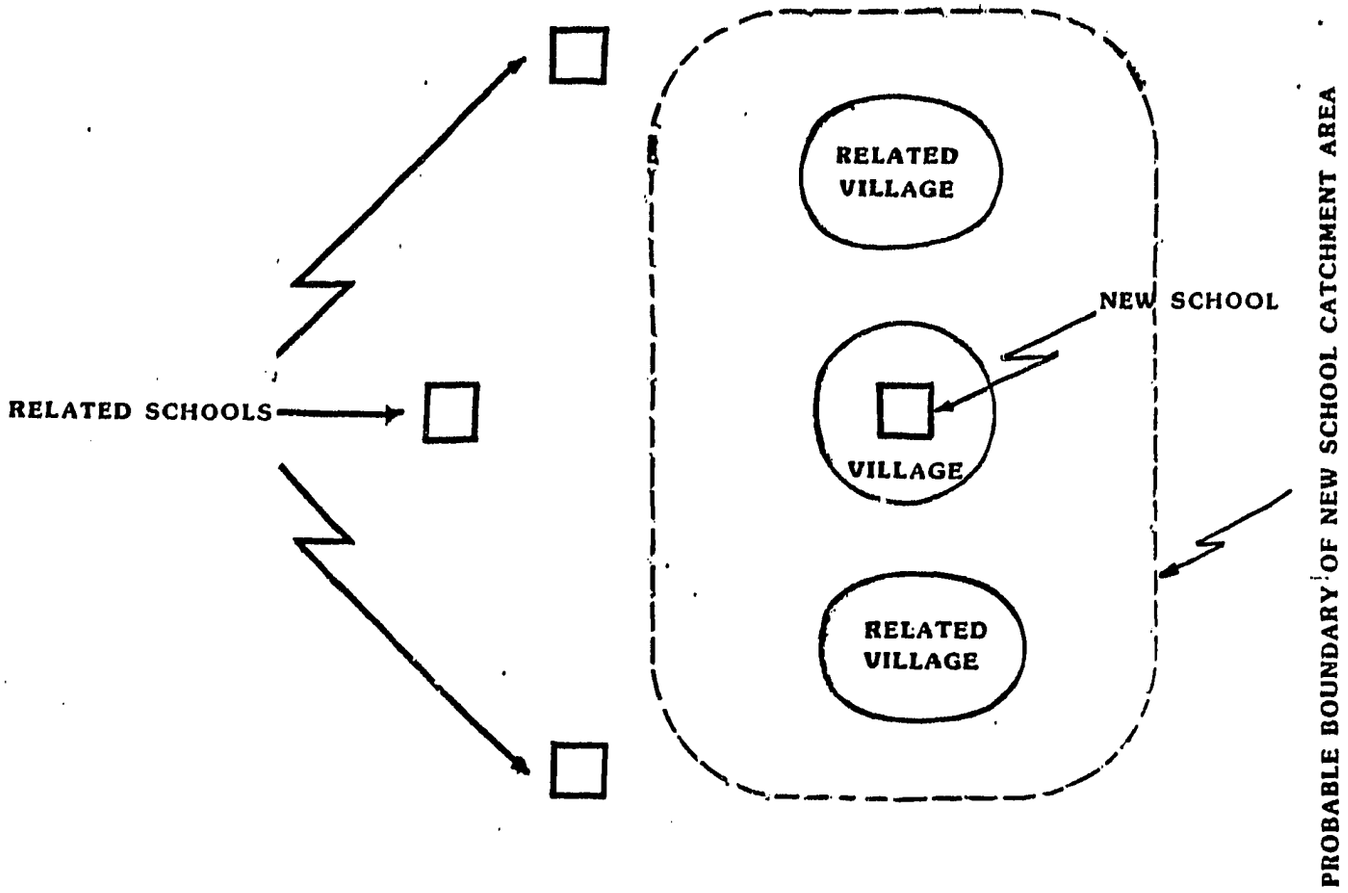

FIGURE i-2: DIAGRAM OF TYPICAL NEW-SCHOOL SITE

INTENSIVE STUDY OF NEW-SCHOOL COMMUNITIES

The design of the Intensive Study of New Schools is described in the Scope of Work, May 1984, pp. II-1ff. Briefly, the study was designed

- to examine the impact of new school construction on the school-going behavior of children in a few, carefully selected rural areas, with special attention given to educationally disadvantaged female, rural, poor, and Upper Egyptian children;
- to identify contributory and exogenous factors that constrain or encourage the enrollment and attendance effects of new school construction;
- to develop recommendations for siting of new school construction in order to more effectively accomplish the attendance objectives of the Egyptian Ministry of Education.

The intensive site study seeks to shed light on the contributory, exogenous, and project-induced factors affecting the enrollment and attendance of school children in the communities where new facilities are located. Because the list of potentially influential variables is extremely long, it was necessary to reduce the numbers studied to manageable proportions. Some important variables were deductively identified and used as the basis for site selection. Others have been identified through an inductive analytical strategy that permits dimensions to arise from findings in the field. In subsequent years we shall seek refinements of these variables and search out unknown and perhaps unsuspected factors from the assembled data.

This first annual report

- describes the research design;
- presents the general characteristics of the sample population and its present school-going patterns;

- tentatively identifies the most salient variables that contribute to school-going behavior both at the community and at the family level;

- tentatively assesses the degrees of relation between these salient variables and enrollment and attainment levels of children in the sample population.

RESEARCH DESIGN

Site Selection

The selection of the sample was a two-phase procedure that first defined appropriate sites and then located family samples within those sites. The sites were chosen to represent what are generally assumed to be sets of educationally relevant characteristics. We assumed at the start, that the following variables were relevant to educational participation. (See Scope of Work, pp. II-2, 3).

- Accessibility of educational opportunities (as a function of physical distance and the relative density of community population): we predict that children in densely packed communities where schools are available will be more likely to take advantage of educational opportunties than children who live in dispersed attendance areas and must travel long distances to school[1].

- Occupational opportunities requiring a degree of education situated within potential reach of community members (as a function of industrial and commerical ventures in surrounding areas): we predict that children in communities where commercial and industrial opportunities exist nearby will be more likely to take advantage of educational opportunities than children who live in agricultural communities where there may be no clear connection between education and future job opportunities.

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[1]Take advantage of" means, in this case, to enroll and attain appropriate grade levels.

- Value placed in education by community members (as indicated by the number of schools within a specified radius of the new school and the long-time established nature of those pre-existing schools): we predict that children in communities which have many and long-established educational institutions will be more likely to take advantage of educational opportunities than children who live in areas that have had little contact with such opportunities.

- Socio-economic level of the community: we predict that children from more affluent families will be more likely to take advantage of schools than children who come from less affluent families.

- Association with urban or rural contexts: we predict that children living in communities near or in frequent contact with relatively urbanized areas will be more likely to take advantage of educational opportunities than children in areas with little or no urban contact.

In the 1983 data collection period, eight intensive sites were studied in the governorates of Assiut, Beheira, and Qena (see Table I-1). In 1984, two further sites will be added to the sample. Eight of the sites were chosen to represent prototypical combinations of the five bipolar variables found in Table I-2. Table I-3 shows specifically how the sites represent these variables.

Table I-1: Intensive New-School Study Sites

	Intensive Site	Markaz	Governorate	Region	Date of New School Opening
1	Manshiya	Hosh Isa	Beheira	Lower Egypt	October 1983
2	Kafr Nekla	Mahmoudia	"	"	October 1983
3	Monshaat il Awkaf	Kafr il Duwar	"	"	October 1984
4	Khutaba	Negada	Qena	Upper Egypt	October 1983
5	Nag Dahi	Nag Hamadi	"	"	October 1983
6	Nag il Taref	Luxor	"	"	October 1984
7	Ghaneyem	Ghaneyem	Assiut	Upper Egypt	October 1983
8	Beni Rafa	Manfalut	"	"	? 1984
9	Fadli	Sidi Salem	Kafr il Sheikh	Lower Egypt	October 1984
10	Nag il Hareef	Akhmim	Sohag	Upper Egypt	October 1983

Table I-2: Characteristics Assumed to Affect Enrollment and Grade-Level Attainment

Variable	Negative Effect	Positive Effect
1. Spatial variables in the distribution of school populations	far / dispersed	near / concentrated
2. Occupational Variables	agricultural	touristic / industrial commercial
3. Value in education	few or no nearby schools; existing schools not long established	many schools long established
4. Socio-economic level	poor	self-sufficient / affluent
5. Urban / rural	rural / far from cities	urban / near cities

Table X-3: Summary of Intensive Site Characteristics

Data Obtained from Community Leaders' Estimates

Variable	Manshiya	Kafr Nekla	Monshaat il Awkaf	Khutaba	Nag il Tarel	Nag Dahi	Ghaneyem	Beni Rafa
Spatial								
Attendance area (bulk of students)	dispersed	concentrated	concentrated	dispersed	dispersed	concentrated	concentrated	concentrated
No. of related villages	17	3	4	3	10	0	8	5
Distance range to new school	0 - 3.5	0 - 2	0 - 2	0 - 1	0 - 3	0	0 - 2.5	0 - 4.5
Occupational Structure								
Head of household (% engaged in)								
agriculture	95	90	50	74	70	34	90	75
commerce	-	5	1	5	10	1	5	15
industry	-	3	40	1	-	50	-	-
government	5	2	2	15	5	10	5	5
other	-	-	7 (driver, mechanics, milk products)	5	15 (touristic)	5 (crafts)	-	-
Value in Education								
Year oldest related primary school est.	1964	1955	1954	1963	1948	1911	about 1930[1]	before 1950
No. of related schools (primary and prep)	4	7	14	5	7[2]	3	3	11
Distances to rel. schls from new sch. village in kilometers	3 - 10	2	2 - 6	4 - 10	.25 - 6	1	.25	.25-5
Socio-economic level (percent)								
high	-	1	-	-	2	-	-	-
above average	20	10	-	-	30	-	10	5
average	30	10	99	40	50	25	50	10
below average	-	80	-	-	15	75	-	25
poor	50	-	1	60	3	-	40	60
Urban Contact								
kilos to nearest city	10	2	4	9	6[3]	8	11[4]	8[5]
frequency of visit	infrequent	frequent	frequent	infrequent	frequent	frequent	infrequent	infrequent
ease of visits:								
roads	poor	poor	mixed	poor	good	good	good	good
transportation	poor	poor	poor	poor	good	good	good	good
television access	few	most	half	few	most	many	most	most
newspaper readers	few	few	few	very few	many	many	most	half

1 = New school will be preparatory school for girls.
2 = Close schools are Al-Azhar schools.
3 = Trip to city requires ferry ride as well as road transportation.
4 = Ghaneyem is considered an urban area (madina)
5 = Beni Rafa is itself consiered a town in that all goods are available.

Two sites in the governorate of Assiut were chosen for special study of girls' enrollment. There local authorities have requested single-sex girls' schools in areas that until now have had only mixed schools. The object of the special study is to determine the impact of single sex schools on girls' enrollment and attainment levels.

Care was taken to match the main characteristics of villages in Upper Egypt with villages in Lower Egypt to permit comparison of what are generally assumed to be two relatively different cultural areas of Egypt. Table I-4 specifies and locates the sites aggregated in this way and shows the special case girls' enrollment sites that make up a Middle Egypt category. In addition, sites are shown that have been paired according to the hypothesized factors that positively and negatively affect educational participation. Sites with positive factors have been categorized for convenience "urban" and those with negative factors as "rural." "Mixed villages" stand somewhere between the other two in terms of positive and negative values. The site selection enables the variables to be examined both in and of themselves and within group aggregates of selected variables at the regional, community, and household level.

Table I-4: Aggregated Sites

Site Category	Intensive Site Location		
	Upper Egypt	Middle Egypt	Lower Egypt
Regional			
Upper Egypt / Qena (3 sites)	Khutaba a (1983) Nag il Taref (1984) Nag Dahi (1983)		
Lower Egypt / Beheira (3 sites)			Manshiya (1983) Kafr Nekla (1983) Monshaat il Awkaf (1984)
Middle Egypt / Assiut (2 sites)		Ghaneyem (1983) Beni Rafa (1984)	
Educational Contexts			
"Rural" Villages (2 sites)	Khutaba (1983)		Manshiya (1983)
"Urban" Villages (2 sites)	Nag Dahi (1983)		Monshaat il Awkaf (1984)
"Mixed" Villages (2 sites)	Nag il Taref (1984)		Kafr Nekla (1983)
Special Case: Girls' Enrollment and Attainment			
Assiut (2 sites)		Ghaneyem (1983) Beni Rafa (1984)	

Note: The dates in parentheses are the years of school openings.

Within the requirements stated above, each site was also chosen to typify clusters of features characteristic of its governorate (see the Appendices for more detail about the sites). Manshiya represents the tribal, remote, poor regions of Beheira. Kafr Nekla and Monshaat il Awkaf represent villages in close communication with Delta towns. Khutaba, in Upper Egypt, is a typically remote village located on the edges of the desert to preserve valuable agricultural land. Nag Dahi is still agrarian (mostly sugar cane) but becoming more involved in the industries of nearby Nag Hamadi. Nag il Taref reflects the touristic occupations of inhabitants of some Upper Egyptian towns. Nag il Hareef, the Sohag site, is characterized by cottage industries in a governorate where land resources are scarce. Sidi Salem, the Kafr il Sheikh site, typifies the new villages that spring up around reclaimed areas in the Delta.

Household Sample Selection

Communities were divided into naturally occurring segments: quarters, blocks divided by main streets, or component settlements, and the sample distributed as equally as possible across these units. In general a pathway was defined leading through the residential unit and every n^{th} house was selected, the n chosen so as to obtain an appropriate size sample (about 40 households in each site). Families with no children or with children less than or more than the age limits defined below were excluded from the sample and the interviewers moved on to the adjacent house.

In each intensive site, a sample of households was also included from related villages surrounding the focal villages and comprising the attendance area of the new school. This sample was chosen by taking a few households from a selection of villages stratified on the basis of distance from the new school site, population size, and socio-economic level. (See Table I-5.)

Table I-5: Household Sample Sizes and Selection

New School Village	Related Villages	Sample taken
Manshiya		20
	Moh. Guwayda	5
	Abdulla Agha	4
	Ibrahim Fawzi	4
	Saleh Balash	4
	Manshiya il Gadida	3
Kafr Nekla		31
	Barakat	2
	Duwidar W'il Geza'ir	5
	Saad Girgius	2
Monshaat Il Awkaf		23
	Gurn	3
	Taraz	3
	Gadaisa	2
	Kafr il Duwar il Balad	9
Khutaba		10
	Idris	8
	Awadallah	10
	Khalayla	12
Nag il Taref		16
	Nag il Genayna	6
	Nag il Atiyat	6
	Esbah Salim	8
	Ababdah	8
Nag Dahi (Total 40)	Sharq (E)	16
	Gharb (W)	24
Beni Rafa (Total 40)		24
	Khayat	7
	Alexsan	7
	Helba	2
Ghaneyem (Total 40)	Sharq (E)	5
	Gharb (W)	6
	Bahari (N)	7
	Qibli (S)	5
	Tira Sohogiya	3
	Mashiya	7
	Azaza	7

Only households with children from the ages of 4 to 15 years were included in the sample: 4 years because of the child's potential to reach appropriate school age before the end of the project, and age 15 because it is the last year with significance for the Basic Education program of nine years. In the special-case girls' enrollment villages, the method of selecting households was the same as in the villages with mixed schools, except that families with only boys were excluded. In Beni Rafa where the new schoool will include grades 1-9, families with girls in the same age groups (4-15 years) were included, but in Ghaneyem where the school is preparatory level (grades 7-9), families were excluded if there were no relevant age girls between 10 and 15.

Time Table for Data Collection

Data were gathered in November and December 1983 from the eight sites in Beheira, Qena, and Assiut governorates. By the time we were able to begin field work, new schools had already opened in five of these a week or two before data collection began. Thus, their "baseline" data reflect a small initial impact. The three other sites had schools that will open in 1984.

In the Fall of 1984 we will collect data from two more sites, in Sohag and Kafr il Sheikh, where schools will open in 1984. Table I-6 shows the timetable for data collection by annual data gathering periods. The timetable is designed to survey each site two times after the initial opening of the new school facilities.

Table I-6: Timetable for Data Collection

	Intensive Site	Fall Collection '83	Fall Collection '84	Fall Collection '85	Fall Collection '86
1	Manshiya '83	x		x	+
2	Kafr Ne[illegible]a '83	x		x	+
3	Monshaat il Awkaf '84	x	x		x
4	Khutaba '83	x		x	+
5	Nag Dahi '83	x		x	+
6	Nag il Taref '84	x	x		x
7	Ghaneyem '83	x		x	+
8	Beni Rafa '84	x	x		x
9	[illegible]adli '84		x		x
10	Nag il Hareef '83		x		x

+ possible additional collection of data
x data collection

Instruments

The study used two main instruments: the community leader interview, and the household survey questionnaire (see Appendix).

Community Leader Interviews

An interview schedule for community leaders was designed to elicit information on the general social and economic situation of each focal village where a new school was to be situated. The interview covered such subjects as population estimates, migration, urban contact, transportation, utilities and services, occupational structures, economic levels and social differences, land ownership, educational opportunities, and attitudes about education. The object of the interview was to determine community factors that might bear on school enrollment and attainment.

The community leader interview was administered in groups of from two to sometimes ten or more participants. From the reception committees of dignitaries that greeted us in the village on our preliminary visit, usually one person was selected as the main respondent to whom questions were directed when we returned on the second visit. He was normally the sheikh il balad (head elder), the omda (mayor) or in the absence of these, someone officiating in their place. The others who attended the meeting with the central respondent actively participated in discussing the questions. When answers were hotly debated, we felt we gained a better understanding of the issues that were significant to the local inhabitants and improved the validity of our data. Questions were always asked by the Egyptian research assistant who then followed up on the question if there was some reason to believe more information would be helpful. In general, the answers we received were well thought-out and articulated.

By conducting the same interview in each site we were able very rapidly to build a picture of the local school environment, with its unique features and its shared similarities with other areas. It is important to caution, however, that the answers represent general estimates by people who are not often called upon to give accurate numbers or determine proportional rates of a phenomenon. Most questions did not have a "favorable" response, nor did they cover areas outside the experience range of the respondents. The most serious biases were those that reflected the ages, occupations, and statuses of respondents trying to answer for the whole community. Even with the biases mentioned, the interview served the purpose well of giving an overall view of the variety of contexts in which rural education takes place. By asking the leaders to evaluate general community patterns, a broader more balanced overview emerged than was possible from the range of opinions expressed in the households alone. The household interviews then could be used to reinforce or disconfirm significant trends emerging from the community leader interviews. Both kinds of interview with their different perspectives served to place in context the information of the other.

Household Survey Interviews

The household survey questionnaire (see Appendix) solicited information on the educational profiles of family members, their current economic level, school distances, and parental explanations of their school-sending patterns. The survey had two purposes: first, to compile an historical record of family school-sending behavior, and second, to investigate the relationship of variables, such as sex of child, economic level and school distance on enrollment and attainment.

The questionnaire was administered to parents or grandparents in their homes by Egyptian women researchers accompanied by a local facilitator usually chosen by a community leader or school administrator. Because the information solicited was generally known in the community and not of a private nature, the local facilitator served the useful purpose of helping us gain people's confidence quickly and providing a check on the accuracy of the answers. Though the facilitators at times tried to intervene to answer questions, an effort was made to assure that the intended subject answered questions without interruption. Overall, the positive effects of the facilitator's presence outweighed any negative effects he or she may have had and, indeed in many cases, guaranteed the easy access we experienced.

Validity of Responses

The reliability and validity of the information solicited from respondents was enhanced through several efforts.

- The same women interviewers were used for the entire year's data collection; each recorded answers on an interview schedule form and later coded the results; pairs of researchers then double checked the codings.
- Community leaders were assigned as local facilitators and helped us gain the trust of respondents.
- The information gathered was non-threatening.
- Key questions were asked in different ways more than once during an interview, and the answers were compared.

Data Reduction and Analysis

Data from the intensive sites are primarily descriptive and qualitative. Many qualitative responses were reduced to categories and scales so they could be tabulated and displayed as frequency distributions. This first year report

takes the form of an analytical, interpretive essay supported by protypical, qualitative descriptions and associated frequency distributions.

SAMPLE PROFILE

The individuals comprising each of the sample households may be categorized in a variety of ways. The following categories were chosen for their potential relationships to the school-going behavior of children.

FAMILY MEMBERSHIP

A few households contained more than one family (see Table I-7). The school-going decisions made by one family are not necessarily similar to those of another, even though they lived in the same house.

GENERATIONS

Each family was divided into two generational levels, older and younger. The older generation consisted of the parent-respondent, his or her spouse, siblings, in-laws, elderly parents, and other older relatives living with the family. The younger generation consisted of the parent- respondent's children. The assumption behind this division was that different decision-making factors with regard to educational participation might be in effect within each generational cohort. Decisions made by parents of children currently in school might be different from the decisions made for these parents in the past by <u>their</u> parents; this turned out to be the case. The number of individuals categorized as members of the older and younger generations are shown in Table I-7.

Table I-7: Households, Families and Generational Membership in the Sample

GOVERNORATE	VILLAGE	NO. OF HOUSEHOLDS	NO. OF FAMILIES	NO. OF INDIVIDUALS						
				NO. OF OLDER GENERATION			NO. OF YOUNGER GENERATION			TOTAL
				M	F	Tot.	M	F	Tot.	
Beheira	Manshiya	40	46	69	61	130	107	114	221	351
	Kafr Nekla	40	43	49	52	101	106	103	209	310
	Monshaat il Awkaf	40	47	60	54	114	144	97	241	355
	Khutaba	40	43	54	55	109	108	92	200	[illegible]
	Nag il Taref	44	45	51	51	102	106	123	229	331
Qena	Nag Dahi	40	42	44	50	94	103	75	178	272
	Ghaneyem	40	40	39	44	83	102	124	226	309
Assiut	Beni Rafa	40	42	50	48	98	91	123	214	312
	TOTAL	324	348	416	415	831	867	851	1718	2549

M = Males
F = Females
Tot. = Total

AGE LEVEL AND SEX

The household sample compared well with the sex and age distribution of the 1976 census results for the same areas where these were available. In the sex by age category, as a result of the smaller number of cases per unit, occasionally a module shows a disproportionate number of one sex or another when compared with census figures. Within-sample comparisons for this reason are always reported in terms of ratios.

MANDATORY AGE CHILDREN

Table I-8 compares the ratio of mandatory age children in the sample with the ratio of those in the 1976 census. The proportion of mandatory age children (5-15) was close to one-third of the total population. The somewhat higher proportion of mandatory age children in the household sample reflects the deliberate inclusion of families with children of age levels mentioned above. Table I-9 shows family composition by age and sex at the time of the 1983 data collection.

RELIGION

All sites are predominately Muslim with Kafr Ne a, Monshaat il Awkaf, and Beni Rafa's small Christian populations represented by one family each in the sample. Not unexpectedly Ghaneyem in the heaviliy Christian governorate of Assiut had the only site with a sizeable Christian population (see Table I-10).

Table I-8: Mandatory Age Children as Proportion of Total Populations

Intensive Site	Children 5 - 15		Total Population		Ratio	
	Sample	1976 Census	Sample	1976 Census	Sample	1976 Census
Manshiya	107	Not available	351	Not available	.30	Not available
Kafr Nekla	114	642	310	2,200	.37	.29
Monshaat il Awkaf	118	721	355	2,472	.33	.29
Khutaba	100	2,360	309	8,387	.32	.28
Nag il Taref	103	2,857	331	10,917	.31	.26
Nag Dahi	90	Not available	272	Not available	.33	Not available
Ghaneyem	113	5,991	309	21,899	.37	.27
Beni Rafa	101	4,173	312	15,254	.32	.27

Table I-9: Family Composition by Age Level and Sex

Intensive Site	Age of Children	Families with Mixed Sexes	Families with Boys only	Families with Girls Only	Total Families
Manshiya	Less than 6	4	0	2	6
	Some school age	37	1	2	40
	TOTAL	41	1	4	46
Kafr Nekla	Less than 6	0	1	0	1
	Some school age	37	3	2	42
	TOTAL	37	4	2	43
Monshaat il Awkaf	Less than 6	1	1	0	2
	Some school age	41	3	1	45
	TOTAL	42	4	1	47
Khutaba	Less than 6	1	3	1	5
	Some school age	32	4	2	38
	TOTAL	33	7	3	43
Nag il Tarôf	Less than 6	1	0	1	2
	Some school age	39	1	3	43
	TOTAL	40	1	4	45
Nag Dahi	Less than 6	1	1	2	4
	Some school age	31	6	1	38
	TOTAL	32	7	3	42
Ghaneyem[1]	Less than 6	0	0	0	0
	Some school age	38	0	2	40
	TOTAL	38	0	2	40
Beni Rafa[1]	Less than 6	2	0	1	3
	Some school age	36	0	3	39
		38	0	4	42

[1]In these two special-case sites for the study of girls' school-going behavior, families with boys only were excluded from the sample

Table I-10: Religious Affiliation of Families.

Intensive Site	Moslem	Christian	Other	Total Families
Manshiya	46	0	0	46
Kafr Nekla	42	1	0	43
Monshaat il Awkaf	46	1	0	47
Khutaba	43	0	0	43
Nag il Taref	45	0	0	45
Nag Dahi	42	0	0	42
Ghaneyem	30	10	0	40
Beni Rafa	41	1	0	42
TOTAL	335	13	0	348

ECONOMIC LEVEL

Table I-11 shows the economic levels of families in individual intensive site villages. Interviewers were asked to form judgments of the economic levels of families on the basis of the following criteria: occupation, value of household production, material possessions, dress and adornments, ownership of livestock, land and vehicles, and level of expenditure. A five-point scale of poor, below average, average, above average, and affluent was employed, with interviewers identifying the criteria that most heavily weighed in their estimation. Their judgments, based on general Egyptian rural standards, were checked by the field supervisor to ascertain that relative uniformity existed.

Figure I-1 shows the economic data aggregated by urban, mixed, and rural villages and also by governorate.

- rural villages were characterized by relatively high numbers of families categorized as poor and below average;
- urban villages were characterized by larger numbers in the average range but showed a usually broader distribution across the economic scale;
- the "mixed" villages and the special case girls' enrollment sites divided with one of each pair (Kafr Nekla and Ghaneyem) following an urban pattern, and the other (Nag il Taref and Beni Rafa) following a rural pattern.

Given the concern of the MOE and USAID to select school sites with disadvantaged school populations, it is not unexpected to find the majority of families average or below in economic level. The spread of households also met anticipated outcomes in the selection of sites appropriate for evaluation in a variety of environments. Moreover, aggregated governorate/regional sites showed little disparity, indicating that comparison samples in Upper and Lower Egypt were fairly well matched with respect to economic levels.

Table I-11: Economic Levels of Families

Intensive Site	Poor		Below Average		Average		Above Average		Affluent		No Ans.		Total Families
Manshiya	14	.30	13	.28	12	.26	7	.15	0	0	0	0	46
Kafr Nekla	9	.21	10	.23	13	.30	7	.16	4	.09	0	0	43
Monshaat il Awkaf	5	.11	10	.21	23	.49	7	.15	1	.02	1	.02	47
Khutaba	12	.28	13	.30	14	.33	3	.07	1	.02	0	0	43
Nag il Taref	2	.04	17	.38	13	.29	9	.20	4	.09	0	0	45
Nag Dahi	7	.17	10	.24	14	.33	9	.21	2	.05	0	0	42
Ghaneyem	7	.18	10	.25	17	.43	2	.05	4	.10	0	0	40
Beni Nafa	10	.24	9	.21	13	.31	9	.21	1	.02	0	0	42
Total	66		92		119		53		17		1		348

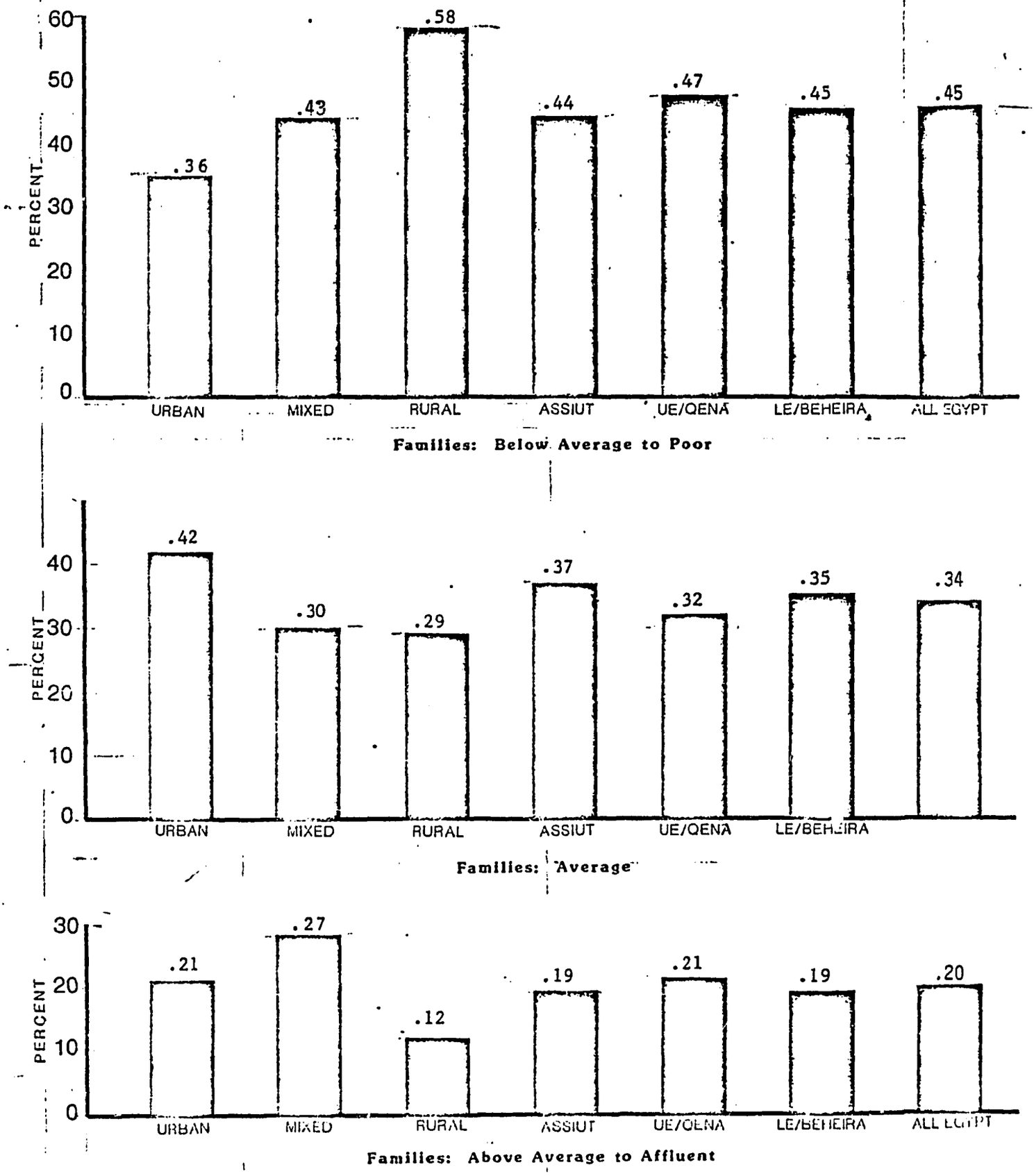


FIGURE I-1: DISTRIBUTION OF ECONOMIC LEVELS IN URBAN, MIXED, AND RURAL VILLAGES

DISTANCE FROM NEW SCHOOL FACILITIES

The household survey questionnaire gathered information about two kinds of distance from family residence to educational institutions. The first of these was the distance individuals reported traveling to their present or last attended schools. These varied by the individual member of the household. The second was the distance of the village from the new-school site. This was an arbitrary number assigned to all families in a single settlement after we discovered from discussions with villagers that there exists a strong psychological sense of membership in discrete communities. Parents who reside within a .5 kilometer radius of each other in a single settlement do not feel that variations of a hundred meters or so make any significant difference in the school-going behavior of their children. The first distance reported permits historical comparisons of the influence of distance on school-going behavior, and the second will be used to estimate the influence of distance on the impacts of the new schools.

Table I-12 shows the distance of families from the new-school sites according to the arbitrarily-assigned figures. These vary somewhat within sites as a result of differences in location of related villages.

Figure I-2 shows the percent of families in aggregated sites that are concentrated within a narrow radius (.5 kilometer) of the school. One can see from Figure I-2 that

- urban villages included more than three-quarters of the sample families within .5 kilometer of the new school;
- rural villages had just over half of the families within .5 kilometer of the new school;
- Upper and Lower Egyptian samples both had about 70 percent of their children in the same range, making them appropriately comparable with respect to physical distance.

Table I-12: Distance of Families from New-School Sites

Intensive Site	0 -.5 km	1 km	1.5 km	2 km	2.5 km	3 km	3.5+ km	Total Families
Manshiya	30	0	11	0	0	5	0	46
Kafr Nekla	34	4	0	5	0	0	0	43
Monshaat il Awkaf	27	10	5	5	0	0	0	47
Khutaba	20	23	0	0	0	0	0	43
Nag il Taref	29	8	0	0	0	8	0	45
Nag Dahi	42	0	0	0	0	0	0	42
Ghaneyem	7	0	0	23	0	0	10	40
Beni Rafa	24	0	0	16	0	0	2	42
	213	45	16	49	0	13	12	348

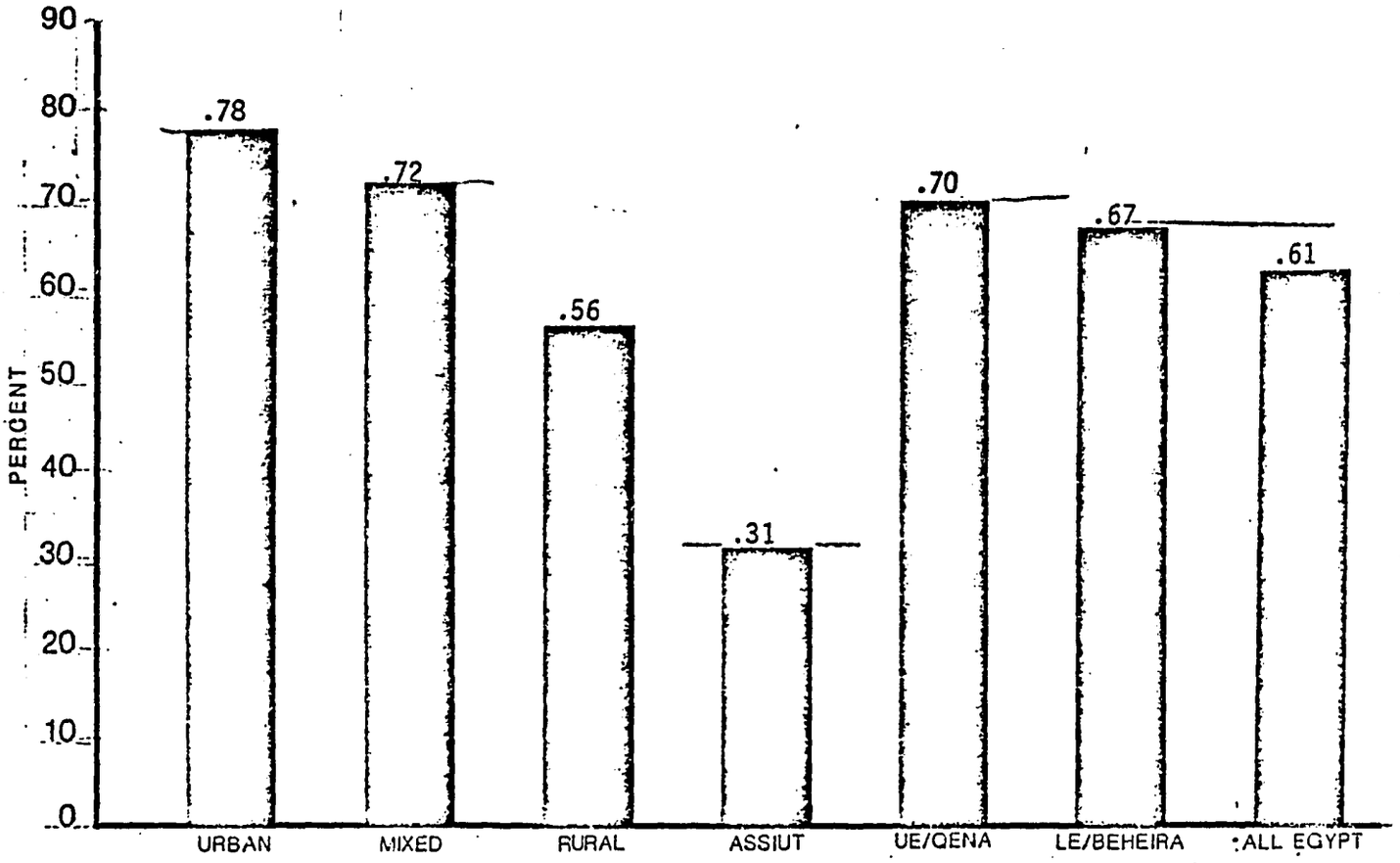


FIGURE I-2: PERCENT OF SAMPLE FAMILIES CONCENTRATED WITHIN 0.5 KILOMETERS OF THE NEW SCHOOL SITES

Most of the school-going population in intensive sites occupies an area within .5 kilometer of the new school. Those outside this radius contend not only with a physical but a psychological sense of separation from the village where the new school is located.

OCCUPATIONAL STRUCTURE OF THE OLDER GENERATION

A description of the occupational structure of the older generation gives an idea of the context in which school-going decisions are finalized, shows the range of work opportunities available to young men, and suggests the kinds of occupation models closest to the child's observation (see Figures I-3 and I-4).

Women:

- 96% of the women (395 out of 415) were reported to be housewives (another 14 were engaged in farming, one was in unskilled labor, and two were property owners).

Though women most definitely work long hours in agricultural production in family plots, in processing of agricultural products from which they earn income, or in seasonal wage labor on other farmers' lands, they rarely report this work as an occupation. They do not report it because 1) they consider their primary role to be homemaking, and 2) any wages or incidental money they earn is considered supplementary to what the main male provider of the household earns. When a woman claims an occupation, it is usually because for one reason or another she has become the head of the household, and it is necessary to explain the source of her subsistence.

- Rural girls were familiar with only a limited range of models on which to base their adult roles.

Girls typically become housewives, and if their families are sufficiently well off, remain home engaged in the care of the house and children. If the

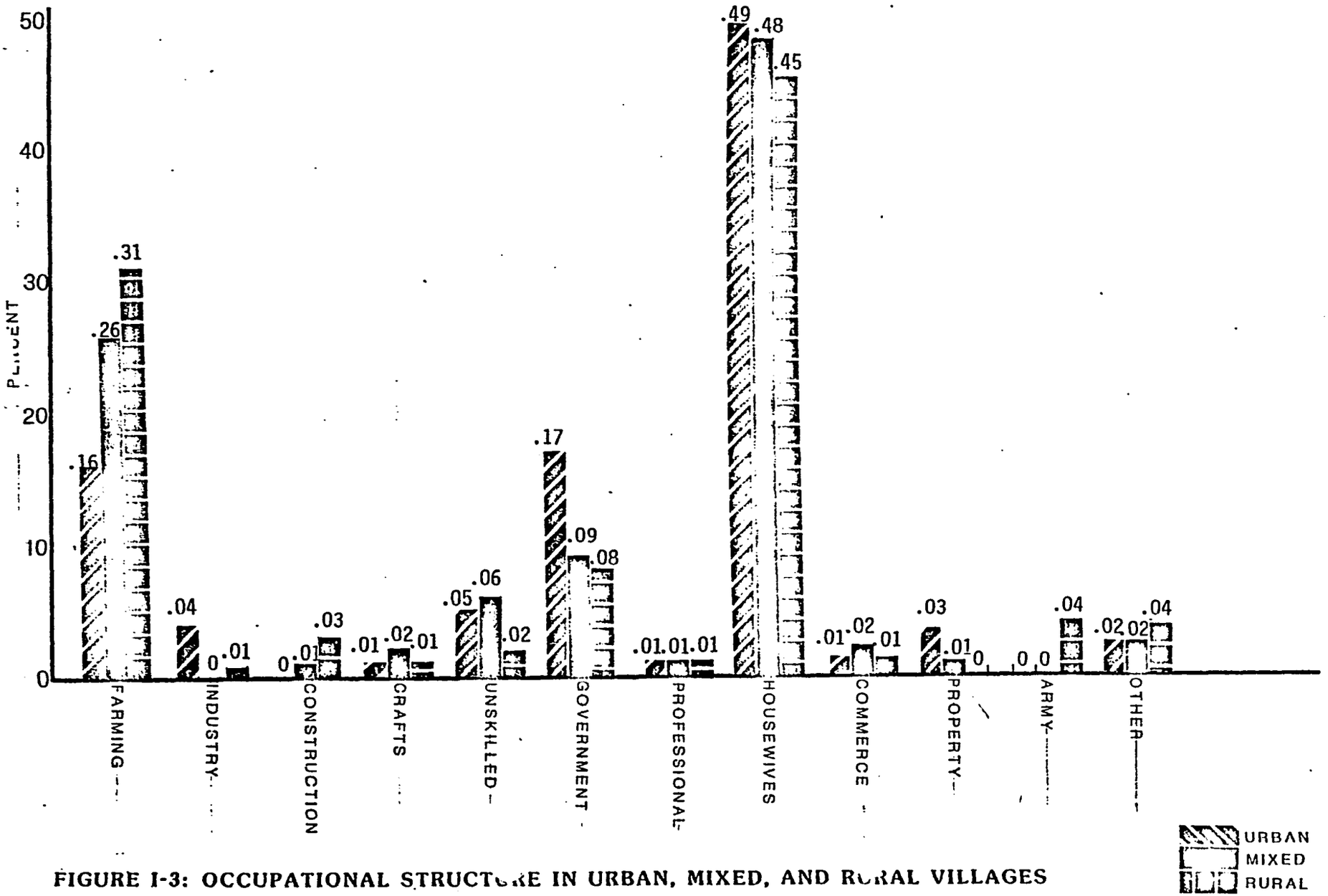


FIGURE I-3: OCCUPATIONAL STRUCTURE IN URBAN, MIXED, AND RURAL VILLAGES

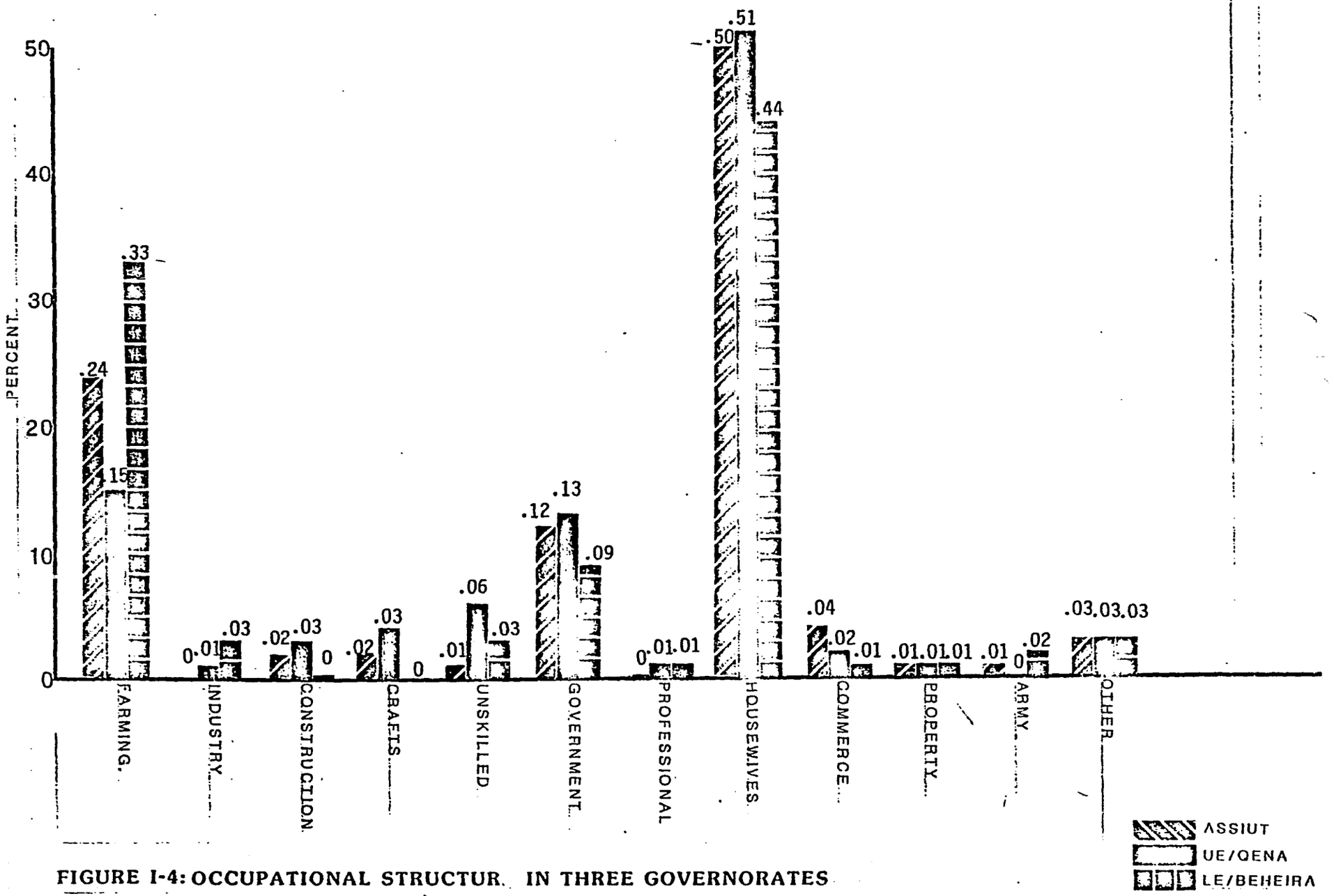


FIGURE I-4: OCCUPATIONAL STRUCTUR. IN THREE GOVERNORATES

family does not have sufficient income they must work on the family-owned land, or in more economically constrained circumstances, in daily agricultural wage labor. A few villages like Kafr Nekla offer opportunities for girls in brick-making and unskilled construction work. If wage labor is engaged in by women, it is usually by the young unmarried and elderly women, both of whom are not as actively involved in the daily care of the house. Another less common model, but one that people in all villages mentioned, was the professional woman with extended education who works as a nurse or, better in terms of status, as a teacher in a primary school. Though this kind of work was beyond the realistic expectations of most of the families, those who sent girls in the younger generation to school cited these models as ones appropriate for their daughters if they were successful in their studies. Further supporting evidence for a potential change in occupational norms came in the questions asked parents about why they educated their children. The leading reason given was "preparation for an occupation" with parents responding in this way for 36 percent of the boys and 28 percent of the girls (see "Benefits of Education" below).

Men

- The primary occupation in all villages was farming (45 percent overall) except in one of the two settlements of Nag Dahi where long established educational institutions have produced a number of government employees. The second most common occupation was government employment (23 percent overall) and the third, unskilled work (7 percent).

- The ratio of heads of household engaged in farming was considerably higher in most villages of Lower Egypt than Upper Egypt.

- The ratio of those engaged in farming was highest in rural and lowest in urban villages and reversed this pattern for government employment, the second most common occupation.

All the villages reported problems in the agricultural sector, such as the dwindling land-to-person ratios, the high costs of agricultural labor, the low returns for production, and inflation. All community leaders reported the desire of villagers to find modes of earning income that provide an alternative to agriculture. The range of occupations found in the sample show the results of this attempt to diversity the modes of earning incomes. In many respects, this diversity is a measure of change, of a willingness to try novel solutions, and of the broadening spectrum of opportunity that is a recent development in Egyptian villages.

Villages still experience differences in their opportunity structures. In the rural Lower Egyptian village of Manshiya, for example, there are basically only two choices: farming and government employment, with the latter only providing limited openings and requiring extensive training for the better positions. Still government employment is the second most common occupation. The third choice, to join the army, is not a choice as much as a requirement for most of those so occupied.

Kafr Nekla adds a few commercial and service occupations to Manshiya's range, and Monshaat il Awkaf adds industrial and manual skills. As the range of opportunity increases in these sites, so do the other characteristics that lead us to call a village "urban."

In the Upper Egyptian villages of the Qena governorate, more people are engaged in a broader spectrum of occupations than in the comparable villages of the Delta. The higher incidence of government employees in these villages reaffirms the reality for people that governmental work is often the most attractive alternative for rural children forced or wishing to escape the arduousness of farming. The rural village of Khutaba had the most individuals

employed in government after farming, as did the "mixed village" Nag il Taref. The latter also added an almost equal number of unskilled workers to its range. The "urban" village Nag Dahi turned up more government employees than farmers with almost three times as many of these engaged in white collar as opposed to blue collar work.

In the Assiut sites, the occupational structure revealed Ghaneyem as an urban town/village with occupations distributed almost equally between farming, government employment and commerce. Beni Rafa, by contrast, followed the rural pattern of a preponderance of farmers and a secondary cluster of government employees.

In many respects it is the relationship between agriculture and human communities that underlies the motivational responses of villagers to the educational experience. In families where agriculture is still the dominant occupation and sufficient land is still available to meet family needs, the relevance of an education that takes children from the land may be questioned. In families under pressure to diversify their incomes, where diminishing land makes people anxious for the futures of their children, long-term education may seem the most certain way to what seems like the only viable alternative, a guaranteed government job. For a few villages another possibility is industrial work or skilled manual labor, but increasingly these kinds of jobs are also requiring minimal literacy skills, and thus education.

For families under economic pressure, the case to educate seems not so urgent for daughters who "grow up to contribute to another man's household," unless a connection is made between education and marriage choices, which when good, reflect well on the entire family.

Place of Work

- The older generation worked 87 percent of the time in the home village, 5 percent in nearby towns, 2 percent in far towns, and 2 percent abroad.
- There was no consistent difference between "urban," "rural" or regional villages with regard to place of work.

From the parents' experience, there is little precedence for leaving the village to seek the kinds of opportunities an extended education offers. Still, people in almost every household can give specific examples of village children who have gone outside the community to pursue careers requiring high degrees of education. Most of these sending their children to school said they would like their boys to become doctors or engineers (the status professions in Egypt) and would have no objection if their male children left the village for work. It was rare to hear them express the same hope for girls. Girls should ideally become teachers and work within the village if they work at all. Or they can marry and follow their husbands to a new location.

Migration

- 80 percent of the sample families had no member migrating outside the village to live temporarily or permanently elsewhere.
- 10 percent had one or more family members who migrate for work within Egypt.
- 9 percent migrated abroad and 1 percent had members who migrated both locally and abroad.
- Rural villages had the highest (between 14 and 15 percent) level of migration within Egypt (including also Beni Rafa which tends toward rural patterns)
- The mixed villages of Kafr Nekla and Nag il Taref had high levels (18.6 and 8.9 percent) of foreign migration, as did the rural village Khutaba (18.6 percent) and Beni Rafa (9.5 percent).

- Mixed villages (31 percent of males and 59 percent of females) had overtaken urban villages (31 percent of males and 66 percent of females) in having the lowest rates of illiteracy.

- Beheira/Lower Egypt still surpassed Upper Egyptian Qena and Assiut in rate of illiteracy with 39 percent for men and 72 percent for women.

Comparison Between the Generations in Rates of Illiteracy

- In the entire sample, between the two generations of males in the same families illiteracy has been reduced 20 percent; for females 23 percent.

- Rural villages showed a reduction of 24 percent for males and only 9 percent for females.

- Urban villages show a reduction of only 7 percent for males but 20 percent for females.

- Mixed villages show a reduction of 28 percent for males and 30 percent for females.

- Beheira/Lower Egypt showed the greatest reduction (22 percent) in illiteracy for males while Assiut showed the greatest reduction (27 percent) for females.

Illiteracy is being reduced most quickly in the mixed villages; for males there appears not to be as much change between the generations in urban areas where enrollments were already higher in the older generation. For females the ratios have changed little in the most remote rural areas. In Assiut, where social norms have changed considerably between the generations, girls ratios of illiteracy have been measurably reduced.

Literacy Without Formal Education (Simple Literacy)

Older Generation

People who claimed literacy without formal education usually attended informal lessons or religious schools (Kutaab) or took adult literacy courses. Whether simple literacy gives an individual functional skills that

Foreign migration which in many ways opened up economic opportunities that had never been available to villagers before, at present is slowing, villagers report, because it requires not only a great deal of prearrangement and initial investment, but also usually requires the right contacts between villagers and the organizers of work crews. Cases of fraud and subsequent loss of money have made many villagers cautious about seeking such jobs.

EDUCATIONAL PARTICIPATION

Illiteracy

Older Generation

- The majority (72 percent) of all sample individuals in the older generation were completely illiterate. The ratio of illiterate women was considerably higher (88 percent) and men lower (56 percent).
- Rural villages had the highest rate of illiteracy (76 percent of the men, 96 percent of the women, and 84 percent overall).
- Urban villages had the lowest rate of illiteracy (38 percent of the men, 86 percent of the women and 62 percent overall).
- Of the regional areas, Beheira/Lower Egypt had the highest illiteracy rates (61 percent of the men, 92 of the women and 76 percent overall).
- Of the individual sites rural Manshiya had the highest illiteracy rate (78 percent of the men and 98 percent of the women) and urban Nag Dahi the lowest (32 percent of men and 86 percent of women).

Younger Generation

- Just slightly over half (51 percent) of the total sample's younger generation were totally illiterate. The rate of illiterate girls was 65 percent and boys 36 percent.
- Rural villages still maintained the highest rate of illiteracy (52 percent of boys and 84 percent of girls with an overall rate of 67 percent).

are useful was difficult to determine within the time constraints of a household survey. Our impression was that definitions of simple literacy range from the ability to sign a name to the ability to read such difficult Arabic texts as the Koran.

- Overall 9 percent of the sample's older generation claimed simple literacy and of these 16 percent of the men and 2 percent of the women made the claim.
- Those claiming simple literacy were lowest (7 percent) in the rural villages where presumably the opportunities for even informal lessons were checked. Urban villages followed closely with 8 percent, probably due to the availability of competing formal educational facilities.
- The highest rate of simple literacy was found in mixed villages (13 percent) where in one village, Nag il Taref a strong Azhar system of religious education exists.

If it is assumed that simple literacy is in most cases a low-level skill and the total of those with simple literacy is added to the number who are illiterate, then the gap between male and female illiteracy is reduced considerably. The largest disparity remains between males and females of urban villages and the smallest in rural villages. Thus informal systems of education in the older generation when they existed at all were utilized more often by males.

Younger Generation

The numbers who claimed simple literacy in the younger generation were negligible. Choices between enrolling and not enrolling tended to be more clearcut in this generation where formal educational facilities are more readily available.

Formal Education

Older Generation

The sample's older generation formed a classic example of an earlier pattern of educational participation in rural Egypt that some studying the

subject have come to accept as valid until the present. The example of this older generation therefore provides a nice pre-baseline measure from which a continuum of the present status quo and future baseline measures can be extended historically. (See Figure I-5.)

Primary or Higher

- Overall, 19 percent of the sample's older generation attended some formal education and 11 percent did not continue on beyond primary level.
- Predictably, the ratios followed the conventional urban-rural continuum with highest participation in the urban villages (30 percent), to lowest in mixed (13 percent) and rural (11 percent) villages.
- Assiut (25 percent) with its more urbanized sites and long-established educational history exceeded the ratio of Upper Egyptian Qena (18 percent) and Lower Egyptian Beheira (16 percent).

Preparatory or Higher

- Overall 14 percent of the sample population attended preparatory or higher and 3 percent did not continue on beyond that point.
- The urban-rural scale was maintained in the conventional order: urban (13 percent), mixed (6 percent) and rural (4 percent) attending some preparatory school or higher.
- Upper Egyptian Qena (9 percent) had a higher ratio than Assiut (8 percent) and Lower Egyptian Beheira (6 percent)

Secondary and Higher Education

- Overall 8 percent attended secondary level or higher.
- The urban-rural scale was maintained in general: with urban a higher (9 percent), and rural a lower (3 percent) ratio of participation, but this time the mixed villages are slightly lower (2 percent).
- Upper Egyptian Qena (7 percent) was barely higher than Assiut (6 percent) and Lower Egyptian Beheira (2 percent).

In the older generation a picture emerges of educational participation conceived as two different levels: one a functional level of literacy and

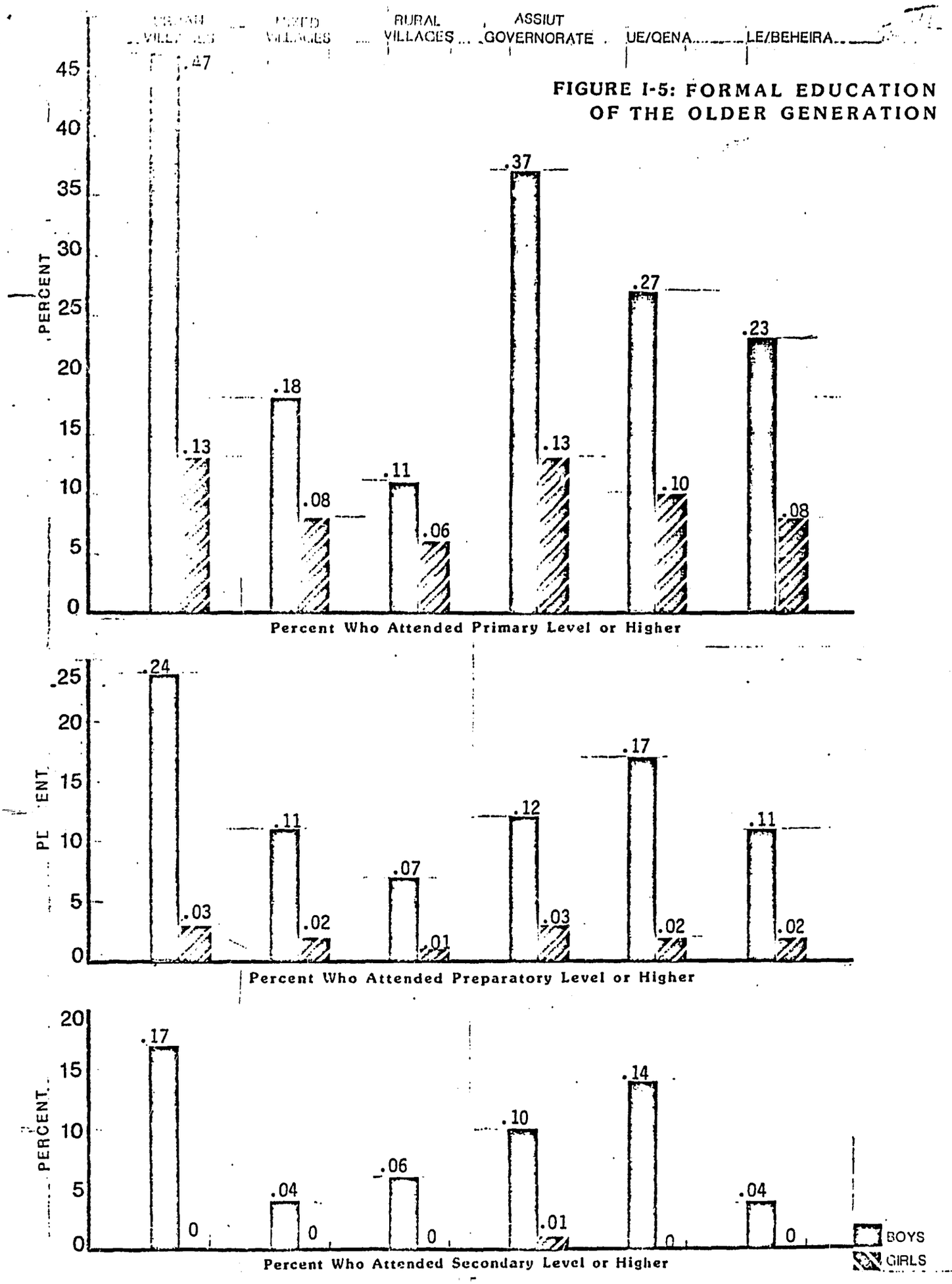


FIGURE I-5: FORMAL EDUCATION OF THE OLDER GENERATION

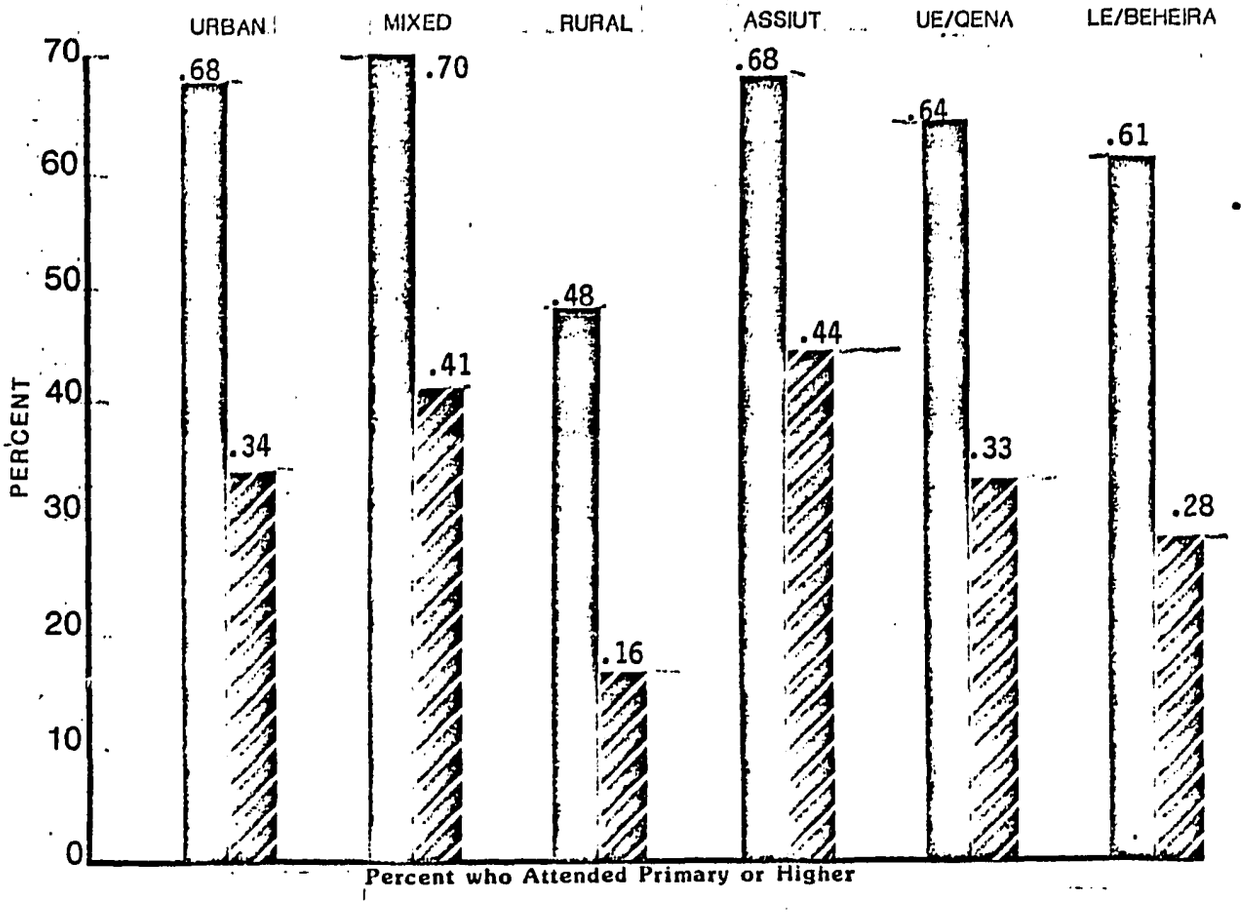
numeracy achieved at the primary level and helpful in terms of general life experiences, and the second a level of advanced education where those who complete it move to a new socio-economic stratum in the society. The number who drop out after elementary level is proportionally much higher than those who drop out between preparatory and secondary level.

Younger Generation

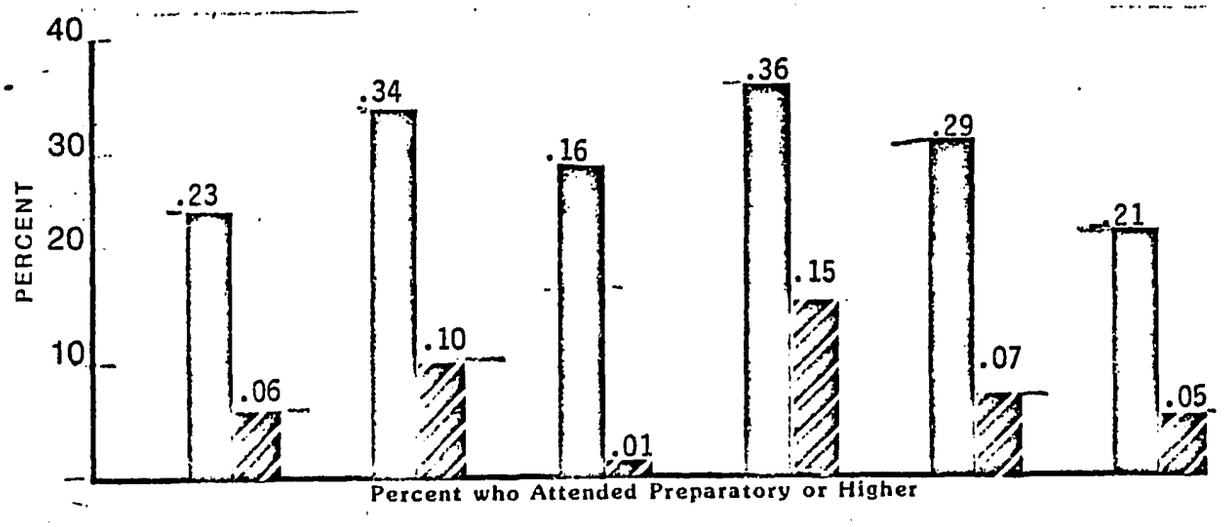
Almost without exception the younger generation was born in post-revolutionary Egypt, after 1952, in a period when the government began seriously to provide the necessary prerequisites for universal education. If individuals in the older generation acquired an extended education it was usually the result of unique sets of circumstances that contributed to their persistance in the system: a particular ability, a foresighted parent, ready access to facilities, or an economically self-sufficient or affluent family with advanced ideas for the community. From the interviews we learned that a number of these adult educated individuals had left the village and relocated fairly permanently in large provincial towns or cities where their talents found better use. It is not until the younger generation that the momentum for education has produced more consistent trends and patterns. (See Figure I-6.)

Primary or Higher

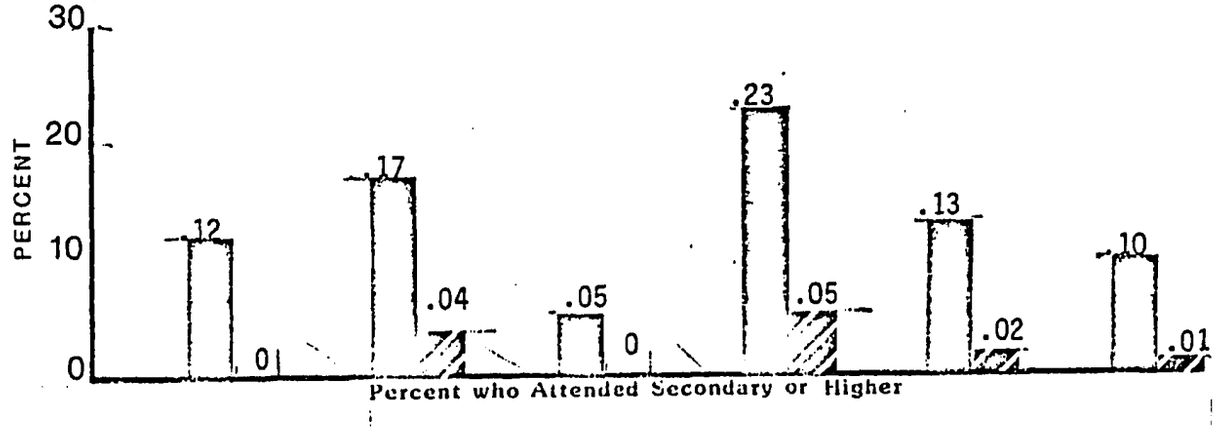
- Overall 49 percent of the sample's younger generation attended some formal education but 31 percent did not continue beyond some portion of primary level.
- Urban and mixed villages showed the highest ratio (54 percent) and rural villages the lowest (32 percent)
- Assiut had the highest ratio (54 percent). Upper Egyptian Qena the next (40 percent), and Lower Egyptian Beheira the lowest (45 percent).



Percent who Attended Primary or Higher



Percent who Attended Preparatory or Higher



Percent who Attended Secondary or Higher

BOYS

Preparatory or Higher

- Overall, 18 percent of the younger generation attended preparatory level or higher and 10 percent did not continue beyond that level.

- The mixed villages had the highest ratio (22 percent) attending preparatory or higher, then, urban (16 percent) and finally, rural (9 percent) villages.

- Assiut had a higher ratio (24 percent) than either Qena (18 percent) or Beheira (13 percent).

Secondary and Higher Education

- Overall 8 percent of the younger generation attended secondary level or higher.

- Mixed villages had the highest ratio (10 percent), urban (7 percent) and rural (3 percent).

- Of the regions Assiut was highest (13 percent) followed by Upper Egyptian Qena (8 percent) and Lower Egyptian Beheira (6 percent).

Comparison between the Generations

- Overall, the greatest increase in educational participation occurred expectedly at the primary level (30 percent), with only a small increase at preparatory level (4 percent) and none at all at secondary and higher. For rural children, it is still the exception in this generation to continue education beyond the primary level. Partly responsible are the much greater commuting distances required in several of the villages when a child advances to these levels. Widespread education is so recent a phenomenon, however, that in villages where facilities are available, it can be anticipated that larger numbers will soon be going to higher levels.

- In the urban-rural categories, the mixed-village ratios of participation increased the most dramatically at all three educational levels (by 41, 16, and 8 percentage points respectively). Urban and rural villages showed moderate increases (24 and 21 percentage points) at the primary level, small increases (3 and 5 percent) at the preparatory level, and hardly any change (2 and 0 percent) at the secondary level.

- Qena increased the ratio of those in primary and above slightly more (31 percent) than Assiut and Beheira (both increased by 29 percent). Assiut moved forward (16 percent) at preparatory level, higher than Qena (9 percent) and Beheira (7 per cent). Assiut again increased at a rate (7 percent) above Beheira (4 percent) and Qena (1 percent) at the secondary level.

The locus of increasing enrollments in the sample is therefore fairly evenly distributed across the governorates at the primary level but centered most substantially in the mixed villages of Upper and Lower Egypt. Assiut and the mixed villages again are the locus of major changes at the preparatory level. Both of the mixed villages have had fairly long established nearby school systems but did not have in the older generation the higher enrollments of urban villages. The rush for education in these villages appears to have been delayed until recently. The combination of accessibility of institutions, time to become accustomed to education, and a large potential pool of candidates seems to have been instrumental in increasing participation ratios in these mixed villages.

Patterns of Formal Education by Sex

Older Generation

The patterns of educational participation become more significant when they are broken down by sex. They show that even in the older generation there was no comprehensive prohibition against girls' participation in formal education programs. Rather, girls' education was not a widely accepted norm and became even less acceptable as girls reached preparatory level. It was at secondary level that communities actually drew the line and both normatively and in fact proscribed education for girls. We thus start with a pre-baseline fact that females of the present parental generation participated at the primary level at all the intensive sites even if only at low levels of

enrollment and attainment. This is also true at a more reduced rate for preparatory level in all sites but Manshiya and Beni Rafa where girls did not enroll. By secondary level only 1 female in the older generation participated (in Ghaneyem).

Figure I-5 shows the participation ratios for older generation males and females:

- In all sites at primary and preparatory levels overall and aggregated categories males and females show a large disparity in their ratios.
- The largest gender disparities occur in urban villages and narrow to smaller disparities in the rural villages, but both males' and females' ratios follow the conventional urban-rural trend.
- At the primary level Assiut surpassed Qena and Beheira in both male and female participation, while at the preparatory level Qena had the highest male ratios. Overall, at preparatory and secondary level the number of girls attending was so small as to be negligible.
- At preparatory level the same urban to rural disparities occur, with the same narrowing of the gender gap as the ratios of male enrollments decline in rural villages.

The general rule of thumb in the older generation is the higher the participation rate of males the greater the disparity with female rates of participation. There is not, in other words, a constant disparity between males and females, but rather a fluctuating one.

Younger generation

In the younger generation the patterns were not as consistent nor as conducive to generalization as those of the older generation. (See Figure I-6.)

- The gender disparities were still large in the younger generation, but their patterns fluctuated with boys and girls ratios spurting ahead in some communities and lagging behind in others or spurting for males and lagging for girls.

- Noteworthy were the mixed villages where boys and girls both made the sharpest gains at all levels (61 percentage points at primary level for boys and 32 for girls in Nag il Taref; 40 percentage points for boys and 34 for girls in Kafr Nekla). In these villages, well established nearby schools and fairly large populations combined with what might be called a "ripeness" factor (the initial period of achieving critical mass is over) provide the suitable conditions.

- In rural villages, boys ratios made strong increases (37 percent) at the primary level while girls' ratios made only small increases (10 percent) and no sample girls continued to preparatory or secondary level.

- In urban villages boys showed the lowest increases (21 percent) just matching the girls' increases at the primary level. Boys' ratios showed a decline at preparatory (-1 percent) and secondary (-5) levels, while girls showed a slight increase at preparatory (3 percent) and no change at secondary. The urban villages may have two factors that contribute to this effect: They have had higher ratios in the past that make it more difficult to show substantial increases in the younger generation, and school crowding is constraining some of the natural increase that might occur.

- Qena and Beheira showed very similar changes in ratios for males and females at all levels (with 37 and 38 percent increases for boys and 23 and 20 for girls at primary level).

- Assiut had a remarkable upsurge in girls' enrollments (31 percent) in the younger generation that matched boys' enrollments at primary level and showed much stronger ratio increase at preparatory level (24 for boys and 12 for girls) and secondary level (13 for boys and 4 for girls).

Given the substantial increases in ratios of enrollment for boys and girls in most categories and the generally improving trend toward girls' education, it is surprising to note that in the majority of cases at primary and preparatory level the disparity between ratios of boys' and girls' enrollments has grown in the younger generation. The average ratio of increase in participation between the generations overall for boys was 34 percent at primary, 13

percent at preparatory and 4 percent at secondary. For girls overall the comparable figures were 24, 6, and 2 percent. At the primary level the exceptions are Assiut governorate and urban villages where the disparities have stayed constant. At the preparatory level the disparities have increased in all cases.

Consequently, while the educational participation of both boys and girls has improved in the younger generation, girls as a rule have not kept up with the advances of boys. One would predict, however, that as boys participation reaches the saturation point, girls enrollments would pick up quickly in the current situation where enough have enrolled in all villages to make the education of girls an accepted fact if not yet always a norm. Areas where constraints on increases in educational participation exist vary for boys and girls: in urban areas for boys, for the reasons noted above (earlier large enrollments inhibit major increases at present); and in rural areas for girls, partly as we shall see, for reasons of social norms and inaccessible facilities.

Expected Levels of Education

Parents whose children were attending school were asked what levels of education their children were expected to achieve. Their answers reflected common contemporary ideals about the value of education as found in television serials and in village models of the few young men and fewer women who have achieved extended levels of education. The parents of boys replied in 60 percent of the cases that they expected their children to go on to university level and in 39 percent of the cases, girls were also expected to reach such levels. No boys were expected to end their educations with primary level though a small number of girls (15 cases or 2 percent) expected to drop out

after primary school. Only one boy was expected to leave after preparatory compared with 16 girls (2 percent). Only one boy and one girl were expected to drop out after secondary level.

However, many parents whose children had reached preparatory school and had proven their capability or lack of it were often more realistic in their expectations than the parents of untested primary age children. They were more apt to opt for specialized training. Within specialized training, agricultural training was not popular. Thus, no more than one percent of the parents mentioned this option for their children, since parents hoped education would remove the children from agricultural occupations. The other specialized training preferences reflected the perspectives of parents about appropriate and desireable occupations for their children if medical or engineering training was not obtainable.

The preferred training for both boys (66 or 8 percent) and girls (57 or 7 percent) was "commercial secondary" where courses in accounting and typing prepare students for a broad range of occupational choices. More boys (31 or 4 percent) than girls (4 cases) predictably expected to attend industrial training. If parents have expectations for their daughters to work, it is as teachers in primary schools, a more achievable goal in some cases than the boys' goal of medicine and engineering. Almost twice as many girls (46 or 5 percent) as boys (24 or 3 percent) were expected to go to teachers' training institutes.

With the possible exception of some parents who plan practical training for their children, answers to questions about future possibilities for their children tended to reveal more about popular ideals than realistic expectations. People answered questions about the future only reluctantly and in a

perfunctory manner. This kind of probing however produced evidence that the concept of two qualitatively different levels of education still persist in the minds of parents of the younger generation.

Educational planners are extending compulsory education to nine years not only to improve the functional skills of school children but also in an effort to encourage children to enter specialized agricultural, industrial, and commercial training at the secondary level. Parents of the younger generation, as their children begin the educational track, see an even wider gap between the functional primary level and the occupationally relevant university level. The vast numbers of students obtaining university degrees now preempt any jobs general secondary students might earlier have occupied, leaving secondary school degree holders not any better prepared for employment than students of lower educational levels.

In other words, first of all parents seek status professional employment that comes with university degrees, but as the time approaches for the child to enter secondary level, realities of other kinds (the child's ability and the availability and affordability in general terms of different options) impinge on decisions and children may end up in the technical training that educational planners had hoped to encourage all along.

We will see in later sections, an evolution has occurring historically in school-going patterns. Data on the educational attainment of the two generations supports the case that a strong momentum for education is underway in Egyptian villages. Caught as a moment in time in the present study, we find different categories of villages advancing at different rates. Early larger ratios of enrollments in urban villages have slowed the rates of increase in the younger generation while the mixed villages have surged ahead. In the

next decade, one would expect the rural villages to take their turn if they are provided with easily accessible facilities.

PARENT IDENTIFIED VARIABLES AND ENROLLMENT AND ATTENDANCE

Parents were asked to identify the major reasons they and/or their children did not enroll or did not attend schools for more than a few years. These reasons may be grouped into 3 categories: (1) social norms, (2) economic variables, and (3) accessibility of facilities. In this section of the report, we assess the extent to which these variables are perceived as significant in the two generations and relate the variables to changes in enrollment and attendance of the younger generation. The variables prove to be important in themselves, but they are also affected by the regional and urban-rural contexts of the different sites.

Terminology and Proxies

The reader should note that "enrollment" here means initial entry into the first grade.[1] "Age-appropriate attainment" refers to the length of time a child remains in school. Precisely, age-appropriate attainment is arrived at by deriving a numerator from the grade level a child has achieved and placing this over the grade level he or she should have achieved according to present age if the system was entered at age six. We thus have three categories of educational participation: enrolled, non-enrolled, and age appropriate attainment. This breakdown assumes that three qualitatively different school-sending behaviors occur. The first group, non-enrolled children, obviously remain untrained, and the parents, for whatever reason, are

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1 Egyptian officials use the term "acceptance"

resistant to educational exposure for their children. A child that does not enter school by the age of eight is irretrievably lost to the system even when parents later change their minds about the benefits of education.

The parents of the second group, enrolled children, presumably have overcome any resistance they may have felt toward even minimal educational participation, and it is therefore probable that if they have any relevant age children of the same sex in the future they will afford them the same opportunities. It is frequently the case that after the hurdle of initial entry has been overcome the very impetus of the system itself or extraneous circumstances may conspire to keep the child for some length of time in the system.

The third level of participation, measured by the attainment quotient, confirms that the child is on track and at grade level and assumes, if the child continues to the full nine years of compulsory education, that a functional level of skills is acquired. The decision-making processes underlying the three levels appear to involve fundamentally different issues. This is especially true for the critical line between no enrollment and enrollment. But it is also true where parents must make decisions about the allocation of family resources to longer and shorter term educational goals.

In the present analysis, the ratio of attendance has been somewhat rigidly set at the optimum case where a child enters grade one at age six and continues regularly through the nine years of schooling, entering grade nine at age 14. In reality, children may also be accepted in grade one when they are eight, seven, or sometimes five years of age. However, we assume here that a system that functions efficiently, with facilities appropriate to the numbers seeking enrollment, will have the majority of children entering

regularly at age six and continuing at yearly intervals to higher grades. The attendance ratio thus is a way of measuring the overall efficiency of the system as well as the longevity of the children in the system.

Reasons for Not Enrolling or Leaving School Before Ninth Grade

Males

For males of the older generation, in roughly descending order the most important reasons for not participating in educational programs fully, or at all were

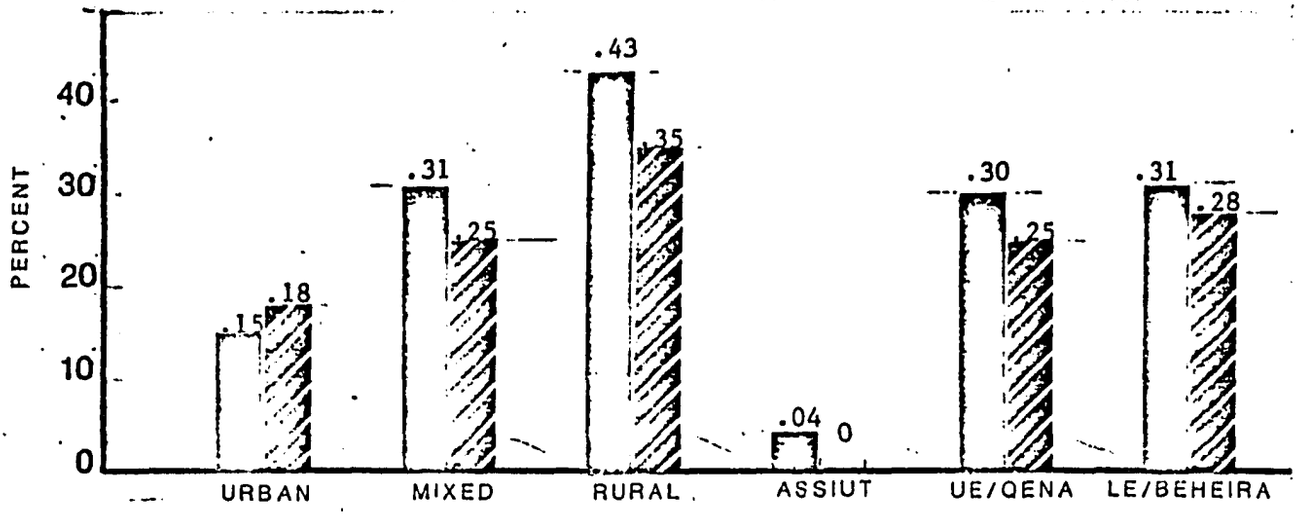
1) no school was available;
2) the family needed the child's labor;
3) few went to school at the time (social norms);
4) school was too far away;
5) school expenses were too high; and
6) the courses were not relevant (See Figure I-7.)

In the younger generation, the reasons in descending order were
1) the family needed the child's labor;
2) failed exams;
3) no school was available;
4) school was too far;
5) problems with school, or child doesn't want to go to school;
6) school expenses too high and finally;
7) the courses were not relevant. (See Figure I-8).

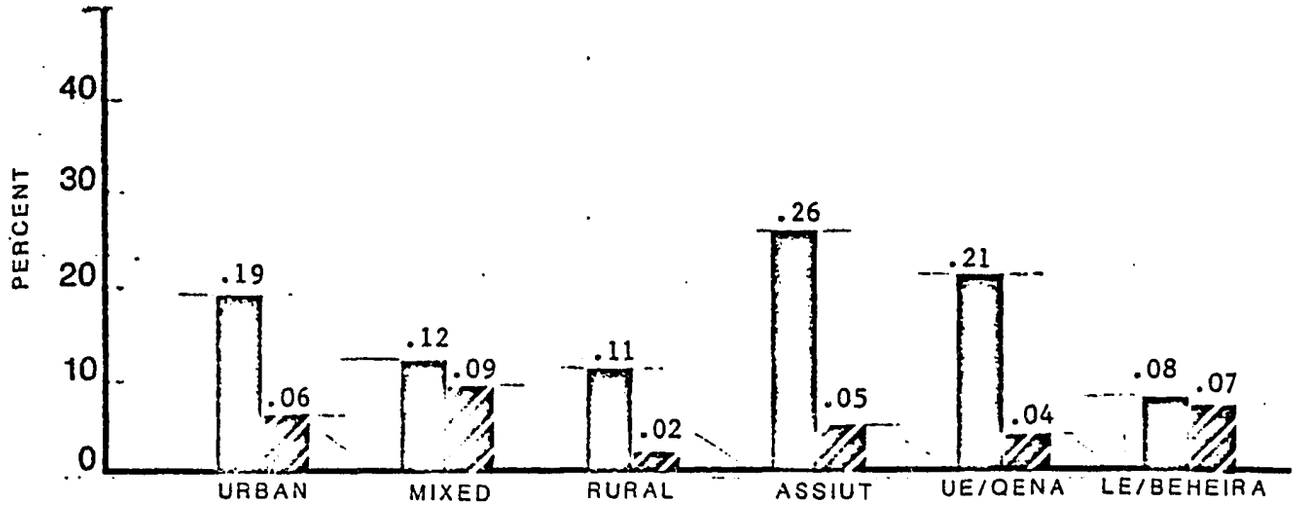
Social norms were no longer considered of major importance for males.

All major reasons cited by the older generation were of reduced importance in the younger generation's enthusiastic rush into available schools. The only reason given that increased systematically with the younger generation male was "failed exams," which is not surprising considering the larger and in some cases less motivated and less capable pool of school children.

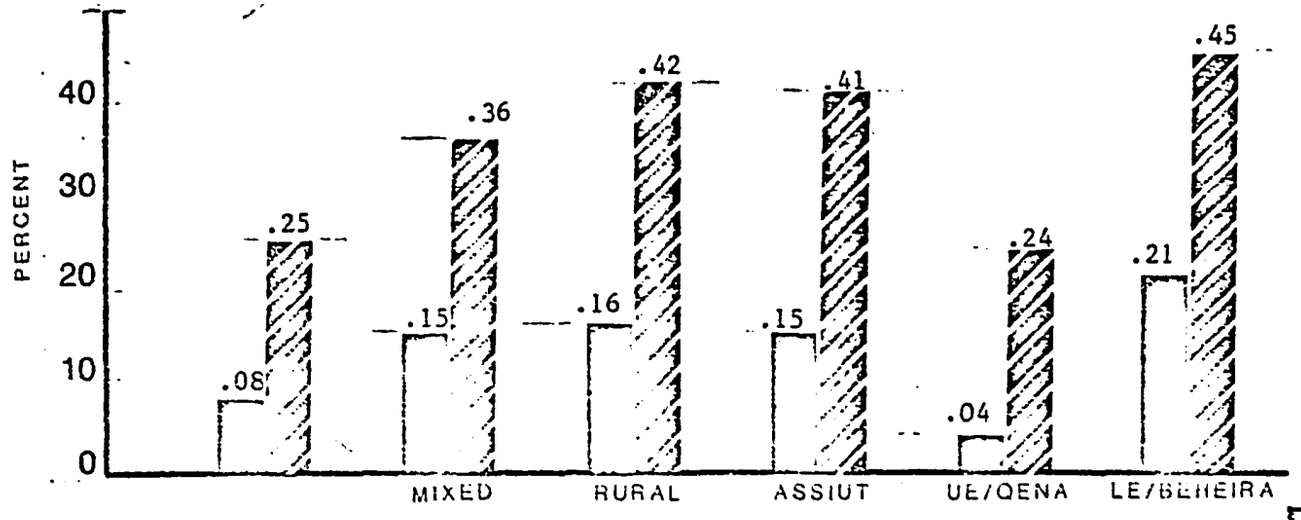
FIGURE I-7: REASONS WHY THE OLDER GENERATION DID NOT ENROLL OR LEFT SCHOOL BEFORE 9TH GRADE



No School Available



Family Needs Child's Labor



Social Norms (No one went at the time)

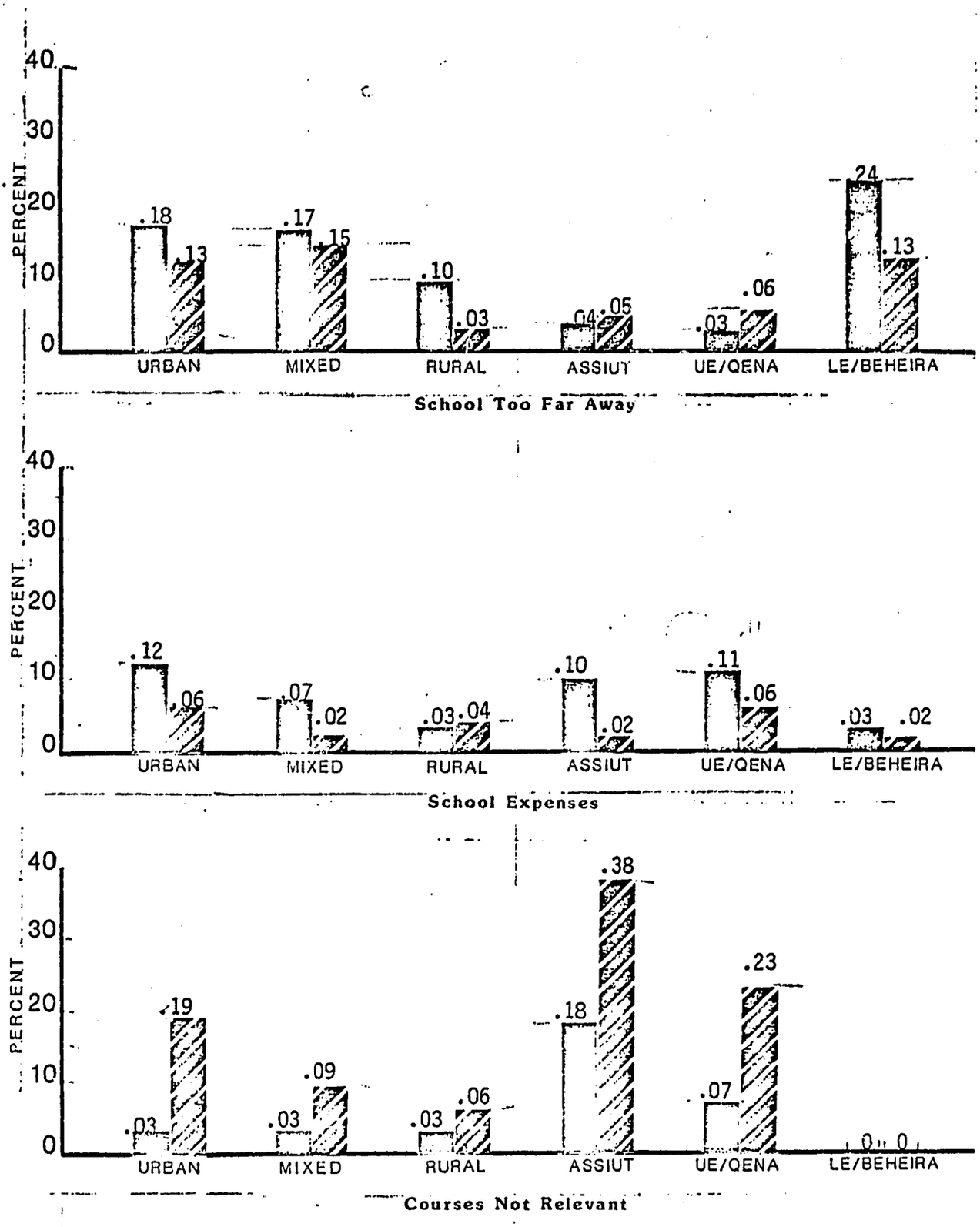


FIGURE I-7 (CONT.): REASONS WHY THE OLDER GENERATION DID NOT ENROLL OR LEFT SCHOOL BEFORE 9TH GRADE

BOYS
GIRLS

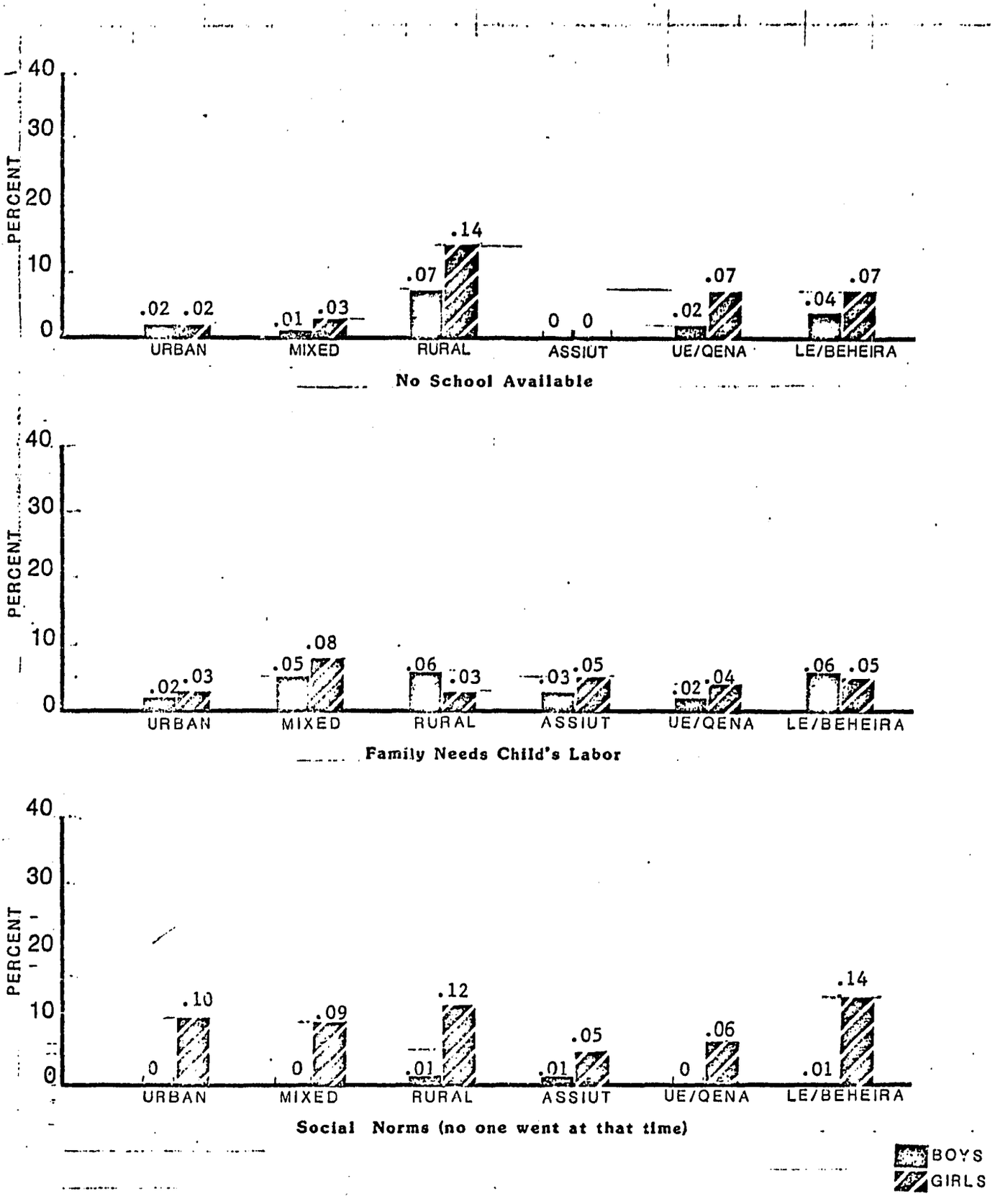


FIGURE I-8: REASONS WHY THE YOUNGER GENERATION DID NOT ENROLL OR LEFT SCHOOL BEFORE 9TH GRADE

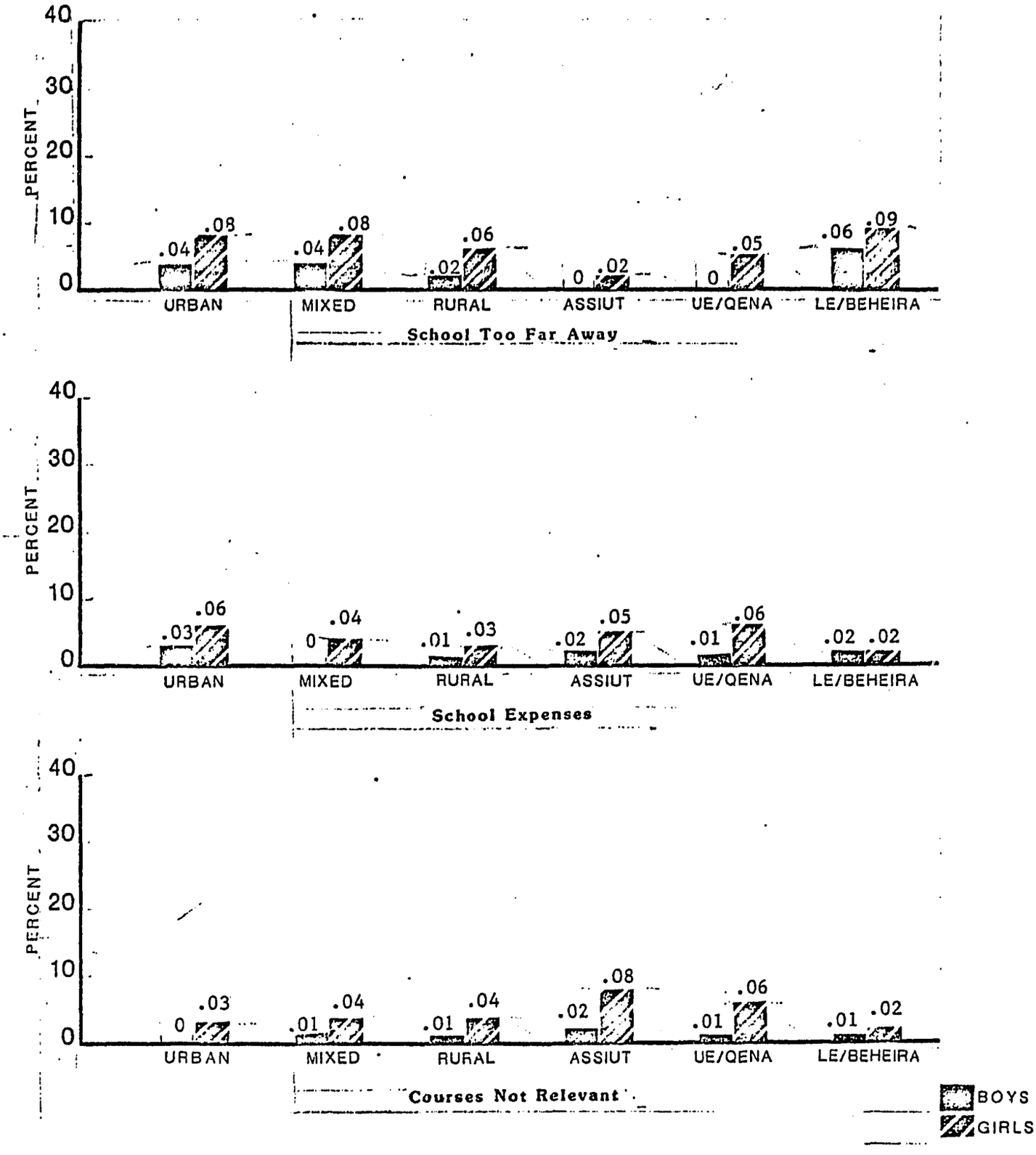


FIGURE I-8 (CONT.): REASONS WHY THE THE YOUNGER GENERATION DID NOT ENROLL OR LEFT SCHOOL BEFORE 9TH GRADE

Females

For females of the older generation, by far the most common reason cited for non-enrollment or limited participation was the lack of supportive social norms. Other reasons were

1) no school available;
2) course not relevant;
3) school too far away;
4) family needs child's labor;
5) chance to marry; and
6) school expenses too high (See Figure I-7.)

In the younger generation female participation was limited by, in descending order,

1) social norms;
2) school too far away;
3) family needs child's work and education not relevant at equal levels;
4) no school available;
5) expense of education; and
6) child doesn't want to go to school (See Figure I-8.)

Other reasons were negligible, and the proportion of those citing the reasons above was reduced considerably from the older generation. Note that as the availability of facilities increased parents cited distance as a factor in limiting participation rather than the non-availability of facilities. Overall, social norms affected female participation the most in both generations, while boys were more often affected by economic variables after the problem of accessibility had been solved.

The reasons given can be combined into three more general categories called a) social norms b) accessibility of schools and c) economic reasons. Each is discussed below, together with its impact on enrollment and attainment.

Social Norms

Social norms are a broad category that can be defined as what people consider appropriate behavior for a child with respect to its sex, age, intended occupation, and social class background. In the older generation, for example, it was not thought appropriate or relevant for a farmer to receive an education, or for a girl to receive an education when she was expected to become a wife and mother.

Parents consider the occupational needs of their boys first when they assess the benefits of education. In the older generation, 11 percent used the excuse of social norms for boys in urban villages, 18 percent in mixed villages, and 19 percent in rural villages. In the younger generation, rationalizations based on social norms declined to very low levels.

The ideal of the rural woman is to become a housewife, and it is that expectation that constrains the majority from recognizing the need for education. Most rural families do not articulate a strong sense of the relevance of education to the woman's goals of marriage and motherhood; at best, they see a few years of education doing no harm to the girl. The minority who do equate education and marriage usually stress the way educational credentials enhance the marriage opportunities for girls, especially for those who marry government employees. For a few, education is thought of as a security for women in case their marriages are disrupted.

In the older generation, 45 percent of the respondents used social norms as a reason for girls not attending school. (See Figure I-9). In the younger generation, the percentage dropped to 13, consistent across urban, mixed, and rural villages. Although norms have loosened considerably for the younger generation of girls, a stable core in all environments still maintain a sense of the inappropriateness of girls' enrollments.

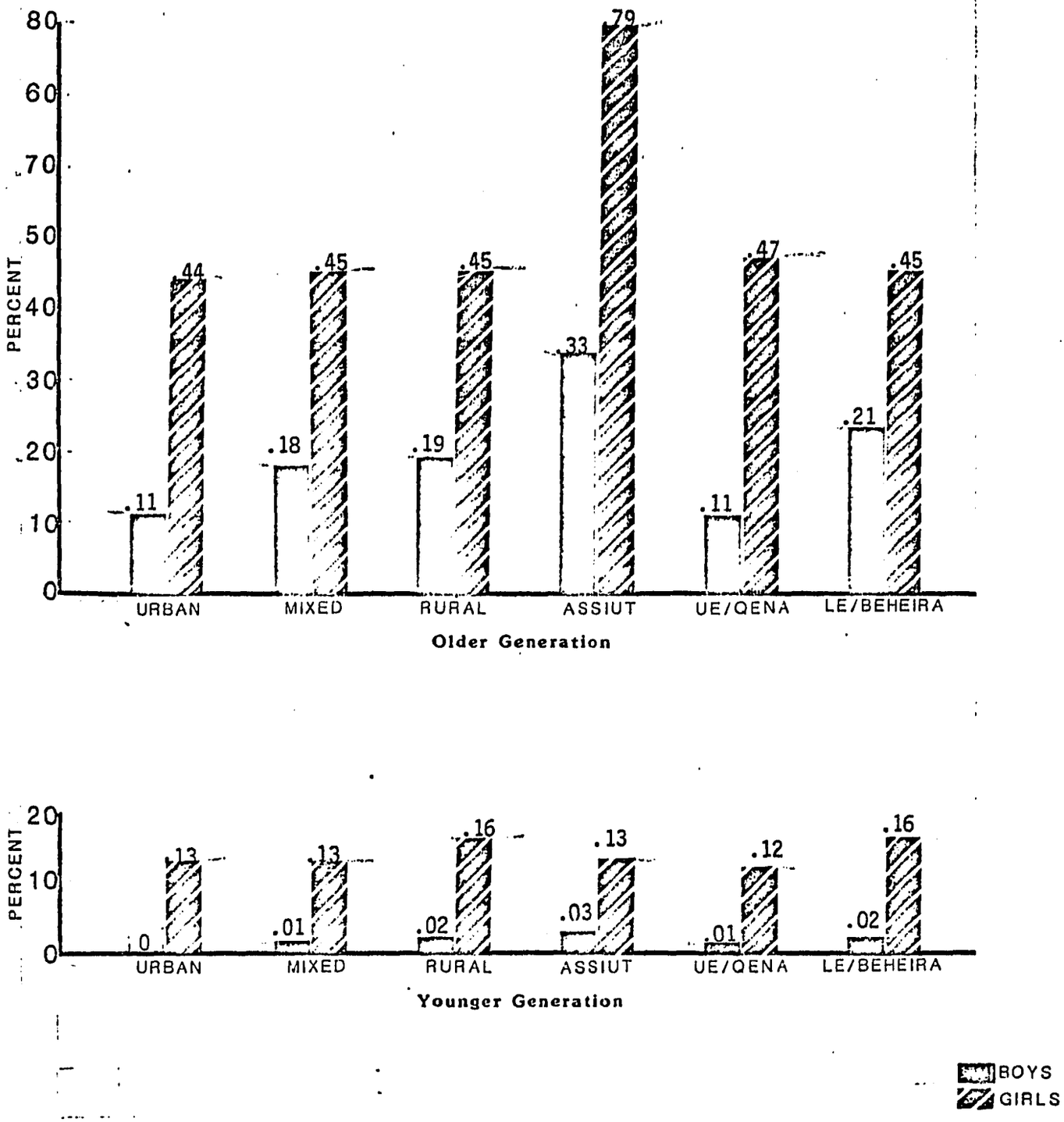


FIGURE I-9: SOCIAL NORMS AS REASONS FOR NOT ENROLLING OR LEAVING SCHOOL EARLY

Anticipated differences showing a more conservative Upper Egypt have so far in our study not materialized. The rather exceptional case of Assiut (Middle Egypt) where social norms were cited in 79 percent of the cases for older generation females and only 13 percent of the younger generation, shows the rapidity with which social norms can change. When people hold onto these norms into this generation, however, the strength of their convictions can outweigh even the most optimum conditions for a child's participation. One young girl of first grade entering-age lives across the street from the new school in Manshiya, as does another just down the street from the school in Khutaba. Their parents seemed surprised when we even suggested schooling for the two, contradicting the almost blanket appraisal by community leaders that all people now want to educate their children.

For girls, a subtlety of social norms is a need for protection, present at all ages, but increasing with puberty. If the school is a community school catering to known children, then parents tend to have fewer objections, even allowing girls to continue in mixed schools to the end of preparatory level. This view was articulated in Nag Dahi and in one of the larger related villages of Ghaneyem. However the people of Beni Rafa expressed a stronger desire to segregate their girls, especially by the time they reached preparatory level.

Norms and Circumstance

Social norms preventing children from participating in educational programs interact with circumstances such as economic constraints or lack of available spaces in schools. Given the overwhelming acceptance of different future goals for boys and girls, it is not surprising, when resources are scarce or places limited in schools, to find parents withholding girl

participants. When parents who withheld children were asked if they would have sent them if their circumstances had been different, 30 answered "yes" for their boys and two "no". For girls only 1 answered "yes" and 31 answered "no."

This evidence supports the conclusion that boys are more likely to be withheld from school for reasons of family circumstance, and girls more for normative reasons.

Community Norms

To the question "Do most parents in the community want to educate their children to the end of preparatory stage?" parents overwhelmingly answered "yes". Table I-13 summarizes the negative replies. In the Assiut sites of Ghaneyem and Beni Rafa, where the communities have requested single sex girls' schools, perceived resistance to girls' education was high. One out of four families in Beni Rafa felt community norms opposed girls going to school. The two other villages where perceived resistance was high were Monshaat il Awkaf and Manshiya. The former showed the only resistance to boys' education at the primary level (2 cases), and the highest resistance of all sites to girls' participation in the preparatory level (11 cases). A strong emphasis on occupations not requiring high educational levels, coupled with over-crowded school facilities, gives little encouragement to extended education in Monshaat il Awkaf, especially for girls who might outstrip their potential mates in educational achievement.

Rural Manshiya's perceived resistance to girls' enrollment was spread across primary (4) and preparatory (6) levels. Here the perceived resistance was more likely a function of the short period of time in which school facilities have been easily accessible, and consequently the relatively short time that traditional social norms have been challenged.

Table I-13: Do Most Parents Want to Educate Their Children to the End of This Level?

Site	Primary Level		Preparatory Level		Total	
	M "No"	F "No"	M "No"	F "No"	M "No"	F "No"
Manshiya	-	4	1	6	1	10
Kafr Nekla	-	-	-	1	-	1
Monshaat et Awkaf	2	2	2	11	4	13
Khutaba	-	3	-	3	-	6
Nag il Taref	-	2	-	2	-	4
Nag Dahi	-	-	-	5	-	5
Ghaneyem	-	2	-	6	-	8
Beni Rafa	-	10	2	10	2	20
All sample "No" answers	2	23	5	44	7	67
Total "Yes" Answers[1]	346	325	343	304	689	629

[1]The question was first asked about preparatory level and then only asked about primary level if the answers to the first question were negative.

Impact of Social Norms on Enrollment and Attainment

Table I-14 summarizes the enrollment status of the younger generation by village and Table I-15 by aggregated sites.

- Overall, 69 percent of the children in our sample were initially enrolling in the first grade, compared with a 1981 nationwide average of 83 percent.

- Only 51 percent of eligible age girls were initially enrolled compared with 85 percent of the boys.

- Individual sites showed a great deal of variety in initial enrollment with the highest ratios of eligible males enrolled in Nag Dahi (99 percent). Ghaneyem (95 percent), Nag il Taref (90 percent) and Monshaat il Awkaf (89 percent). The lowest ratios for males are found in Manshiya (61 percent), Khutaba (79 percent), and Beni Rafa (81 percent). As expected, the highest ratios appeared in villages with the characteristics identified as "urban" and the lowest in villages identified as "rural" (See Table 15).

- For girls, Ghaneyem had the highest initial enrollment at 73 percent, but the fact that the sample was chosen from nearby fairly dense populations rather than the many distant villages that rely on Ghaneyem for educational facilities makes the situation seem better than it actually was in this area. Next comes Nag Dahi (64 percent for girls) with its nearby well-established schools, then Nag il Taref (58 percent) with its local Al-Azhar system, and finally Kafr Nekla (54 percent), again with schools very close at hand. The villages with far-away schools fared lowest for the girls, in rural Manshiya (23 percent), in Khutaba (31 percent), and even in urban Monshaat il Awkaf (45 percent) where distance and overcrowded conditions appear to have been partly responsible for the low enrollment of girls.

Table I-14: Enrollment and Attainment by Aggregated Site of Children Age 6 and Above

Category		Never Enrolled		ENROLLED CHILDREN: Less Than Appropriate Attainment		ENROLLED CHILDREN: Appropriate Attainment		ENROLLED CHILDREN: Total Enrollment		Total Age 6+
		No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.
Manshiya	M	28	.39	29	.41	14	.20	43	.61	71
	F	57	.77	13	.18	4	.05	17	.23	74
	T	85	.59	42	.29	18	.12	60	.41	145
Kafr Hakla	M	14	.16	40	.47	33	.38	73	.84	87
	F	37	.46	27	.34	16	.20	43	.54	80
	T	51	.31	67	.40	49	.29	116	.69	167
Monshaat il Awkaf	M	12	.11	65	.59	34	.31	99	.89	111
	F	35	.55	24	.38	5	.08	29	.45	64
	T	47	.28	89	.51	39	.22	128	.72	175
Khutaba	M	16	.21	40	.52	21	.27	61	.79	77
	F	38	.69	10	.18	7	.13	17	.31	55
	T	54	.41	50	.38	28	.21	78	.59	132
Nag il Taref	M	8	.10	35	.43	38	.47	73	.90	81
	F	36	.42	31	.36	18	.21	49	.58	85
	T	44	.27	66	.40	56	.34	122	.73	166
Nag Dahi	M	1	.01	36	.51	33	.47	69	.99	70
	F	17	.36	22	.47	8	.17	30	.64	47
	T	18	.15	58	.50	41	.35	99	.85	117
Ghaneyem	M	4	.05	40	.49	37	.46	77	.95	81
	F	25	.27	34	.37	33	.36	67	.73	92
	T	29	.17	74	.43	70	.40	144	.83	173
Beni Rafa	M	13	.19	20	.30	34	.51	54	.81	67
	F	41	.50	25	.30	16	.20	41	.50	82
	T	54	.36	45	.30	50	.34	95	.64	149
All Sample	M	96	.15	305	.47	244	.38	549	.85	645
	F	286	.49	186	.32	107	.18	293	.51	579
	T	382	.31	491	.40	351	.29	842	.69	1224

Table I-15: Enrollment and Attainment by Aggregated Site of Children Age 6 and Above

Category		Never Enrolled		ENROLLED CHILDREN: Less Than Appropriate Attainment		ENROLLED CHILDREN: Appropriate Attainment		ENROLLED CHILDREN: Total Enrollment		Total Age 6+
		No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio	No.
Urban	M	13	.07	101	.53	77	.40	178	.93	191
	F	52	.47	46	.41	13	.12	59	.53	111
	T	65	.22	147	.47	90	.31	237	.78	302
Mixed	M	22	.13	75	.49	71	.42	146	.87	168
	F	73	.44	58	.35	34	.21	92	.56	165
	T	95	.29	133	.40	105	.32	238	.71	333
Rural	M	44	.30	69	.47	35	.24	104	.70	148
	F	95	.74	23	.18	11	.09	34	.26	129
	T	139	.50	92	.33	46	.17	138	.50	277
Assuit	M	17	.11	60	.41	71	.48	131	.89	148
	F	66	.38	59	.34	49	.28	108	.62	174
	T	83	.28	119	.38	120	.37	239	.74	322
UE/Qena	M	25	.11	111	.49	92	.40	203	.89	228
	F	91	.49	63	.34	33	.18	96	.51	187
	T	116	.28	174	.42	125	.30	299	.72	415
LE/Beheira	M	54	.20	134	.50	81	.30	215	.80	269
	F	129	.59	64	.29	25	.11	89	.41	218
	T	183	.38	198	.41	106	.22	304	.62	487

Historical Trends

Historical trends show norms changing in the past several decades and demonstrate the impact that new facilities have had in the past on enrollment and attainment. A common pattern of enrollment and attainment emerges from the interviews--with villages differing primarily in the timing with which they reach different stages. The four identifiable stages for boys are

1) an initial period when no one enrolled;

2) a second period when an accessible school was introduced and a handful of stalwart students not only entered, but almost all continued to preparatory level and beyond;

3) a third stage when a larger pool of applicants entered school with a concomitant lowering of the overall level of commitment and ability and a subsequent drop-out of substantial numbers of the cohort;

4) A final stage that finds larger numbers entering the system with a more general acceptance of the necessity for longer periods of attendance. This last stage in most villages has only recently been reached and has therefore not yet had time to show its full potential.

The pattern differs for girls primarily in its timing and tentativeness. There is usually a preliminary enrollment of boys that builds to higher levels as time passes. This enrollment is followed with a lag of a decade, more or less, before an initial few girls pioneer female participation in educational institutions. Another delay of a year or two occurs before there is a more consistent pattern of female enrollment. It appears necessary in the village for a critical mass of boys and a few girls to enroll in order to soften community opinion before substantial numbers of girls can enter the system. Boys' levels of enrollments show evidence of being affected within a few years by the establishment of new facilities, while girls' levels of enrollments seem to bear little immediate relationship except when the new school is

established directly in the community of residence as in the case of "one-room" schools introduced in Khutaba and Manshiya.

Impact of Sex and Age Norms on Enrollment and Attainment

Initial Enrollment

The initial enrollment of boys in grade one has increased slowly but steadily in almost all villages over the years. This is evident in Figure 10 in the different enrollment levels for the two age groups. In general, a lower percentage of children aged 15 and above at the time of our interview had been initially enrolled in school than children aged 6 to 11. The differences between enrollments in the age groups tended to correlate with the potential for increase in enrollment, steeper where the percentage of enrollment of older boys was low (in rural villages) and flatter where enrollments of older children were already high (in mixed and urban villages).

Trends in girls' initial enrollments across the age groups tended to be more eratic than boys' but still showed higher percentages of enrollment for younger children. The trend in girls' enrollment has involved establishing education as the community norm rather than the exception. Figure I-10 demonstrates the success of this effort in the substantial ratios of age-eligible girls enrolling in the system.

The three sites (Manshiya, Nag Dahi and Beni Rafa) where girls' enrollments have dipped considerably among the 6-11 year-olds will be followed up in future data collection trips to find out if there is some explanation for the decline.

Attainment of Age-Appropriate Grade Levels

Children have reached age-appropriate grade levels with varying degrees of success, determined a great deal by their age level and the extent to which

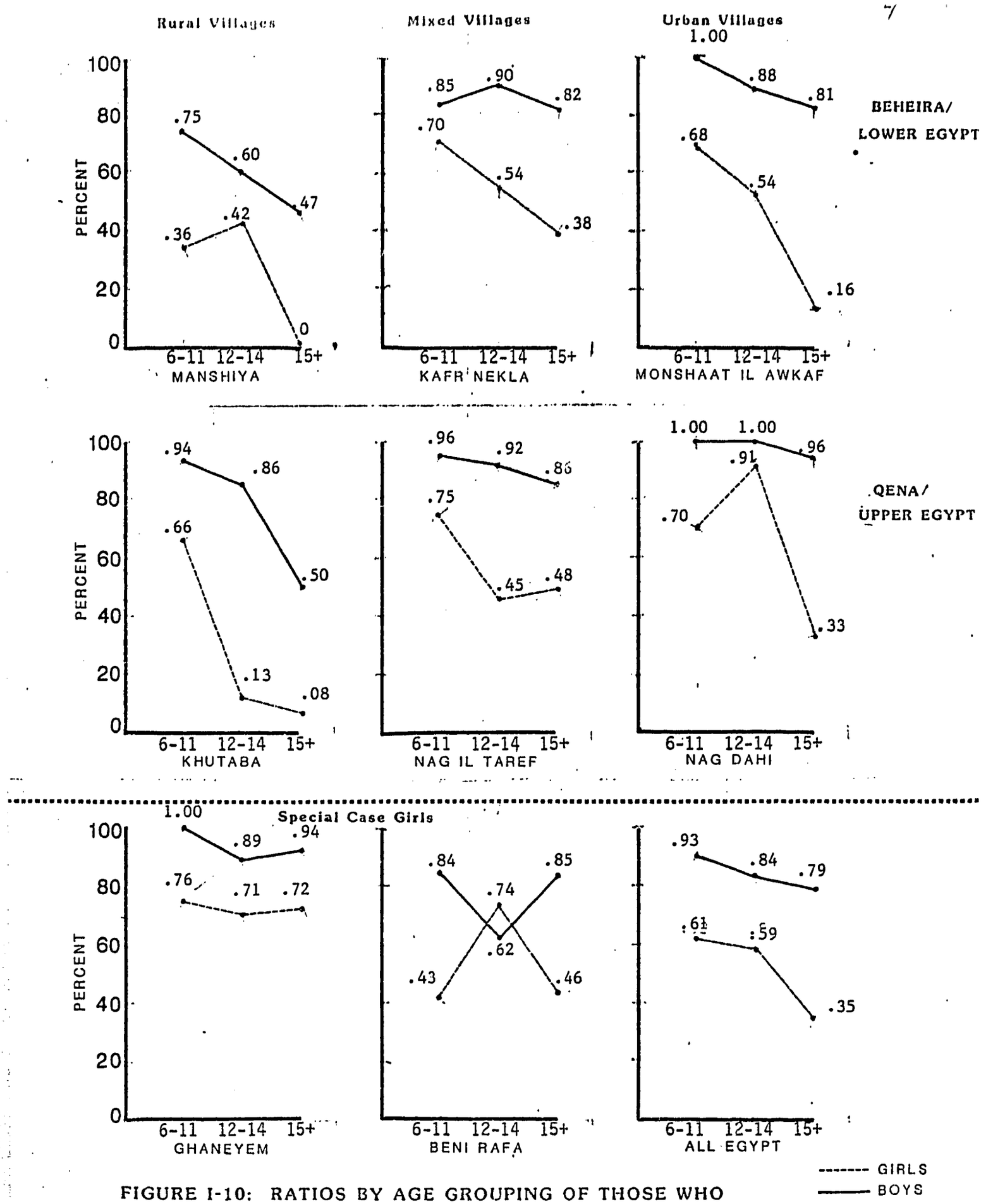


FIGURE I-10: RATIOS BY AGE GROUPING OF THOSE WHO INITIALLY ENROLLED IN FIRST GRADE

education has become a norm for their community and sex. Figure I-11 shows dramatically how norms have changed for the sexes. Boys and girls in the fifteen and over age group show striking differences in the extent to which they attained age appropriate grade levels. Community norms at the time this age group went to school encouraged long-term educational participation for boys and discouraged any but participation at the lowest levels for girls. Boys' and girls' levels of age-appropriate enrollment moved closer together in the period when the 12 to 14 age group went to school, and since then, in most cases, they have moved in parallel, even moving toward convergence in some villages. These figures indicate the extent to which educational participation has become a community-wide rather than a sex specific norm.

The two villages (Nag il Taref and Ghaneyem) where distinctive variations from the general "all Egypt sample" pattern occur, show a pattern where girls have exceeded boys in the extent to which they have attained age-appropriate grade levels. The most impressive increase was found in Nag il Taref where a nearby "safe" religious system serves to encourage the participation of girls.

Generally speaking, the disparities between boys' and girls' ratios of enrollments and attainments of age appropriate grade levels show up over the entire spectrum of sites despite major advances in girls' participation in recent years.

- In the whole younger generation only 15 percent of eligible age males have not enrolled while 34 percent of girls have not entered the system.

- About the same level of disparity (about 40 percentage points) exists between boys and girls in urban and rural villages and a somewhat lower disparity (31 percentage points) in mixed villages.

- Qena and Beheira governorates stand about equal (at 38 and 39 percentage points) and Assiut has the lowest disparity of all (27 percentage points).

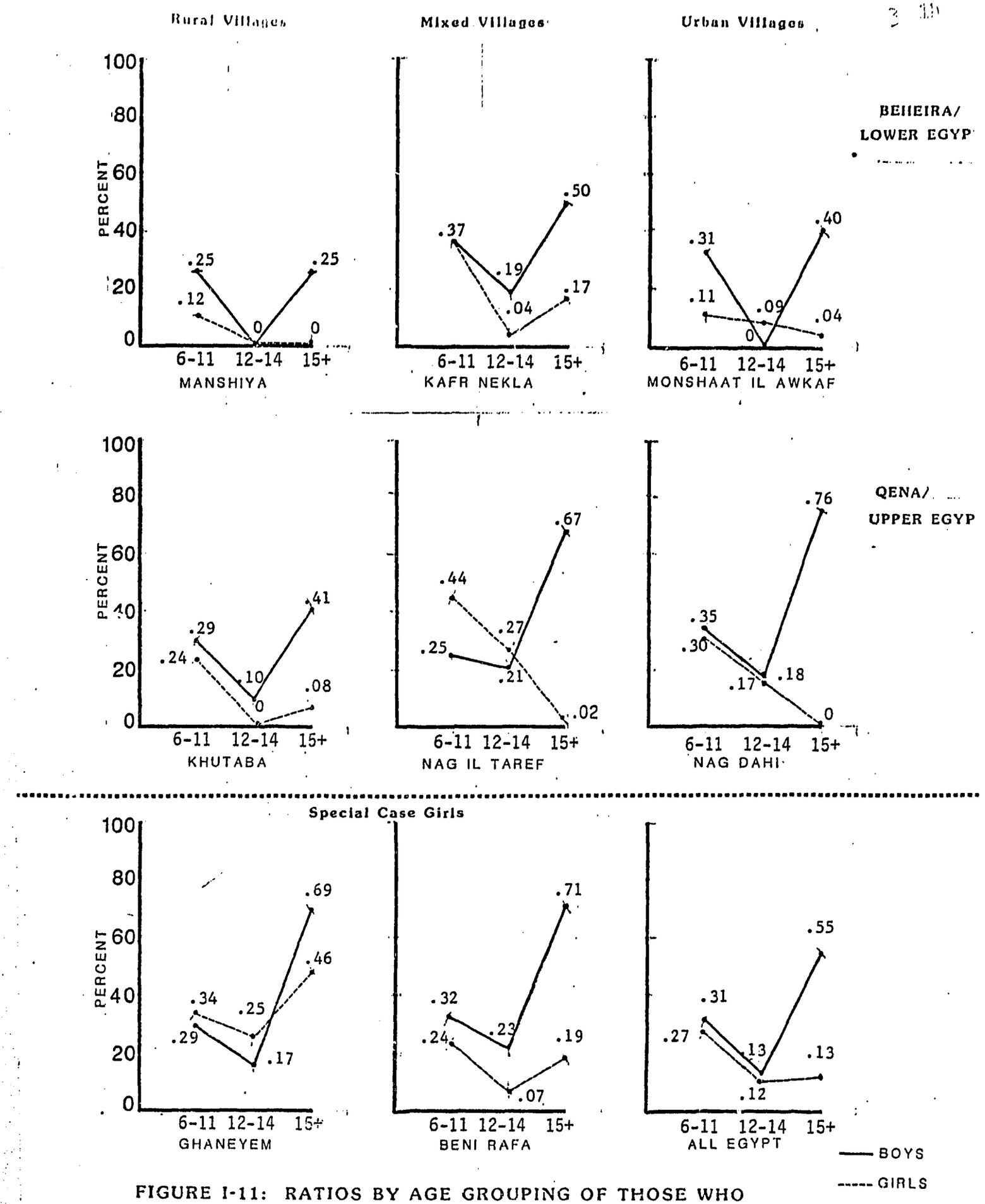


FIGURE I-11: RATIOS BY AGE GROUPING OF THOSE WHO REACHED AGE APPROPRIATE GRADE LEVELS

The problem therefore is universal. After age 8 these children are irretrievably lost to the formal education system. These figures make clear that the largest potential untapped reservoir of recruits for the educational system is found among girls. Only among "rural" village males are there still sufficient numbers out of school to provide a pool of candidates. There, enrollments are already rising precipitously on their own.

One theory suggests that girls are more likely than boys to leave the system after primary level when they become sexually mature. Our data does not support this theory:

- Eighty-five percent of relevant age males and 60 percent of relevant age females of the younger generation experience some primary education and 47 percent of the relevant age males and 22 percent of the relevant age females experience some preparatory level schooling. Male and female levels of participation therefore drop by exactly the same amount, 38 percentage points, between the two school levels.[1]

It is apparent, however, that norms do support the educational participation of primary-age children to a greater extent than preparatory-age children, and the participation of boys above girls at all levels. If girls are withdrawn from school at the preparatory level for reasons of their developing sexual maturity, distance (which may also be related to sexual maturity), or other factors, boys in rural families may be withdrawn because they have become physically and mentally mature enough to assume more responsible roles in family production. Boys, like girls, must also contend with the greater distances required to commute to preparatory level schools.

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[1]Nationwide figures of enrollment also support the conclusion that girls' ratio of participation does not change measurably between primary and preparatory levels, in this case as a function of total enrollments.

Those distances often force parents to review again the strength of their motivations in sending children to school.

As noted above, parents tend to perceive the educational process as consisting of two fundamentally different levels, one with functional relevance at the primary level and the other requiring secondary level or preferably higher levels to confer occupationally significant skills. Preparatory level participation until now has implied commitment to higher levels of learning. The new concept of preparatory level, conceived in the Basic Education program as a necessary part of functional level learning, has not yet penetrated fully in Egyptian villages.

Economic Reasons for not Enrolling or Leaving School Early

Interviews with parents revealed the variety of effects economic level may have on children's school-going patterns. Poverty, for example, may lead to three possible educational strategies:

- prevent all or most children from going to school (especially girls where parental motivation is weaker) because of school-related expenses and/or the need for the children's labor;
- cause diversification of goals for children's futures with resources deliberately diverted for educational purposes only in selected cases: for boys, older or younger children, or particularly able children;
- create determination to see children educated as the only alternative to the problem of diminished resources.

The features of poverty that affect the educational prospects of children are

- the inability to pay school-related costs;
- the burden of foregoing the child's production or income;
- the need for children to assume the responsibilities of a missing adult family member (since many poor families are missing the head of household);

- the overriding immediacy of short-term needs that may interrupt educational progress irreparably.

At other economic levels the issues may be just as complex. At the "below average" level, for example, small land holdings may barely sustain a family. Family members tied to agricultural production at this level and unable to hire laborers often find it more difficult than the landless poor to forego children's labor. At "average" economic levels, families may be self-sufficient enough to begin to think of status questions. For example, with more resources they can begin to hire extra labor and relieve their own family members of arduous agricultural production tasks. One result may be that women are relieved of field work and confine their activities to a greater extent to the house. In a rural community this is a cultivated ideal. If girls are conceived as being able to learn from their mothers all they need to know for roles as "sheltered" housewives, they may be withheld from school. If parents want to ready them as spouses of higher-status educated men or simply to enhance the family status in general, they may send them to school[1].

With less demand for their work, boys may also be sent to school more often and for longer periods in "average" families. Finally in "above average" or "affluent" families, the same relaxation of work demands on children on the one hand may allow educational participation of boys and girls, but on the other it may also offer occupational opportunities to boys not dependent on long-term education. Affluence in villages is usually a result of substantial land ownings, migration to work in other countries (that may require a

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[1]The third most important benefit parents perceived in education for both boys and girls was enhanced status.

boy to assume the responsibilities of household head), or a commercial or skilled craft enterprise.

A breakdown of economic reasons for withholding children from school yielded the following results:

Older Generation

- For boys, more parents in urban than rural areas rationalized non-participation as due to the need for "child labor" and "the costs of education." (See Figure I-12.)

- For girls, there was no consistent pattern across the aggregated sites other than the fact that economic excuses were used less frequently for girls than boys.

- Middle and Upper Egyptian parents reported that they needed boys' labor more often and found school costs more burdensome, probably because those areas tend toward greater poverty than Lower Egypt. Girls were described as staying home for economic reasons at about the same rate in all three regions, at a rate lower than the boys.

Younger Generation

- For boys of the younger generation, "need for their labor" decreased considerably in comparison to the older generation as a reason for non-attendance. "School expenses" barely existed anymore as a reason. "Need for the boys' labor" was about the same across the regions. The burden of "school expenses" was reported somewhat more frequently in Upper and Middle Egypt.

- For girls of the younger generation, "need for the child's labor," though used infrequently, surpassed the rate for boys.

- For girls, school expenses were reported with equal ranking across the site categories; they also were seen as more important for girls than boys in the younger generation (the girls ranking changed little between the generations).

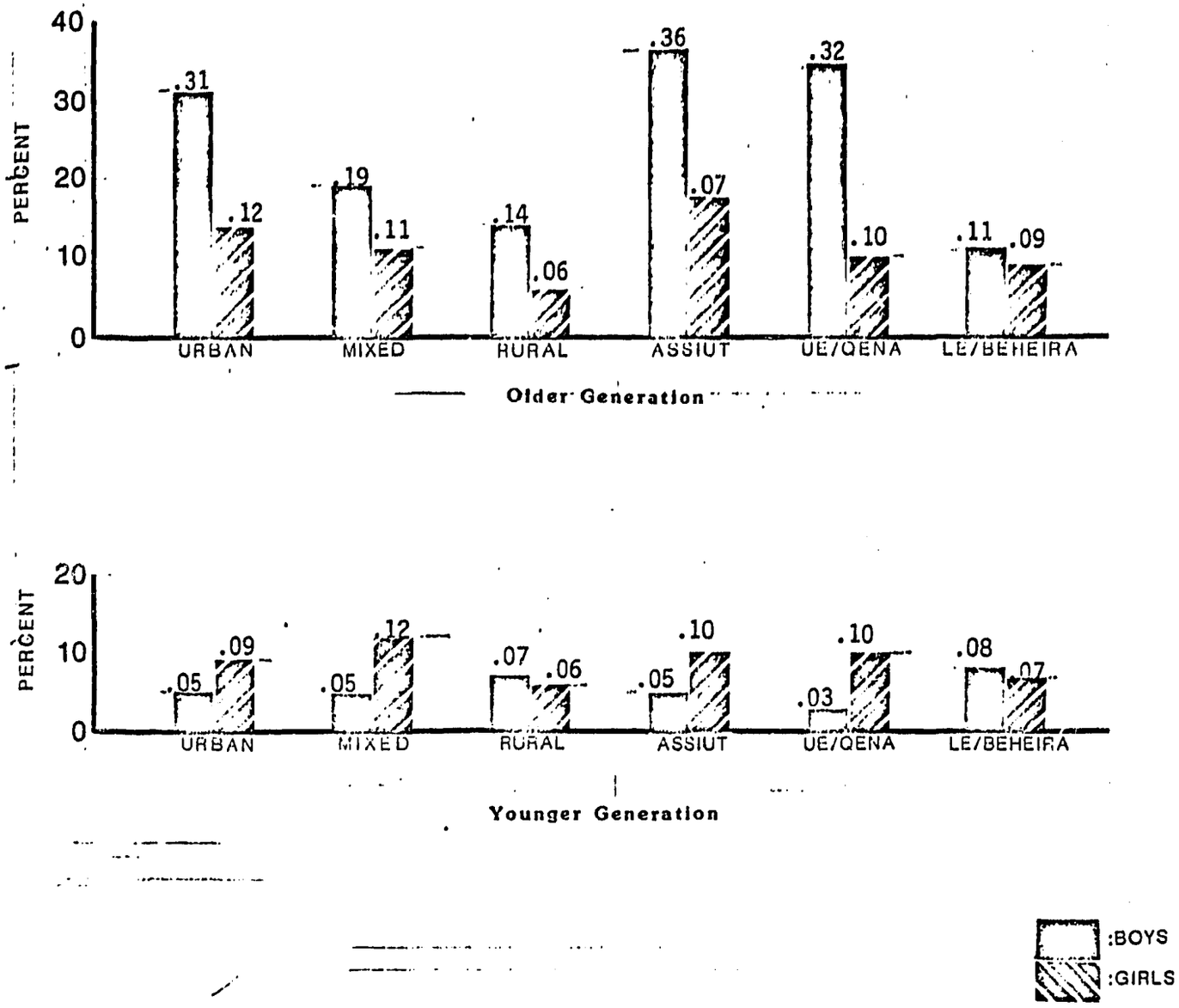

FIGURE I-12: ECONOMIC REASONS FOR NOT ENROLLING OR LEAVING SCHOOL EARLY

When the two economically related questions of family labor needs and costs of school are aggregated a clearcut pattern of intergenerational change emerges:

- In both generations, the frequencies of non-participation of girls reported to be a result of economic constraints were uniform across all categories of sites and similar from one generation to the next (Figure I-12).

- Boys' rates of reported non-participation for economic reasons dropped an average 18 percent between generations but showed considerable variety in different aggregated categories Assiut (-32 percent) and Qena (-30) show the largest decreases in the regions, with Beheira only decreasing by 3 percent. Decreases on the urban-rural dimension show the largest in the urban sites (-25 percent), next the mixed (-14 percent), and finally the rural sites (-8 percent).

For boys occupational issues seem to be central. When, as occurs more frequently in the younger generation, occupational returns of education are viewed as compensating for economic costs, economic reasons no longer are as valid for non-particiaption. In rural areas and in the special set of occupational circumstances of the Beheira sites (see Annex: Site Vignettes), the costs of educational participation may not yet have come to be viewed as occupational investments by all parents. In urban and mixed sites, their relevance is well established.

It is clear from discussions with the villagers that if scarce household resources are going to be spent on education, the investment is returned in greater degree by educating a boy rather than a girl. The fact that economic costs loom larger for girls than boys in the younger generation partially reflects this attitude. Educating a girl is thought by many to be the same as subsidizing the household of her future husband's family.

Cost of Schooling

The urban middle class parent usually finds the ordinary costs of education negligible (discounting the voluntary expense of private tutoring). A rural family, however, has to take account of these expenses. In all areas of Egypt, a fee of about 1 to 1.50 LE is collected each year per child as part of a parents' fund. Other expenses include those for uniforms, shoes, sports clothes, "Western" dress (expected of school-going children in place of their normal village dress), notebooks, school bags, and incidental school needs. Rural parents in various sites arrived at roughly the same sums when asked about school expenses. In Kafr Nekla, parents' estimates came to an average 50 LE per child per year with an additional 50 LE in years when tutoring was necessary. In rural Mansh'ya, parents estimated between 15 and 30 LE per child a year. Parents in Ghaneyem estimated that with tutoring included the cost was from 70 to 75 LE per child per year at the primary level and about 120 LE per child at the preparatory level. In Nag Dahi parents' estimates averaged about 50 LE per primary child: 6 LE for uniform, 6 LE for sports clothes, 3 or 4 LE per shoe 1.50 for the primary fee 4 or 5 for the book bag, and the rest for miscellaneous clothing expenses and school supplies. Many of the clothing expenses are those that the middle-class parent bears as part of a middle-class life style, but they become extraordinary expenses for a rural farm family. As one mother put it, "A poor family can't afford to educate more than one child."

Impact of Economic Level on Enrollment and Attainment

In the sample, the proportions of children enrolled and attaining age-appropriate grade levels generally rose as the economic level of their families increased (See Table I-16).

Table I-16: Ratios of Participation by Economic Level

Education Status	Poor	Below Average	Average	Above Average
Total Enrollments	.52	.64	.75	.82
Achievement of Age Appropriate Grade levels	.16	.25	.29	.42
Boys Enrollments	.77	.82	.89	.89
Boys' Achievement of Age Appropriate Grade Levels	.24	.34	.42	.49
Girls Enrollments	.28	.43	.59	.73
Girls' Achievement of Age Appropriate Grade Levels	.08	.15	.15	.34

The girls' levels tended to rise so precipitously in several villages that it would be fair to say that in these environments a minimum economic base must exist in a family before girls are well assured of being placed in school (See Figure I-13). Five of the eight villages, Kafr Nekla, Nag il Taref, Nag Dahi, Ghaneyem and Beni Rafa follow fairly regular patterns of increased enrollments for boys and girls with increased economic level and, with somewhat more variation, regular increases in the ratio of children who achieved age-appropriate grade levels (See Figure I-14).

Males

- In all villages, but Khutaba male ratios show an overall increase with higher economic levels of households. In four villages (Kafr Nekla, Nag il Taref, Khutaba and Beni Rafa), however, there was a small decline between average and above-average families.

One possible explanation is that better-off families frequently provide alternative occupational opportunities like property management or skilled manual jobs for male children that are more appealing than the often low paying but respectable jobs acquired through extended education[1]. In this respect, it is interesting to note that these four villages are ones where the largest numbers of families report one or more members of the household migrating abroad for work. The 1950s and 1960s were times when social mobility was achieved most easily through educational channels. Since the 1970's, social scientists have pointed to a new kind of social mobility in villages brought about by migration to other Arab countries that permits the accumulation of material resources.

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[1]This effect was also discovered among comparably better-off families in a lower socio-economic district of Cairo.

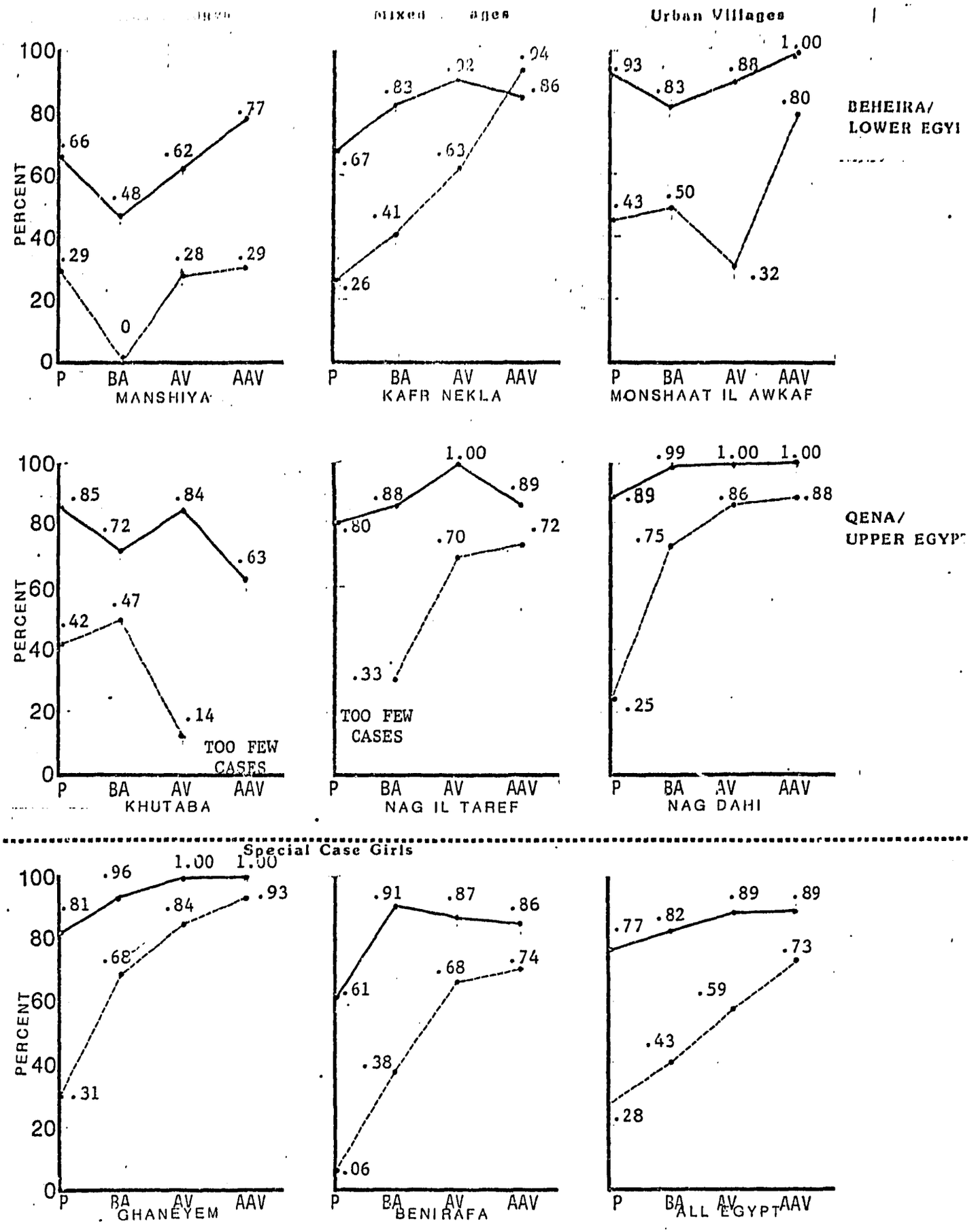

FIGURE I-13: RATIOS OF YOUNGER GENERATION (AGE 6 AND ABOVE) WHO INITIALLY ENROLLED IN FIRST GRADE BY ECONOMIC LEVEL

P POOR
BA BELOW AVERAGE
AV AVERAGE
AAV ABOVE AVERAGE
BOYS ——
GIRLS ------

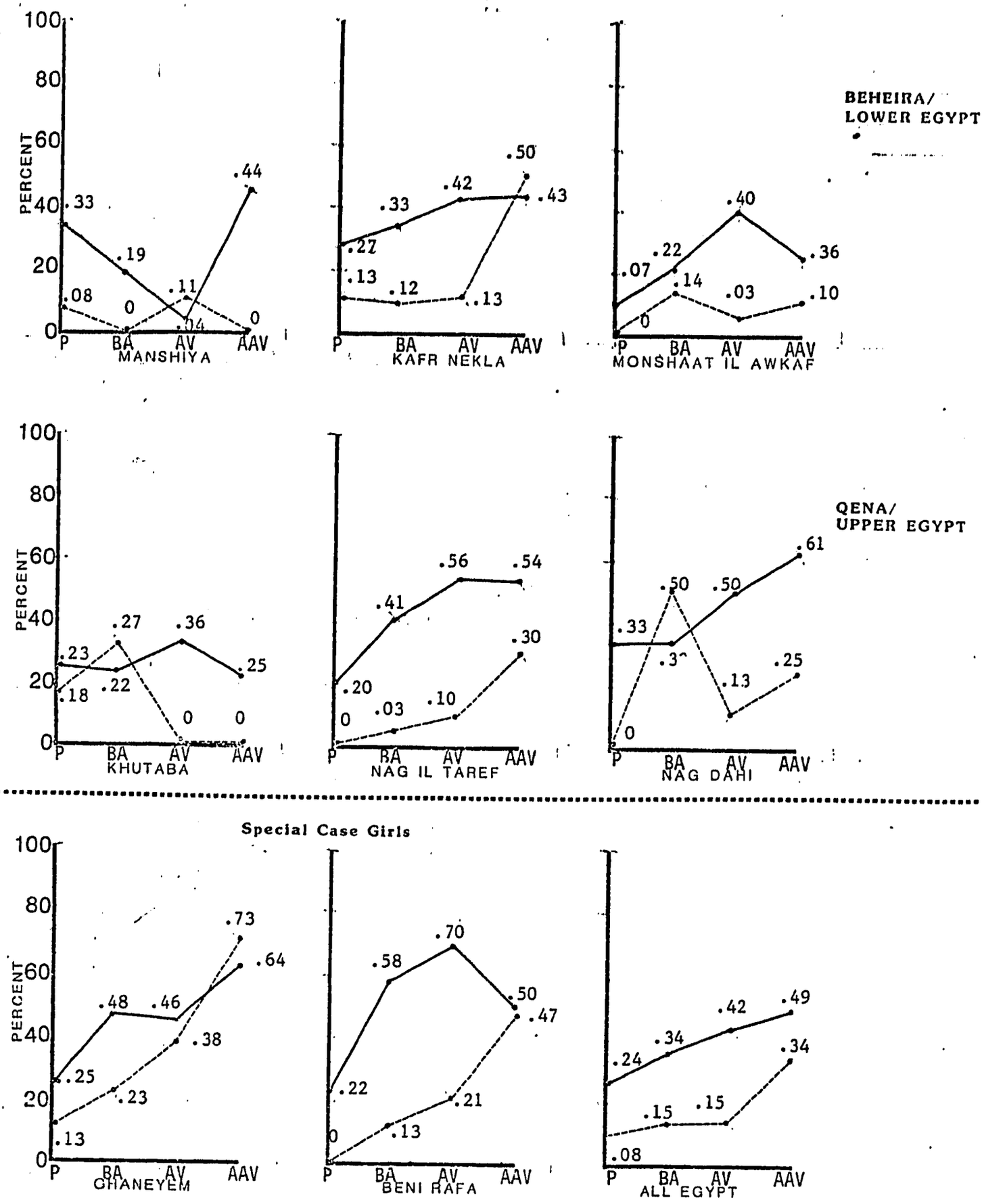

FIGURE I-14: RATIOS OF YOUNGER GENERATION (AGE 6 AND ABOVE) ACHIEVING AGE APPROPRIATE GRADE LEVEL BY ECONOMIC STATUS

P POOR
BA BELOW AVERAGE
AV AVERAGE
BOYS ——

Migration may have several effects on male enrollments in villages, both encouraging and discouraging participation. On the one hand, some parents feel that education opens other opportunities so children will not be forced to migrate to earn income and the larger resource base of the family tends to encourage educational participation. On the other hand, if migration is instrumental in reducing enrollments in affluent families in these four villages, it may be because 1) models of successful migration tend to encourage children to develop manual skills that people believe they can learn more successfully outside the formal educational system and 2) when heads of household go abroad to work, their absence often requires male children to assume their responsibilities at home. We will follow up these issues in the 1984 data gathering.

- In the two "rural" villages of Manshiya and Khutaba and in the "urban" village of Monshaat il Awkaf there was a decline in ratios of enrollment at the "below average" economic level from higher ratios in poor households.

A possible explanation to this previously noted anomaly is found in the different resource bases common to "poor" and "below average" families, where ownership of small plots of land, found more frequently among "below average" families requires reliance on child labor. Children's labor even at a very early age is a valued asset at home while schooling is an economic drain upon the family in terms of expenses paid out and labor lost. Overall, the variations in boys' enrollments and attendance that can be traced to economic factors appear to relate as much, if not more, to the labor needs of families as they do to the actual affluence level and the ability to afford the costs of schooling.

Females

- In 5 villages, girls' initial enrollments showed a very consistant rise with economic level, from a large increase between poor and average levels to what is a usually small increase between average and above-average levels.

The different levels of enrollment for girls from poor and average families suggests that a sufficient economic base must exist in a family in most cases before girls will be placed in school. It is difficult to say why in the two villages, Monshaat il Awkaf, and Khutaba, poor girls have a larger ratio of enrollment than girls in average and below average circumstances. In Monshaat il Awkaf the ratio of enrollment jumps again among the above-average girls. The crowded conditions of schools in the vicinity that exclude some eager enrollees and the occupational structure that emphasized industrial and manual skills for males, discourages many girls from stressing educational accomplishments.

Khutaba's ratio of girls' enrollment needs explanation from the field, though in general terms it parallels the effects in boys' enrollments suggesting the presence of similar factors. The final village, rural Manshiya, maintains a fairly stable enrollment ratio across the economic levels except for below average households where there were no girls enrolled.

Female enrollments, when compared with boys, seem more closely related to the economic cushion affluence brings, making the education of less crucial individuals in the family affordable. A second explanation for why girls of families with higher economic levels tend to enroll more often and achieve age-appropriate grade levels, is the greater assurance that families of these levels feel.

Prominent village families have the confidence to initiate behaviors that have not yet assumed the level of community norms. In interviews we found that where education was a long-term established pattern for boys and girls, the family was almost always one that occupied a prominent economic and leadership position in the village. Often these families maintained closer contact with nearby urban areas and prided themselves on their liberal modern views.

Economic Status and Participation at the Preparatory School Level

- The preparatory level participation rates of all relevant age children were highest in average income level households for both boys (19 percent) and girls (10 percent).
- For boys, higher ratios of participation are found in lower economic levels (poor 9 percent, below average 10 percent) as opposed to higher levels (above average 8 percent).
- For girls, the opposite was the case, higher ratios of participation are found in higher levels (above average 8 percent) as opposed to lower levels (poor 1 percent, below average 3 percent).
- Girls' and boys' ratios of participation were the same in families that had above average economic levels.

As noted above boys' levels of participation tended to be related to occupational goals and the need of households for their labor. The higher levels of participation, at preparatory levels found for boys in the average and lower economic levels undoubtedly reflect parental desires to provide occupational alternatives to farming for their children. Rural Khutaba (where land resources are diminishing in relation to the numbers of people) and the mixed village of Kafr Nekla (where labor opportunities are limited despite local industry) have the highest number of males enrolled in preparatory level.

For girls, preparatory level rat'. of participation generally support the conclusion drawn earlier about schooling in general for girls: a sufficient economic level is important before girls' enroll. The ratios tend also to suggest that there is a status element involved in girls' education for some average and above-average families.

Accessibility of Facilities

"Accessibility of facilities" as a reason expressed by parents for why they or their children did not attend school or dropped out early has two components: the actual availability of a facility and the distance the child must go to attend the school. In recent years, a third element has been added, crowding that prevents admission or causes the child to leave school early for a variety of reasons.

Some of the factors related to how distance is perceived or experienced include

- actual distance traversed around natural obstacles like canals, railroad tracks, highways can substantially increase straight-line distances;
- dangers along the way like speeding cars, trains and sometimes people, may pose a threat to the child;
- costs and availability of transport if transportation is required;
- protection if companions are needed to accompany small children or older girls;
- age of the child if he or she is very young and has trouble walking distances that would be easy for older children;
- sex of the child: may magnify the difficulties for girls;
- psycho-social sense of "own" community versus a "stranger" community;
- systematic exclusion from distant schools that are overcrowded.

Accessibility has declined as a reason for non-participation from 38 percent for males and 30 percent for females of the older generation to 5 percent for males and 10 percent for females of the younger generation (See Figure I-15). For the most part, the decline relates specifically to the establishment of nearby schools during the period when many of the younger generation children were enrolling in school. In every aggregated category, the decrease was larger for boys (overall 33 percent) than girls (20 percent), but considerable variety existed at different locations. Large decreases occurred in areas that either saw new facilities established closer to the community (rural sites) or where enrollments picked up considerably in recent years (mixed sites).

Accessibility was cited as a more important reason for the non-participation of older generation males than females, undoubtedly because it was more often males of that generation that seriously considered the possibility of enrolling. In the younger generation, accessibility of facilities was more often claimed as a reason for the non-participation of girls. It is likely in this case that social norms have been translated, during this transition period, into accessibility issues because people feel themselves not quite ready to accept community norms permitting more girls' participation. In both generations, schools were of course available to the same degree and at the same distance for both sexes. Yet parents perceived accessibility differently in relation to the sexes.

- In both older and younger generations as one would expect, accessibility of facilities is more difficult for boys and girls in rural as opposed to urban villages and major differences exist between governorates, with Assiut (as noted) experiencing the least problem with accessibility, Qena more, and Beheira the greatest.

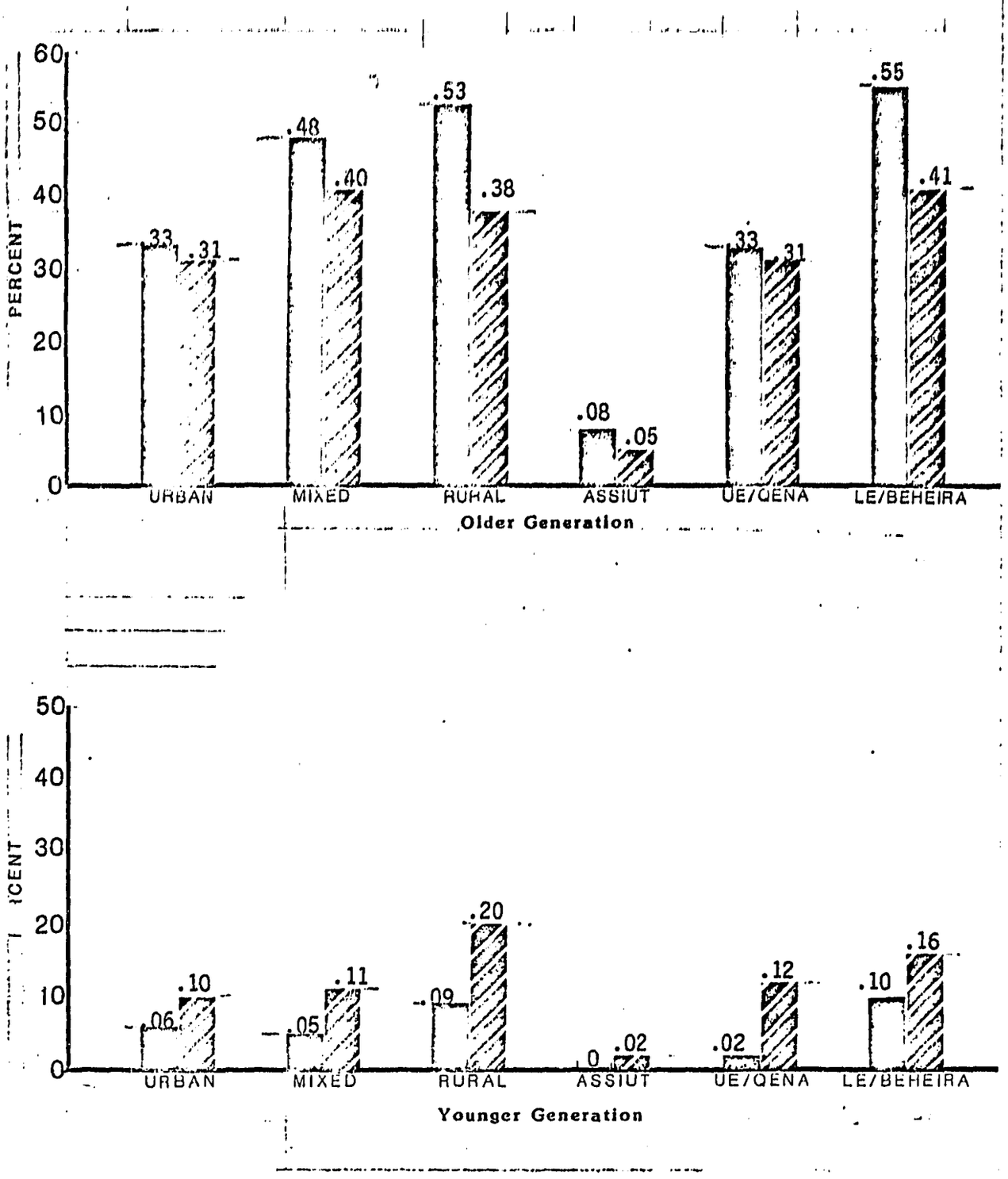

FIGURE I-15: ACCESSIBILITY OF FACILITIES AS A REASON FOR NOT ENROLLING OR LEAVING SCHOOL EARLY

BOYS
GIRLS

Several special characteristics of accessibility became evident from parent interviews. First, parents were particularly concerned about sending six year olds long distances to first grade, and some only sought admission when the children were seven or eight years old for that reason. Second, the concept of distance turned out to be as much a psycho-social dimension as a physical one. In several sites parents noted their reluctance to send girls' to preparatory school even when such schools were within a kilometer or two (as in Nag Dahi), if the schools were in distinctly different "stranger" communities. Their perception of another village as a "stranger" community varied with the degree to which they perceived their own community as an integral one.

For example, in the central quarters of Ghaneyem, where people do not know everyone in their district on a face to face basis, distance was not as significant a factor. However, in related villages to Ghaneyem which are smaller, and where people know each other better, Ghaneyem became a "stranger" community. Third, in some villages, most notably Monshaat il Awkaf, parents showed us children who had been refused admission in other communities' schools because of lack of space. School authorities confirmed that large numbers of children from surrounding areas had been turned away for reasons of lack of space.

Crowded conditions are an important factor difficult to relate directly to enrollment changes since government policies do not officially permit the refusal of children. The constraints crowding pose to decisions about school sending may be subconscious as much as conscious, and they are rarely articulated by parents unless pressed to do so. In communities where schools are crowded, social norms against girls' enrollments tend to remain strong

(Monshaat il Awkaf), and enrollments of girls as a ratio of total enrollments are low.

In some communities we visited, it appeared that parents themselves voluntarily withheld girls in order that spaces would be secured for boys of the community. In one crowded school (Beni Alilj, not an intensive site), when parents were permitted to add a classroom at their own expense for their own children, girls comprised over 50 percent of the total enrollment in that class, compared with usual ratios of 17 percent in already existing classrooms. From our probing, a paradigm of the relationship between crowding, distance and enrollments emerges. (See Table I-17.)

Crowding appears to have less effect on boys' enrollments than girls'. Boys' longevity rather than enrollment in the system is more likely to be curtailed by the combination of crowding and distance, while girls' enrollments and longevity both may be constrained by the combination. Overall, from parental remarks, crowding and distance simply add two more constraints to girls' participation, while for boys they are usually, except in extreme cases, only more hurdles to overcome. When parents stated adamantly, as most did who were asked, that distance makes no difference in whether a child goes to school or not they add, "If the parents want them to go they will go and if the parents do not, they will not." In many more cases parents want boys to go enough to surmount the obstacles.

Impact of Distance on Enrollment and Attainment

The impact of distance on enrollment and attainment is extremely difficult to assess in the context of the intensive sites. When a child starts primary school there is usually only a single school available or if there are several schools, all other factors being equal, the parent chooses the closest

Table I-17: Crowding and Distance Effects on School-Going Behavior

Availability	Parents' Attitudes		Rationalization	Behavior
Limited Places (distant school)	Education relevant	M	Boy's occupational preparation central	Boys go to school
		F	Boys' needs more important	Girls stay home
	Education not directly relevant	M	Norms expect boys' participation	Boys go to school short time
		F	Social norms against female participation	Girls stay home
Limited Places (near school)	Education relevant	M	Boys' occupational preparation central	Boys go to school
		F	Boys' needs more important	Girls may attempt enrollment but face rejection
	Education not direct-directly relevant	M	Norms expect boy's participation	Boys go for a short time but may stay longer
		F	Social norms against participation	Girls stay home
Available Places (distant school)	Education relevant	M	Boys' occupational preparation central	Boys go to school
		F	School is useful	Girls go to school
	Education not directly relevant	M	School is useful at low level	Boys go to school short time
		F	Social norms against participation	Girls don't go to school
Available Places (near school)	Education relevant	M	Boys' occupational preparation central	Boys go to school
		F	School is useful	Girls go to school
	Education not directly relevant	M	Norms expect boys' participation	Boys go to school for short time but may stay longer.
		F	Social norms for girls' participation	Girls go to school short time

school. As a result, single villages do not provide the opportunity to study more than two or three distances a child must go to school. Similarly, choice of school is usually determined by level, preparatory or primary, and by where there are spaces available, rather than by how far away the school is. In the majority of cases there is only one school appropriate for the child. Drawing a comparison across villages often proves misleading, because it ignores the complexity of related factors that may affect thresholds of distance drastically in different locales.

Common sense tells us distance is important, but except for extreme cases other factors such as motivation and economic circumstance may weigh more heavily. Many members of the older generation said they did not go to school because schools were either not available or too distant, yet children of the younger generation go to schools that in some cases were located at the same distance as for their elders. Threshholds of extremity are difficult to find and probably vary from place to place. In Monshaat il Awkaf, which has the most distant schools of the intensive sites, at about 4 kilometers, almost 90 percent of the relevant age boys enrolled at some time; 34 (or 31 percent) achieved age-appropriate grade levels; and another 50 percent achieved less than appropriate grade levels. Of current 6 to 11 year olds, all males were enrolled despite the distance to the nearest primary school.

More than half of relevant age girls in Monshaat il Awkaf, however, remained at home, and only 8 percent reached age-appropriate grade levels. For children 6 to 11 years old, the same picture emerged, a little more than half went to school and the rest remained at home. But whether the girls stay at home because of over-crowded schools, because of the unique industrial base of the work force, or because of distance is not clear.

Monshaat il Awkaf illustrates another problem with developing realistic threshhold measures. Egyptian villages are usually situated in discrete, densely populated settlements where distances between all households and an available school are virtually the same. Thus it is only possible to measure distance as discrete blocks of space rather than on a gradually increasing scale. The nearby related village of Kafr il Duwar il Balad has many of the same surrounding features of Monshaat il Awkaf, but the population is closer to available facilities and has much higher levels of enrollment and attainment.

From the history of past enrollment in intensive sites, it was clear that the establishment of a school in the vicinity brought in larger groups of males and eventually a substantital number of females. A school established in the community itself, even a "one-room" school, tended to dramatically increase the enrollment of girls.

In general, there was a relationship between distance and enrollment. Table I-18 shows, from among six to eleven-year-olds, a comparison of enrolled and non-enrolled by the distance they went or would have gone to school. For boys and girls living close to schools, there was a higher level of participation than for those living farther, up to three kilometers away. After three kilometers the imperative of going long distances to modern schools makes the question of distance important but perhaps not so compelling a question as parental motivation about whether to educate or not[1].

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[1]The villages which most affected these results were the villges, Nag il Taref and Monshaat il Awkaf.

Both boys' and girls' ratios of enrollment increase at those longer distances. Among 12 to 14 year olds, we see the same phenomenom, this time because preparatory level schools are almost always located at much greater distances from student's homes. Except occasionally in urban areas, with each move to a higher educational level a child must be prepared to go even greater distances, until finally at the level of the university, he or she must usually go to live in a distant town.

Table I-19 shows the ratios of those achieving age-appropriate educational attainment by distance from school. Here there appears to be a similar mild correlation between age appropriate attainment and distance for boys and girls.

Parents who are motivated to send their children, it seems clear, are not deterred by reasonable distances up to three or sometimes more kilometers, just as parent respondents themselves have reported.

In home interviews, parents occasionally noted that they withdrew their girls after elementary school because they did not want them continuing in a more distant preparatory school. The implication was that they feared sending the girl to a stranger community rather than that they felt hesitation over the actual distance involved. We heard such comments in Nag Dahi where the move to a mixed preparatory school meant association with a new group of students from a greater variety of villages. In Ghaneyem, Manshiya, and Nag il Taref the same kinds of comments were voiced in related villages by parents reluctant to send their children to the not very distant but "stranger" village where the new school was located. In Nag il Taref, many parents sent children of both sexes (but primarily girls) to local religious schools rather than send them to a modern school located in another community. In a related village of Ghaneyem a mixed preparatory school will open next year and parents

Table I-18: Enrolled and Non-enrolled 6-11 Year Olds by Distance from Current School or School Child Would Have Attended if Enrolled.

Educational Status		1.0 km.		2.0 km.		3.0 km.		3.5 km.	
Enrolled	M	133	.92	17	.77	8	.57	59	100
	F	92	.65	12	.43	9	.47	37	.84
Non-enrolled	M	11	.08	5	.23	6	.43	0	0
	F	49	.35	16	.57	10	.53	7	.16
Total	M	144	1.00	22	1.00	14	1.00	59	1.00
	F	141	1.00	28	1.00	19	1.00	44	1.00

Table I-19: Attainment Level by Distance from Current or Last-attended School[1]

Educational Status		1.0 km.		2.0 km.		3.0 km.		3.5 km.+	
Less than appropriate	M	121	.66	40	.70	20	.91	109	.69
	F	105	.68	29	.66	6	.86	39	.67
Age appropriate	M	63	.34	17	.30	2	.09	49	.31
	F	49	.32	15	.34	1	.14	19	.33
Total	M	184	1.00	54	1.00	22	1.00	158	1.00
	F	154	1.00	44	1.00	7	1.00	58	1.00

[1]Children whose last school was secondary or university level have been excluded. The remainder are those currently in school up to grade 9 or those who dropped out before the end of grade 9.

there said they would withdraw their daughters from Ghaneyem's single sex girls' school (even though they approved this system) and keep them in the mixed school in their own community. In Khutaba when the new school opened this year, children from one of the neighboring villages continued going to a school much further away than they were accustomed to attending rather than switch to new teachers and a totally new environment.

These comments show that though distance has an effect eventually on the numbers of students enrolling as we have seen through historic data, another aspect of distance is psychological and relates to a sense of what is "own" and what is a "stranger" community. The committed overcome their hesitations but the marginally motivated (which often includes the parents of girls) may allow their reservations to restrict the educational participation of their children. Community leaders dedicated to educating local children understand this problem and work hard to establish new schools in the local community. In Monshaat il Awkaf resentment was expressed in two nearby related villages that the new school would not be located in their communities, even though the distances their children have gone to school in the past will be greatly reduced with the advent of the new school in Monshaat il Awkaf.

Other Reasons for Non-participation

Parents noted a number of other constraints on educational participation, but these were mentioned so infrequently that it is difficult to assess their impact on enrollment and attainment. Problems related to school itself and the refusal of children to remain in school are small but persistent problems in both generations, about equal for boys and girls.

More important as a reason was "failed exams." A small ratio of members of the older generation explained that they left school because of failed

exams, and this group becomes larger in the younger generation. The problem was reported somewhat more frequently for the boys, who make up a larger group of school goers, than for the girls.

Why Children May Not Finish Preparatory Level

A survey question asked if parents planned to keep their children in school to the end of preparatory level. The majority of parents responded that they had already sent or planned to send their children to the end of preparatory level (1152 children or 67 percent). Another sizeable group had not sent or did not plan to send their children to school at all (399 children or 23 percent).

The few who answered that they did not expect their presently enrolled children to continue to the end of preparatory level gave as the most common reason (19 cases for boys and 5 for girls) difficulties in exams as the primary reason. Equal number of boys (7) and girls (7) will not continue because of distance, six of the girls in Nag Dahi and one in Nag il Taref. The boys resided in Kafr Nekla (4) and Nag Dahi (2). The numbers are so small, however, that they can only be considered isolated problems. An additional small number of villagers stated that their children did not continue beyond primary school because preparatory schools were not available, the child's labor was needed, the school was too expensive, the courses were not relevant, there were problems with the school, their children had a chance to marry, or such practice did not fit social norms. The small number of parents who do not expect their children to finish preparatory level support the contention that once children enroll initially, major resistance to educational participation has been overcome and a momentum carries the child through the system unless faced with special circumstances that prevent continuation.

The major circumstance cited by parents, failure in exams, is a systemic constraint that has little to do with parental resistance to the system.

Retention

Though from teachers' reports large numbers of children repeat grades, few parents admit that their children were held back. In our sample, they said that children repeated the 6th grade most frequently, followed by 9th grade, 4th grade, 8th grade, and finally 2nd and 7th grades. (See Table I-20). Proportionally, boys were reported to have been retained more frequently than girls. The rural villages and Nag Dahi had the lowest rates of retention; Kafr Nekla had the highest rate for boys (25 percent) and Monshaat il Awkaf the highest for girls (17 percent).

Rates of Absence

Though parents reported an idealized version of the extent of their children's absence rates, their responses still provided a sense of the underlying reasons for absenteeism. Overall there was little difference in the reported rates of absenteeism between boys and girls in all categories of the aggregated villages (See Figure I-16). Absenteeism was reported more frequently in urban villages than in rural villages. Absenteeism in Upper Egyptian (Assiut and Qena) villages was reported to be lower than in the Delta villages. Monshaat il Awkaf, of all the sites, reported the highest ratio of absenteeism (41 percent of the school-going male population and 50 percent of the school-going females).

Reasons for Absence

The four major reasons for absence was weather, illness, need for child's labor, and distance (See Figure I-17). Several of these factors seem to a

Table I-20: Retained Children by Grade of Retention

Grade	Children Retained		Ratio of Retained to Enrolled Children[1]	
	Males	Females	Males	Females
2	3	3	.01	.01
4	8	5	.01	.02
6	42	10	.08	.03
7	8	3	.01	.01
8	10	0	.02	.0
9	30	7	.05	.02
TOTAL	101	28	.18	.10

[1]The total number of enrolled children is 549 males and 286 females.

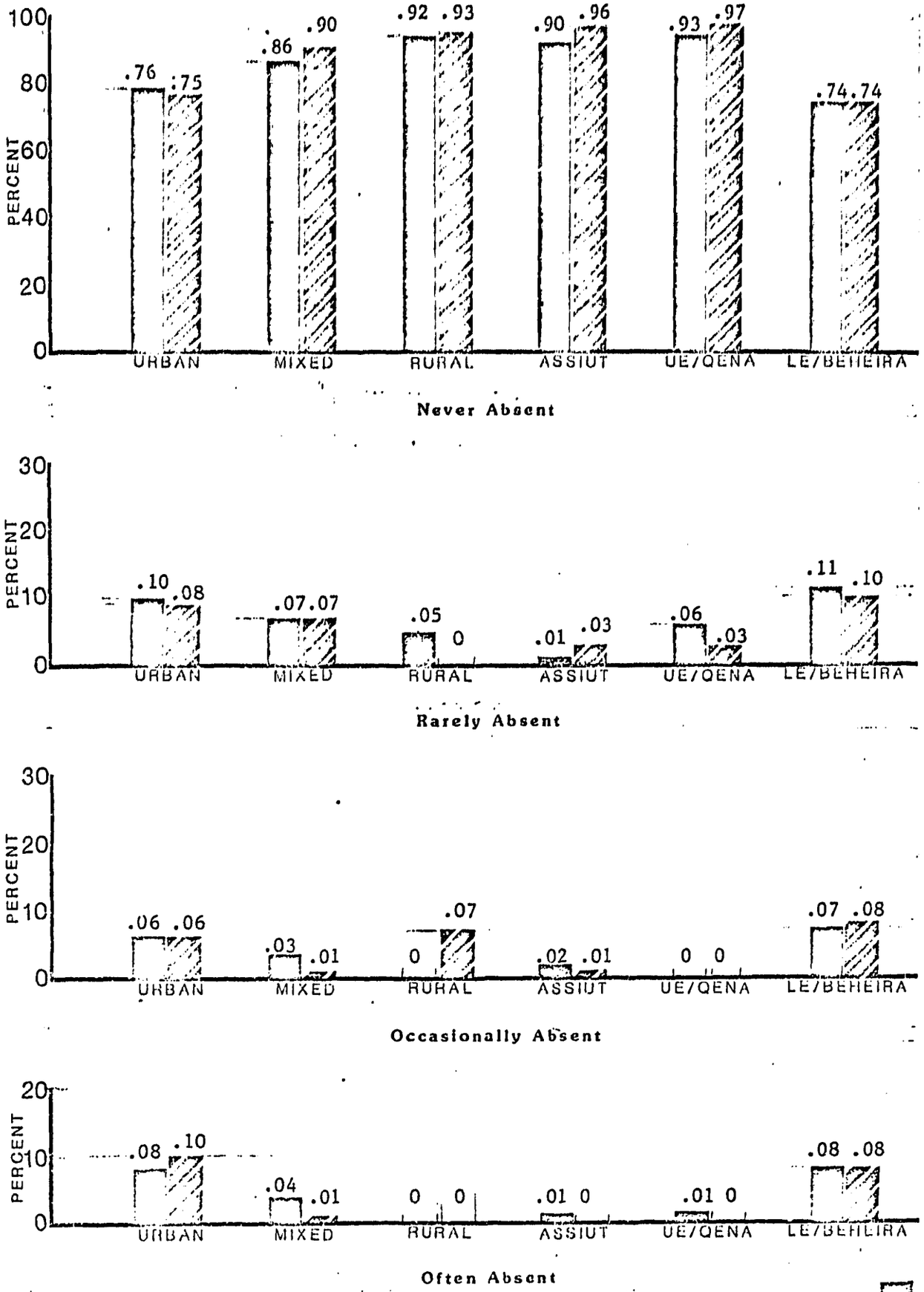


FIGURE I-16: REPORTED ABSENCE RATES FOR PRESENTLY ENROLLED CHILDREN

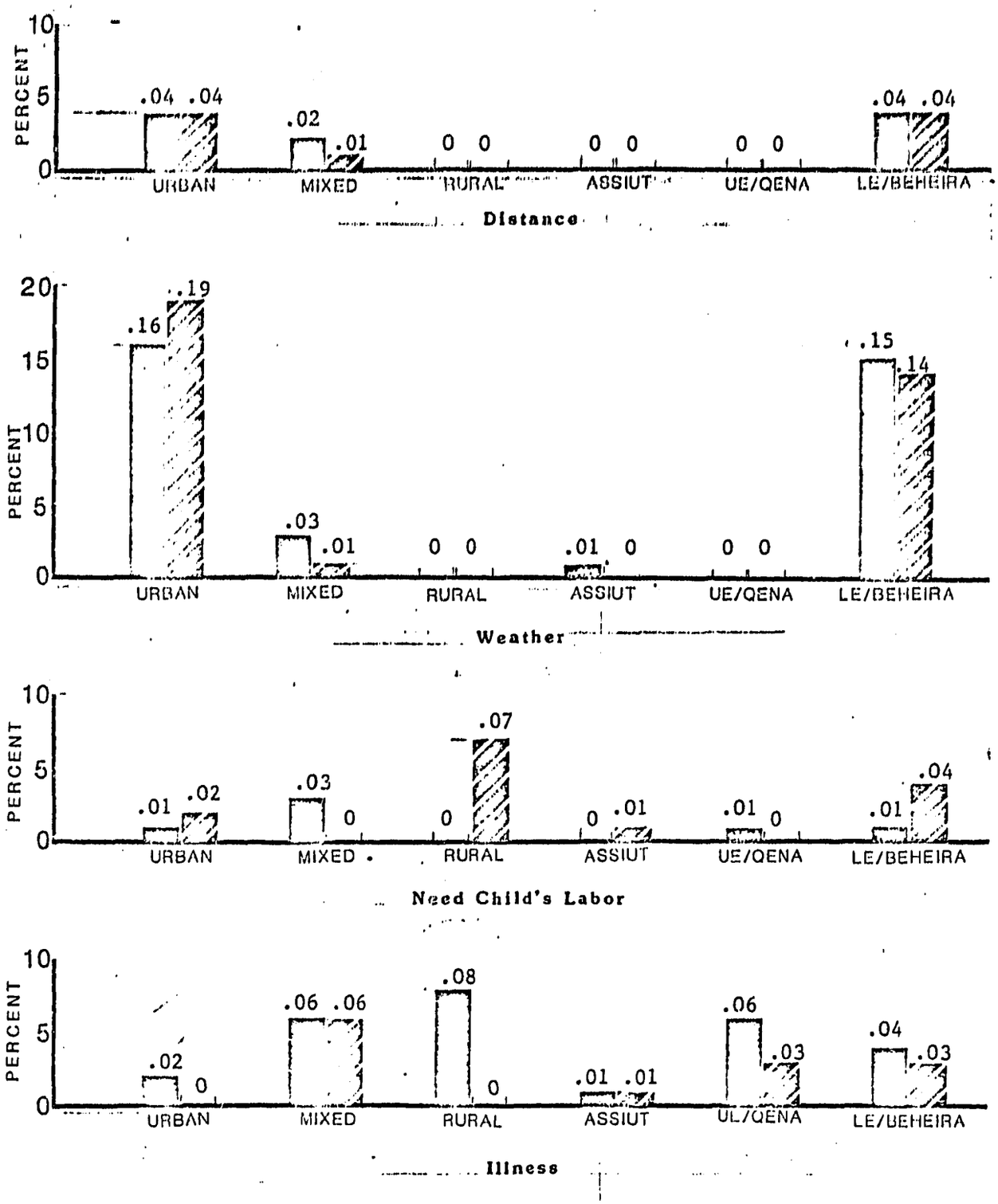


FIGURE I-17: REASONS GIVEN BY PARENTS FOR ABSENCES FROM SCHOOL

[1]Parents in all governorates report that 86 percent of boys and 90 percent of girls are never absent from schools. The graphs summarize the remainder of school-going children. A few children also were absent because of problems in school, and because there was no one to accompany them. No one mentioned difficulty with transportation.

large degree to be localized: weather and distance most affect the urban village children of Beheira (in Monshaat il Awkaf) where distance along dust roads to school and a winter rainy season combine to make it difficult at times for children to attend school. For rural villages, the need for their labor is the most significant reason for girls to stay home and for boys, illness; rural children are little affected by weather or distance, given the fact that in the two rural communities of the sample, new schools are now in place, and before them, "one-room" schools existed in the local communities. Overall illness poses at least as great a problem for boys as girls. Transportation, problems in school, and lack of a companion with whom to walk to school were mentioned only in isolated cases. In general most of the variables affecting attendance as reported by parents go back to two of the three variables affecting initial enrollment: economic and accessibility factors, while adding the problems of illness and weather. Social norms, which were significant in initial enrollment and again affect longevity in the system, are largely overcome at the point of initial enrollment and are not viewed as significant in day-to-day attendance.

Benefits of Education

Another way of looking at parental motivations in school sending behavior is to ask what benefits parents expect children to receive from their educations. Villagers are not accustomed to answering questions that are speculative or deal with future events and thus their answers must be taken with some caution. It was not uncommon for them to answer "Education is clean" or "it lights up the mind," rather than to specify a more direct connection between the child and more tangible goals the parent holds for the child. Parents did

not answer or their answers were so unrelated to the question in 13 percent of the cases that they had to be discounted.

Summarizing the valid answers, the leading benefit of education for males and females both was considered preparation for an occupation (114 cases or 36 percent of enrolled boys and 72 cases or 28 percent of enrolled girls). Second, for both sexes (110 or 35 percent of boys and 55 cases or 22 percent of girls) was the benefit that comes from functional literacy in helping people cope with daily life. The third benefit, again for both boys (44 cases or 14 percent) and girls (33 cases or 13 percent) was improved status. The fourth benefit for girls alone (3 cases or 12 percent) was the chance to marry better. Fourth place for boys (19 cases or 6 percent) was considered to be the preparation for household responsibilities. A few isolated parents considered the basic levels of education important as a preparation for further training, in providing functional numeracy or as simply something one does because everyone else goes to school.

In a related question that was later discarded, parents were asked to evaluate which courses were most useful for their children. The vast majority either did not know enough about the courses their children took, or they were unwilling to evaluate the benefits of courses that they believed had been designed by experts who must know what is good for their children. Parents in general we found are more interested in certificates of school-level achievement than they are in the specific content of courses.

Summary of Factors Related to School-Going Behavior

According to the respondents, whose undirected responses were solicited, factors in the past that have constrained and are still constraining educational participation fall roughly into three categories: social norms,

economic variables, and accessibility of facilities. All were claimed more frequently in older as opposed to younger generations. In the younger generation enrollment and attainment data still show sharp differences at all levels between boys and girls, but evidence is clear that as time passes the effects of normative constraints have decreased. The economic level of the households was clearly correlated with the ratios of enrollment and attendance, roughly increasing as economic level increases but producing a few consistent deviations that interview data help to clarify. Distance from the school as a factor affecting enrollment and attendance in these particular sites showed little relationship to enrollment and attainment. From parent interviews, however, it became clear that lack of space at the first grade level affects enrollment especially in the case of girls, and crowding affects persistence in the system.

FAMILY DECISION MAKING

Decision making about school sending takes place in rural villages in the context of family groups and not as individual choices about individual children. Parents often make decisions for the benefit of the family as a whole and do not necessarily think every individual child has the right or the need for education. This section reviews previously discussed variables related to school-going through the lens of family decision making.

Family Enrollment Strategies (See Figure I-18)

- Few families sent no age-eligible child to first grade (7 percent).
- The majority (54 percent) demonstrated a mixed pattern sending some children to school while keeping others home.

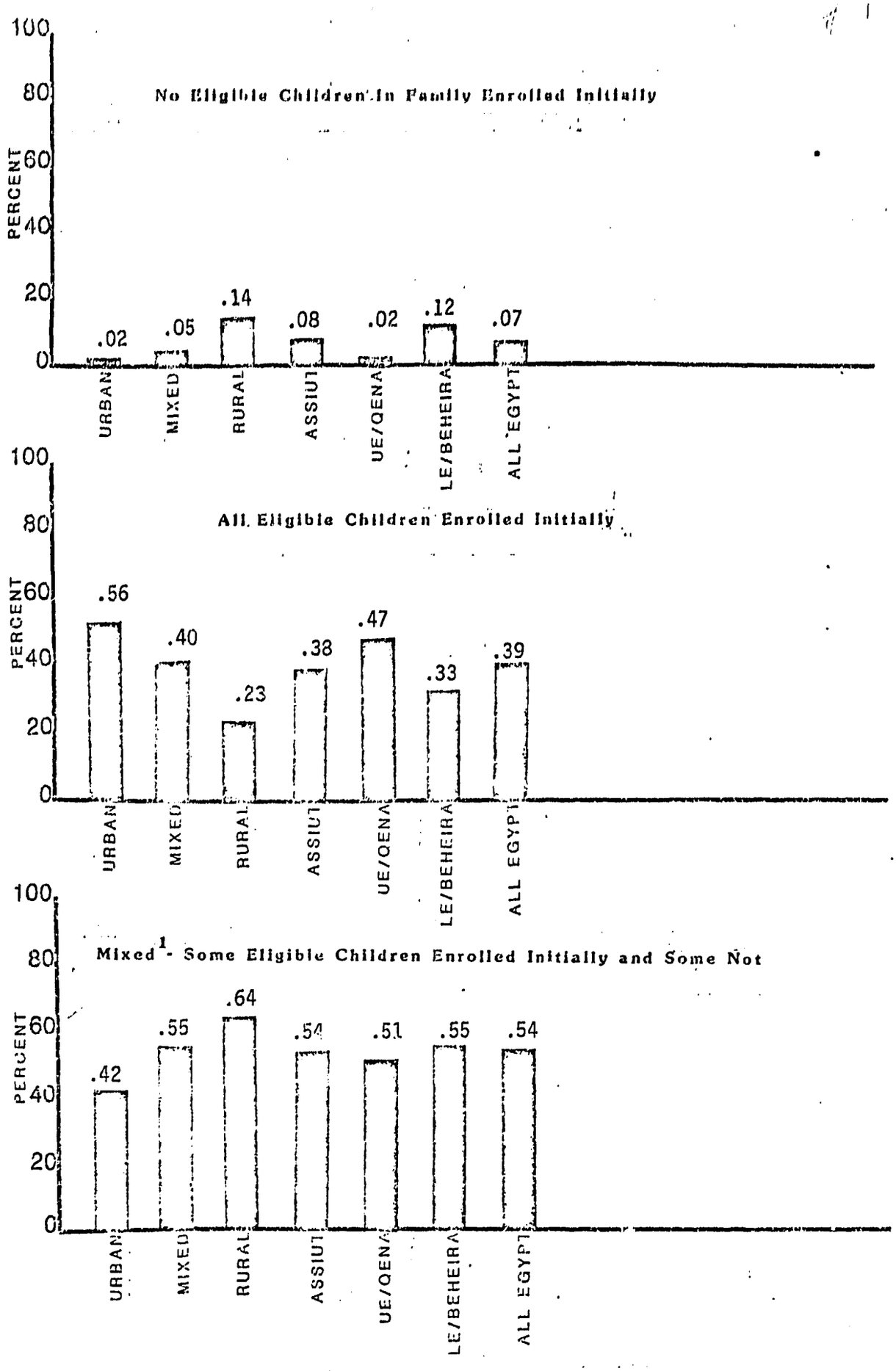


FIGURE I-18: COMPOSITE FAMILY ENROLLMENT STRATEGIES

1 This category also includes families where children of only one sex exist and only some enrolle

- A substantial number (39 percent) sent all eligible children to school.

- Rural villages had the smallest ratios of families with all eligible children enrolled and urban villages had the highest ratios.

- Upper Egypt (Qena) had generally higher ratios of families that enrolled all elegible children than Lower Egypt (Beheira).

The surprisingly low numbers of families who sent no age-eligible children to school underline the fact that community norms supporting some level of education for children are broadly accepted in Egyptian villages. Who should go to school and who should stay at home seems to be the current question, rather than should children go to school at all.

Sex Related Strategies (See Figure I-19)

Males

- Most families (95 percent) enrolled at least one male child. Only a few (5 percent) did not enroll any male children. A high ratio (42 percent) sent all eligible male children to school.

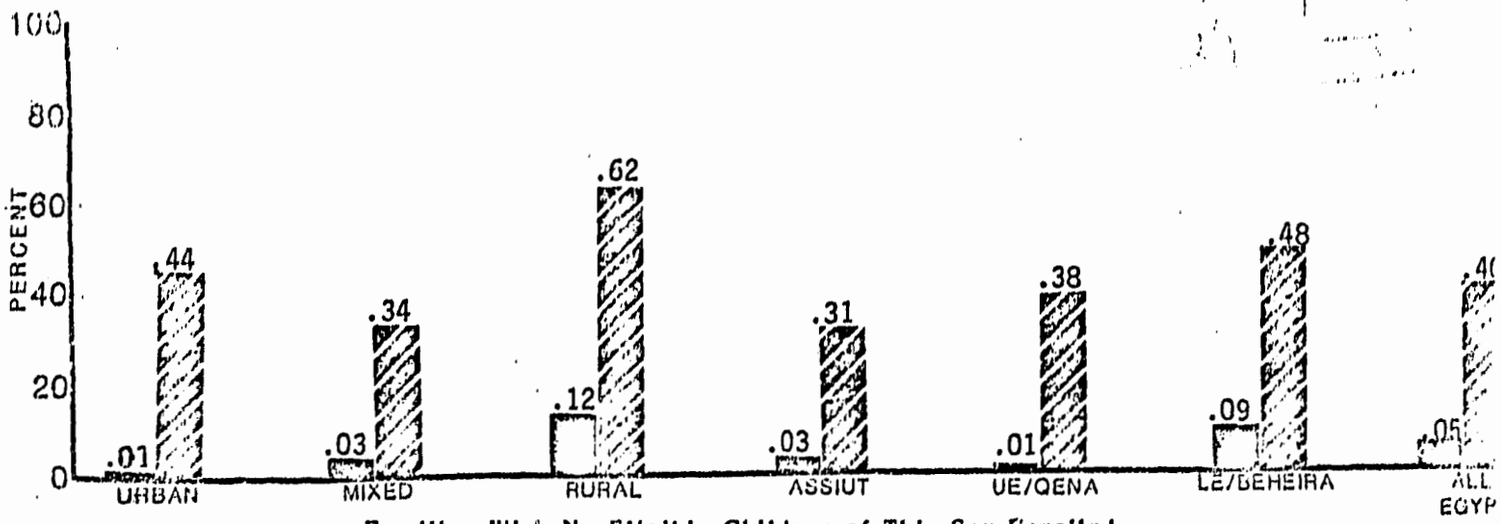
- In rural villages the ratio of families sending no males to school was higher than urban villages. Mixed villages showed a higher ratio (49 percent of families with all males enrolled than either urban (40 percent) or rural (34 percent) villages.

- Lower Egypt showed greater variety, perhaps as a result of more unique characteristics in each site (Monshaat il Awkaf's greater ambivalence toward education, Manshiya's disadvantaged status, and Kafr Nekla's near-by long established educational system)

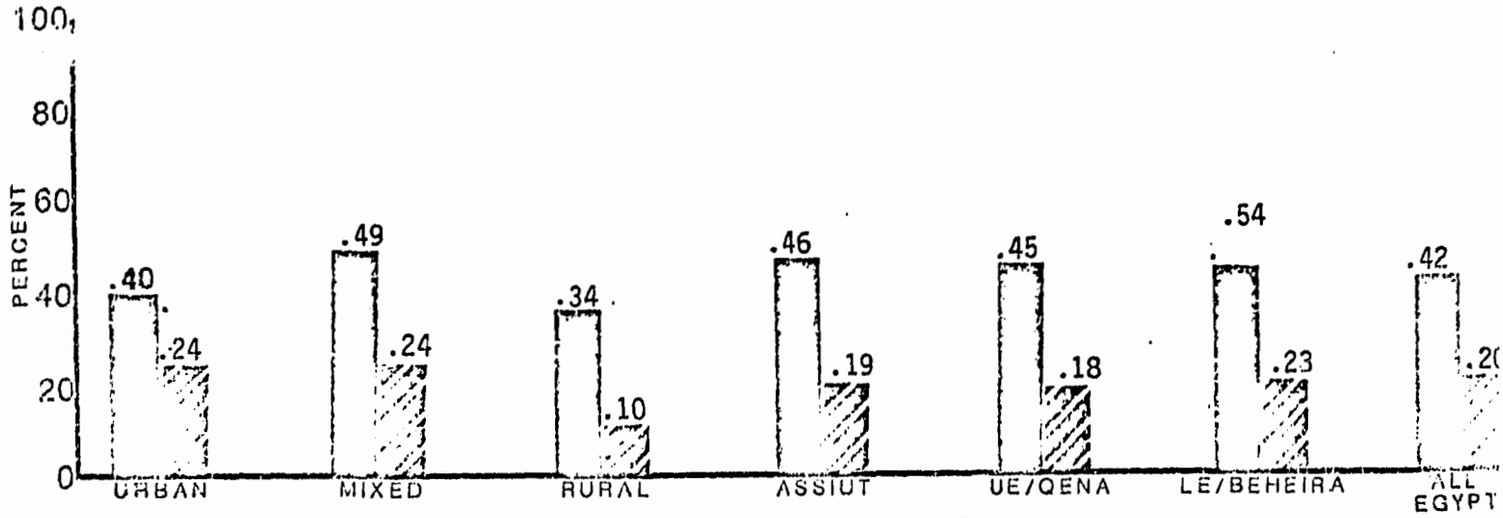
Females

- Overall a high ratio (40 percent) of families sent no eligible female to school; the same ratio sent some but not all female children to school and a smaller ratio (20 percent) sent all eligible girls to school.

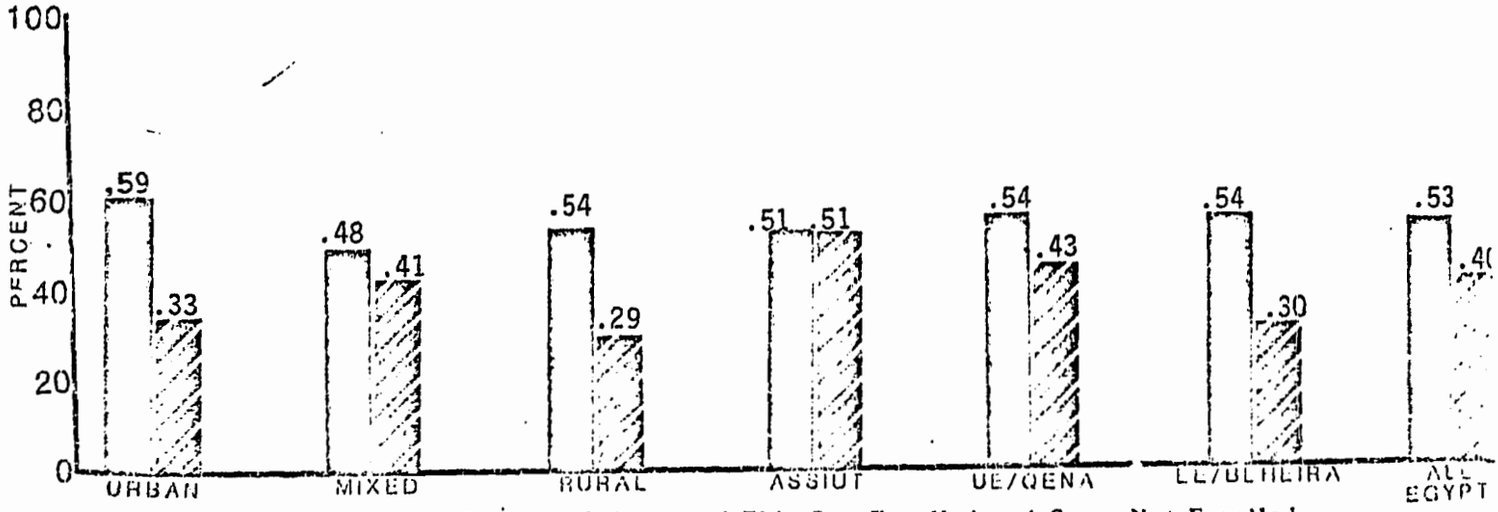
- More families in rural than mixed or urban areas sent no eligible females to school.



Families With No Eligible Children of This Sex Enrolled



Families With All Eligible Children of This Sex Enrolled



Families With Some Eligible Children of This Sex Enrolled and Some Not Enrolled

BOYS
GIRLS

FIGURE I-19: FAMILY ENROLLMENT STRATEGIES BY SEX

- Ratios of families sending all girls to school tended to be low in rural villages and higher in urban and mixed villages. In school sending strategies Beni Rafa follows a rural pattern and Ghaneyem an urban pattern. The lower ratios of school sending were found in areas where social norms still resist the full participation of girls.

The large numbers of families (comprising the largest category of strategy in most sites) where some children go to school and some stay home attest to the transitional nature of the present period and to the extent of parental ambivalence toward the educational participation of their children. In general, these families are less cautious about sending boys than girls. As school going becomes a more accepted part of community life, parents often send younger children, even though older ones of the same sex remained at home. This produces, we hypothesize, a situation that is ripe for improvements in enrollment and attainment since a great deal of initial hesitation has been overcome, while the pool of potential candidates still remains large.

Family Strategies of Enrollment by Economic Level (See Figure I-20)

Generally as the socio-economic level of families increases

- Fewer families are found with no eligible children enrolled;
- More families enroll all eligible children; and
- Fewer families exist with mixed strategies of some eligible children enrolled and some not enrolled.

Some variations from these generalizations occur. An unusually high frequency of families that enroll no children occurs in the "below average" category in the rural villages, Kafr Nekla, and Monshaat il Awkaf, all villages with considerable reliance still on agriculture and with a number of below-average families that have small plots of land requiring family labor.

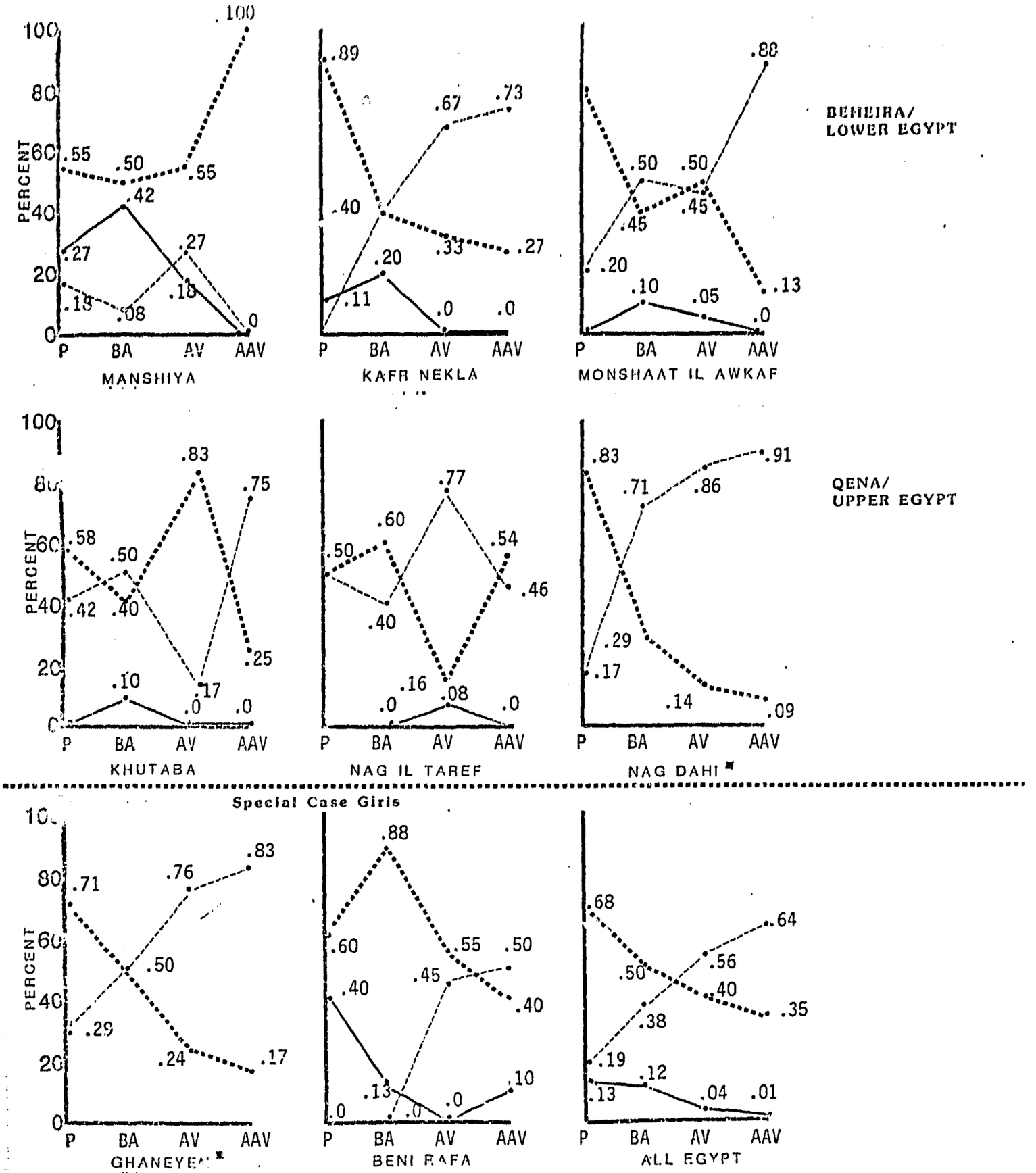


FIGURE I-20: FAMILY ENROLLMENT STRATEGIES BY ECONOMIC LEVEL

* All families with age eligible children had some enrolled

NO ELIGIBLE CHILDREN ENROLLED ———
ALL ELIGIBLE CHILDREN ENROLLED - - - - -
SOME ELIGIBLE CHILDREN ENROLLED · · · · ·

P POOR
BA BELOW AVERAGE
AV AVERAGE
AAV ABOVE AVERAGE

The trend in enrollments of all eligible children in rural villages shows little consistant relation with increasing economic levels. These were also the villages that, with Beni Rafa, had the lowest ratio of families with all girls in the family enrolled. More than other villages they strongly emphasized the lack of accessibility to schools (availability and distance) and social norms as the primary reasons preventing girls' participation.

The trend in mixed strategies of enrollment in the rural sites and Nag il Taref were also variable with respect to economic level. In Manshiya, in fact, the trend was the reverse of that found in Monshaat il Awkaf and Nag Dahi. In these rural villages, ambivalence still exists toward girls' education.

Family Ratios of Enrollment and Grade-Level Attendance (See Figure I-21)

Composite Ratios of Enrollment and Age-Appropriate Attendance

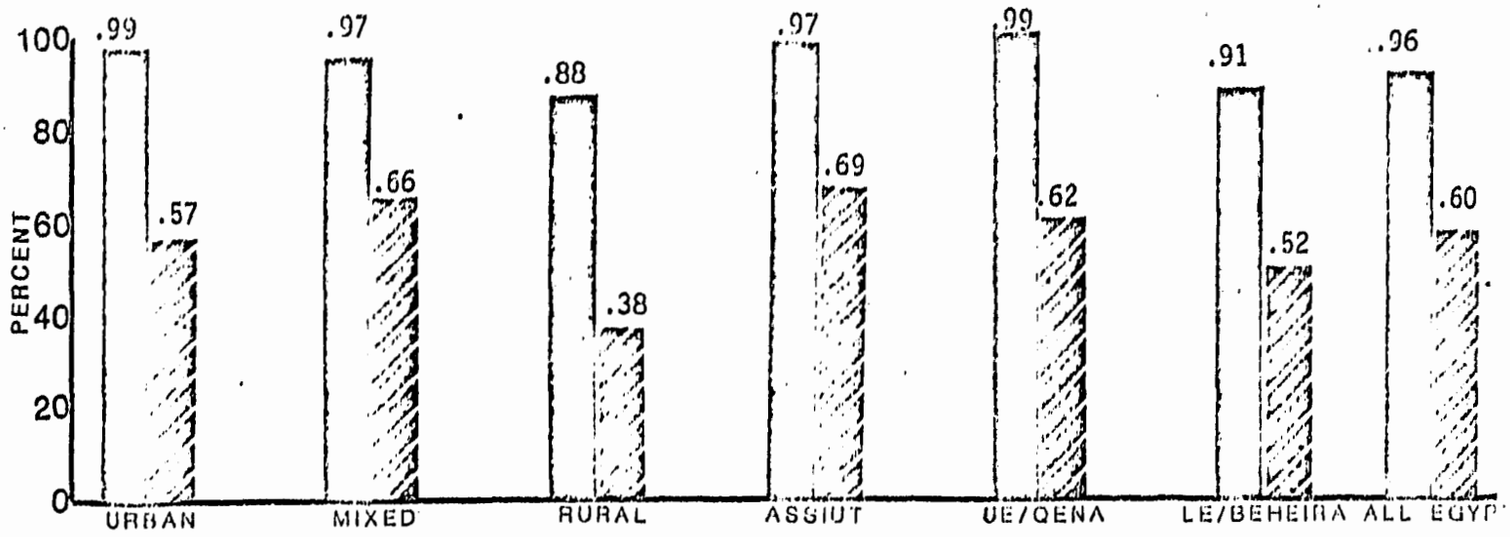
Figure I-21 demonstrates the extent and nature of enthusiasm for educational participation in the sample:

- The vast majoritiy (94 percent) of families sent at least one child to school.
- The vast majority (85 percent) of families include children who have not achieved age-appropriate grade levels, i.e. there is considerable waste and inefficiency in the system.

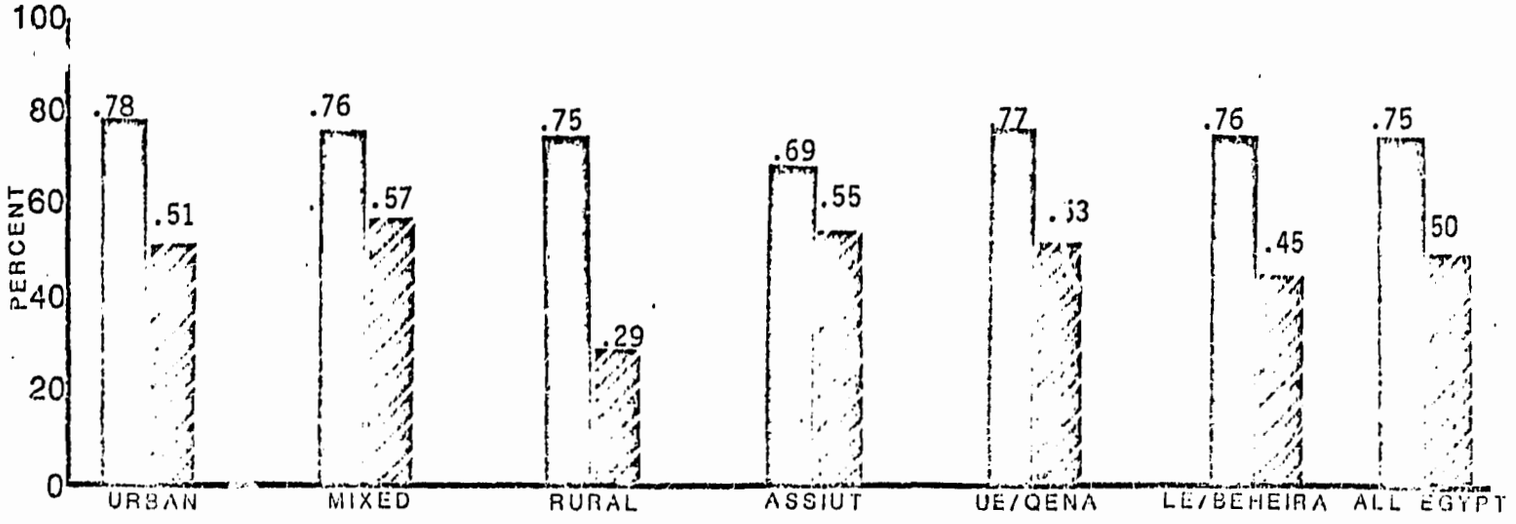
From family strategies of educational participation it is evident that recruitment efforts need to be directed at the subcategories of children parents do not enroll and persuasion exerted toward extending the child's stay in the system.

Family Ratios of Initial Enrollment by Economic Level (See Figure I-22)

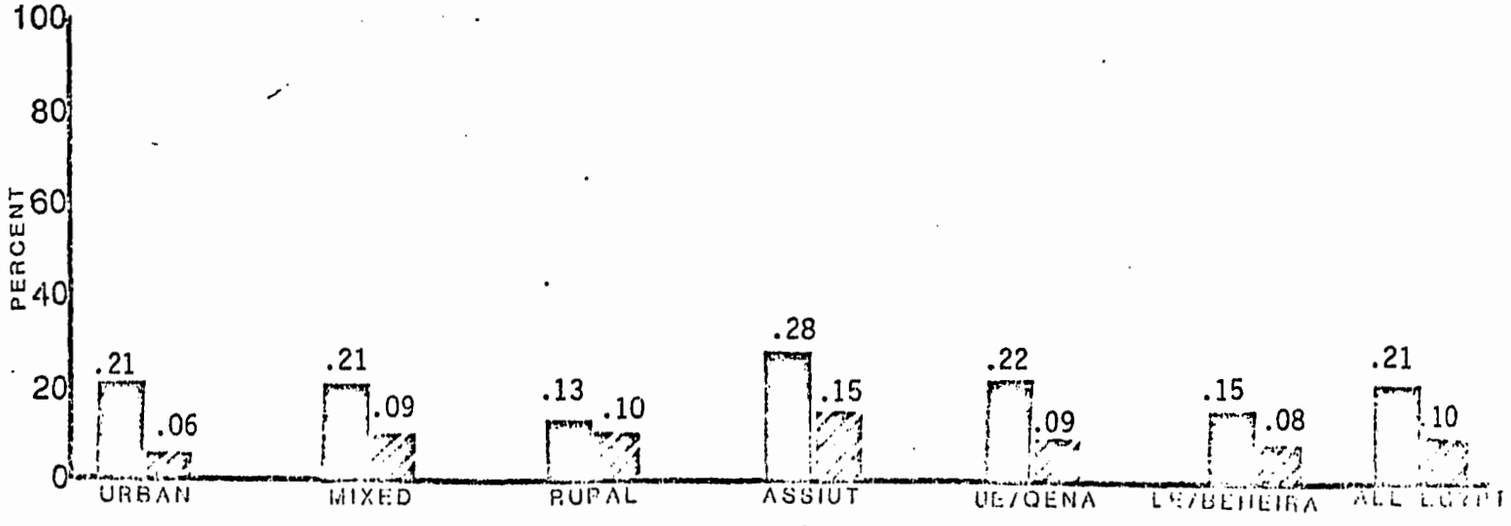
The ratios of families with at least one male child or female child initially enrolled increases in most cases with economic level.



Family Ratio of Initial Enrollment by Sex (ratio of families where at least one child of this sex enrolled)



amily Ratio of Less Than Age Appropriate Grade Level Achievement by Sex (ratio of families where one or more children of this sex did not achieve age appropriate grade level)



Family Ratio of Age Appropriate Grade Level (ratio of families where all children of this sex achieved age appropriate grade level)

BOYS
GIRLS

FIGURE I-21: FAMILY ENROLLMENT AND GRADE LEVEL ACHIEVEMENT

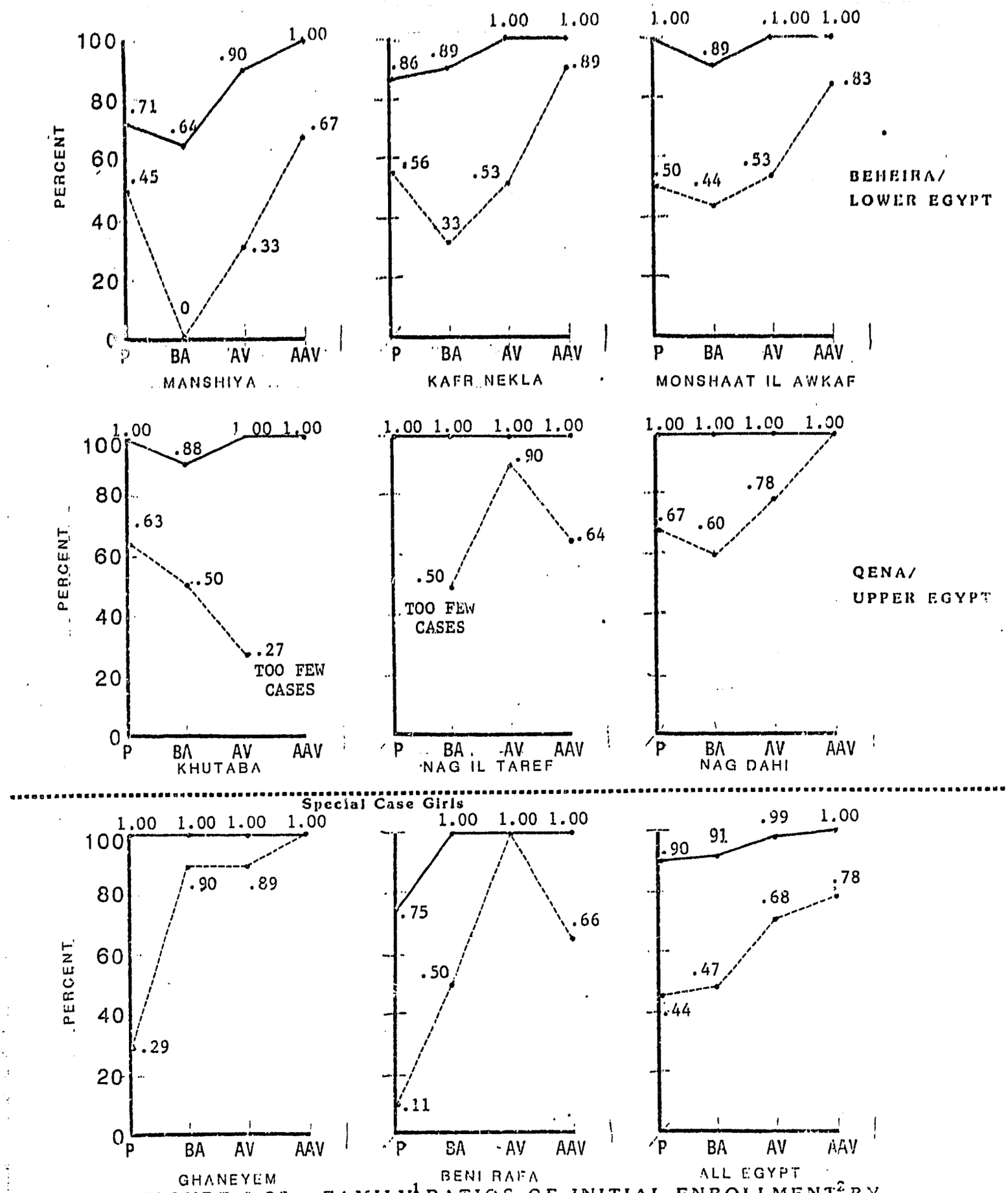


FIGURE I-22: FAMILY[1] RATIOS OF INITIAL ENROLLMENT[2] BY ECONOMIC LEVEL AND SEX

1. Only families are included with children of relevant age and sex
2. At least one child of this sex is enrolled

- The ratio of families initially enrolling at least one boy in most villages reaches 100 percent by average and above average economic levels of the households.

- In all but three villages the ratio of families initially enrolling at least one girl reaches a high at the above average economic level.

- Conservative villages, (Khutaba, Nag' il Taref and Beni Rafah), peak at lower economic levels and decline in the ratio of families enrolling at least one girl at the above average economic level.

This phenomenon is consistent with the concept expressed in poorer communities that a sufficient degree of affluence allows women the leisure to stay at home and engage exclusively in a housewife's tasks rather than requiring them to earn money or work in the fields. Where education is thought of as a preparation for an occupation, this could affect girl's participation, causing more straitened households, if they can afford it, to seek extended education as a goal for girls, and better-off families to reject any appearance that their women need to work. Elsewhere we have noted the contradictory view in more progressive settings where the better-off families set the trend for the community by educating their girls. Degree of affluence, a long established position in the village, identification with wider "urban" norms and other factors combine to determine which route a family takes.

<u>Family Ratios of Age-Appropriate Grade Levels by Economic Level</u> (Figure I-23)

- Generally, the ratio of families in which all male children reach age-appropriate grade levels rises with economic level.

- Greater variation in the curve occurs in the ratios of families in which all girls reach age-appropriate grade levels. Half the villages do not have ratios that rise with economic level; three remain relatively stable, and the last has ratios that decline as economic level rises.

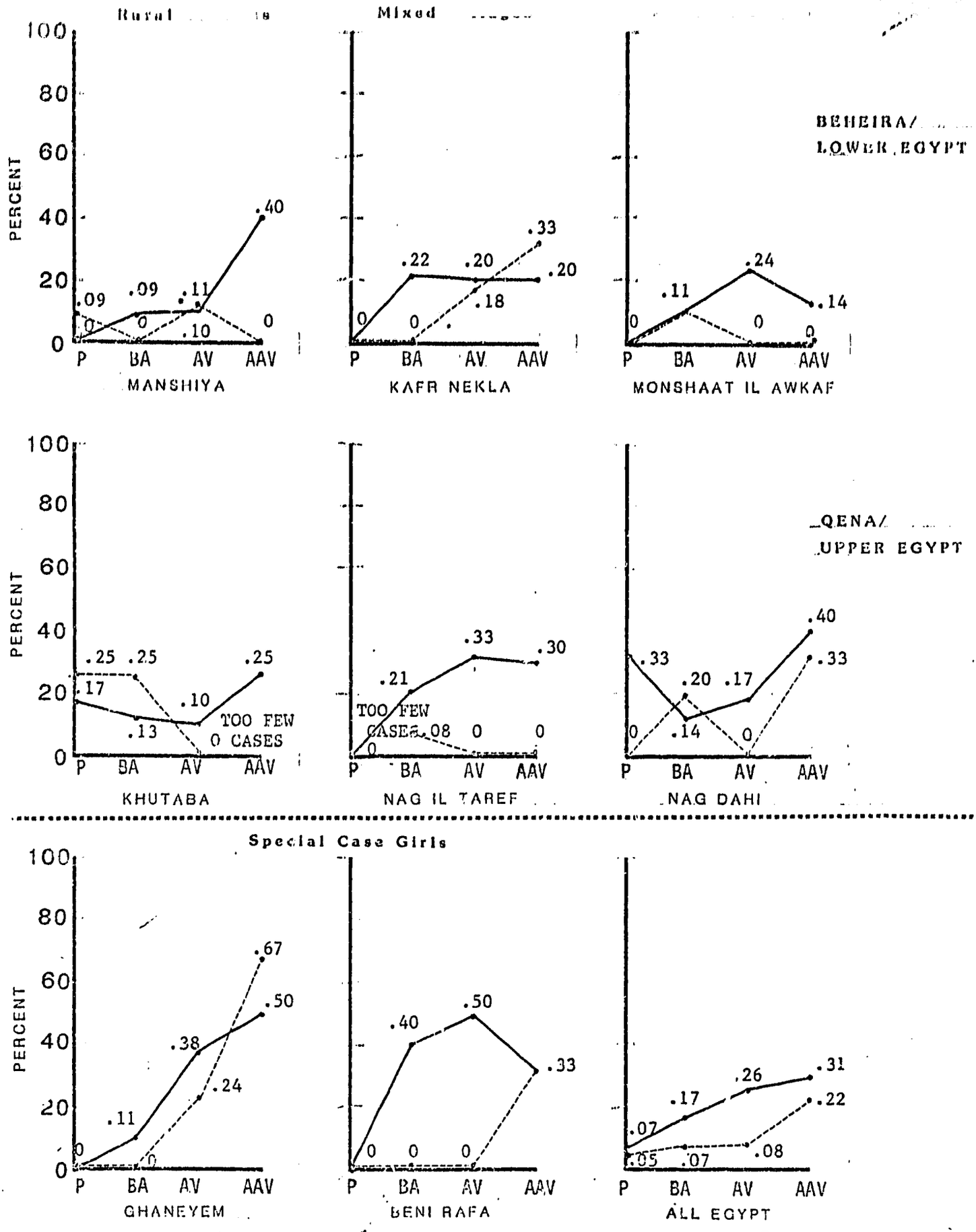


FIGURE I-23: FAMILY[1] RATIOS OF AGE APPROPRIATE[2] ATTENDANCE BY ECONOMIC LEVEL AND SEX

1. Only families are included with children of relevant age and sex
2. All children in the family of this sex reached the grade appropriate to their age up to 9th grade

Social norms in the remote (Khutaba and Manshiya) and conservative (Nag 11 Taref and Beni Rafa) villages keep the numbers of families in which all the girls reach age-appropriate grade levels low. Parents either themselves question the relevance of schooling for all their girls or they perceive community norms as opposing girls' education.

In Nag Dahi the more affluent families have played a leadership role, achieving relatively high levels of age-appropriate attendance for boys and girls. The two sites in Assiut show relatively high levels of age-appropriate attendance in economically above average households. Ghaneyem's exemplary model must be considered in light of the lack of crowding in local schools (only three schools are needed to eliminate afternoon shifts at the primary level and none at the preparatory level according to 1981 estimates of the MOE. Well motivated families can in such instances place their children at appropriate age levels without any difficulty. In the over-crowded Beni Rafa area, schools have responded by adding more shifts and expanding class room size, and the result has been that Beni Rafa children have maintained fairly high ratios of age-appropriate grade levels, when compared with other sites, but under more adverse conditions than Ghaneyem.

Predictions From Family Decision-Making

Aggregation of the data in terms of corporate, family-decision-making processes helps in developing models of future school sending behavior. If we assume, once a family has sent one child of a sex to school, that future children of the same sex will be sent, then we note the areas where there is room for further change[1].

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[1]The labor needs of households are usually met by the eldest children of each sex.

Enrollments

From past evidence, the future guarantees high rates of initial enrollments of males in most households and in all villages except those similar to rural Manshiya. Increases in the absolute numbers of males enrolled will of course occur as a result of population increases and an expected more consistent sending of school children in households that have only newly overcome their initial hesitations about education. Room for improvement in male enrollments is present in poor and below average households and in rural villages like Manshiya. Here we would expect to find the most impact of new facilities simply because a greater potential for increase exists in these areas. It will be important to determine the extent to which new facilities attract this last major pool of male recruits.

In all villages, girls' enrollments have a considerable way to go before universal education is achieved though indications are that the disparities between boys' and girls' enrollments are increasing rapidly as time goes by. The greatest potential for overall impact on enrollments by AID-funded facilities at the moment is clearly in the area of girls' enrollments. Even in a village like Ghaneyem, with relatively high levels of female enrollment overall, poor families maintain low records of girls' enrollments. In general, the largest pool of potential girl recruits for the educational system remain in the poor or below average households.

Attendance

In all villages, and for the vast majority of households, attendance does not reach age-appropriate grade levels for boys or for girls, and there is relatively little difference between the sexes in this respect. It is expected that new, more easily accessible facilities especially at the preparatory

level can have a major impact on holding children longer in school and moving them through the system more efficiently. One would expect, therefore, that the impact of new schools will be seen more clearly in the holding power they exert on school-going populations.

SUMMARY

Impact on Enrollment and Grade-Level Attainment

The following is a summary of our findings about the effects of the originally hypothesized variables on enrollment and grade level attainment.

Spatial Variables

- There is a general tendency for children of the sample who live closer to school, within a radius of three kilometers, to reach higher levels of enrollment and agelevel attainment. This relationship, however, does not form a regular progression after three kilometers, when, in this particular sample (which includes some villages with distant schools), the more vital question becomes one of whether to educate the child or not, when no other schools exist within closer range.

Occupational Variables

The relationship of occupational variables to educational participation was not always consistent. Tendencies that appear to hold true are the following.

- Occupational structure appears significantly as an indicator of type of village.

- Primarily agrarian communities tend to have low levels of enrollment and age-level attainment because of a historical pattern that saw little connection between education and agrarian occupations. Now, however, in villages where occupational choices are limited, and land resources are diminishing, extended education may present the brightest prospect for young males.

- Industrial and commercial occupational opportunities do not create a context entirely supportive of extended education. Though initial enrollments tend to be high in villages where these opportunities are available, there is weaker motivation to remain long in school. At higher educational levels there may be direct competition from employment in industrial and commercial occupations that require only fundamental levels of learning.

- Girls' educational participation as yet is little related to occupational goals in villages.

Value Placed in Education

- There was not a clear cut progressive increase in rates of enrollment and attainment that varied with length of time schools had been established in the vicinity of a village. This was because all but the two rural villages of the sample had had nearby accessible schools for some time. More sensitive gradients of relationship occurred a decade ago, before norms favoring education were so widespread. In the rural sites where schools were more recent, enrollment and attainment levels were moderately lower for males and much lower for females.

Socio-economic Level

In the course of the study, the socio-economic variable was refined to permit a comparison between villages that tend to have relatively homogeneous populations weighted toward the lower end of the socio-economic scale and villages that are composed of more stratified populations including a wider range of economic levels. The original hypothesis suggested a comparison between dichotomous "rich" and "poor" villages, which, in a small select sample like ours, cannot be found in such pure form.

- In the refined comparison, there was a consistent rate of increase in male enrollments and attainment of age level grades as the economic diversity of the population increased.

- For girls there was also a roughly consistent increase in educational participation with the greater diversity of the village, except in the one village where schools were distant and parents found other issues overriding.

- At the household level, an even more definitive relationship between economic level and educational participation was found.

The variables above exist in different combination and proportion in the site environments that have been selected for study. Below is a summary of the typical characteristics and levels of enrollment and age-level attainment found in the selected sites.

Generalizable Characteristics of the Intensive-Study Site Environments

The following are the notable characteristics of different types of environments compared one with another.

Urban Villages

Characteristics

- Families tend toward average economic levels but show a broad range of economic levels.
- Communities tend to be larger and more densely settled.
- A broader range of occupational choice exists within commuting range, with even some opportunities open for women. These villages tend to have the highest ratios of inhabitants engaged in government employment and the lowest engaged full-time in agriculture.

Education

- Urban sites have the lowest ratios of illiteracy.
- In the older generation, we found the highest ratios for primary, preparatory and secondary enrollments.
- In the younger generation, the ratios of enrollment were equaled or surpassed by mixed villages. Male ratios increased the least as a consequence of already relatively high rates of enrollment.
- Sex disparities in ratios of enrollment were largest in the older generation though overall male and female enrollment were the highest of all sites. Sex disparities continued to be high in the younger generation, about equal with those of rural villages.

- Among reasons cited for non-participation in the educational system, distance was the major problem. In the older generation, economic reasons were cited most often as the reason for boys' non-participation but declined the most as a reason in the younger generation.

- Enrollment figures broken down by age and sex showed that, among 12 to 14 year olds, urban villages had the highest ratio of girls enrolled, but by the 6 to 11 year old age group, mixed villages equalled urban villages in the ratio of girls enrolled. Urban boys, ages 6 to 11, had the highest enrollment rates of all the sites.

- Urban sites shared honors with mixed villages for having the highest ratio of families sending all girls to school.

- Younger generation boys' educational participation started in the late 1950s for boys, followed by girls in the late 1960s and early 1970s, about a decade before rural villages.

Mixed Villages

Characteristics

Mixed villages were selected to reflect "special case" characteristics (Kafr Nekla, a primarily agricultural village close to a small industrial city and Nag il Taref, a village drawing on nearby touristic and commercial economic opportunities). Having neither exclusively urban nor rural characteristics, they fell fairly consistently between those two extremes on general indicators of economic level, range of occupational choices, and concentration of attendance areas. Where there were definite tendencies in one direction or the other, Kafr Nekla tended toward urban and Nag il Taref toward rural patterns.

Education

- In the younger generation, mixed villages overtook urban villages in achieving the highest participation rates of both males and females at all three levels of the formal education system.

- Increases in formal education for the younger generation occurred almost equally for males and females (in urban villages there was little increase for males and in rural villages little for females).

- Older generation males in mixed villages had the highest rate of participation in informal systems of education.

- Males' participation in the older generation was restricted primarily because "no schools were available" or "schools were too distant." Girls stayed home for normative reasons or because schools were not available.

- In the younger generation, no reason stood out as significant for limiting male participation, while for girls, need for their labor, social norms, and the distance to school were cited about equally.

- Though enrollments of mixed village children, particularly males, increased dramatically between the generations, the transitional nature of the period is seen in the fact that urban villages remained ahead of mixed villages in the ratios of families with all eligible children enrolled.

In general, the characteristics that are hypothesized to affect enrollments and grade level attainment in urban, mixed, and rural environments do indeed exist in the relative proportions that prompted sample site selection. Older generations of the sample families enrolled in school or attained expected grade levels in rates that increased as one moves from rural to mixed to urban villages. In the younger generation, the disparity in enrollment and attainment ratios between urban and mixed villages was rapidly reduced as the result of a postulated "ripeness" factor that appears to have been operative in mixed villages. This consists of a combination of a large potential pool of candidates, available facilities, and a critical mass of enrolled students who help establish community-wide norms of education.

Generalizable Charcteristics of Regions

Upper Egypt and Lower Egypt

Characteristics

- Upper Egyptian villages showed greater range of household economic level, but overall the large majority of households fell in the same categories of economic level as those in Lower Egypt and Assiut.

- Upper Egypt also showed a broader range of occupational choice compared to the more solidly agrarian nature of the Lower Egyptian sample.

- Both regions had households located within about the same radius of new school sites.

Education

- Upper Egypt in both generations had lower rates of illiteracy.

- In the older generation, ratios of primary participation in Upper Egypt were higher than those in Lower Egypt but lagged behind the Assiut sample. At preparatory and secondary levels, Upper Egypt surpassed the other two regions in ratios of enrollments.

- By the younger generation, the ratio of primary, preparatory, and secondary participation of both boys and girls was always higher in Assiut, followed by Upper Egypt and Lower Egypt.

- Upper and Lower Egyptian samples cited the lack of available facilities as a constraint on educational participation about equally in the older generation. For males of that generation Assiut and Upper Egypt cited economic reasons more frequently than Lower Egypt, but by the younger generation, their ratios were both reduced to about the same levels as Lower Egypt.

- Upper and Lower Egypt had about the same ratios of parents citing social norms in the older generation while in the younger generation, both regions showed considerable reduction in the extent to which social norms posed a problem.

- The ratios of boys' enrollments are about the same in Upper and Lower Egypt, but girls have higher enrollments in Upper Egypt.

- Among 12 to 14 year olds, the highest enrollment ratios occurred for boys in Upper Egypt.

- In terms of family strategies, higher ratios of families enrolled all eligible children in Upper Egypt but the disparity between families who send all boys and all girls was also higher. In Lower Egypt there was less distinction made between boys' and girls' enrollments in family strategies.

Though the two major regions of Egypt, Upper and Lower Egypt, appear to be roughly similar in characteristics, the results of the survey showed Upper Egyptian sites of the sample generally ahead of Lower Egyptian sites in terms of levels of enrollment and attainment. We suspect that this is an artifact of the sample selection process, and possibly of the selection process for the location of schools in general. Educationally disadvantaged groups in Beheira seem more easily identifiable in a governorate that has had a history of long-term well-established education. Governorate officials seem to have chosen sites particularly well to meet the requirements of the project's goals of helping disadvantaged target audiences.

Special Case Assiut (Beni Rafa and Ghaneyem)

Characteristics

- Both sites are small towns with fairly dense concentrated school attendance areas, catering also to a number of small settlements in a fairly large hinterland.

- Ghaneyem possessed the only significant Christian population of all sites.

- Ghaneyem's sample population peaked at the average level but was well distributed across the economic levels. In general, this was also true for Beni Rafa, though only one family was considered affluent and all households appeared more homogeneously below average to average in economic level.

- In the urban mold Ghaneyem had a well-diversified occupational structure while Beni Rafa demonstrated the more rural pattern of predominantly agrarian occupations coupled in a small way with government employment.

Education

- Both sites have had schools for a fairly long time, but Beni Rafa schools suffered in a more serious way from overcrowding.

- In the older generation, males in both communities participated in educational programs to about the same extent, but Ghaneyem females were already ahead of Beni Rafa, enrolling at a higher rate and staying in school longer.

- By the younger generation Ghaneyem males had moved ahead of Beni Rafa in educational participation and Ghaneyem girls remained ahead.

- Beni Rafa parents articulated a strong sense of community norms against the education of girls, and a number said that even if circumstances had been different in their households, they would not have sent girls to school.

- In the older generation, both communities cited the need for the child's labor as the major reason for not attending school and stressed the lack of relevance of courses for females.

- In the younger generation, where it was rare to find boys not participating in educational programs, at least at a minimal level, parents of both communities cited failed exams as the major reason males left school early.

- Ghaneyem parents limited girls' participation because of need for their labor, while Beni Rafa parents still cited normative reasons for withholding girls in the younger generation.

Overall, the readiness of Ghaneyem parents to extend the educational participation of girls is advanced over Beni Rafa parents who still express strong reservations about girls' enrollments. These attitudes are reflected in the higher ratios of enrollment and attainment of age-appropriate grade levels in Ghaneyem over those of Beni Rafa. In general, Ghaneyem provides a context with urban characteristics and Beni Rafa a more typically rural context in which to examine the changes in girls' enrollments with the advent of AID-funded new schools.

EXTENSIVE STUDY OF THE IMPACT OF NEW SCHOOLS

BACKGROUND

As the extensive study of new schools began, new schools were being rapidly constructed, staffed and prepared for opening in five governorates: Kafr il Sheikh, Beheira, Sohag, Assiut, and Qena. Education officials in each governorate were keeping lists of the schools, their construction time tables, and their expected opening dates. A number of schools were scheduled to begin operation in 1983, more in 1984, and still others in later years. For the extensive study, the research team drew a representative sample of schools in each governorate, from among those to be opened in 1983 and 1984.

In the first year of the study, the team's first objective was to assess the overall impact of the new schools on enrollment -- it was too soon to assess effects on literacy. Therefore, this report focuses on the impacts on enrollment attributable to the new schools that opened in 1983. Subsequent reports will assess the impact of 1984 new schools on enrollment and also will examine the impact of both 1983 and 1984 new schools on literacy.

METHOD

Selection of New-School Sites

From the lists of 1983 new-school sites in each governorate, the research team chose four sites at random, a total of 20 sites.[1] Figure i-2 on

[1]This was done by choosing every "nth" site in order from each governorate's list, starting from with a site chosen at random from among the first n. The value of n was chosen so as to obtain four schools from each list. This procedure was designed to select a quasi-random group of 1983 new-school sites totaling 20 schools, four from each of the five governorates.

page 16 shows a schematic diagram of a typical site, consisting of a village where the new school was located, related villages from which other children might come to the new school, and related schools to which children from the new-school site might have gone in the past. To understand the study design, it is essential to keep these elements of a typical site clearly in mind.

Selection of Comparison Sites

With the assistance of Mr. Mahmoud Gamal el Din, the USAID official responsible for approving the sites of new schools, the research team reviewed the site maps for each governorate and identified additional sites that fulfilled MOE and AID criteria for new schools, but where new schools were not likely to be opened before the Fall of 1986. A total of 20 such sites were identified, four in each of the above-listed governorates. These formed a sample against which to compare the impacts of the new schools.

Identification of Related Schools

As shown in Figure i-2 on page 16, "related schools" were those schools nearby the new-school site to which some youngsters might already have been going. In order to assess the net impact of a new school, one has to know how the enrollment in its related schools changed when the new school opened. Some children who were expecting to go to first grade in a related school might change their minds and attend the nearby new school. The result would be a lower-than-anticipated enrollment in the related school which would compensate for the additional enrollment in the new school. This would be more convenient for the students, but it would not result in a net increase in enrollment. Similarly, students in later grades who would have attended a related school, but who switched to the new school instead, would not contribute to a net increase. However, children who had decided to drop out

because of the distance, but who stayed in because the new school was near, would represent a net increase. Although children who stopped going to a related school, and came instead to the new school, could not contribute to a net increase in enrollment, if their places in the related schools were taken by others, their moving would, in fact, make a net increase possible. All these are reasons why it was important to identify, as accurately as possible, all the related schools surrounding each new school site.

The first step in identifying related schools was to determine the location of each selected new school on the map. The second step was to examine the map together with governorate officials and ask the officials to identify all possible schools to which children, who might later attend the new school, might presently be going. The research team depended on local governorate officials to identify the related schools for each site.[1]

Research Strategy

In order to assess the impact of a new school, one needs to know the total enrollment of all its related schools. Then one needs to estimate what the total enrollment of those schools would have been in the absence of the new school. Given that, one can compare "expected" total enrollment with the actual total enrollment when the new school is included. The difference is the new school's net effect.

To estimate the expected enrollment in the absence of the new school a time-series analysis was used. Records of enrollment in all the related

[1]Next year the team will be able to refine the analysis for grades two through six by obtaining from each new school a list of the actual schools that children previously attended. However, this, of course, is not possible in grade 1. Similarly, in the comparison sites where no new schools exist, the governorate officials' judgments are essential.

schools for each site were examined for the past five years from 1978 to 1982. From the trends in these records, projections of enrollment for 1983 could be made. Then the actual enrollments, including those in the new school, could be compared with the projections. In order to do this, it was necessary to collect historical enrollment data from the records for all the related schools from every site.

Data Collection

For each related school, governorate education officials examined the records for each school year from 1978-79 to 1982-83 and recorded the enrollment of boys and girls in each grade in each year. These data were collected from governorate records with the guidance of Dr. Makary and researchers from Cairo University. The same data were also gathered for those sites that were selected for the intensive community studies in each governorate. In the intensive study sites, duplicate data were also collected directly from the schools themselves as a check on the reliability of the governorate records.

Completeness of the Present Data Set

New School Sites

Table I-21 lists the selected new-school sites in each governorate and notes the current status of data from these sites. A great deal of time and effort has been devoted to collecting and cross-checking these data and making sure that they were accurate and complete. The data currently available for analysis do not completely represent the original design. The differences are noted below.

TABLE I-21

1983 NEW SCHOOL SITES

GOVERNORATE	ID NUMBER	MARKAZ	SCHOOL NAME	STATUS
ASSIUT	811*	GHANEYEM	TALIIM IL ASASI BIL GHANEYEM	Incomplete Data
	802	IL BADARY SOUROUR	ESBET SOUROUR IL TALIIM	Analyzed
	842	ABOU TEIG	NAZLET ABOU KAIB IL IBT	Analyzed
	852	IL BADARY	IL MAMAYIA IL TALIIM ASASI	Excluded
	892	AHNOUB	ARAB IL KADYN IL EID	Excluded
BEHEIRA	911*	IL MAHMOUDIYA	KAFR NEKLA	Analyzed
	921*	HOSH ISA	MANSHIYA	Analyzed
	932	EDCO	ESBET SITTA W' SABAA	Analyzed
	942	SHOUBRA KHIET	IL SAMADIDI	Analyzed
	952	ITAY IL BAROUD	IL IBRAHIMIYA	Analyzed
	982	SHOUBRA KHIET	IL KOMI	Analyzed
KAFR IL SHEIKH		DATA NOT AVAILABLE		
QENA	611*	NAQADA	IL KHUTABA	Analyzed
	621*	NAG HAMADI	NAG DAHI	Analyzed
	632	QENA	NAG IL GEBEEL	Analyzed
	642	KOUSE	NAG HAMED AHMED RAMADAN	Analyzed
	652	ABOU TISHT	IL MOAISERA	Analyzed
	662	ARMANT	NAG IL BEKALA	Analyzed
SOHAG	711*	AKHMIIM	NAG IL MAREF IL IBT BNAGA	Analyzed
	712	AKHMIIM	NAG AHMED ISMIAL BIL SOOMA SHARQ	Analyzed
	722	SOHAG	NAG IL ARAYA IL IBT ELMOUS	Analyzed
	732	SOHAG	NAG MALROD IL IBT ELMOUS	Analyzed
	742	TAHTA	NAG SHONWARY	Incomplete Data

*Intensive study site

Assiut: Data from only two 1983 new-school sites are currently available from Assiut. Data from site number 811 are incomplete at this writing but will be completed during the coming year. Sites 852 and 892 in Assiut turned out to be preparatory schools rather than primary schools, whereas the new schools chosen in all the other governorates were primary schools. Therefore, these sites in Assiut were excluded from the first year's analysis. To fill out the data set in Assiut we need to choose two more 1983 primary new school sites.

Beheira: Data from Beheira are complete.

Qena: Data from Qena are complete.

Sohag: Data from site 742 are incomplete but will be completed during the coming year.

Comparison Sites: Table I-22 shows the selected comparison sites in each governorate. These data are all complete except for site 924 in Beheira and site 744 in Sohag. Data from Kafr il Sheikh were excluded from the present analyses, because the corresponding new-school data from Kafr il Sheikh were not available. Both the new school and comparison data from Kafr il Sheikh will be added in next year's re-analyses.

Overall, we have available for analyses at this time data from eighteen 1983 new-school sites representing four governorates and fourteen comparison sites in the same governorates.

Methods of Analyses

Separate analyses were made of each of the following:

Enrollment of Boys in Grade one
Enrollment of Girls in Grade one
Enrollment of Boys in Grades two through six
Enrollment of Girls in Grades two through six

TABLE I-22
COMPARISON SITES

GOVERNORATE	ID NUMBER	MARKAZ	VILLAGE NAME	STATUS
ASSIUT	824	MANFALUT	IL MAWANKA	Analyzed
	844	ABU TEIG	NAZLET BAKOUR	Analyzed
	854	IL BADAN	AMIR ABD IL WARAS	Analyzed
	884	SEDFA	ELMACAF IL SHARQI W' GARBI	Analyzed
BEHEIRA	914	MAHMOUDIYA	ISBET ZABRA HANEM	Analyzed
	924	HOSH ISA	ISBET ABU YOUSEF	Incomplete Data
	954	ITAY IL BAROUD	ISBET ABU IL FADEEL	Analyzed
	974	HOSH ISA	ISBET IL MANI	Analyzed
KAFR IL SHEIKH	DATA EXCLUDED FROM PRESENT ANALYSIS			
QENA	624	NAG HAMADI	ZELTEN	Analyzed
	634	QENA	NAG ALI ABU ZEID	Analyzed
	644	KOUSE	NAG ABU HOMMOUS	Analyzed
	654	ABU TISHT	NAG IL TOUD	Analyzed
SOHAG	714	AKHMIIM	NAG IL SAHAF	Analyzed
	724	SOHAG	NAG IL ARAB	Analyzed
	734	SOHAG	NAG ADFA	Analyzed
	744	TAHTA	NAG HAMOUDA	Incomplete Data

One might expect the main impact of a new school to be on initial enrollments in grade one. A net increase in grade one enrollment would represent entirely new children coming into the school system. However, a new school might also have an impact on enrollment in grades two through six. A net increase in these grades would represent increased holding power--children who remained in school because the new school was close, rather than dropping out because the related school was far away. These reflect different policy concerns and may be influenced by different factors; consequently, separate analyses were made.

Time Series Projections

The first step was to prepare time-series charts of the enrollment data for each of the above groups. An example is shown in Figures I-24 and I-25 for the schools related to the new school called Nag Dahi in the Qena markaz of Nag Hamadi. This example will illustrate how the charts were prepared.

The Nag Dahi site included two related schools, Il Sharki Bahgoura Il Ibtidiyia (code #6212) and il Sahel Bel-Sharki Bahgoura (code #6214). The numbers of boys and the numbers of girls enrolled in each grade in these two related schools were obtained from the records for each school year from 1978-79 to 1982-82. Then, to form the charts shown in Figure I-24, the enrollments in grade one for both of the schools were added together. Figure I-24 shows how these enrollments gradually increased from 1978-79 to 1982-83 for both boys and girls.

The charts in Figure I-24 were next used to project the expected enrollments for the school year 1983-84. This was done by fitting a straight line through the series of five points from 1978-79 to 1982-83 in such a way that an equal number of points fell above and below the line and their

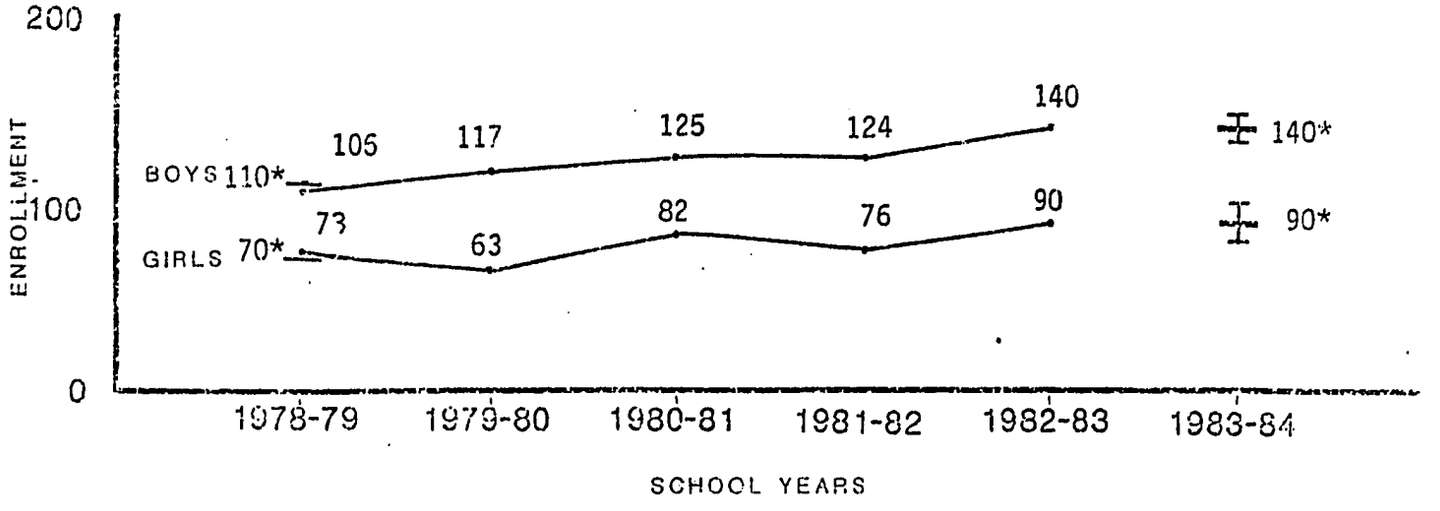

FIGURE I-24: TRENDS IN TOTAL ENROLLMENT FOR GRADE ONE IN SCHOOLS RELATED TO NAG DAHI (621)

* = Straight line intercepts. The vertical bar marks the envelope of uncertainty (see text).

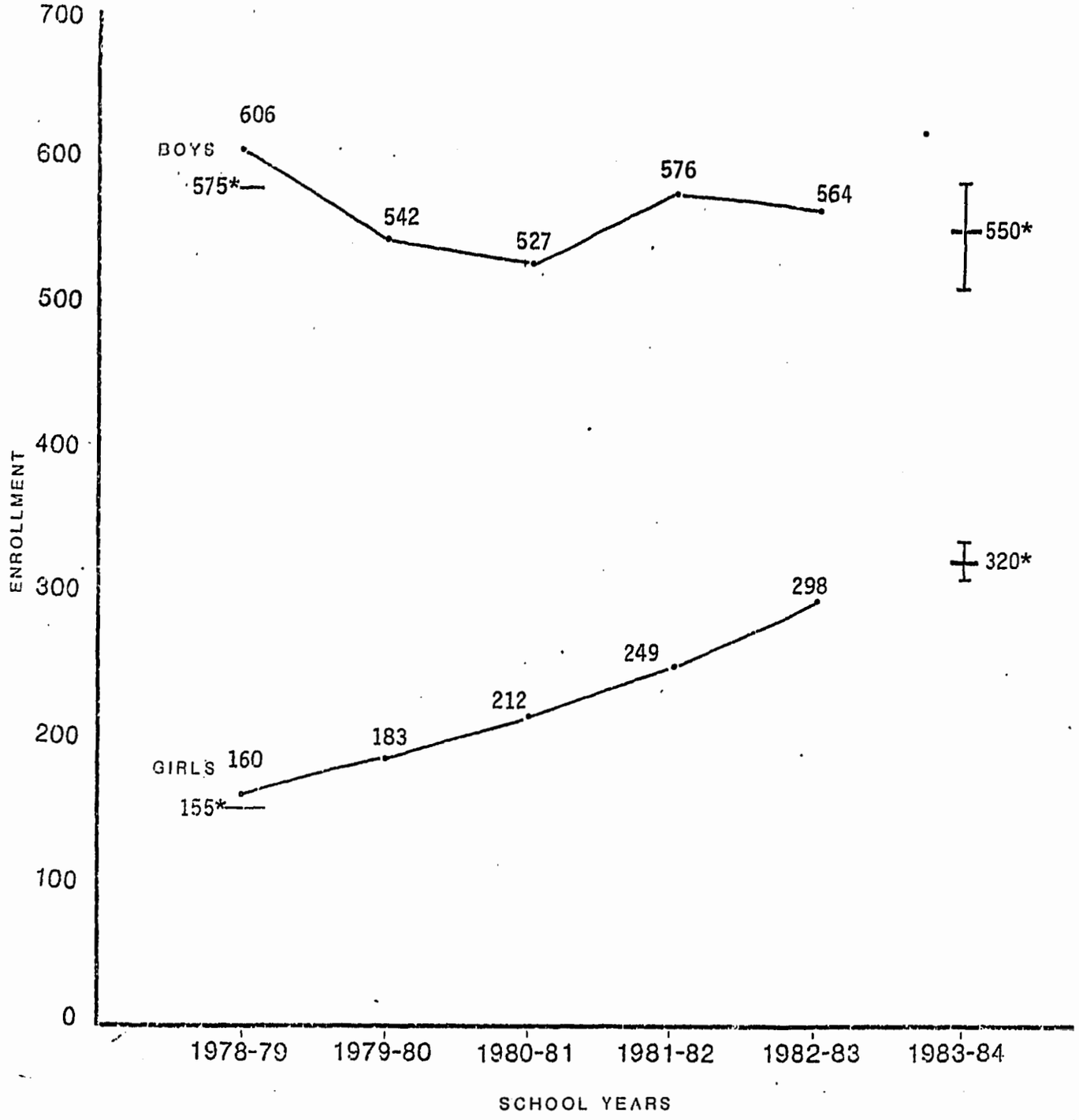

FIGURE I-25: TRENDS IN TOTAL ENROLLMENT FOR GRADES 2 THROUGH 6 IN SCHOOLS RELATED TO NAG DAHI (621).

* = Straight line intercepts. The vertical bar marks the envelope of uncertainty (see text)

distances from the line were minimized. This was done by graphical methods. One could also calculate a "least squares" fit, but at the beginning stages of analyzing new data sets it is best to use graphical methods so as to make sure to detect possible non-linearities and abnormalities in the data that the computer might overlook.

Straight lines fitted to the data in Figure I-24 crossed the school year 1983-84 at points corresponding to enrollments of 140 for boys and 190 for girls. These defined the projected enrollments for the 1983-84 school year in the absence of the new school.

Figure I-25 shows the corresponding analyses of the trends in total enrollment for grades two through six. The trends in enrollment for grade one reflect what MOE officials call "acceptance"--decisions about the entrance of youngsters into the school system at the beginning. The trends for grades two through six reflect persistence: decisions about whether or not a youngster will remain in school.

Figure I-25 shows very different trends in persistence between boys and girls in the schools related to Nag Dahi. Boys' enrollment decreased during the period from 1978 to 1983, while at the same time girls enrollment increased substantially. Each year during this period of time, (since first grade enrollments increased only slightly) more girls evidently decided to remain in school.[1]

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[1]Throughout this report we will interpret increases in enrollment in grade's two through six as reflecting increased frequency of decisions to remain in school. However, the increases in enrollments might also be caused by children in transfering from other schools into our group of related schools. Without a detailed analyses of the records, we cannot tell the difference between these two possible sources of increase. This ambiguity may require further study in some of the sites.

Variability in the Projections

When straight lines are fitted to a series of points as shown in Figures I-24 and I-25, some of the points fall above the line and others fall below it. The spread in the distribution of the points around the line is an indication of the variability, or uncertainty, in the straight-line projection. In the curve for girls in Figure I-24, there was little variability, and therefore the projection seems reliable. In the curve for boys, there was greater variability, and therefore the projection seems more uncertain. The following procedure was used to take account of such differences in variability.

Two lines were drawn parallel to the straight-line projection and spaced apart so that they exactly included all of the points on which the projection was based. These lines marked the "envelope" of the projection. The points at which this envelope crossed 1983-84 school year were marked. In Figure I-25, for example, the envelope of uncertainty for boys can be seen to be much wider than that for girls.

A new school effect was called "notable" if it fell outside the envelope of uncertainty that came from its time-series projection. Whether or not an effect was notable depended on the variability of the projection. A relatively small effect could be notable if there was little variability. On the other hand, a large effect might not be notable if the points in the time-series projection varied greatly around the best-fit straight line. "Notable" does not mean statistically significant. Five points in a time series are too few to permit a test of significance. But the envelope provides a convenient estimate of variability, and points that fall outside it are worth noting because they depart further from their projections than any of the previous points on which the projections were based.

Estimation of Impact

Following the procedures described above, time-series charts of related-school enrollment were constructed for each of the 1983 new-school sites and each of the comparison sites. Straight lines were fitted to these charts and enrollments for 1983-84 were projected, together with their envelopes of uncertainty. These data provided the baseline against which the effects of the new schools could be assessed.

Table I-23 shows the impact of the new school in Nag Dahi. In grade one, the projected enrollment for boys was 140 and its envelope of uncertainty extended from 135 to 145. The actual enrollment in related schools, not including the enrollment of the new school was only 127. This was substantially below the projection, so evidently, the new school drew some first grade boys away from the related school. However, when the enrollment of the new school was added to the enrollment of the related schools, the first grade boys' enrollment rose to 150. This was above the projected enrollment, and slightly above the envelope of uncertainty, so evidently the new school also drew in some new students.

From these data we can say that approximately 13 first grade boys, who probably would have attended related schools if the new school had not been constructed, seem to be going to the new school. In addition, approximately 10 boys seem to be attending the new school who would not have enrolled in the related schools. The net effect of the new school in Nag Dahi was to add approximately 10 boys to the number of acceptances boys who would probably not otherwise have attended school at all. Similarly, the new school seems to have added approximately 13 first grade girls who might not otherwise have attended school. Attendance of girls in the related schools did not drop as the boys did, when the new school was opened.

TABLE I-23

EFFECTS OF 1983 NEW SCHOOL IN NAG DAHI

	PROJECTED ENROLLMENT IN 1983-84	ENVELOPE OF UNCERTAINTY	ACTUAL ENROLLMENT NOT INCLUD-NEW SCHOOL	ACTUAL ENROLLMENT INCLUDING NEW SCHOOL	NOTABLE IMPACT
Grade 1					
Boys	140	135-145	127	150	Yes
Girls	90	80-100	87	103	Yes
Grades 2-6					
Boys	550	510-585	489	595	Yes
Girls	320	310-335	254	319	No

The impact of the new school in Nag Dahi on boys' persistence in grades two through six was substantial. The new-school boys' enrollment in those grades was 106. Sixty-one of these would probably have gone to related schools if the new school had not been built, but an additional 45 probably would have dropped out, instead. On the other hand, the impact of the new school on girls persistence was negligible. Of the new school enrollment of 65, virtually all would have gone to the related schools, according to the projection.

The foregoing illustrates the method of analysis. To recapitulate: We have : 1) first identified the schools to which youngsters in the new-school catchment area might be going; 2) made time-series charts of the total enrollments in these schools separately for boys and girls, and for grade one and grades two through six (combined); 3) used these charts to project what the enrollment would have been if the new school had not been constructed, using a straight line projection; 4) recorded the actual total enrollment for the school year 1983-84 both with and without the enrollment of the new school. The amount by which enrollment in the related schools falls below the projection measures the degree to which children left them to come to the new school. The amount by which enrollment of all the schools, including the new one, falls above the projected enrollment measures the net effect of the new school.[1]

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[1]Most of the new schools in the study achieved some enrollment in all of grades one through six when they opened in 1983-84. Only one school enrolled children above grade six. However, several schools enrolled children in fewer than six grades. If the enrollment in a new school happened to be, for example, only in grades one through five, then only those same grades from the related schools were used in the analyses.

RESULTS

Table I-24 shows the impacts of the eighteen 1983 new schools. A positive number in the table indicates a net positive impact. A negative number indicates that the total enrollment at the site, including the new school, fell below the projection. Most negative impacts may be explained as the result of variability surrounding the time-series projections. However, a few were quite large and may indicate errors in data collection. These will be investigated during the coming year.

Notable Impacts

The notations "(yes)" and "(no)" in Table I-24 indicate whether or not the given impact was notable against its own baseline, i.e., that it fell outside its envelope of uncertainty. At the foot of the table is a summary of the notable impacts. For boys in grade one, the new schools had no notable impact on enrollment in nine of the 18 sites, notable negative impact in two sites, and notable positive impact is in seven. For girls in grade one, the pattern was similar, except that there were no negative impacts. Overall, for grade one, notable positive impacts occurred in slightly less than half the new school sites.

Positive impacts on retention in grades two through six were somewhat more frequent than positive impacts on initial enrollment in grade one. For boys, the new schools had no notable impact at six sites, notable negative impact in two sites, and notable positive impact in eight. For girls the new schools had no notable impact in six sites and notable positive impact in ten. Overall, for grades two through six, notable positive impacts occurred in half or more of the sites.

TABLE I-24

1983 NEW SCHOOL IMPACTS

Governorate	School Code Number	Grade 1 Boys	Grade 1 Girls	Grade 2-6 Boys	Grade 2-6 Girls
ASSIUT	802	+5 (No)	+35 (Yes)	+202 (Yes)	+47 (Yes)
	842	-44 (No)	-18 (No)	+69 (No)	+72 (Yes)
BEHEIRA	911	+27 (No)	+49 (Yes)	+117 (Yes)	+170 (Yes)
	921	+52 (Yes)	+30 (Yes)	-14 (No)	0 (No)
	932	+21 (Yes)	+5 (No)	-31 (Yes)	+5 (No)
	942	-4 (No)	+11 (No)	+25 (Yes)	+29 (Yes)
	952	+32 (Yes)	+42 (Yes)	na	na
	982	+45 (Yes)	+45 (Yes)	+24 (No)	+43 (Yes)
QENA	611	+4 (No)	-4 (No)	-60 (Yes)	+8 (No)
	621	+10 (Yes)	+13 (Yes)	+45 (Yes)	0 (No)
	632	+75 (Yes)	+50 (Yes)	+197 (Yes)	+73 (Yes)
	642	-20 (Yes)	0 (No)	+137 (Yes)	+71 (Yes)
	652	+5 (No)	+17 (No)	+7 (No)	-10 (No)
	662	-66 (Yes)	+8 (No)	na	na
SOHAG	711	+1 (No)	+15 (No)	+117 (Yes)	+55 (Yes)
	712	+14 (No)	-8 (No)	-8 (No)	+1 (No)
	722	+14 (Yes)	+30 (Yes)	+12 (Yes)	+11 (Yes)
	732	+31 (No)	+15 (No)	+6 (No)	+32 (Yes)

SUMMARY OF NOTABLE IMPACTS

Total Cases	18	18	16	16
Notable Positive	7	8	8	10
Notable Negative	2	0	2	0
No Notable Effect	9	10	6	6

Comparison Sites

We may better understand the foregoing results by relating them to results from the comparison sites, where exactly the same analyses were carried out but no new school was built. Table I-25 shows the "impacts" of these non-existent schools. The sizes and directions of those impacts come strictly from the variability in the time-series projections.

In a site where no new school was actually built, one would expect to find a few notable "impacts" as a result of unpredictable variation, but one would also expect to find equal numbers of positive and negative impacts. That was not the case. There were more positive than negative "impacts" among the comparison-group of sites (see Table I-25). This evidently happened because the straight line projections underestimated increases in enrollment that were taking place in some sites more rapidly in 1983-84.

To get an unbiased picture of the impact of the new schools, then, we must compare their patterns of notable impacts with the patterns found in the comparison schools. This is shown in Table I-26. Only in the case of boys in grade two through six did the difference in the patterns approach statistical significance at the .05 level.[1]

From the foregoing analysis one can see that the impacts of the new schools were neither uniform nor dramatic. Notable impacts was infrequent in grade 1. They were more frequent in grades two through six among boys.

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[1] For boys grades two through six, the obtained Chi-Square was 5.295. A Chi-Square of 5.299 was nesessary for the .05 level of significance.

TABLE I-25

COMPARISON SCHOOL "IMPACTS"

Governorate	School Code Number	Grade 1 Boys	Grade 1 Girls	Grade 2-6 Boys	Grade 2-6 Girls
ASSIUT	824	+13 (No)	-5 (No)	-13 (No)	-13 (No)
	844	+3 (No)	+5 (No)	+24 (No)	+24 (No)
	854	-5 (No)	+19 (No)	-9 (No)	+11 (No)
	884	-9 (No)	-2 (No)	-24 (No)	+6 (No)
BEHEIRA	914	+15 (No)	+17 (Yes)	-4 (No)	+20 (Yes)
	954	+2 (No)	+8 (No)	+19 (No)	+31 (Yes)
	974	-18 (No)	-17 (Yes)	+13 (Yes)	0 (Yes)
QENA	624	-39 (Yes)	-6 (No)	+9 (No)	+31 (Yes)
	634	+8 (No)	+22 (Yes)	+4 (No)	+23 (Yes)
	644	+9 (Yes)	+7 (Yes)	-2 (No)	+23 (Yes)
	654	+9 (No)	+3 (No)	+21 (No)	+15 (Yes)
SOHAG	714	+25 (Yes)	+15 (Yes)	-17 (No)	+6 (Yes)
	724	-8 (No)	+17 (No)	-24 (Yes)	+5 (No)
	734	+37 (Yes)	-5 (No)	+57 (Yes)	+28 (No)

SUMMARY OF NOTABLE IMPACTS

Total Cases	14	14	14	14
Notable Positive	3	4	2	7
Notable Negative	1	1	1	0
No Notable Effect	10	9	11	7

TABLE I-26

1983 NEW SCHOOL IMPACTS COMPARED TO "IMPACTS" IN COMPARISON SITES.

	Notable Positive Impact	No Notable Impact	Notable Negative Impact	Total
		GRADE 1 BOYS		
New School	6	10	2	18
Comparison	3	10	1	14
		GRADE 1 GIRLS		
New School	7	11	0	18
Comparison	4	9	1	14
		GRADE 2-6 BOYS		
New School	8	6	2	16
Comparison	2	11	1	14
		GRADE 2-6 GIRLS		
New School	10	6	0	16
Comparison	7	7	0	14

Sizes of the Impacts

Another way to examine the results is to compare the sizes of the impacts found in the new school and comparison groups, ignoring whether or not they were notable against their own baselines. The results of this analysis may be seen in Figures I-26 through I-28 as comparisons of frequency distributions. (Each block in a frequency distribution represents the difference between projected and obtained enrollments at a particular site.)

If the impacts of the new schools were large, one would expect their distributions, shown in Figures I-26 through I-28, to fall considerably to the right of the distributions for the comparison schools. The differences between the means of the new-school and comparison distributions may be used as a measure of the average size of the new-school impact.

From the figures, one can see that the distributions of impacts of the new-school sites did differ from the distributions for the comparison sites in the expected direction. Five of these six differences were statistically significant at approximately the .05 level or better.[1] Only the impact on enrollment of boys in grade one did not show up as a significant effect.

This analysis in terms of impact size supports the foregoing analysis in terms of notable impacts in showing that the largest overall impact of the 1983 new schools was on persistence of boys in grades two through six.

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1 For grade one girls the obtained t was 2.24, probability .016.
For grade one total, the obtained t was 1.65, probability .055.
For grades two through six boys the obtained t was 2.42, probability .013.
For grades two through six girls, the obtained t was 1.93, probability .035.
For grades two through six total the obtained t was 2.46, probability .012.

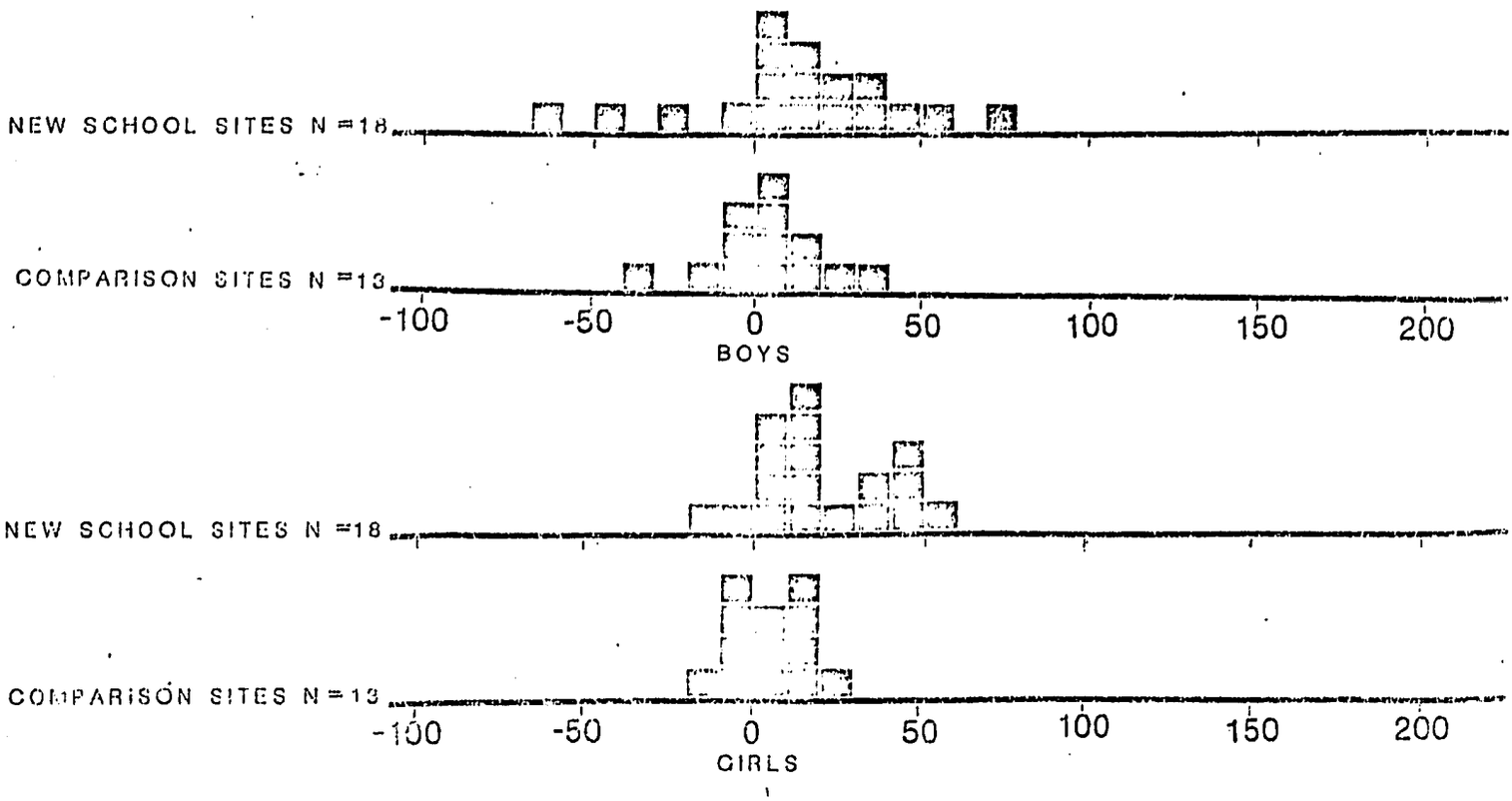

FIGURE I-26: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON BOYS AND GIRLS IN GRADE ONE

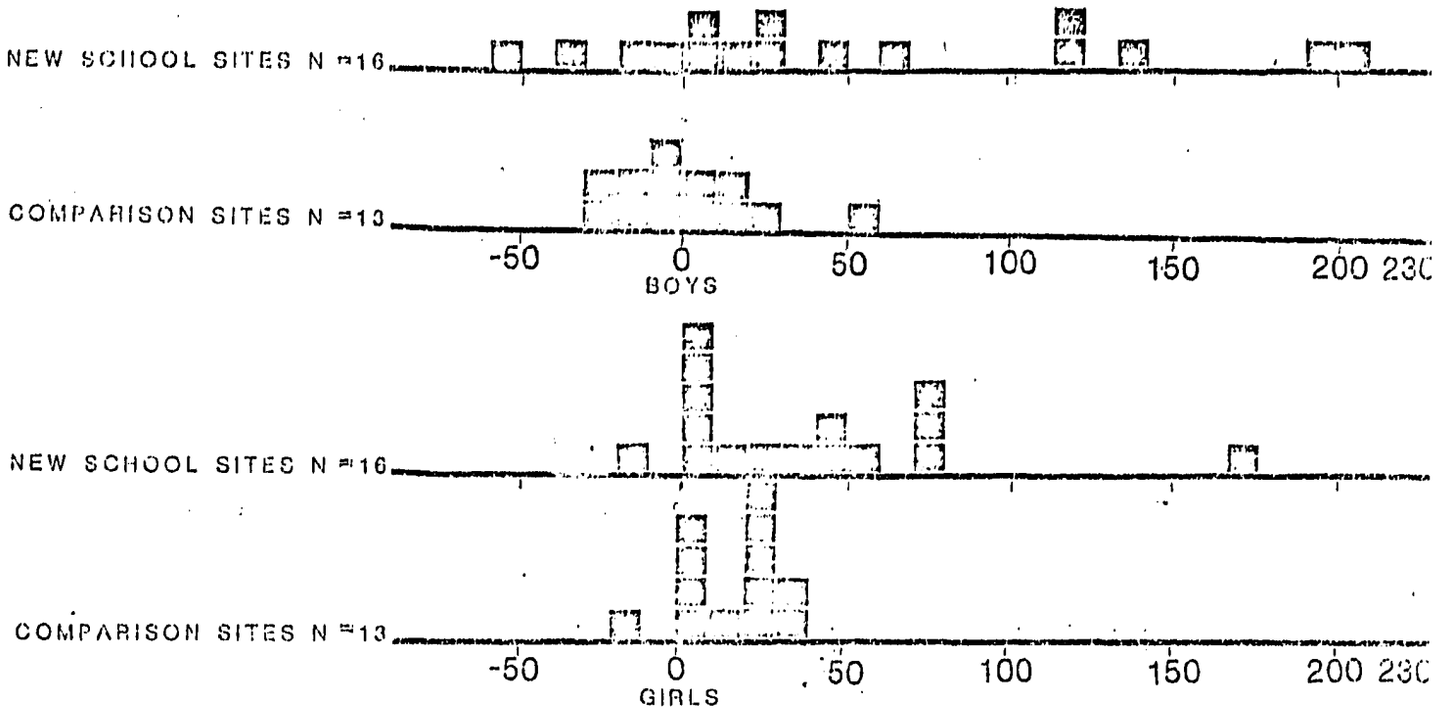

FIGURE I-27: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON BOYS AND GIRLS IN GRADES TWO THROUGH SIX

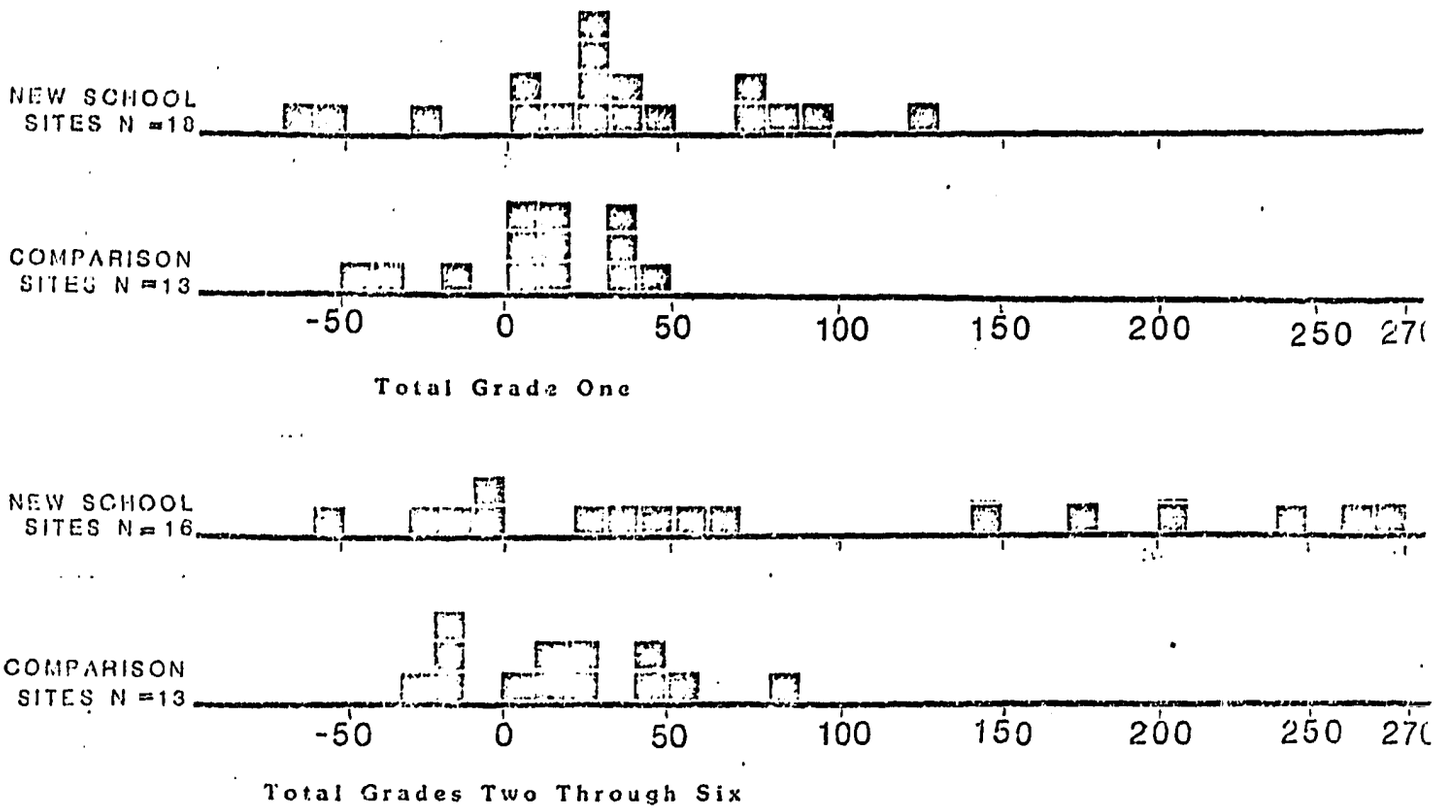

FIGURE I-28: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON ALL STUDENTS IN GRADES ONE THROUGH SIX

However, with this more sensitive analysis, smaller but significant effects on girls in grade one, and in grades two through six also came to light.

Using the differences between the means of the new school and comparison distributions as estimates of the average impacts of the new schools, one may generalize as follows. On the average, the net impact of a new school which opened in 1983 was to add

7 boys to grade one,
14 girls to grade one,
50 boys to grades two through six, and
23 girls to grades two through six.

Perhaps the overall impacts described above are all that might be expected of a new school building program in its first year of operation. In some sites there was uncertainty as to whatever the schools would actually open. Villagers may have adopted a "wait and see" attitude. New teaching staff had to be brought in from outside and were in many cases unknown.

It is important, also, to note that the sample sizes in this first year's study were very small. Next year, when the data from 1983 and comparison schools from Kafr il Sheikh and the 1984 new-school data from all five governorates are added, the picture should become much clearer. There is good reason to be optimistic about the impacts of the new schools.

Characteristics of High-Impact New Schools

One can see clearly, from Figures I-26 through I-28, that some impacts were unusually large. If these large impacts could be traced to particular sites, then perhaps one could discover characteristics of the sites which could be used to predict high impacts in other places.

Table I-27 shows the patterns of outstanding impacts as they were related to specific sites. The identification number of the site appears at the left;

the impacts found in each group for that site follow in the table. Outstandingly large impacts are marked by boxes. Whether or not each impact was "notable" against its own baseline is indicated by "(yes)" or "(no)". Not surprisingly, all the outstanding positive impacts were also notable against their own baselines.

Four sites showed outstanding negative impacts, and one (#842) showed both outstanding negative and outstanding positive impacts. The negative impacts show no interpretable pattern, and they may signal data errors.

The positive effects did fall into sensible patterns. In every school where there was an outstanding effect on boys, there was also an outstanding effect on girls at the same level. One site (#632) yielded outstanding effects for all groups. Two sites (#802 and #911) yielded outstanding effects for both boys and girls in grades four through six, and also for girls in grades one. Two sites (#642 and #711) yielded outstanding effects for both boys and girls in grades two through six, but no outstanding effects for grade one. Two sites (#921 and #632) were the reverse: outstanding effects for both boys and girls in grade one, but no outstanding effects in grades two through six. Only three of the ten sites showed isolated outstanding effects, two for girls in grade one (#722 and #952) and one for girls in grades two through six (#842).

At this writing we know little about the foregoing sites, except for those that participated in the intensive community studies. These were Kafr Nekla in Beheira (911) and Manshiya in Beheira (921). Kafr Nekla is a transitional village, near an urban area, where the proportions of boys and girls in school were already relatively high, and, in fact, slightly declining over the past five years in the related schools.

TABLE I-27

PATTERNS OF OUTSTANDING IMPACTS

POSITIVE EFFECTS

Site No.	Grade 1			Grade 2-6		
	Boys	Girls	Total	Boys	Girls	Total
802	+5 (No)	+35 (Yes)	40	+202 (Yes)	+47 (Yes)	249
842	-44 (No)	-18 (No)	-62	69 (No)	+72 (Yes)	141
911	+27 (No)	+49 (Yes)	76	+117 (Yes)	+170 (Yes)	287
921	+52 (Yes)	+30 (Yes)	82	-14 (No)	0	-14
952	+32 (Yes)	+42 (Yes)	74	(No New-School Enrollment in Grades 2-6)		
982	+45 (Yes)	+47 (Yes)	92	+24 (No)	+43 (Yes)	67
632	+75 (Yes)	+50 (Yes)	125	+197 (Yes)	+73 (Yes)	270
642	-20 (Yes)	0	-20	+137 (Yes)	+71 (Yes)	208
711	+1 (No)	+15 (No)	16	+117 (Yes)	+55 (Yes)	172
722	+14 (Yes)	+25 (Yes)	39	+12 (Yes)	+11 (Yes)	23

NEGATIVE EFFECTS

Site No.	Grade 1			Grade 2-6		
	Boys	Girls	Total	Boys	Girls	Total
842	-44 (No)	-18 (No)	-62			
611	+4 (No)	-4 (No)	0	-60 (Yes)	+8 (No)	-52
622	-66 (Yes)	+8 (No)	-58	(No New-School enrollment in Grades 2-6)		
932	+21 (Yes)	+5 (No)	26	-31 (Yes)	+5 (No)	-26

TABLE I-27 (CONT)
PATTERNS OF OUTSTANDING IMPACTS

KEY TO SCHOOL CODES

802 = Assiut, Esbet Sourour il Taliim (in Sourour)
842 = Assiut, Nazlet Abu Kaib il Ibt (in Abu Teig)
911 = Beheira, Kafr Nekla (in il Mahmoudiya)
921 = Beheira, il Manshiya (in Hosh Isa)
952 = Beheira, El Ibrahimiya (in Itay il Baroud)
962 = Beheira, il Komi (in Shoub Rukhit)
632 = Qena, Nag il Grebeel (in Qena)
642 = Qena, Nag Hamed Ramadan (in Kouse)
711 = Sohag, Nag il Maref il Ibt Bneda (in Akhmim)
722 = Sohag, Nag il Araya il Ibt Elmous (in Sohag)
611 = Qena, Nag il Khutaba (in Nakoda)
622 = Qena, Nag il Beheila (in Armant)
932 = Beheira, Esbet Sitta w' Saba (in Edco)

Social norms clearly favor attendance in school, the economic levels of the households make it possible, and evidently the new school broke a barrier caused by bad roads in the rainy season, which resulted in net increases in all but boys in first grade (where enrollment was already high). The new school in Kafr Nekla was also staffed by enthusiastic teachers who actively competed for their teaching positions in this desirable location near urban Mahmoudiya and not far from Alexandria.

Manshiya is an isolated, rural village near the town of Hosh Isa. Enrollments in the related schools in the town have increased rapidly in the past five years, and the proportions of girls in these schools are relatively high. Norms are changing to favor school attendance for all boys though not all girls as yet in Manshiya. In the intensive study, the proportion of sample girls' age six and over enrolled proved extremely low (23 percent). Relatively few children have attended school in the past; consequently, there is not a large group of children already in grades two through six. The school in Manshiya had difficulty attracting teachers for all grade levels because of its remote location; therefore a few sixth graders are still attending related schools. Therefore, the initial impact in Manshiya was on grade one. It will be interesting to see what will happen to later grade enrollment in the next few years.

Those interpretations can only be suggestive. During the coming year we will learn all we can about the other high-impact new schools to see what general characteristics appear.

SUMMARY AND CONCLUSIONS

On the basis of a small sample of cases, (18 new-school and 14 comparison sites) new schools which opened in the Fall of 1983 were found to have significant impacts in increasing net enrollments for boys and girls in grades two through six and for girls, but not boys in grade one. The net impacts, averaged across all schools, were to add

7 boys to grade one,
14 girls to grade one,
50 boys to grades two through six, and
23 girls to grades two through six.

On the average, these are satisfying impact to see in such a small sample with the chosen evaluation methodology. However, there was great variability among the sites, and several actually showed negative net impacts due to variability in the estimates of expected enrollment.

A preliminary analysis of sites where particularly high impacts were found suggests that it may be possible to predict impacts on the basis of site characteristics. This will be a major emphasis in the coming year's analysis.

INTENSIVE SITE VIGNETTES

SAMPLE SITES--BEHEIRA AND QENA

The following vignettes summarize the information collected from the community leaders.

MANSHIYA (HOSH ISA, BEHEIRA)

Like the district in which it is located, Manshiya is poor. The small Muslim community is estimated by community leaders to have a population of about 700 people, with agriculture the major occupation. The inhabitants, almost all of whom are descendents of one family with four branches, come originally from Bedouin tribes of Libya. About half the family heads own the 50-60 feddans of the village with the largest landowners possessing 1 1/2 feddans. The other half work other people's land or rent small plots.

Rice is the main crop because it has proved more reliable against climatic and infestation disasters. There are a few cows and a few ducks and geese (chickens died as a result of diseases, brought in by foreign breeds).

The major economic problem of the village is extensive subdivision of land through inheritance that has now reached the point where it is increasingly difficult for families to subsist off the land alone. Yet the immediate environment provides few alternative ways to generate income. There is almost no migration, little commerce, no major industry, and no cottage industries. A few inhabitants work in government employment as guards, janitors, or teachers. Outside the home women work only in farming. Children are hired regularly in seasonal agricultural work, taking 2 LE/day compared with 5 LE/day for adult men.

Leaders estimated that 50% of the families could be classed as "poor," 30% average, and 20% above average, but they note that economic differences are

small. Economic levels have become worse in recent years. When people express the priority purchases they would make if they had extra money, they listed "necessities for marriage," "animals," and "food" (basic needs) in that order.

The district capital, Hosh Isa, the nearest town, is 10 kilometers away from Manshiya. Most roads to the capital are of and dirt are very difficult to navigate in the rainy reason. People go there to sell their agricultural products and to shop. On special occasions, villagers also visit nearby settlements where family members have intermarried. They go to Hosh Isa for all medical and governmental services; a government clinic three kilometers away is rarely open and has few supplies.

There are no privately owned cars or trucks in the village. Taxis can be hired from Hosh Isa. There has been electricity in the village since the time school construction commenced; a water pipeline to the village broke 5 or 6 months ago and has not been repaired. Only about 15 families own TV sets.

An energetic Sheikh Mashriki, who has been a driving force in the village for improvement of conditions, stresses the imperative of education for the village's children, many of whom have no alternative but to seek employment outside the rapidly dwindling agricultural sector. He distinguishes between girls who need enough schooling to read and write, and boys who will need to graduate from university in order to find jobs with high enough incomes to survive. He stresses the village's need for local boys to become doctors and teachers to provide the services needed there, clearly preferring the conscientiousness of local personnel to the lackluster performance of outsiders.

Before 1964 no schools were available in the vicinity of Manshiya; that year three, a mixed primary school was established kilometers away in Abqa'in, and in 1975, five kilometers away, Harara Preparatory School for boys. In 1980, through the efforts of local parents, a four class "one-room school" began operations in a partially constructed house in the village. Except for the sixth grade, it was absorbed in 1983 into the AID financed new school. The new school presently draws children from 18 small related communities that vary in distance from 1/2 to 3 kilometers away.

Leaders speak of the changing attitudes of successive generations toward education. The oldest generation never considered education. Their lives were occupied in farming. Some from the next generation began to want education, but there were no opportunities. Now most want to educate their children, and as opportunities become easier most will do so.

Talking about the obstacles to education, they identified the main one as poverty, where the family needs the child's income and can't afford the costs (clothing, book cases, etc.) of school. Second is the law that doesn't allow children over the age of eight to begin school, a problem because there has been only limited opportunities for older children to go to school. The weather in the rainy season used to be an impediment to attendance when schools were far away. According to the leaders, the present new school will have adequate spaces for children for a few years, but as yet it doesn't have adequate equipment and teachers (there was no sixth grade teacher and no principal).

The picture that emerges in Manshiya is of an economically pressed community, demonstrating a desire for the education that until now was not easily attained. The recency with which educational opportunities have become

available will presumably require time for some in the population to adjust their thinking to the new possibilities. A sizable segment, however, already sees the necessity of education as a possible way out of their economic problems.

KAFR NEKLA (MAHMOUDIYA, BEHEIRA)

Kafr Nekla too, in many respects, is typical of its district. A school attendance area that includes about 4000 inhabitants (the 1976 census says 2200 for Kafr Nekla alone) has a population that spans the economic levels, includes both Christians (in one settlement) and Muslims. Though primarily engaged in the agricultural activities of farming and poultry production, the inhabitants can find a variety of other employment opportunities in nearly Mahmoudiya.

The community and surrounding settlements are usually dominated by a few major families with a scattering of other smaller families. Leaders estimate that 90 percent of the male population are engaged in agriculture, where daily workers earn 5 LE to 7 LE for a 4-hour day. Because of the shortage of agricultural workers, five percent are in commerce (some own small shops), three percent are in industry and two percent in government employment. A few are mechanics.

Sizable numbers of villagers (about 100) have migrated to Iraq to engage in agriculture. A few educated young men work in Cairo and Alexandria in government employment. About half the women work in agriculture, in the fields or in poultry production. Others work in two local brick factories, where they make about 2 or 3 LE/day, or in construction. The mechanization of some farm labor has decreased the numbers of jobs open to women. Children are

employed in the summer in local brick factories, and in winter in agriculture or in digging canals where they earn about 2.25 LE/day.

Leaders estimated that about 80 percent of the population was economically below-average or poor; this included mostly those who were engaged in farming and who owned either no land or less than 1/2 feddan. Those in other than agricultural occupations (ten percent) were evaluated as average, above average were those (10 percent) who owned 1/2 to 3 feddans of land. Those (.1 percent) with high economic levels were the three major landowners, 2 of who own 15 feddans each and the third, who owns 30 feddans.[1] See Table 6i below.

A variety of crops are raised: cotton, rice, wheat, alfalfa, corn, and vegetables. Vegetables are the best income earners but in substantial quantities special permission is required from the Agricultural department.[2]

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[1]As with many off-the-cuff estimates, the numbers are approximate. The general picture is accurate even the particular figures are not. Below is a more accurate breakdown, by a local agricultural engineer, of the land use and ownership patterns.

Table 6 i : Landownership in Kafr Nekla

Land Size (feddans)	No. of Owners (1981)
Less than 1	67
1 - 3	118
- 5	18
-10	8
-50	4
Total	215

Table 6 ii : land use (1983)

Land use	No. of users
Work own land	224
Work part/rent part	15
Rent all	2
Total	
Total	241

[2]In Kafr Nekla, as elsewhere in Egypt, the government requires specified cropping sequences, partly because of a need for particular crops and partly for the convenience of adjusting water supply to large areas planted in the same crop. To raise vegetables on a large scale a farmer needs to get exemption from this cropping scheme and get neighbors to agree also to planting vegetables so that the water to the area can be adjusted properly.

People commonly raise poultry and cows, which are good money earners. There have been no major changes in occupational structure, cropping, land ownership, or animals raised in the last ten years. About 45 percent of the land is owned by absentee landowners. If people had extra money they would spend it first on land, second on marriage necessities, and third on buildings.

The nearby industrial town of Mahmoudiya (2 kilometers away) provides opportunities in its electrical power plant, rice milling and textile mills for a few workers, but because these plants are relatively highly mechanized, opportunities are limited. For example, the spinning mill only employed 1200 workers from the whole surrounding area. The close proximity of the district capital, however, means that villagers have frequent contact with urban life.

Villagers sell their products in Mahmoudiya and buy the necessities they cannot find in the small stores that a few residents of Kafr Nekla have in their homes. The dirt road to Mahmoudiya is barely passable on foot in winter, and at all times of the year, horse carriage is the only regular means of transportation. On special occasions villagers also visit surrounding small settlements where relatives have intermarried.

People obtain all medical and government services in nearby Mahamoudiya. There is however a local agricultural cooperative and village bank for agricultural loans. Line electricity has been available for 5 years, and water has been piped into the homes for 20 years (in the last 4 years weak water pressure has made it necessary to carry water from public wells most of the time but a new pumping station financed by AID should ease the problem in a few months). Most villagers regularly watch television; few read newspapers.

Mahmoudiya has also provided long time access to educational opportunities for villagers from Kafr Nekla. Since 1955 there have been a number of primary

and preparatory schools available, and since 1960 secondary schools, both general and technical. Many villagers in speaking about education could point to specific local models--young people with advanced university degrees.

The AID-financed village school, which opened in 1983 with 6 grades, will expand to 7, 8, and 9 grades in successive years. The school was easily staffed with qualified teachers and administrators from the Mahmoudiya area. Leaders commented that girls should be educated to "secure their futures" so that they can attract husbands of a high standard, or be able to support themselves if the husband dies or proves of bad character. Work however was considered a final resort for girls. Teaching was mentioned as an appropriate work for girls. Parents want their boys educated so they can have an easier, higher status life rather than face the difficulties associated with agriculture. Usually they mention with approval examples of young university educated men from the village. The ideal was always expressed in terms of finishing the university level.

They felt attitudes had changed over the recent generations.[1] The oldest generation, if they were interested in school, sent their children to the Koranic schools for a few years (the mayor was a product of this kind of schooling). In the next generation, a few were educated in modern schools, but not many. Now most want to educate their children. The attitude changed because the economic level of households became higher, because subdivision of the land forced people to find new ways of earning income, and because schools became more accessible. "Now people in villages think like the people of

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[1]The nearby Christian settlement of Girgius Saad stood out as a community with longer and more active acceptance of educational opportunities than most of its neighbors.

Cairo because we watch television regularly." The leaders claimed that with the opening of the AID-financed school there were no longer any obstacles preventing children from going to school, but during the household interviews, it became clear that many children of poorer families were not attending school. Some parents noted that they keep girls home because of the high daily wages now being paid for agricultural labor. Attendance is sometimes irregular during the harvest season, but often the school takes a brief holiday to permit children to help in the harvest.

Before the new school, rainy weather made the short 2 kilometer distance over dirt roads extremely difficult, but in general, distance has not been an important factor in school enrollment for Kafr Nekla. The leaders feel that mixed schools are appropriate through preparatory school age and noted that presently with the opening of the new school there are adequate spaces available for children who come from Kafr Nekla and the other small settlements in the area.

Kafr Nekla emerges as a village still highly agricultural, not drawn substantially into urban life despite its close contact with the small industrial town of Mahmoudiya and its urban institutions. A large segment of the population feels straitened by economic pressures as evidenced in the number who migrate to labor abroad, and the numbers of women and children that are admitted to work in the arduous labor of brick making, construction, and agriculture.

Subdivision of the land into parcels barely adequate to support most landowning famililes is a further indicator of a need to find alternative opportunities for the young. The pervasiveness of the models of television and the support demonstrated by local leaders obviously keen to raise local standards,

suggests an atmosphere ready for substantial increases in school enrollments and attendance. What balances this factor is the growing need to generate income quickly by cutting education short or holding back the more expendable girls for field labor.

MONSHAAT IL AWKAF (KAFR IL DUWAR, BEHEIRA)

Monshaat il Awkaf is affected by two significant influences, the first, by the historic formative effect that came with land reform measures, and second, by its proximity to the major Delta industrial town, Kafr il Duwar. Before the 1952 Revolution the village was very small, but with the announcement of the distribution of the King's land (about 300 feddans surrounding Monshaat il Awkaf), people came from many areas of the Delta to take advantage of the 4 or 5 feddans they might receive depending upon their family size. Now the village has about 4000 residents (2200 according to the 1976 census). The vast majority are Muslim, but there are a few Christian families.

Many who claimed land in the 1950s were young men with small families; over the years the families increased in size and much of the land was subdivided so that with the present decade the inevitable problem of dwindling land resources has become critical. At the same time, young labor is being drawn out of the agricultural sector, so that it is difficult to find the needed workers for the shrinking plots. In Monshaat il Awkaf people are coping with these agricultural problems in two ways, by increasing areas under vegetable cultivation to achieve greater profit margins and coverting areas to pear orchards where profits are increased and labor is reduced.[1] During the

[1]These changes require the permission of the Ministery of Agriculture.

five-year interim period before fruit production reaches adequate levels, vegetables are planted under the young trees. Some who would like to remain in agriculture are tempted to sell their land for high prices, which because of urban expansion from nearby Kafr il Duwar have risen from 20,000 LE to 30,000 LE a feddan, and move to newly reclaimed land elsewhere that sells for far less.

Leaders estimated that about two-thirds of heads of household engage in some kind of agriculture. The major crops are rice, cotton, vegetables, and fruits. Some families raise poultry and cows for their own needs. All those who own land work their own land, but no one owns more than five feddans. Probably no more than 50 percent gain their income primarily from agriculture. About 40 percent work in the industries nearby (4 kilometers by walking, 6 kilometers by car) of Kafr il Duwar. There are cotton ginning, macaroni, spinning, dying, chemical, synthetic, and food processing plants all run by the Egyptian government. Wages vary from 25 to 80 LE a month with the average about 50 LE. About 4 percent specialize in milk processing, 3 percent work as drivers or mechanics, 2 percent are government employees, and 1 percent own small shops in their homes.

Leaders claim that no women work, but observation in the village showed a number of women actively engaged in harvesting activities, and two women appeared to be the major workers in two local shops.[1] Male children work in agriculture in the summer and during the school holidays--especially during the cotton harvest; villagers do not like girls to work in these activities they say.

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[1]Because these are family work activities, they are probably not classified as "work."

Only five to seven individuals have migrated outside the country for work because people have found "income low and prices high" in places like Saudi Arabia. Many people who work in Kafr il Duwar, however, have moved into the village to find cheaper housing, because housing prices in Kafr il Duwar have soared with the development of industry and consequent migration of thousands seeking work. Leaders estimate that 10 to 20 percent of the houses in the villages are rented or owned by these migrating workers.

All those engaged in any way in agriculture come from the group who migrated during the 50s. In general the economic level of most of the villagers can be described as average with none noticeably higher or lower than the others. The only exception, noted by the leaders are 8 people who depend on modest pensions. The village has had line electricity for 4 years and both piped and public water faucets for 22 years. About half watch television. If people had extra money they said they would spend it on animals, vehicles, and land in that order.

In the last 10 years leaders report that the most significant change that has occurred is in the occupational structure of the village. Older residents previously all worked in agriculture. Increasingly the middle generation worked in factories, and the younger generation is expected to depend more heavily on education to prepare them for work.

The proximity of Kafr il Duwar has meant that well established urban contacts, government services, and educational opportunities have been available to villagers for several decades. People regularly go to the markets of Kafr il Duwar, held twice weekly. On additional occasions, they go to town to buy other necessities, and they always go there for medical and governmental services. A small medical clinic in a nearer village is by-passed because of

unreliable service. On special occasions, such as weddings, deaths, or feasts, people visit other villages where they have relatives.

People normally walk the four kilometers to Kafr il Duwar because the paved road is longer, and there is no regular transportation. School children also walk this distance--a reason given by leaders for why some young children, especially girls, are not sent to school. Compounding the problem is a major train track that children must cross, and rain in winter that makes the path difficult. This problem is even more acute for many of the small settlements that make up the attendance area of the new school.

In the settlement of Gurn for example, very few children go to school. Irrigation canals require children to walk about seven kilometers to Kafr il Duwar. The distance to the new school could be reduced to two kilometers if a bridge were placed in a strategic point over the canal. In Tarez and il Gadeesa, even the new school will not change the fact that children need to cross the major highway between Alexandria to Cairo to go to school. Gadeesa particularly is a very poor group of small houses occupied by families working the land of an absentee owner in Alexandria. There is no piped water or electricity, and few children go to school or even contemplate going.

Primary schools have existed in Kafr il Duwar since 1954 and preparatory schools since 1960 (for boys) and 1962 (for girls). There is also a full range of general and technical secondary and Azhar schools. The new AID school in Monshaat il Awkaf is scheduled to begin operation in the fall of 1984. The rapid expansion of Kafr il Duwar's population as taxed the capacity of schools to provide adequate space. Villagers report that many of their children have been turned away from school admission because of this

lack of room. As a result, children may not always attend the closest schools; they turn to schools where there are openings if they can find places at all. Two schools where children of related settlements have been going said that they turned down 47 and 25 eligible children respectively because of lack of space.

Leaders said girls should go to school in order "to marry well," meaning to find an educated man with status. More than other villages, leaders here stressed the improvement in quality of life and work that comes from education, rather than stressing the direct connection between education and finding a job. They said education leads to better "thinking", more rational consumption, and better opportunities to earn. The leaders believe many children (males) now want to stay in agriculture and need to be educated to learn more about increasing yields. Most of those community leaders interviewed were farmers who see the income produced from agricultural labor (not landownership, which is costly) as better than the fixed incomes of industrial workers in the public sector, given optimum circumstances.

Leaders say that attitudes have changed. The oldest generation did not find schools available except for the Koranic schools (the Omda attended one of these), and in any case the economic level was so low people couldn't afford to send children to school.[1] After 1952 they began to educate children; as land ratios per family diminished, there was less need for all family members to engage in agricultural labor. Now "everyone" wants to educate their children, whether they are boys or girls. It makes no difference if the schools are mixed or single sex.

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[1]Before the Revolution, schools were designed mainly to develop a clerical class and they required fees.

From household surveys it became clear, however, that few children who went to school stayed for an extended time. From people's remarks, it appears that most occupational opportunities available in Kafr il Duwar do not require extended periods of education and thus do not provide incentives to remain in school. Only recently has literacy been required for industrial work and then only at a very basic level. Though industrial work does not actually interfere with Basic Education (by law children theoretically cannot work in the private sector before age 15 and in the public sector before 18), it holds out the possibility of a secure future for those who wish to drop out of school after a very short time.

Monshaat il Awkaf's twin settlement, Kafr il Duwar il Balad, because of its proximity, should provide the other large contribution of school children to the new AID school. But it has somewhat different circumstances. The village is closer to Kafr il Duwar (its outermost extension) and therefore closer (two kilometers) to already available schools. The people here come from about 10 or 12 stable families who have resided in the village and owned land for many generations in the same area. Most children go to school and many have gone on to obtain university degrees. In this village the vast majority of children are enrolled. People complain only of the crowded two-shift schools their children must attend in Kafr il Duwar.

Monshaat il Awkaf is affected by a complex set of factors related to the enrollment and attendance of children in schools. On the one hand overcrowded facilities and fairly concentrated population centers guarantee initial enrollments once distances to schools have been reduced; on the other hand the occupational structure does not provide a clear cut connection between

education and jobs and thus gives little incentive for children to stay long in the system.

NAG DAHI (NAG HAMADI, QENA)

The village of Nag Dahi is made up of two settlements (east and west) lying perhaps 100 meters apart and of closely similar size and density. Leaders estimated the population at about 2500. The community is located eight kilometers from the important industrial town of Nag Hamadi. About 50 percent of the men are engaged in industrial work, 34 percent in agriculture, 10 percent in government employment, 5 percent in skilled crafts, and 1 percent in commerce. Industrial workers are employed in various factories in Nag Hamadi: aluminum (established in 1970), sugar refining (established in 1910), electrical power (established in 1967) and construction equipment for dredging canals.

Government workers find work in neighboring and far away towns such as Abu Tisht, Dishna, Qena, Luxor, and Cairo and make up the increasing numbers who migrate out of the village in search of work. A few migrate abroad in unskilled manual labor. Women generally do not work nor do children.

In agriculture the main crop is sugar cane, with a few vegetables on the side, or with permission from the Ministery of Agriculture, larger patches of vegetables. Sugar cane production is primarily the work of men. About 25 percent own small plots of land, which they and family members work themselves. Perhaps 5 percent work on other people's land while sometimes owning land themselves. There is a tendency for families to diversify income sources--working land if they own it, sending some family members into

industrial work or any other potential source of employment. Some families raise animals: cows, sheep, poultry, and buffalo.

A small black molasses factory in the village using sugar cane that remains after government quotas are filled, provides work for few individuals. Nearby are also small brick and pottery works. The best money earner (from milk products) is the buffalo. Leaders judged the individual economic differences among families as small. About 75 percent could be considered below average and 25 percent average.

In the last ten years major economic changes have occurred as a result of new employment opportunities: positions in recently established factories in Nag Hamadi and, for the educated, work in cities. There has been a resultant decrease in the percentage of those who work their own lands or the land of others. Only a few have become economically better off. If there were extra money available in families, leaders judged that they would buy land, buildings, animals, businesses, necessities for marriage, and TV in that order of priority.

There is a direct paved road to Nag Hamadi that makes this large town easily accessible to the residents of Nag Dahi. There are no private vehicles but there are frequent taxis and buses that make the trip. Some people own private bicycles. Crops are sold seasonally in Nag Hamadi, and people frequently go to buy everyday needs there. They also visit nearby towns on social occasions and for marriages and funerals.

Line electricity has been available since 1973 and from a year ago there has been piped water to some of the houses. Public water taps have existed since 1965. Many villagers have access to television, and many read newspapers. Students and workers who commute to Nag Hamadi buy papers there.

There is a nurse and a midwife in the village but no hospital, private doctor, or place to buy medications. These services are found eight kilometers away in Nag Hamadi, as are legal and security offices. A social affairs office is located five kilometers away in Khodariat, and government administrative offices a kilometer away in Kilh.

Mixed primary schools have existed since 1911 and 1945, respectively, in Sharqi Bagoura, a village about one or two kilometers from Dahr, and in Sahil il Bakeeli, two kilometers away. In 1962 a mixed primary school was established one or two kilometers away. Since 1963, a mixed preparatory school has been located about two kilometers away. Thus schools have existed for a long time and at a short distance from the residents of Dahi. In 1983 the AID-financed Dahi Basic Education school opened with 131 boys and 80 girls. There are also Azhar religious schools nearby, established in the 1970s, with 10 boys of the village attending at the primary level 2 kilometers away, 8 boys and no girls attending single-sex preparatory school in Nag Hamadi, and 12 boys and 3 girls attending singe-sex schools at the secondary level, also in Nag Hamadi. Since the 1960s specialized schools at the secondary level have existed in Nag Hamadi. At present the village has about 10 students attending the Teachers Training Institutes which are sex segregated, 15 attending the mixed commercial secondary, 20 the agricultural secondary, and 20 the industrial secondary.

Attitudes about education have changed in the recent past according to community leaders. Only one or two went to school from the oldest generation because schools were not available or the distance to school was too great; the majority of heads of household were farmers with such low incomes they could not afford the luxury of education. People who were educated at that

time had to leave the village to find work. In the middle generation, those who were educated increased as schools were made free and more accessible, and transportation easier. Now in this generation, leaders say, "everyone wants to educate their children": boys because it is required for their futures and girls because education has become an accepted norm. Now there is "progress" and communities are "developing." The single most important goal for a girl is to marry well. With education her marriage opportunities are better.

Boys are educated in order to increase their economic levels by giving them better employment opportunities. Most boys would like to become doctors or engineers. Attitudes have changed because the economic level of families is better now and people have become "enlightened" through watching television and reading newspapers. Leaders said there are no obstacles now that would prevent children from going to school. With the new school there are enough places now for all the children, and they can easily walk to school. The leaders said, however, that more girls would go to school if there were separate sex schools.

In the household survey we discovered that in fact though many boys had been going to school for a long time, girls' ratios of enrollments had not kept up at a comparable rate. Those girls who enrolled rarely went beyond the end of the sixth grade. Parents generally felt it was acceptable for girls to go to a mixed primary school a kilometer or two away, but they were reluctant to enroll them in a nearby mixed preparatory school drawing children from a wide area. Several parents noted that if the mixed schools were in their own community "where we know all the families and many are related," they would be willing to send their daughters to higher levels.

The two villages of East and West Dahi, which make up the new school attendance area, are similar in terms of social structure; each is organized around a handful of key families, who own commercial reception halls and usually reside in adjacent homes that together make up family quarters with in the village boundary. West Dahi residents, however, were more prosperous and many had had considerable more educational experience than East Dahi residents. (The Director of Public Relations in the district offices in Nag Hamadi, for example, comes from West Dahi village). The difference between the villages according to some respondents originated with a single man who received an education early and later become the principal of a nearby school, encouraging local children to go to school.

KHUTABA (NAQUAD, QENA)

Khutaba is a small village of about 4000 inhabitants (the 1976 census puts the area of Hagar Danfiq at 8387) with perhaps 7,000-13,000 more scattered in settlements along a five kilometer axis that are close enough potentially to provide children for the new AID-financed school. People of the villages are generally homogenous from local origins and all Muslim. Khutaba itself is made up of a number of different families but the related villages of Idris and Khilagla are organized around one major family. Another related village Awadulla has four families.

About 74 percent of the men work in agriculture, 5 percent in commerce, 1 percent in industry, 15 percent in government and 5 percent in skilled crafts (mostly brick making). About 15 are now working in Saudi Arabia in agriculture or construction. A few work as government employees in neighboring towns such as Naqada, Danfiq while others work in industry in Aswan, Cairo, or Port

Said. The numbers of those migrating temporarily for work are increasing. Leaders say women and girls do not work outside of family production. School boys work in summer and on holidays with their fathers, while uneducated boys work all year long in agriculture and construction.

Leaders estimated the families as 40 percent average and 60 percent poor without major differences. The most well to do has 10 feddans of land. Of those who own land, 15 percent have medium-sized plots and 85 percent small plots. About 89 percent of these work their own land, and about 2 percent rent or have a sharecropping arrangements for their land. The rest rely entirely on workers. About 60 percent of the villagers at some time or another work on the land of others. Farmers grow wheat, corn, sugar cane, alfalfa and lentils, with lentils and sugar cane the best money earner. They also raise cows, buffalo, poultry, goats, donkeys, and camels depending on the economic level of the household. The best money earner is the cow with its milk products.

The only major change in the economic scene in the last 10 years is the opening of more job opportunities in other Arab countries. Families who have taken advantages of these opportunities have improved their economic conditions. Leaders said that if people had extra money they would buy income earning businesses, buildings, land, household appliances, TV furniture, necessities for marriage, animals, and cars in that order.

Khutaba is nine kilometers from Nagada, partly over dirt roads and partly on good paved roads. Villagers often walk to the paved road to pick up taxis, though taxis also come irregularly to the village. Most goods must be bought in Nagada, and on Saturday agricultural products are sold there at a weekly

market. People visit relatives in nearby villages on special occasions. For all medical services people usually go to Nagada though there is a small health unit 6 kilometers away in Danfiq. All governmental offices and services are also located in Naqada. Khutaba has had line electricity for a year through the efforts of private individuals; there is no piped water, nor are there public faucets. People use their own pumped well water. Very few, at the most 20 percent, have access to television and even fewer (5 percent) read newspapers.

A primary school has existed in the area (four kilometers away in Hagar Danfiq) since 1963 and in Naqada (nine kilometers away) a preparatory school for boys, since before 1950. A mixed preparatory school opened in 1974 (ten kilometers away) in Bahari Kamila. Until the new AID-financed Basic Education school opened in 1983 the parents organized, as a branch of the Abadiya (also called Hagar Danfiq) school, a small three-room school with about 100 students. In Naqada, there is also an Azhar school where about 25 children from the area go. Some children from the village attend the Commercial Secondary school in Naqada (35 students), established in 1979, The Industrial Secondary School (15 students), established before 1950 in Luxor 23 kilometers away, and The Industrial Secondary (20 students), and Agricultural Secondary (35 students) schools, both established in Qena (35 kilometers away) before the 1950s.

There has been a change in how people view education. In the oldest generation, less than one percent were educated because there were virtually no schools in the area, and the economic level of families was low. In the next generation, only about three percent were educated because, though schools were available, they were far away and the people still were generally

poor. According to villagers, no one has yet received more than a secondary school degree. Now about 46 percent want to educate their children. The reasons reported why some still do not educate their children are 1) many children have no birth certificates or the date of birth is registered one or two years after the actual birth because of the distance to the health unit, 2) economic levels of the households are low requiring the child's labor or 3) because people know government salaries (that require education) are low and prefer work in better paying construction work that require little or no education.

With the opening of the new AID-financed school (in the first year with five grades), there are enough places at present for local children (all children from 8-6 who applied were accepted). It had been expected that children from a settlement 1/2 kilometers to the north of the new school would send children, but instead the children continued in their previous school because they were "used to that school and unsure yet of the quality of the new school." Next year it is likely that they will change over to the new school according to leaders.

In the household interviews in Khutaba we continually saw evidence of what appears to be a major problem of the village: the distance to the nearest health unit that leaders originally pointed out to us. One family for example had, according to birth certificates, 3 sets of "twins," children born actually in 6 different years but grouped when the parents found it convenient to register them. Other evidence of poor medical facilities was the number of children who gave illness as a reason for not enrolling initially or for not continuing schooling. Families also reported the deaths of numbers of their children.

NAG IL TAREF (LUXOR, QENA)

Nag il Taref is part of a larger area called Qurna. The whole larger area had a population of about 11,500 inhabitants in 1983 according to community leaders (the 1976 census reports 10,917). Nag il Tarif is located on the West Bank of the Nile, across the river by ferry and 6 kilometers distant from the tourist center of Luxor. Encompassed in the Qena area are a number of villages adjacent to the West Bank tourist sites. Still, in Nag il Taref about 70 percent of heads of households engage primarily in agriculture, 10 percent in commerce, 5 percent in government employement and 15 percent in touristics related activities, mainly in the manufacture of alabaster and other tourist souvenirs. Women and girls do not work outside the home. School boys often work in alabaster factories in the summer, while the uneducated work in these industries all year round. There are increasing (slowly) numbers who migrate temporarily outside the village to Alexandria, Aswan and Cairo to work as government employees or in construction, or to other Arab countries as skilled technicians. A number commute daily to work in hotels and government offices in Luxor. Also, increasing in numbers are retired persons returning with pensions from work in distant Egyptian cities. Leaders characterized the economic levels of families as high in 2 percent of cases, above average 30 percent, average 50 percent, below average 15 percent, and poor 3 percent. The largest landowner owns 40 feddans. Of the landowners 10 percent own large plots, 60 percent medium sized plots and 30 percent small plots. Fifteen per cent work their own land, 70 percent hire workers, 5 percent rent land or have a sharecropping arrangement. About 15 percent of the villagers work as laborers on other people's land. Sugar cane is the major crop and a good money earner. The government requires the growing of

this crop in much of Qena to reduce transportation costs to nearby sugar factories. Since the same cane plants produce for several years, labor is primarily seasonal at harvest time. Cows and buffalo are raised by some families. The major economic changes that have taken place in the last 10 years according to local leaders result from the increased numbers who migrate to other areas for work which when added to increasing numbers of educated, have caused smaller numbers to work their own land or work in agriculture at all. Other changes mentioned include the change in cropping from cotton to sugar cane, a less work intensive crop, and the increasingly critical nature of continued land subdivision as a result of inheritance customs. But in general the economic levels of most families have remained fairly stable. According to leaders if families have extra money they buy buildings, furniture, household applicances, TV and necessities for marriage.

Though there are a number of small stores in Nag Tarif, where people can buy and sell food products, frequent visits are made to Luxor (6 kilometers distant) for purchases, especially by men. Roads are direct and well paved, and taxis, buses, private trucks and cars are readily available. To reach Luxor it is necessary to take the ferry (a trip school children at some levels must pay 25 p round trip to make). A number of people own bicycles and motorcycles. Men also often make visits on special occasions to neighboring villages to meet reciprocal obligations to relatives. Leaders say women do not go on these visits. Nag il Taref has had line electricity since 1970, but still has no water piped to houses. Public taps have been available since 1958. Most villagers have access to television; newspapers come daily to the village and many read them. Medicines and a health unit with three doctors and a dentist are available in Nag il Taref. All other medical facilities

including private doctors are found in Luxors. Nag il Taref has a social affairs office, government administrative offices, post office, security and sugar company office in the village. Law courts are in Luxor.

A mixed primary school has been available three kilometers away since 1948, a mixed preparatory school 5 kilometers away since 1980. The two shifts of the primary school have about 1000 children from the area attending, and about 430 more attend the preparatory school. Another 400 attend the Al-Azhar primary and preparatory schools (in one building) located directly in the intensive site focal village. Located in Luxor for "a long time" have been a commercial secondary school for boys (40 from the village), a commercial secondary school for girls (about 20), a mixed teachers' training school (about 30) a hotel training school (about 20) and an industrial training school for boys (about 40). There have been subtantial changes in people's attitudes toward education in the recent past. Only about 1 percent of the oldest generation experienced any form of education and that usually in Kutab-Koranic schools which were the only schools available. Leaders noted that the economic level of families was "too low" to afford schooling in any case. About 10 percent in the middle generation were educated, as schools became increasingly available and people began to realize the importance of education. Now 90 percent of the young children go to school, because "schools are near their homes", "their economic level is better", and because people have become "enlightened". There are three possible reasons leaders mentioned why parents might not send all children to school: 1) The difficulty and expense of transportation (particularly if they are older children at the secondary level in Luxor) 2) If schools are far from their houses, or 3) because of the poor quality of schools. Girls would be more likely to go to

school if there were single sex schools. They noted that the new AID financed Basic Education schoold (to open in 1984) may not be large enough for all the children who plan to come, estimated at about 300 the first year. For that reason the new school planned as a 1 to 9 school may remain 1 to 6 if enrollments are high in early grades. A large number of local children have been attending the Al-Azhar schools, but parents said that with the availability of a regular school in the village, most would prefer to send their children there. A factor possibly contributing to early crowding of the new school is the plan to move four nearby villages to an area near the new school site. There is some debate among leaders about whether this will add numbers to the school or whether these children would already have attended the new school from their former villages. Some people reported, and others denied that schools in the area have a problem with teacher absences for more lucrative jobs in the tourist trade. Given the touristic opportunities available near Nag il Taref for primary or secondary incomes, a strong language program would be a powerful drawing card in a curriculum that is otherwise not particularly related to local occupational structures. This was noted by a number of families. Leaders in commenting on why people educate their children gave the common answer for girls "so they can be good wives and help educate their children" but for boys they emphasized education for education's sake, "Everyone knows there is a difference between the educated and the non-educated person." Although they also mentioned education as securing the future with eligibility for a job in government (the tourist trade is seasonal), they said at the same time that the occupational ideal of a boy is to become an officer (rather than the common response "doctor or engineer" which was mentioned elesewhere as the culmination of high academic achievement).

SPECIAL CASES -- ASSIUT

(GIRLS ENROLLMENTS AND ATTENDANCE)

BENI RAFA (MANFALUT, ASSIUT)

Villagers estimate the number of inhabitants in Beni Rafa at 20,000 (the 1976 census say 15,254) with about 15,000 more in the whole school attendance area, making Beni Rafa in terms of size a small town. Christians make up about 25 percent of the population and Muslims the rest. Both groups live dispersed throughout the community and not in special quarters. Many of the families of Beni Rafa originated historically from bedoun tribes of the Arabian Peninsula that came to Egypt during the Islamic Invension. The community divides into about 20 families. The community is self-contained in terms of daily shopping, medical facilities (except for a hospital which is 11 kilometers away on paved roads in the district capital of Manfalut), and government services such as social welfare, administrative and security offices (law courts are in Manfalut). There is no public transport, only taxis, and a small but increasing number of private cars. People only need to leave Beni Rafa for special purchases or for special visits to the homes of relatives in neighboring settlements. Villagers are generally proud of the fact that women stay close to home.

Electricity has been available for 15 years and piped water for 23 years. Most people are engaged in agriculture (90 percent, about 5 percent are in commerce or crafts (as peddlers, store owners, brick sellers, and furniture workshop owners) and another 5 percent are in government employment (police officers, doctors, social service and other administrators, and teachers). The urban character of Beni Rafa and the prominent role played by government employees makes their influence felt in more marked ways than their small

numbers would imply. Large numbers of residents, usually, those with no land, have migrated temporarily to other towns and cities of Egypt and outside the country. Some work as government employees in Manfalut, Assiut and Cairo. About a thousand, according to leaders, migrate outside the country mostly to Iraq as farmers but also a few to Saudi Arabia, Kuwait and the Gulf as government employees. All the taxis that provide transportation from Beni Rafa to other cities have been brought through wages from work abroad.

Women do not work, leaders say, but we noticed that women frequently appear in the fields and a number of local women work as teachers in the village or in Manfalut and Assiut. Boys help in gathering crops in the summer and working with their fathers during the year after school. Poor families need children's labor all the year. Leaders estimate that about 50 percent of the people have an average economic level, 40 percent are poor, and 10 percent (those who work abroad) are above average.

From the time land reform measures were implementeds in 1960-63 almost everyone in Beni Rafa has had land. Two per cent of those owning land are absentee landlords; 2 percent of local people own large plots and 96 percent of landowners have small plots. The major crops are beans (foul), wheat, cotton and cumin with bean the best money earner. Poultry, cows and buffalo are raised for family needs primarily. In the last ten years the major economic change in the village has been the increasing numbers who migrate to foreign countries for work and the decreasing number who work their own land because of migration and education. Agricultural labor has also become more difficult to find. People say that if they had extra money they would buy animals, cars, land, buildings and necessities for marriage in that order.

Mixed primary schools have been available in Beni Rafa from at least the 1950s and a mixed preparatory school since the 1960s. With the opening of the AID girls' Basic Education school in 1984, all levels may become completely sex-segregated. Every mosque has a Koranic school that some children attend all year and others in the summer only. In talking about education for girls, leasers said they had no objection to it but didn't feek girls' education was very important. They noted that only a small number of girls were educated in Beni Rafa for that reason. The leaders supposed if the girls showed a talent for education they should continue in school but if they needed special tutoring it was their opinion that it would be better if they stayed at home. On the other hand, for boys the question was different: they all felt agriculture was arduous work that a boy could avoid if he became educated. The leaders see no special obstacles that would prevent children from going to primary school. They said however that more girls would go to school if there were separate sex schools for them. For older children who go out of Beni Rafa to secondary school, one problem mentioned was the expense (20 p a day) for transportation.

There has been a change in parents' attitudes about education in recent decades. The oldest generation took little interest in school; if they were educated it was "by chance." In the middle generation few went to school but the number was increasing. Now about 90 percent send their children to school initially; those who pass exams are allowed to continue but those who fail are withdrawn. It is only the poor according to the community leaders, who may not send their children at all. The attitude changed, they feel as parents began to recognize that education was a convenient way for boys to learn skills that would allow them to earn money more easily.

In three related villages sampled out of the eight additional villages which contribute children to the attendance area, there were always fewer children going to school than in Beni Rafa. In two, Alexsan and Khayat, situated 2 kilometers east and west of Beni Rafa with population estimated at 4000 and 2000 each, two landownership patterns prevailed. In Alexsan the economic level is poor, about 50 percent of landowners own 1 to 11/2 feddans and the other half 1 to 5 feddans. About 60 percent of the heads of households have migrated to work in foreign countries or other parts of Egypt. A handful of residents have secondary school technical degrees (one is the headmaster of the primary school in Beni Rafa) and 10 more are presently in mainly technical secondary schools. At present 13 girls go to primary and 2 to preparatory school. In Khayat one prominent family owns much of the land and educates all its children. About 50 percent of villagers own small plots and the other 50 percent work the lands of the prominent family. The difficulty in finding enough laborers to work the land has caused the family to convert some of the land to fruit orchards. Many of the children in the small landowning and worker families do not attend school. Inadvertantly we also sampled a small settlement, Helba, with 10 to 15 houses 7 kilometers from Beni Rafa and lying between two attendance areas. The village was extremely poor with dwellings not much more than holes in the ground. Only 3 related people has experienced any education and that because they had once lived in the district capital of Manfalut. The combination of object poverty and long distances to commute to school have and will probably continue to have an adverse effect on educational participation.

Perhaps the most promising development in terms of girls education in Beni Rafa is the model provided by a handful of dynamic young women teachers (some

from prominent families of the village itself) who actively encourage a small but determined group of girls to continue in their studies. It will be interesting to try to determine whether villagers have requested a single sex girls' school because they want to encourage girls' education or because they hope to provide more places for boys in the older primary and preparatory schools.

GHANEYEM (GHANEYEM, ASSIUT)

Ghaneyem is a fair-sized town in a remote area an hour's drive south of Assiut. Each of its present 4 quarters (called North, South, East and West Ghaneyem) was originally a village of 3 or 4 large families. Before and during the early Nasser years farmers grew hashish on large well-defended farms, and carried out continuous small battles and revenge killings between their communities. One is struck on the road to Ghaneyem by the size, number and elaboration of cemetaries in this region. President Nasser reduced much of this lawlessness by means of the army during the 60's, and many inhabitants during this time, went to live permanently in Cairo (where in the Wekalt il Balah area many set up shops). Ten years ago the authorities joined the four communities to form the town of Ghaneyem in an effort to exert a stronger security presence. Now the town is run by a town council (meglis il medina). In the last 3 to 4 years revenge killings for the most part have stopped. In household interviews we found the education of many children in the area adversely affected by these events - by the poor security situation, by the loss of parents, and by poor economic situations indirectly relating to these events. People commented that residents were afraid to appear in the streets during that period, much less send children out to schools. The presence of

normally operating schools contributes to the present sense of security, and more particularly the presence of a large preparatory school for girls that draws students from across the quarters of the town builds the kind of links that are important to future tranquility in the area.

Leaders estimated the population of greater Ghaneyem at 50,000 inhabitants even though the census of 1976 put the figure of the town itself at 21,899, a more reasonable figure. The last 5 to ten years have seen sizeable numbers migrating out of Ghaneyem, most temporarily to earn income but a few for permanent residence abroad where they feel they can find a life with more opportunities. The rate of migration at present is lessening with more of the educated remaining in Ghaneyem. Many return to Ghaneyem we were told, because prices elsewhere are high or because they have retired and want to return to their original homes to spend the rest of their lives.

Most of the town is Muslim, but in South Ghaneyem approximately 50 percent are Christians, with perhaps an additional 10 percent Christians dispersed through other quarters. The educated are distributed fairly equally across the quarters. About 75 percent pf the men are engaged in agriculture, 15 percent in commerce, 5 percent of the men and 1 percent of the women in government employment, and 5 percent of the men in manual labor or skilled crafts. The people refer that their women and girls not work, but some who need the money work in seasonal day field labor. Boys help their fathers during summer holidays. Leaders characterized the economic level of the people as 60 percent poor, 25 percent below average, 10 percent average and 5 percent above average. They felt the economic differences between most families was not large. Of landowners 80 percent own small plots, 15 percent medium size plots and 5 percent large plots. About 80 percent of landowners work their own land, and about 20 percent hire workers. About 60 percent of

laborers work the land of others. Cotton, soy beans, and alfalfa are the main crops with alfalfa the best money-earner. Cows, buffalo, sheep, goats and poultry are raised with the perferred money-earners sheep and goats. In the last 10 years the major changes in the economic situation involve the increased opportunity to migrate temporarily for work in other Arab countries, and the effects of diminished land resources available to individual families. The decrease in the ratio of agricultural land per family results from subdivision of parcels through inheritance, the increase in land prices that induces people needing income to sell land in order to buy other income earners like cars or shops, and the pressing need of an exploding population to expand onto agricultural land for their housing needs. Housing erected for the needs of government employees in Ghaneyem for example has been used instead for office buildings forcing the employees to seek housing elsewhere. Leaders say that recent economic changes are not clear-cut. They characterized them as a pyramid shaped graph with gradually improving economic conditions due to land reform from 1950 to 1965 when wars, and local disputes started a deteriorating trend that has lasted until now in the 1980s. When asked what people would do with extra money, they answered, "Buy TV, household appliances, furniture and necessities for marriage, building, land, animals, cars and businesses" in that order.

The area surrounding Ghaneyem's cultivated areas is primarily barren and sandy. Attempts on a large scale to reclaim some of these lands is one direction economic pressures are driving the residents. The Law of Reclaimed Land #100 in 1964 declared that a farmer could reclaim as much unowned desert land as he was capable of working without limit. Practically however no more than 3 or 4 feddans can be reclaimed by a single individual we were told

because of the difficulty and costs which must be borne by the individual. After the land becomes productive the farmer begins to pay rent to the government. Earlier under the 1958 Land Reform Bill many families in Ghaneyem were given small plots of land, that now are no longer viable with the increase in family size and the subdivision of the land.

As an urban area, Ghaneyem is largely self-contained. Major roads are paved between settlements and people often visit relatives who have intermarried in various areas of the district. Most of the basic necessities are available. Line electricity was installed in 1970 and water piped to homes in the late 70s. Most townspeople have access to television; newspapers come daily and a large number read them regularly. All medical facilities including a hospital are available in Ghaneyem, and all government services except law courts (the nearest is in Sudfa, 10 kilometers away).

Public and private (Christian) primary schools have been avaialable in Ghaneyem since before the 1950's and a mixed preparatory school since the 1960s. All Ghaneyem primary schools are 2 shift. With the opening of the AID new preparatory school for girls in October 1983, the mixed school became a single sex school for boys. There are 42 preparatory classes in all Ghaneyem district; 3 schools in Ghaneyem and 4 in nearby Deir il Ghanadea. Next year a mixed preparatory school will open in Azaza[1], 2 kilometers away, presumably drawing some of the girls out of the new school. Parents in Azaza say they would rather send their daughters to a mixed school that is near than a single sex school that is farther away. In the first year of its operation 1983/4

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1 Also 4 classes will be added to the elementary school.

there were 242 girls enrolled in 6 classes (first year students, mumbering 85, came from 11 elementary schools, second year students, also 85, came from 2 preparatory schools and third year students, 75, came from the same 2 preparatory schools). Since 1970 there has also been and Al-Azhar Institute for Primary Religious Education, which follows the same curriculum as government schools, except for Basic Education classes and a greater emphasis on religion classes; two girls in the new preparatory school were admitted with degrees from this school. It is likely that the advent of single sex preparatory school was crucial to these girls continuing their educations[1].

Leaders say that in recent decades attitudes about schooling have changed markedly. The oldest generation had no access to schools, and they were preoccupied with local disturbances. Because of the poor economic conditions when schools started people could not afford the cost of the regular fees. As the economy improved and schools became more widely available and free, more people sent their children to school. Now everyone wants to educate their children we were told and if they do not educate them, it is because they are poor and unable to forego the child's labor or pay the related costs of schooling. There are no other obstacles that prevent children from being educated. Leaders felt mixed schools were appropriate at primary school level, but that more girls would attend single sex preparatory level schools (residents invariably also expressed this view). At present, places in the school are adequate for the children but authorities feel that double the

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[1]In other areas of Egypt where Al-Azhar systems were strong, as in Sharqiya, where the Sheikh of Il-Azhar, Abdel Halim Mahmoud supported the system, girls' enrollment received a boost from parents who felt secure in a segregated system under religious auspices.

number of classrooms should be made available soon for future expected increases in students attending preparatory schools.

Several officials mentioned problems specific to the schools in Ghaneyem. The first is the difficulty in finding teachers for the girls' schools. Only one teacher in the new preparatory school is a woman. There are not enough certified local women because in the past not enough local women have qualified for the teachers'training school in Assiut. Officials requested ministry officials travelling with us to excempt local girls from meeting the score requirements for eligibility to teacher training institutes. They explained that the nearest source of teachers is Assiut itself; but primary teachers earning 30 LE/month cannot afford the 10LE transportation cost from Assiut and few want to live in a place as remote as Ghaneyem. For these reasons officials would like also to have teacher housing constructed on the new school grounds. They noted that because of its urban status Ghaneyem did not receive food allotments and felt that food would act as incentive to poor children from remote areas of the district.

Ghaneyem draws students to its preparatory school from 5 other communities. Azaza, mentioned above, is a densely populated community 2 kilometers away, originally settled by some of the more wealthy landowners from Ghaneyem who wanted to live closer to their agricultural lands. About 80 percent of the residents engage in agriculture; 15 percent are educated government employees. Many young girls go to school and people speak of encouraging girls' education. By contrast, the neighboring villages of Kiema 9, and Tura Sohagiya, 3 kilometers away, send only a few boys and no girls that we could discover, though we were told that girls from this district went to Ghaneyem

schools. These two villages have an extremely low economic level. One mother noted that when people were as poor as they were, they could only afford to educate one child at the most and that child would be a boy. Most residents are caretakers of orchards, or make baskets and cages from date palm fronds. Many left the area during the troubles of the Nasser period and then returned later.

COMMUNITY LEADER INTERVIEW FORM

FORM 10

Governorate: _____ Interviwer: _____

Markaz: _____ Person(s) Interviewed: _____

Name of Village (site): _____

Population

Approximate no. of inhabitants: _____ 1976 Census: _____

Density of population: Concentrated: _____ Dispersed: _____

Density of school pop.: Concentrated: _____ Dispersed: _____

Subgroups of the population (religious, economic, ethnic, occupational and others) (Name them, note locations and approximate per cent of the population) _____

_____

Migration

Have there been sizeable numbers of the village that migrate outside the village in the last 5 to 10 years? _____

_____

Temporarily? _____ For what reason? _____

Permanently? _____ For what reason? _____

Has this number been increasing or decreasing? _____

Have sizeable groups moved into the village in the last 5 to 10 years?

_____

Temporarily? _____ For what reason? _____

Permanently? _____ For what reason? _____

Has this number been increasing or decreasing? _____

Urban Contact

How far is it (in kilometers) to the nearest large town or markaz capital

_____

What is the condition of the roads between the village and the town?

_____

Direct? _____ Indirect? _____

Paved? _____ Unpaved? _____

What means of transportation do people use?

Taxis? _____ Buses? _____ Private cars, trucks? _____

Other? (specify) _____

Where do people go to sell their products? _____ How often? _____

Where do people go to buy everyday needs? _____

2

Where do people go to buy special needs? _____

How often? _____

Do people visit any other towns or cities regularly? _____

Which ones? _____

For what reasons? _____

Do women also visit the same towns for the same purposes? _____

Utilities and Services

Does village have.....

line electricity? _____ Since when? _____

water piped to houses? _____ Since when? _____

public water faucets? _____ Since when? _____

Do villagers regularly watch television?(most, many, half,some, few, or none) _____

Are newspapers brought daily to the village? _____

How many people regularly read newspapers?(most, many, half, some few or none) _____

What medical facilities are available in the village.....

Hospital _____ If not, how far? _____

Clinic _____ If not, how far? _____

Docter _____ If not, how far? _____

Nurse _____ If not, how far? _____

Midwife _____ If not, how far? _____

Place to obtain medicines _____ If not, how far? _____

Other (specify) _____

Other government services .....

Social welfare centers _____ If not, how far? _____

Administrative offices _____ If not, how far? _____

Legal offices(courts, etc.) _____ If not, how far? _____

Security _____ If not, how far? _____

Other (specify) _____

Occupational Structure

What are the opportunities in the village to earn money?

			Men	Women
Agriculture	_____	About what percent do this?	____	____
Commerce	_____	About what percent do this?	____	____
Industry	_____	About what percent do this?	____	____
Government	_____	About what percent do this?	____	____
Manual labor	_____	About what percent do this?	____	____
Skilled crafts	_____	About what percent do this?	____	____
Other	_____			

What are the opportunities for work outside the village?

In neighboring towns? (give type of work, town's name and number of people who do this work) _____

In distant towns or city? (give type of work, town's name and number of people who do this work) _____

Outside the country? (give type of work, town's name and number of people who do this work) _____

Do any of these kinds of work in the village or outside require education?

Which ones?	What levels of education?	What skills?

Do women work outside the village? _____ At what kinds of work? _____

Do any of the kinds of work use children (up to 15 yrs) to a significant degree?

Boys, Girls	Which ones?	Continuously or Seasonally or Part-time

Economic Level

How do you characterize the economic level of people of this village?

Generally very high _____ Generally below average _____

Generally above average _____ Poor _____

Average _____

Are there economic differences between families or are most of the same economic level? _____

If there are differences, what are they? _____

What is the approximate percent that belongs to each group?

High _____ Below average _____

Above average _____ Poor _____

Average _____

Who owns most of the land in the village?

	Percent
A few local families? _____	_____
Absentee landlords _____	_____
Self-owned: large plots _____	_____
medium plots _____	_____
small plots _____	_____

What percent works own land? _____

What percent hires workers? _____

What percent either rents out land or has a share-cropping arrangement? _____

What is the approximate percent of those who work as laborers on other people's land? _____

What are the crops grown in the area? _____

What crops are the best money-earners? _____

What animals are raised? _____

Which animals are the best money-earners? _____

In the last ten years have there been changes .....

In the way people earn their living? _____ What changes? _____

In the job opportunities available in the village? _____ What? _____

In the job opportunities available outside the village? What? _____

In the numbers who work their own lands? ____ Why? _____

In the numbers who work in agricultural labor? _____ Why? _____

In the kinds of crops or animals raised? _____

In landownership? ___ Size of plot? ___ Ownership? _____ Use? ___ (Specify)

Site: _____ CL 5

In the economic levels of the families?

What percent became better _____ worse _____ the same _____?

If people have extra money what do they buy (estimate priority-1,2,3,...)

Priority

_____ Land
_____ Buildings
_____ Cars, trucks, etc
_____ Animals
_____ Businesses
_____ Household appliances (washer, frig, etc.)
_____ TV, radio
_____ Furniture
_____ Necessities for marriage (gold, furnishings)
_____ Gifts
_____ Other (specify) _____

Educational Opportunities

For what reason do parents educate their children? (What benefits do they think their children receive from education?)

Girls | Boys

_____

_____

_____

What sort of work do children nowdays want to do when they grow up?

Work (priority)	Boys	Girls

Do these kinds of work depend upon education?

Work	Eductional skill or level

When were the various primary and preparatory schools established in this area? How far are they and which are now attended by village children?

No. Now attending from village	Mixed, Boys, Girls	Date Est.	Distance	School Name

Are there any parent built schools (called one-room but often more)?

No. of Child. who attend	No. of Cl.	Est.	Distance	School Name

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Are there any religious schools (Al-Azhar or other Muslim or Christian schools)

No. of child. attending	No. of cl.	Est.	Distance	School Name

Are there any other educational opportunities available in the area? (private, indust. training, commercial, agric., teachers training, etc

No. of child. attending	Kind of School	Est.	Distance	School Name

In the last 10 years has there been a change in the village about how people feel about sending their children to school? What is it?

_____

What was the attitude when the oldest generation was young? _____

_____

What was the attitude when the middle generation was young? _____

_____

What is the attitude now? _____

_____

Why do you think the attitude has changed? _____

_____

What are the obstacles that prevent children from going to school now?

Boys:

Girls:

Are there any special obstacles in this area that might prevent children from going to school? (like weather, crop harvests, vendettas, placement of irrigation ditches or other obstacles)

Boys:

Girls:

Would more girls go to school if there were separate primary and preparatory schools for girls? _____

_____

Are there enough spaces in local schools for all the children to go? _____

_____

If not, how do the authorities and parents decide who can go to to school? _____

_____

Who usually stays home? Boys _____ Girls _____ Younger children _____ Others (specify) _____

Is there some means of transportation that children can use to go to scho

_____

HOUSEHOLD SURVEY INTERVIEW FORM

Form No. 3

HOUSEHOLD INTERVIEW

Serial No. | | | |

1. Governorate _____
2. Markaz _____
3. Site _____
4. Head of The Family _____

Interviewer _____

Supervised by _____

Accompanied by _____

(Name(s) of those accompanying interviewers: Local persons, other team members, ...)

HOUSEHOLD INTERVIEW

1. Governorate _____
2. Markaz _____
3. Site _____
4. Household serial number _____
5. Number of families in household _____
6. Family number (within the household _____
7. Family member interviewed: Mother, Father
8. Religious affiliation: Moslem Christian, Others
9. Has anyone from the household migrated for work within the last two years? Yes , No

- If no, ask question 11 _____

10. If yes: how many to other parts of Egypt? _____
    how many to foreign countries? _____
11. Distance from house to New School (estimated to one-tenth of km by interviewer) _____

12. Educational and Occupational Profile:
a. Adults (see below for what is meant by an adult)

	A	B	C	D	E	F
Name	Sex	Age	Extent of Education	Reason not in Sch. or left Sch.	Present or expected occupation	Place of work
[1] Head of family						
[2] (Spouse)						
[3] Other: (Specify)						
[4]						
[5]						
[6]						
[7]						

*By adults we mean father, mother, uncle, aunts, grandfather or grandmother of children of younger generation.

12.b: Children*

	A	B	C	D	E	F	G	H	I	J
Names	Sex	Age	Extent of Education	Name of present school	Dist from Present school	How often in month is child absent	Most common reason for absent	Second most common reason	Has Child been retained in prim. or prep	If yes in what grade (s)
1. (Eldest)										
2. (Next eldest)										
3. (etc.)										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										

* Include adult as well as younger children

K	L	M	N	O	P
Ed. Plans: to what formal level	Reason child may not finish prep.	Reason not in School or left sch.	Present or expected occupation	Place of Work	Comments

13. (To be asked if parents have kept/school-age children at home)

a. If your circumstantces permnitted it, and if there was enough room in a near by school, would you send all your children to school? Yes _____ No _____

Comments _____

(If "No", then ask:)0

b. Boys? Yes No

Girls? Yes No

c. If No ask:

Why?

Boys _____

Girls _____

14. a. (To be asked if parents send boys to school) What are the reasons you send your boys to school?

(What benefits do you think they get from schooling?)

b. (To be asked if parents send girls to school)

What are the reasons you send your girls to school?

(What benefits do you think they get from education?)

15. a. Do you think that most of the people of your community feel it is good to educate their children to the end of preparatory level?

Boys : Yes No

Girls: Yes No

b. If no, do you thing that most of the people of your community feel it is good to educate their children to the end of priary level

Boys : Yes No

Girls: Yes No

16. Socioeconomic level of household

a. Poor, Below average , Average , Above average , Affluent

b. Comments (Justification criteria) _____

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STUDY OF USAID CONTRIBUTIONS TO THE EGYPTIAN BASIC EDUCATION PROGRAM

FIRST ANNUAL REPORT

Volume II: Studies of New Equipment and Technical Assistance

OCTOBER 1984

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STUDY OF USAID CONTRIBUTIONS TO THE EGYPTIAN BASIC EDUCATION PROGRAM

(Contract No. 263-0139-C-00-3009-00)

FIRST ANNUAL REPORT

VOLUME II: STUDIES OF NEW EQUIPMENT AND TECHNICAL ASSISTANCE

Submitted to: USAID/Cairo

October, 1984

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CREATIVE ASSOCIATES, INC.
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ACKNOWLEDGEMENTS

We wish to express our gratitude to His Excellency, Mustafa Kamal Helmy, Minister of Education; to His Excellency Mansur Hussein, Vice Minister of Education; to the Honorable Hamid Suliman, General Manager of the General Administration of Planning and Follow-Up, Ministry of Education; to Mr. Hassan Harass, Consultant to the Ministry of Education; to Mr. El Sawi Abdel Sawi Samie Ahmed and Mr. Azem El Saidi of the General Administration of Planning and Follow-Up, Ministry of Education; and to the education officials of the governorates of Kafr il Sheikh, Beheira, Assiut, Sohag, and Qena, whose devotion to the quality of Egyptian education made this study possible. We also gratefully acknowledge the help of our hard working research assistants, Said Ali il Deeb and Gamal Abdel Fateh, and the other field researchers who accompanied us in the data collection.

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CONTEXT OF THE STUDY

This is Volume II of the first annual report of a four-year study of USAID contributions to the Egyptian Basic Education Program. The purpose of the study has been to collect information and develop theory that will help USAID and Ministry of Education (MOE) officials assess the impact of USAID contributions on the Egyptian Basic Education Program and plan future contributions to it, specifically in the areas of construction of new schools, provision of equipment for use in Basic Education classes, and provision of technical assistance to the Ministry of Education.

The study officially began in January 1983. Preliminary site visits were made in February 1983, and the first major data collection effort, involving site visits to villages where new schools were located and to schools where materials and equipment were being utilized, took place in November and December 1983. This report presents findings drawn from those site visits, from follow up visits that took place in the Spring of 1984, and from data collected from Ministry of Education officials and records throughout the year.

The methods and hypotheses that have guided the study have been described in detail in a document entitled Scope of Work, May 1984, submitted to USAID Cairo. These methods and hypotheses will be briefly reviewed again as the first year's findings are presented below.

Figure i-1 shows the overall pattern of USAID contributions to Egyption Basic Education toward which the study has been directed. The construction of new schools, which began as a USAID Project in 1982, has been a major effort, involving extensive joint planning by USAID and MOE officials concerning the

Ministry of Education Activities	USAID Contributions
- Construction of New Schools school mapping site selection construction	- To New School Construction
- Development of New Basic Education Curriculum curriculum equipment teacher training school finance	- To Provision of New Equipment
- Planning and Policy Analysis	- To Provision of Technical Assistance

Figure i-1: Pattern of USAID Contributions to Egyptian Basic Education
January 1983 - July 1984

choice of rural sites where schools would be likely to have an impact on increasing enrollment and literacy, particularly of girls and other educationally disadvantaged groups; creation of detailed maps of the local school regions (markaz) as a tool for determining sites of new schools; and close cooperation between USAID and MOE officials in financing and following up the construction of approximately 550 new schools.

Provision of new equipment, which began as a USAID project in 1981, has also been a major assistance project designed to support Ministry goals of increasing equity and access and enhancing the relevance and effective outcomes of the Basic Education curriculum. It has been carried out by MOE officials with USAID financial support.

The technical assistance program, which began in 1983, is a host country contract provided by USAID to the MOE for the purpose of obtaining consultation and assistance on all aspects of the Basic Education Program as determined by MOE priorities. In the first year, technical assistance work began in the areas of curriculum and teacher education, educational economics, school designs, and computer-based planning.

BACKGROUND

By the late 70's, the primary and preparatory schools in Egypt not only lacked appropriate facilities, but also instructional equipment in the classrooms. With the advent of the Basic Education program, it became imperative to provide equipment for teaching the practical courses in the primary and preparatory schools. Also, it was necessary to upgrade equipment in the science classrooms, because much of the equipment was worn-out or obsolete and many schools had none.

As part of the general agreement between AID and the Government of Egypt to support the Basic Education program, the commodities import program was used to supply the requisite equipment. The Ministry assembled meetings of supervisors in the practical courses, science, and social studies, and charged them with drawing up lists of equipment needs. The equipment was divided into major categories--materials teachers used as instructional tools, such as charts, maps, globes, overhead projectors, or demonstration models for science courses, and equipment for students to use as they developed knowledge and skills in the practical courses. These ranged from simple hand tools, such as saws, hammers, screwdrivers, pliers, rakes and other garden utensils, to more complicated equipment, such as drill presses, electric incubators, electric sewing machines, voltage meters, and microscopes, to name but a few.

After the lists were decided upon, a system was devised for tendering, purchasing, receiving, storing, and distributing the equipment to the schools. A parallel system for identifying each school's needs for of equipment was also developed and set into operation, so that once the shipment had

been received, verified, inventoried, stored, and was ready for reshipment, the governorates were notified to come and pick up the equipment for their schools.

APPROACH

The first-year Study of New Equipment was designed to obtain the information needed to design a larger, long-term study of AID-funded equipment. The purpose of this larger study was to assess the effects of the input and use of the new equipment on enrollment, attendance, retention in grade, and practical-skills learning in Basic Education courses offered in grades five through nine.

The goal was to test the following hypotheses:

- Certain patterns and levels of utilization of equipment and materials of the type supplied by AID will measurably increase the enrollment of school children;
- Certain patterns and levels of utilization of equipment and materials of the type supplied by AID will measurably increase the attendance of school children;
- Certain patterns and levels of utilization of equipment and materials of the type supplied by AID will decrease retention in grade;
- Certain patterns and levels of utilization of equipment and materials of the type supplied by AID will measurably increase both the practical skills and theoretical knowledge of school children.

In addition to those four hypotheses, we wished to test the following hypothesis about the special impact of the new equipment.

> Certain patterns and levels of utilization of equipment and materials of the type supplied by AID will measurably increase the enrollment, attendance, and practical skill levels of disadvantaged populations (girls, rural children, and poor children).

Further, we wished to test a contributing-variable hypothesis: A relationship exists between the project goals of enrollment, attendance, and the development of desired skills and knowledge and the following factors:

- the adequacy of supplies of the materials and equipment;
- the degree of logical connection between the content and uses of the material and equipment, instructional goals of the units of instruction in which they are used, and the tests used to evaluate the children's performance;
- the level of training for teachers on the use of materials and equipment and instruction;
- maintenance, repair, and replacement rules and procedures;
- the logistics of storage and retrieval of equipment in the schools; and
- the administrative encouragement and supervision in the use of new equipment.

The first-year study of equipment was a descriptive and qualitative study designed to provide the study team with a modest but in-depth look at the use of USAID equipment: at the kind and extent of instructional uses, the constraints that might inhibit its use, its suitability for intended uses, and administrative or logistical problems that might exist with regard to equipment storage, recordkeeping, replacement, repair.

Information on the overall program to select, acquire, and distribute equipment to the schools, and on the efficacy of that process, was obtained through interviews with key officials in the central ministry in Cairo, their counterparts in the governorate offices, and the schools. In addition, we directly examined equipment in each of the schools in the sample.

STUDY ORGANIZATION

For logistical reasons, the team responsible for the Intensive Study of New-School Communities and the Equipment Study team scheduled their field visits concurrently. Both wanted to begin visits as early in the school year as possible. In addition to a visit at the beginning of the year, the equipment team also made visits close to the end of the school year so we could see what changes, if any, took place over the year.

Unfortunately, in both Beheira and Assiut, the opening of primary schools had been delayed by the unexpected lateness of the cotton harvest. This meant that when we visited some of the primary schools in early November, they were only in the third week of the school term, right at the period when there are the usual difficulties that come at the start of the school year before routines are well established.

As a result, the team was not able to observe practical instruction, for those schools had not yet received their AID equipment. Moreover, not all the schools were fully staffed by that time, particularly with teaching staff for the practical courses. In more than one instance the team was able to observe a new teacher being trained in the uses of equipment in a practical course such as electricity or carpentry. Additionally, we saw more than one especially arranged "demonstration" class, an artifact of our early arrival. Though our visits were somewhat disruptive, coming as they did at the very beginning of the school year, the teachers and headmasters were generous with their time and energy and were perfect hosts. We are extremely grateful for their assistance.

Fall visits in Beheira were from November 1 through 10. The team visited schools in Assiut from November 14 through 21 and in Qena from November 22 through November 30.

The Spring visits to these same schools began on March 2 and lasted through March 22. For these visits we reversed the order, starting in Qena and finishing up in Beheira.

THE SAMPLE OF SCHOOLS

Schools were not selected at random. Rather, the sample simply included the new schools in the sites chosen for the Intensive Study of New-School Communities, together with some of their "related" schools (i.e., the existing schools that students had attended or would have attended were there no new school in the intensive sites). In addition, in order to enrich the sample and make it more comprehensive, we asked governorate education officials to nominate nearby schools where we might find particularly good examples of teaching the practical courses. Table II-1 shows the locations and levels of 31 schools. Since the three new schools had just opened, it was not possible to collect data from them in the first year. Therefore, this report includes data from only 28 of the 31 schools.

Within each of these schools, classroom observations were made at all five grade levels in the practical courses and in science classes (which had also received AID equipment). Audiovisual equipment and instructional materials and equipment for social studies such as maps, charts, globes, etc., were also examined, but no classroom visits were made to observe them in use.

Of the 31 schools selected, three were built in the 1930s, nine in the 1950s, eight in the 1960s, eight in 1970s, and three were new basic education schools opened for the first time in 1983. These new schools were located in the small villages of Manshiya, Kafr Nekla schools, Beni Rafa and Khutaba. The remainder were located in six small and four medium sized cities, the latter being the three governorate capitals and Luxor.

Table II-1: Schools Visited by Location and Level

	Beheira		Assiut		Qena	
Locations	Primary	Preparatory	Prim.	Prep.	Prim.	Prep.
Manshiya*	1	-	-	-	-	-
Hosh Isa	-	2	-	-	-	-
Kafr 1 Nekla*	1	-	-	-	-	-
Mahmoudiya	2	-	-	-	-	-
Damanhour	1	2	-	-	-	-
Kafr il Duwar	1	1	-	-	-	-
Beni Rafa	-	-	1	1	-	-
Assiut	-	-	2	3	-	-
Ghaneyem	-	-	1	1	-	-
Khutaba*	-	-	-	-	1	-
Naqada	-	-	-	-	1	1
Nag Hamadi	-	-	-	-	1	1
Qena	-	-	-	-	2	2
Luxor	-	-	-	-	1	1
Total	6	5	4	5	6	5

Schools Visited:
Primary 16
Preparatory 15

Schools were located in four villages, six small cities, and four medium-sized cities.

*New 1983 opening schools (no data collected in 1983-84 site visits).

Of the 28 schools, which formed the basis of this report, 15 began instruction in the second week of October in 1983, three in the last week of October, one in the first week of November, and eight at the end of the first week of November. One school reported that it had started classes on September 8.

SAMPLE OF CLASSES

In the same way that schools were selected to offer a range of examples, so also classrooms were selected for observation that would ensure a wide range of teaching examples. Thus, in schools large enough to provide a wide choice, classrooms were chosen to fill in the data required for a full picture of all subjects and grades. In other instances, we decided to visit classes arbitrarily, sampling what was available on a given day. Sometimes, observations were deliberately made of those classes which were considered superior or of classes where certain items of equipment had not yet been observed in use.

Approximately 46 percent of the classes observed were in primary and 54 percent were in preparatory schools. We concentrated somewhat more heavily on observation in grade-six classes, since that is the concluding year of that stage of education. At the preparatory level, we sampled more classes at the eighth-grade level and less at the ninth grade, since 1983-84 was the experimental year for teaching of practical courses in grade nine, and not all schools had courses set up or operating at the time of our visits.

We balanced our sample so that we could see teaching in the practical courses and science, grades five through nine, for the boys', girls', and

mixed-sex schools. We also tried to see examples of both "practical" and "theory" lessons and a wide range of teachers, from very new teachers to those with long experience.

TEACHERS INTERVIEWS

For teacher interviews, we followed the pragmatic practice of asking all those who taught the practical courses and science at appropriate grade levels who were present on the day we visited to attend interview sessions.

PROCEDURES FOR THE VISITS

In late February and early March of 1983, a preliminary visit had been made to each of the governorates in order to pick the sample. Each school was visited at that time and either included or rejected in the sample on the basis of that visit. In addition, during that same time, preliminary background information about the school was collected and AID-financed equipment was examined carefully. We also interviewed officials in the governorate offices and the headmasters in the schools in order to collect the background data and to understand how the equipment program operated in the governorates and in the schools.

Prior to the Fall visit, we submitted a visitation schedule and travel itinerary to the Ministry of Education for their approval. In turn, this schedule was communicated to education officials of each governorate prior to our visit. Upon our arrival in the governorate, we first visited appropriate officials in the governorate education offices, beginning with the undersecretary or his or her designated representative. In each of the governorates, the officials in charge of planning in the education offices were those

who made all the logistical arrangements and designated one or more of their staff members to visit the schools with us.

Therefore, schools had had some notice of when we were going to visit, and they knew that we would be observing classes and talking with staff. But they did not know specifically which classes we wished to observe nor whether we were going to talk to all the staff or only a select sample.

On days when two or three small schools were to be visited, the team would be split up so that two or three researchers and a governorate official visited one school and two or three team members and the ministry official visited another. However, in the case of fairly large schools, the entire team stayed together so as to complete the visit in one day, if possible.

On arriving at a school, the ministry official introduced us to the principal and other appropriate staff members and explained the purposes for our visit. In the course of these conversations, we examined the school schedule and the field supervisor assigned classes for observations. We were then accompanied to the classes by members of the school staff, introduced to the teacher, and left to observe on our own. In all instances the American researcher was accompanied by an Egyptian researcher, who also observed the same class.

During the time the observers were in classes, another member of the team interviewed the principal and collected relevant background information on the school and equipment. Once the classroom observations and the headmaster interview were complete, all the teachers of the practical and science courses grades five through nine, were assembled for interviews, usually in the school office.

The interviews were conducted in small groups of two, three, or four teachers at a time. Teachers were given the interview schedule; the Egyptian researcher explained the purposes of the study and went over the questionnaire carefully, answering questions and interpreting any of the written questions that seemed ambiguous at first reading. (See the Appendix for list of questions used in the interview.)

As teachers worked their way through the questionnaire, any questions that arose were answered by the researcher as they came along. Every attempt was made to insist that responses be individual, but inevitably, there was some discussion among the teachers of particularly thorny issues.

Each afternoon or evening of the day of the school visit, the team went over every interview and observation carefully to check for accuracy in recording responses. At that time all interviews and observations were coded. Any unusual circumstances that might have biased responses in one way or another or that may have indicated a lesson was unrepresentative were discussed thoroughly and entered into field notes.

SCHOOL TYPES AND SIZES

All of the primary schools were mixed-sex. Seven of the preparatory schools were girls' schools, six were boys' schools, and two were mixed-sex schools. They ranged in size from six to 28 classrooms. There were three six classroom schools and two 28-classroom schools in the sample. Seven were "small" schools of six to nine classrooms, eight "medium-sized" schools of from 13 to 17 classrooms, and 13 were "large" schools of from 18 to 28 classrooms.

In the primary schools, grades five and six, the grades of interest to us, the fifth grades ranged in size from 41 to 199, with four schools having four classes of fifth graders. Sixth-grade classes ranged in size from 34 to 190 pupils. There was a range of sixth grade classrooms from one through four, with seven schools reporting they had three classes of sixth graders.

In the preparatory schools, which were much larger on the average, the number of pupils in grade seven ranged from 69 through 629, with the largest school having 13 classes of seventh graders. Eighth grade pupil size ranged from 76 to 637, with a high in one school of 14 classes of eighth graders. In the ninth grade, populations ranged from 50-555, with the largest school reporting 13 classes of ninth graders.

SCHOOL FACILITIES

Attention was also paid to the adequacy of the physical facilities, especially with regard to the number of special purpose rooms, such as shops, home economics rooms, science labs, etc. Two schools reported having four shops, three had two, and one reported having only one. The remaining 22 schools had no shops at all. Two schools reported having five home economics rooms, two had four, two had three, four had two, eleven had one, and seven had none. The 15 preparatory schools in the sample each had a library though none of the 13 primary schools were so fortunate.

Nineteen had no storerooms, seven had one, one had two, and one had three. Twenty-four schools had no audiovisual room, three had one, and one had two rooms used for that purpose. When asked if all of the rooms had working electrical outlets, 26 of the 28 reported yes, one reported no, and we had no answer from one school.

In the March visit to these same schools, we asked if any additional rooms had been added since November. Two primary schools had added one classroom, one had added two classrooms, and one preparatory school had added three classrooms. The remaining 24 had not added any classrooms. No offices nor libraries had been added, though one primary school did add a storeroom. Two of the preparatory schools had added a garden. Five of the schools reported that they did not yet have electrical connections to all the rooms, though all reported having electricity in the school itself.

PROCEDURES FOR DISTRIBUTING EQUIPMENT

Some of the schools in the sample began receiving AID-financed equipment in 1981. Based on the knowledge of the practical courses each school planned to offer, its size, and the extent of its equipment, the governorate offices supplied the central ministry in Cairo with equipment requests for each of the practical courses as well as science and social studies. They also submitted requests for audiovisual equipment. Once the equipment had been purchased, shipped and verified, it was stored in Alexandria or Damanhour, and the governorate offices were notified to come and get their school's requested equipment.

In turn, the governorate offices were then responsible for distributing the equipment to their schools. Within each subject area, the equipment was grouped into "packages", so that in agriculture, for example, there were a number of items grouped in a "food industries" package, another number in a "poultry" package. For science classes, mobile science labs were purchased and distributed, with chemicals, microscopes, and other lab necessities, as well as a plastic upper-body human torso with detachable internal organs.

Each school was provided with the list of equipment supplied them, which also contained the price of each item. When the shipment was received at the schools, each package was opened, and examined to make sure that it contained the proper number of appropriate items and that the shipment was in good order. Each item was then entered into the inventory records of the school and governorate.

QUESTIONS: CONSTRAINTS ON USE OF EQUIPMENT

As we visited the schools, examined the equipment, and talked with headmasters and teachers, we were concerned about the constraints--logistical or procedural--that might inhibit the use of the equipment in instruction. For example, what would happen if something were lost or broken. Was there a repair budget? Who bore the financial responsibility, for example, if a piece of equipment were broken, destroyed, or lost through classroom use? What were the rules for storing equipment, checking it out and replacing it?

Was the school budget high enough to purchase the amount of raw materials, lumber, cloth, etc., they needed so that students might gain experience using the equipment rather than simply learning about its theoretical use in their classrooms? Was there adequate storage space for the equipment? What happened in the double-shift schools, for example?

Did the equipment have instructions, a catalogue, or directions for assembly accompanying it, and if so, were the directions in Arabic? (See the Appendix for lists of questions asked.)

QUESTIONS: TEACHERS' USE OF EQUIPMENT

We were also concerned about how the equipment was used. Had teachers been trained in the use of the equipment? Did they feel comfortable about using it? How did they use equipment in their classrooms--that is, was it used primarily in demonstrations or was there "hands-on" experience for the students?

Teacher's opinions about the equipment were important as well. Did they consider it to be adequate in amount, in kind, and in quality? That is, did they feel they had "enough" of the "right" equipment? Was it of good quality? If not, what other equipment, either new or different, would they suggest be purchased?

FINDINGS

EQUIPMENT REPAIR

We found that schools did not have an equipment repair budget, as such. If a piece of equipment were broken, a school might have a staff member who could fix it, or sometimes someone in the community could do so. If it were a more severe problem that required paying someone to fix it, the headmaster could bring the matter to the attention of the parent teacher council, which had a modest budget.

The same was true for equipment replacement. If an item were lost, sometimes the teacher would replace it, if it were an item of modest cost, such as a screwdriver. But if it were a larger, more expensive item, an inquiry was made as to who was responsible and whether the teacher had exercised proper

care of the item. If the teacher was found responsible, he or she was required to pay for the item. Teachers report this to be a rather severe constraint, because they feel at risk financially for lost, stolen, or broken equipment in their charge. Many expressed reluctance to use certain pieces of equipment that looked rather fragile or were known to be very expensive from the price list--a much dicussed matter in most schools.

On several occasions, the team assembled overhead projectors at a school where staff requested to show them how to do so. Often, the teachers then disassembled the projector and replaced it in its box, saying they would not use it because it was too risky financially.

MATERIALS BUDGET

About 68 percent of the headmasters said their materials' budget was not sufficient to purchase the amount of materials needed for an adequate job of teaching. One-third said they felt that temporarily a larger budget was necessary to buy sufficient raw materials for practical courses. One-third felt the increase should be permanent, and one-third did not answer.

EQUIPMENT STORAGE

The rules for storing and checking equipment out are complicated by school size, the subject, and the number of teachers using the equipment. In general, if the school is large enough to have a central storage place for science equipment, for example, then the science equipment was stored there and handled by someone who acted as an inventory clerk, checking the equipment out and in and monitoring its condition. In other courses, such as carpentry

or home economics, the equipment was stored in the room where it was used and a teacher was charged with its keeping. In few instances did we find enough storage cabinets or controllable storage areas.

EQUIPMENT DISTRIBUTION

There were a few misdistributions of equipment and supplies. For example, we found several schools in which a ten-year supply of chemicals had been provided the school, causing a storage and shelf-life problem. In a few instances orders had been garbled, and the wrong piece of equipment had been delivered to a school. For example, some boys' schools received home economics' packages. Those problems were generally rectified.

However, we found a continuing problem with equipment that required slight modifications in order to be usable. The new butagas stoves were equipped to use line gas, but the schools used bottled gas. This meant the school not only had to adapt the stoves by installing different valves in each but also had to purchase a "bomba"--a butagas cylinder and valve for which they had no budget. By March some schools still had not made the conversion.

TEACHER OPINIONS ABOUT AID-FINANCED EQUIPMENT

In order to get teachers' opinions about AID-financed equipment, they were asked to answer the following question:

> "As you consider the AID equipment that you have, in your judgment is it adequate or inadequate in amount, in quality, and in kind for satisfactory teaching of the practical courses, science, and social studies?"

The teachers understood "adequate in amount" to mean that there were "enough" items of equipment for satisfactory teaching of a particular subject,

"adequate in quality" to mean the equipment was of sufficiently good quality to last, and "adequate in kind" to mean that it was suitable for use in teaching their courses. The teachers' overall answers are shown in Table II-2.

Table II-2: Overall Teachers' Judgments on Adequacy/Inadequacy of AID Equipment

	Kind		Quality		Amount		Not Applicable
	adeq.	inadeq.	adeq.	inadeq.	adeq.	inadeq.	
Primary 85 Teachers	47%(41)	44%(37)	88%(75)	3%(3)	41%(35)	51%(43)	8%(7)
Preparatory 138 Teachers	25%(32)	51%(72)	60%(83)	16%(23)	28%(29)	49%(67)	23%(32)
Totals 223 Teachers	34%(76)	48%(108)	71%(158)	12%(26)	33%(74)	49%(110)	17%(39)

* Number of teachers responding is placed in parenthesis

In order to understand these results better, we disaggregated the responses to all but the question of quality by the courses taught and the levels of schooling. (See Table II-3).

Table II-3: Teachers' Judgments of Adequacy/Inadequacy of AID Equipment in Terms of Kind

	Primary level 85 Teachers		Preparatory level 138 Teachers	
	adeq.	inadeq.	adeq.	inadeq.
Agriculture 50 Teachers	16%(3)	79%(15)	13%(4)	65%(20)
Industry 57 Teachers	60%(12)	15%(3)	35%(13)	35%(13)
Home Econ. 37 Teachers	52%(12)	43%(10)	21%(3)	79%(11)
Science 79 Teachers	13%(57)	39%(9)	27%(15)	48%(27)
TOTALS	48%(48)	44%(37)	51%(71)	18%(40)

Inspection of Table II-3 shows that 79 percent of the primary teachers and 65 percent of the preparatory level agriculture teachers felt the "kind" of equipment to be inadequate, as did 79 percent of the preparatory-level home economic teachers, and 48 percent of the preparatory-level science teachers.

Their judgments on inadequacy of the kind of equipment--its "suitability" so to speak, lead us to think it would prove of value to interview a sample of agriculture and science teachers and supervisors to see why they felt so, and whether different kinds of equipment should be added to the AID list, or whether some items should be deleted from the list. In subsequent site visits, we will conduct these interviews and report the results separately following the visits.

Table II-4: Teachers' Judgments of Adequacy/Inadequacy of AID Equipment in Terms of Amount

Amount

	Primary level 85 Teachers		Preparatory level 138 Teachers	
	adeq.	inadeq.	adeq.	inadeq.
Agriculture 50 Teachers	5%(1)	90%(17)	3%(1)	84%(22)
Industry 57 Teachers	60%(12)	15%(3)	30%(13)	30%(13)
Home Econ. 37 Teachers	35%(8)	60%(15)	43%(6)	57%(8)
Sciences 79 Teachers	61%(14)	35%(8)	34%(19)	41%(23)
TOTALS	41%(35)	51%(43)	29%(39)	49%(67)

Teachers of agriculture and home economics at both levels also reported not having enough equipment (see Table II-4.) Note also that in this table, unlike Table II-3, the majority of the primary-level home economics teachers agree with their preparatory level colleagues on the inadequacy of the amount.

These results are somewhat ambiguous in at least one respect. Teachers were asked to make judgments about AID-financed equipment, but it is quite clear that many of them, particularly in agriculture and science, responded in terms of all the equipment they used rather than just about the AID equipment. This is a natural response since the majority of the schools were well

established and already had a pool of equipment to which the AID equipment was added. This is particularly the case in agriculture, home economics, and science, subjects that have existed in the curriculum of the schools for a long time. The preparatory schools, in particular, had not only received equipment from the ministry from time to time, but some had also received UNICEF equipment as well.

When teachers responded negatively about amount, kind, or quality, they were asked to explain their answers. In many cases they responded that "The equipment is old and worn out." Clearly they could not have been thinking of brand new AID equipment.

We tend to accept their statements about inadequate amounts of equipment at face value despite the confusion about whether they are speaking only of AID equipment or of all equipment. Clearly, if they think equipment is inadequate en toto, then the AID portion is even less adequate, for it is only a part of the total. We also came to the same conclusion after observing teachers using the equipment.

A frequent comment about the "amount of equipment" was that it was insufficient for the number of students in their classes. Often lessons had to be delayed or modified because several classes of the same subject requiring the same equipment were scheduled in different classrooms at the same time. In some cases, equipment was unsuitable. For example, there were screwdrivers in the electrical package with blades too big to be used with the screws furnished those classes. And an area with unpredictable electrical service received an electrical incubutor in the poultry package.

Content analysis of their comments and explanations show that three reasons account for 74 percent of all the responses given.

- Classes are so big in size that the amount of equipment available for each class must be increased so that students may have free use of them.

- Very often more than one class of the same practical subject is scheduled for teaching at the same period of the day. That means that only some teachers can use the equipment on some days, and this sharing reduces the amount of time each student can use the equipment.

- Some parts of the curricula for the practical courses require equipment, but it is not on the list of equipment supplied from AID funds.

When asked to make suggestions for new or different equipment, only three items were mentioned that were not already on the AID-financed list. Those were:

- refrigerators, requested by primary school agriculture and home economics teachers (42 and 43 percent respectively);

- cream separaters, requested by both primary and secondary school agriculture teachers (27 and 55 percent respectively); and

- apiary equipment, especially hand tools, requested by 26 percent of preparatory level agriculture teachers responding to this question.

All the rest of the items receiving 20 percent or more mentions, were already on the AID list.

There are a number of reasons why the teachers did not suggest a larger number of "different" items of equipment. First, many are not familiar with items of equipment other than those they have seen or used in their own classes. Second, there are relatively few equipment catalogues circulating in the schools of Egypt.

The teachers are also very practical in their outlook and recognize that equipment should be suitable for use in their schools; hence, neither exotic nor terribly expensive, nor for that matter, too complicated for students to

use. Moreover, it must suit the syllabus, for that is the controlling element in the curriculum, so that even if a different piece of equipment were suitable, were relatively inexpensive, and simple to use, it still would not be suggested unless it was called for by the syllabus--at least not by more than a very few teachers.

In our view, these findings speak well for those who composed the list of AID equipment. We will interview a sample of agriculture, home economics, and science teachers and supervisors, however, to find out why so many of them express dissatisfaction with the kind of equipment and what if anything could be done by making changes.

INSTRUCTION

In order to become more familiar with general instructional practices and use of equipment in the courses studied, we conducted formal observations in 28 agriculture classes, 40 industrial classes, 30 home economics classes, and 35 science classes. Of these, 20 were fifth grade classes, 44 were sixth, 24 were seventh, 26 were eighth, and 19 were ninth grade classes. As has been commented on earlier, we concentrated more heavily in trying to understand the instruction in grade six, for it is the last year of primary school, and (unfortunately) also the last year of education for a number of students who are not going on to preparatory school. We also observed more classes in industry, since that is the "new" practical course offered in the primary schools and in many of the preparatory schools.

Each observation report called for a note to be made of the course being taught and the grade level, the size of the class, the number of boys and girls in the class, the time the class began and ended, the number of adults

in the classroom and their roles, and the objectives of the class. The report also noted whether or not equipment was being used, and if so, what kind of equipment, and how it was used. We described also how the lesson developed during the course of the period, whether any of the equipment that was being used was new, or unfamiliar to the student, or whether there were any pieces of equipment in the classroom that were clearly not usable for any reason.

We were also interested in how the class was organized and taught, how much of the class period was devoted to whole group teaching as opposed to teaching in small groups or individual teaching; whether the teacher or the students did most of the talking; whether the students asked lots of questions, or rarely asked questions; and whether the teachers made all the classroom decisions, shared the decision-making with student, or initiated no decisions making in the classroom. Finally, we wanted to know the degree to which the students were active or passive, and the degree to which they were self or teacher-directed.

We saw both "theory" classes and "practical" classes in all subjects. The "theory" classes were larger, as were the science classes, as a general rule. The range of children at the primary level went from one class of five students to one of 55; at the preparatory level, we saw one class with seven students and one with 60.

OBJECTIVES AND EQUIPMENT USE

In all cases the objectives of the class were consistent with and derivative of the curriculum syllabus, as one might expect under those circumstances.

Again, as one might expect, equipment was being used in 86 percent of the classes we observed in the primary schools and in 81 percent of the prepara-

tory-school classes. We found some equipment clearly not usable in its current condition in 63 percent of the primary school classes we visited, but in only 42 percent of the preparatory classes. In part, the explanation for this arises from our having visited so early in the school year. Many of the butagas stoves had not been converted to use bottled gas. In some smaller primary schools some of the equipment had not yet been unpacked. Several of the mobile science laboratories had not yet been placed in operation because there were no instructions in Arabic, making it difficult for most of the teachers to set them up and use them.

In several schools the electrically powered incubators had been packed up again because the irregularity of electrical services in the school and community caused severe problems in using unmonitored electrical equipment. In several instances electrical appliances were not usable because the school did not possess a voltage converter and none came with the appliances.

By year's end when we next visited these same schools, most of these problems had been alleviated, though the butagas problem still remained for many schools.

When asked if the equipment that was being used was familiar to the students or new, 78 percent of the primary teachers responded that the equipment was not new to the students, and similarly, 73 percent of the preparatory school teachers made the same statement--most of the equipment was standard, and the newer equipment was being saved for use later in the year.

CLASS ORGANIZATION AND TEACHING

The observers were asked to judge what percentage of instruction in each class was whole group, what percentage was small group, and what percentage

was individual. Of the classes observed 71 percent were judged to use whole group instruction 100 percent of the time. Small group instruction predominated in 14 percent of the classes observed, and individual instruction in 16 percent of the classes. Nevertheless, it is still true that whole group instruction predominated.

Whole group instruction is almost always used for explaining matters to a class or for purposes of information exchange, explaining a theory, or demonstrating how a tool is held or sharpened or assembled or taken apart. We saw nothing but whole group instruction in science. Almost always whole group instruction was used in teaching about food industries in agriculture and in demonstrating cooking in home economics, as well as in sewing when students were learning how to read patterns or make measurements for patterns.

TEACHERS TALK-STUDENTS TALK

The questionnaire used a scale from one to five with the phrase, "students talk most of the time" as one, and "teachers talk most of the time" as five. In 84 percent of the primary and 83 percent of the preparatory classes teachers were observed to have talked most of the time. For question asking, the questionnaire used the same scale of one to five with "students rarely ask questions" as the one and "students often ask questions" as five. In 95 percent of the primary and 92 percent of the preparatory classes students rarely asked questions. In 96 percent of the classes, the teachers seemed to make all the classroom decisions.

STUDENTS ACTIVE OR PASSIVE, SELF-DIRECTED OR TEACHER-DIRECTED

To measure the degree of students' activity or passivity they were ranked on a similar five point scale, with one being very passive and five being very

active. In 81 percent of the primary classes, the observer judged the students to be active or very active. In the preparatory schools, however, only 60 percent of the classes received similar rankings of four or five. In an additional 23 percent of the preparatory classes, students were ranked as three.

On degree of self- and teacher-directedness, the questionnaire again used a scale of one to five, with one being teacher-directed, five being self-directed. In primary classes, 86 percent and 80 percent in preparatory classes of the students were judged to be teacher directed. In short, the students were lively, acted interested, but were well-disciplined and clearly under the teacher's control in most of the classes observed.

TEACHERS' IN-SERVICE TRAINING

In the November field trip, we asked teachers whether they had had any training courses in the last two years connected to what they teach, and if so, how helpful they had found each course. Fifty-nine percent of the primary-level teachers had received some training in the last two years but only 31 percent of the preparatory-level teachers had. In March 1984 we asked teachers whether they had received any training between November, 1983 and the time of our March visit. Fifty-two percent of the primary-level teachers in the sample had received training in that interval, as contrasted with only 23 percent of the preparatory-level teachers.

Both groups reacted favorably to the training--60 percent of those trained sometime within the last two years (as reported in November of 1983) ranked training as either "somewhat helpful" or "very helpful," and of those trained between November 1983 and March of 1984, 57 percent gave a similar rating.

In addition, we asked how long the training courses had been. For the group trained between 1981 and November 1983, slightly more than half attended courses that averaged about four days in length, and slightly under half attended courses that averaged about six days in length. In contrast, the majority of those who were trained between November 1983 and March 1984, received three days of training or less. Of the primary-school teachers, 57 percent received three days of training, 23 percent received two days, and the rest were scattered. Similarly, of the preparatory school teachers interviewed in March 1984, 69 percent were trained for three days.

SCHOOL STAFF OPINIONS ON HOW TO IMPROVE THE PRACTICAL COURSES

In both the November and the March visit, teachers and headmasters were asked the following question:

> "If you could have five choices of the things that would improve the teaching of practical courses in your school, what would they be?"

In responding, the most frequent teacher responses were the following:

1. First priority should go to building more workshops;
2. Second priority should go to increasing teacher training, by having more teachers trained better in courses that lasted for a longer time;
3. Third priority should be to increase the amount of equipment in the practical classes and sciences;
4. More instructional time should be allocated to the practical courses; and
5. Class size should be reduced.

In both the November and March visits, the headmasters were in agreement with the first three priorities. In March the headmasters had a consensus on a fourth and fifth priority. These were:

4. The materials' budget for schools should be increased in order to improve instruction in the practical subjects.

5. Automatic promotions should be cancelled and grades should be given in the practical subjects.

EMPHASIS ON PRACTICAL VS. THEORETICAL LEARNING

In order to understand some of the intent of the instruction we had seen, we asked the teachers in the sample how much emphasis they placed on "practical learning" and how much on "theoretical learning." Table II-5 shows their response.

Table II-5: Emphasis Given by Teachers to "Practical Learning" as Opposed to "Theory Learning" in Teaching the Practical Courses and Science

All Teachers

Degree of Emphasis on Practical Learning	Agriculture	Industry	Home Economics	Science
0%	9%	2%	11.7%	9.6%
25%	34%	32%	23.5%	19.2%
50%	22.7%	42%	29.4%	30.7%
75%	31.8%	24%	32.3%	30.7%
100%	2.2%	0%	2.9%	9.6%

We had expected more unanimity within each subject field than we found. We were also surprised to see the science teachers were the highest on emphasis to "practical learning." Seventy-one percent said they gave 50, 75, or

100 percent emphasis to "practical learning" in their teaching whereas only 57 percent of the agriculture teachers, 66 percent of the industry teachers, and 65 percent of the home economics teachers gave the "practical learning" emphasis such a high ranking.

We are not sure whether these findings reflect differences or misunderstanding of what is meant by "practical learning" among the teachers; whether its may have resulted from misinterpretation of what the question meant; or whether it reflects geniune curriculum differences. In subsequent visits, we will seek to clarify answers to this important pedagogical question.

Our assumption, perhaps unfounded and certainly not yet observed to be true in a majority of cases, is that the practical courses should place very heavy emphasis on "practical learning" with "hands-on" use of equipment by students early on. In addition, the amount of emphasis given to "practical learning" versus "theory learning" should be related to the students' developmental stages. (See the Appendix for a copy of a short paper by Dr. Abo Bakr Abdeen Badawi, of Ain Shams University, presented in the final report of Work Order No. 2 Team [Curriculum and Teacher Education] of the Technical Assistance Project. This paper presents a developmental theory which supports the foregoing assumption.

EXAMINATIONS

We asked if students are examined throughout the year on a monthly basis, at mid-year, and at the end of the year. Of the teachers 99 percent reported they examined students throughout the year on a monthly basis, 85 percent gave mid-year exams, but only 8 percent gave an end-of-year exam.

David Kinsey of the project staff examined the practical course textbooks, grades five through eight, to see what logical connection, if any, existed between the contents, the instructional goals, and the tests suggested to evaluate students' performance. He found that objectives either have to be inferred from the content and activities in the textbook, or sometimes appear at the end in a short list of theoretical and practical studies. He reported that the list

> may specify that the student will know the types of tools used and know the safe ways in which to use them. If noted, objectives are given in terms of knowledge and activities and not in terms of specific behavior or skills. Many of the practical objectives can be memorized as knowledge, so as stated, the objectives that appear in the text are not of the nature to orient a goal-based evaluation of outcomes where equipment is used, whether by the teacher or an outside evaluator.

With regard to outcomes, Dr. Kinsey reports that

> if potential outcomes of practical studies and training [are] viewed in terms of knowledge, skills, and attitudes, the textbooks only appear to test for the first....Skills are the focus of hands-on drill or projects, though they are often more implicit than explicitly underlined in the project directions. The texts do not provide measures or guidance on how to assess skill achievement.

Further, Dr. Kinsey comments on tests and measures in the textbooks.

> Most sections of a given text have questions listed at the end and the most common type is true/false. There are also some completion, matching, and open-type questions. Authors differ in their skills in clear question formulation, but all typically deal with knowledge content...if the use or nonuse of equipment has any influence on the student's ability to answer such questions, it would at best appear to be a very marginal influence and would be impossible to factor out.

SUMMARY

In this section of the report, we will group the summary and recommendations under the headings of equipment, facilities, and instruction.

EQUIPMENT

It seems clear from our observations in the classroom, from teacher interviews, and from interviews with headmasters, that more equipment would be extremely useful--particularly in agriculture--if instruction is to offer the students adequate opportunity to use the equipment themselves rather than only observe it in use.

Some of this problem might be alleviated by more imaginative scheduling and grouping practices within the classes, but there is a limit to how artful one can be in the absence of enough equipment. As was mentioned earlier, the majority of both the agriculture and science teachers at both levels judged the equipment they had to be inadequate in kind. A sample of those teachers will be interviewed to see whether or not additional equipment should be added to the list, or whether some could be deleted with new equipment substituted.

There have been some equipment misdistributions in the system; some schools receiving some of the wrong equipment, and some receiving too much. Some of the shipments were damaged in transit; some were improperly packed for transoceanic shipment, so that a few schools received a shipment of chemical supplies in containers that were rusted through and in which no usable chemicals were left.

There seems no doubt but that the central purchasing and distribution system works quite well, though officials in upper Egypt would prefer having a

warehouse closer to them in Damanhour--perhaps in Assiut. The appropriate governorate officials had no immediate remedy to the problems of faulty shipments or misdistributions except to complain to Cairo.

In the case of the dried-out and rusted empty cans that once held chemicals, a report had been made at the time the schools received the shipment. Yet a year later nothing had yet been done. Clearly, governorate officials need to be able to remedy at least some of these problems themselves.

If one school has two mobile science labs and another has none, the governorate officials should be able to transfer the extra lab to the other school. A school that receives a ten-year supply of chemicals should be able to share that supply with others that are lacking. Perhaps they do now have the discretion. If so, they remained silent about it or were confused.

Officials are keeping accurate inventory records at both the governorate and school levels, for which they are to be commended, but it seems that a redistribution procedure within each governorate, keyed to governorate and central inventory records, would provide these local officials with the logistical flexibility they need to be more fully responsive to the schools' needs.

The lack of budgets in the schools for equipment repair, maintenance, or replacement will prove more and more inhibitory of equipment use over time. Few schools have personnel trained in equipment maintenance or repair. To take a trivial example, who is going to sharpen all those cross-cut saws made dull by students' use in carpentry classes? Surely a modest investment in equipment maintenance would be wise to safeguard the large investment made to date by AID in the commodities-equipment supply program.

We were concerned also about the future when funds may not be available from AID or other external sources for the purchase of equipment from abroad.

We suggest, therefore that USAID and the Ministry give serious attention now to studying the feasibility of having the needed school equipment and tools manufactured in Egypt through a combination of private enterprise and state participation. This private/state system participation should include the technical schools. These schools now manufacture some school furniture. There may be some equipment or supply items that they could also manufacture and thus provide valuable training experiences as well. It may be that a modest investment now can have long-term beneficial pay-off.

FACILITIES

There is a clear and present need in the schools for workshops, especially for industry courses, and for more storage space. No schools has enough storage space, and every school could easily use more storage cabinets.

INSTRUCTION

In-service training

In-service training needs are high, both for teachers and for headmasters. However, it is not clear what the mix or distribution of the in-service training should be. Teachers and headmasters responded to questions about improving instruction by saying that more training and longer training was required. Many, many teachers unfamiliar with the equipment they were using could have benefited from instruction in equipment use itself. This was particularly true of industry teachers.

When queried, headmasters reported that they needed training in the particulars of basic education itself--not just its theory and philosophy--in the

equipment that is used in basic education classes, and in how they might help teachers do a better job of teaching.

Classroom observations and discussions with teachers and headmasters lead the team to believe that it would be fruitful to rethink and redesign the in-service courses. It may well be that with the advent of the new textbooks promised for school-year 1984-85, math and science concepts and skills will be more integrated with the practical courses. Therefore, these skills will be specifically taught in in-service training courses. We hope so. If not, that should be a high priority area for in-service training.

In the team's view, teachers and headmaster training programs need to be redesigned--expanded, made more practical, and conducted in actual school settings where good models of effective and efficient ways of teaching the practical courses can be observed and learned. Successful teachers and headmasters should be used as trainers and paid extra for their work. In some schools, one can find senior teachers and persons qualified to be headmasters who cannot accept the job for personal reasons and who have time available to provide in-service in their own schools, train those in other schools, and help as needed.

Innovative Methods

We felt from our observations and interviews that improving instruction was so vital in the Basic Education courses that in-service education, as important as it is, would not suffice. We therefore spoke with officials in the governorates about the importance of establishing a system that promotes the development and use of new methods. To be effective it is essential that the methods be developed, tested and revised within classes in regular basic

education schools, not in model schools. A sustained program of this type will make basic education more effective, consistent, and efficient.

Teachers could test and practice innovative methods; then they could instruct other teachers in the use of techniques they found successful. Over a relatively short time, a more exciting mix of instructional techniques than one now sees might appear in the classroom and teachers might become more excited about teaching the practical courses.

Use of Technical Assistants

Officials in each of the governorates asked us to make the recommendation that the classroom technical assistants, who hold diplomas, be permitted to function as teachers and be assigned to teacher training institutes for a study program so they might earn their teaching degree while teaching. Not only would this help fill the absolute shortage of teachers, particularly for industry courses in the primary schools (carpentry and electricity, for example), but in addition, it would bring into the teacher labor force those already skilled in the use of the equipment and in its techniques.

ASSESSMENT

In the opinion of most, unless students in the practical courses are examined as rigorously as they are in their other courses, and unless their test scores are used in some way that is significant to them, both the students and the teachers will not take these courses as seriously as they do others. Additionally, with the current system, it is almost impossible to know with any certainty, whether the practical courses are building the attitudes, the knowledge, and the skills that they were designed to produce.

In order to know whether the practical courses are meeting their objectives, the teachers must measure the students' attainment and growth over the five years in which they are enrolled in the practical courses. A consistent, objective system of measuring student performance, particularly in the skill areas, needs to be developed and implemented.

SPECIFIC RECOMMENDATIONS

On the basis of our study of new equipment, we would make the following specific recommendations now:

1. An explicit examination should be made of the official system and of popular practices in the governorate offices and in the schools for the distribution, assignment, redistribution, inventory, maintenance, repair, storage, and replacement of equipment and materials so that a more effective and efficient system could be designed, developed, tested, and implemented in the governorates.

2. A revised, more effective, and more efficient in-service training system should be devised based on an examination of the current in-service training system for teachers of practical courses and for headmasters. That system should use effective Basic Education schools as training sites and successful teachers and headmasters as trainers.

3. A system should be established for developing and testing innovative methods of teaching the practical courses in Basic Education in each of the governorates. It should include a communication system for sharing the results among the governorates and within each one, and a subsystem for implementing the adoption of these new proven methods in other schools through training programs, support services, appropriate supervision, and an incentive system to encourage headmasters and teachers to participate.

4. The brief paper on Practical Subjects by Dr. Abo Bakr Abdeen Badawi should be amplified, with studies as scholarly and thoughtful as his. These could serve as a basis for a re-examination of instruction in the practical courses and as the basis for some "clinical" experimentation of the re-examined model in actual school settings, consistent with recommendation number three above.

5. A consistent and objective student performance assessment system for the practical courses needs to be designed, tested, revised, and implemented on a nationwide basis. It should include a requirement that the results of the measures have consequences of importance to students and teachers to ensure that they are taken seriously and administered fairly and properly. Such an assessment system must contain objective ways of measuring the practical skills as well as the acquisition of knowledge (often referred to as the "theoretical" portion of the courses).

We suggest that AID and the Ministry consider using the technical assistance contract to implement programs described in the above five recommendations.

BACKGROUND

Once the school construction and commodities programs were established and operating well, AID and Ministry officials turned their attention to the matter of how to provide the Ministry with appropriate expertise in technical areas such as curriculum development or teacher education, on an on-call basis over a period of time long enough to ensure adequacy of input.

For example, with regard to curriculum, the general curricula outlines, objectives, and goals for the Basic Education Program had been written and approved by appropriate committees. Topics had been assigned for textbooks, and text writers had been nominated. Ministry officials hoped to have the textbooks completed and in use in the schools by the Fall of 1984. They wished, however, to have them evaluated by experts prior to their becoming final.

Similarly, ambitious plans were being made for a revision of the teacher education programs, both pre-service and in-service, and it was felt that expert opinion might be of use there, as well.

Consequently, a decision was made to set up a three-year, host-country, time-and-effort contract through the Ministry of Education for the provision of technical assistance in support of the Basic Education Program. It was felt that such a contract would provide the Ministry of Education with the flexibility to call on expertise as needed and to adjust work efforts easily to fit new needs that might arise. In the Spring of 1983, the Ministry completed negotiations with the winner of the competition, the Academy for Educational Development. Specifically, in response to a statement of priorities of the Ministry, the Academy was to provide three basic services:

1. State-of-the-art information [on priority topics];

2. Qualified consultants [to work on these same priority topics]; and

3. Management structure and coordination [for the entire process].[1]

In short, the Academy was to provide the technical assistance delivery system, staff it with qualified consultants, and offer the latest state-of-the-art information upon which to base alternative courses of action.

Consultants were "expected to be capable of...planning and executing research activities related to the development of programs to implement planned educational change; and...advising and assisting...responsible MOED officials on the development and implementation of programs to achieve stated policy goals." Further, the consultants were to hold seminars and workshops for interested Ministry employees whenever there was an opportunity (Academy Proposal).

The Academy proposed to "supplement the...knowledge of its American consultants or employees with a broader familiarity of Egyptian education and culture and Arabic language skills through access to a pool of qualified Egyptian education consultants." A sub-contract with TEAM/MISR's Arab Center for Cultural and Educational Development provided access to a "larger pool of qualified Egyptian education experts." TEAM/MISR was also to assist in formulating the requirements for work orders and act as the Academy's agent in selecting, contracting, and coordinating the efforts of Egyptian consultants to the project.

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[1]From the proposal presented by the Academy for Educational Development for the Basic Education Project, Ministry of Education, Arab Republic of Egypt, (USAID Grant #263-0139).

APPROACH

The study of technical assistance was designed

- to assess the amount, nature, and utility of the impact of the technical assistance at the policy and operational level of the Ministry and its governorate offices;
- to determine what the programs' effects, if any, were on other institutions in Egypt's educational system--such as the Schools' of Educations' pre-service education programs and the Teacher Training Institutes' programs; and
- to determine what impact the program would have on actual school practices.

HYPOTHESES

The design was guided by the following hypotheses.

- AID-financed technical assistance will stimulate noticeable changes in important aspects of the rationale, objectives, and procedures through which the MOE organizes and supports curriculum development, teacher training, educational planning, and cost analysis for basic education.
- AID-financed technical assistance will stimulate noticeable changes in the rationale and procedures which guide the MOE in evaluating the effectiveness and efficiency of programs in the areas of curriculum development, teacher training, and related programs that enhance the relevance, efficiency, and effectiveness of basic education.
- AID-financed technical assistance may have a noticeable effect on educational activities at the primary-school level.

The overall approach is to interview key technical assistance providers, key recipients of that advice, and key department staff in curriculum, teacher training, educational planning, and cost analysis. Members of the universities colleges of education staff and faculty members at selected teacher

training institutes will also be interviewed to see if they perceive any clearly identified areas of change resulting from technical assistance and to gather their estimates of the significance and importance of those changes.

Data sources include the various documents generated in the course of the technical assistance planning and provision, as well as perceived opinions, attitudes, and perceptions of key figures in the effort. Document analysis will play a prominent role in guiding the interview studies, and when appropriate and feasible, in-system observations of practice will be made in the schools and in administrative offices at the Ministry and governorate levels. We will interview school administrators and supervisors to identify changes that they have come about as a result of technical assistance.

STUDY ACTIVITIES IN THE FIRST YEAR

This report covers activities from late January 1983, until May 31, 1984. Subsequent activities will be included in the next report. In late January and early February of 1983, interviews were conducted with appropriate AID officials and with the three high-level staff members of the Ministry of Education, who were the chief architects of the technical assistance planning in the Ministry. The major document reviewed and discussed was the Ministry's priority paper, Priorities of Special Importance in the Different Areas of the Required Studies on Basic Education (Arab Republic of Egypt, Ministry of Education, October 1982). This paper served as the equivalent of a "needs assessment" statement and was the Ministry's major statement of the initial scope of work for the technical assistance contract. In these early interviews, Ministry officials spoke extensively of the hopes for the

technical assistance work. They also described how the priority paper could be translated into specific tasks.

Essentially, they viewed the effort as a series of separate research projects. The approach was to be content-oriented rather than process-oriented--designed to provide the Ministry with specific information they required rather than to help them build capacity to solve technical problems.

In the Ministry's view, the contract was to work as follows. The Ministry would issue work orders to the contractor (for work in one of the areas mentioned in the priority paper); the contractor would then field a team of American and Egyptian experts who would be responsible for "solving the problem." The contractor was to select the foreign experts and specify the qualifications for the Egyptian experts. Then the Ministry was to pick Egyptians to work on the project who met the specifications set forth by the contractor.

A work plan and schedule would then be laid out, reporting procedures decided upon, and beginning and ending dates specified. The contractor would be expected to have a Cairo office with a staff that included Egyptians with an excellent command of English. Work would start in April or early May (at least the work of organizing the effort). The Ministry expected the contractor to be totally responsible for the organization and conduct of the work. The emphasis throughout the contract would be for the contractor to "have experts do the job rather than train Egyptians who would then be able to do the job." If there was to be any training work in the contract, it was to be minor and informal.

According to the most senior official, the basic reason for the contract was to solve specific problems--not build Egyptian problem-solving capacity.

As an example, he talked of the work that needed to be done in the area of curriculum. "American experts are to evaluate the content for its suitability for each grade level, its scope, relevance and balance among subjects, course placement, and pedagogical strategies." This was not to be an empirical study.

A technical-assistance study interview was held in Egypt in the spring of 1983 with Ministry officials on the day prior to contact negotiations. The Academy's proposal was reviewed extensively in light of the Ministry's position paper. Later on, in the summer of 1983, conversations were held with appropriate Academy officials.

In September 1983, the first of a continuing series of conversations, discussions, interviews, and dialogues were held with the Academy's Assistant Director in Egypt--the director and coordinator of TEAM/MISR's sub-contract. Further interviews were also held with the same senior Ministry officials. The project had hit a snag in that the Ministry had not yet approved any of the foreign experts nominated by the Academy nor had it forwarded to the Academy any of its own nominees. The interviews were focused on trying to discover what had gone wrong, and what, if anything, was being done to rectify the situation so that work could start.

According to one senior official, the impediment had been removed and a meeting scheduled for October 30 to approve the experts, so that work could proceed. Unfortunately, that meeting had to be cancelled because the First Undersecretary of the Ministry found he had a scheduling conflict.

No further contact was made with the technical assistance project until the second week of December. On December 12 the first technical assistance team arrived in Egypt to begin on Work Order No. 2 (Curriculum and Teacher Education).

Initial meetings with the two American experts were concerned primarily with sharing preliminary information from the school team's site visits. In subsequent sessions, discussions centered on their work plans, the problems they were facing in gaining access to relevant information, and those they anticipated facing as they tried to accomplish their work within the time period allotted.

At the end of their visit, several discussion sessions were devoted to their preliminary report drafts. In addition, the Creative Associates representative in charge of the study prepared an informal critique of the preliminary draft report. Following the technical assitance team's departure, occasional contact was made with the TEAM/MISR coordinator to track the progress in final report preparation.

In early May, 1984 the American expert on finance arrived to commence work on Work Order No. 3, as did the Cypriot architectural expert working on school design study (Work Order No. 4), and the director of the computer-based planning technical assistance project (Work Order No. 5.) Extensive interviews were held with the American financial expert and with the architect. A brief, get-acquainted, meeting was held with the director of the computer-based planning technical assistance project.

In May, meetings were held with TEAM/MISR's coordinator and a senior MOE official to discuss the response to the work order No. 2.

DIMENSIONS OF TECHNICAL ASSISTANCE

The effectiveness of a large-scale technical assistance program may be related to the degree to which the delivery system is designed to emphasize certain system characteristics. Most designers of technical assistance

delivery systems emphasize certain aspects or dimensions of technical assistance over others. This comes about for a variety of reasons having to do with the nature of the organizations involved, the problems they are attempting to solve, and the time, financial, cultural, and other constraints the designers face.

Some systems are designed to increase the recipient's capacity to identify and solve problems, while others are designed to emphasize direct problem solution. Some are intended to be flexible so they may be updated or renewed periodically as needs and conditions change, while others operate as fixed systems and implement only the original plan. Some systems are designed to use a mixed strategy, implementing the original plan where appropriate and retaining flexibility to change plans as the necessity arises.

Often a technical assistance delivery system is designed to have a process rather than a content-orientation. Usually the process-oriented design also has a capacity-building aim whereas the content-oriented system most frequently is used to provide direct aid. The process-orientation is typically characterized by attention to the function, structure and organization of the recipient organization and tends to approach needs and problems through strategies that help the client discover the necessary resource or solution, as for example, through engaging the recipient in a planning or problem-solving process to address a given manifest or latent need.

Need identification or need assessment strategies differ, as well. Typically, the capacity-building approach will emphasize helping the client organization assess or reassess its own needs. On the other hand, a direct-aid, fixed-approach design usually takes the client organization's statement of need at face value and proceeds to the solution with little or no attempt to redefine or reassess the needs.

System designs differ also on the dimension of reactivity. Some are designed to be deliberately proactive, to take direct initiative with their assistance recipients on addressing the problems identified, whether or not the recipient organization may have originally perceived them as needs. Reactive systems, on the other hand, respond only to requests for help formulated and presented by the recipient organizations.

The more comprehensive the system, the more likely it is to emphasize engaging the recipient consciously in diagnostic activities--in the process of self-assessment--so they are empowered by a greater understanding of their situation and its possible causes and are thus likely to be more ready to engage in improvement activities.

Technical assistance delivery systems differ in how they approach the critical intervention activity of planning,--how the planning is done and who is involved. The more comprehensive capacity-building systems usually emphasize mutual planning based on the mutual analysis of diagnostic information. Typically, they also feature mutuality in defining the task and sub-task structures of the work to be done, in setting timelines and critical milestones, in establishing evaluation criteria, and in negotiating the allocation of resources to these important matters.

Resource allocation becomes critical early on for limitations always exist on the number of people, amounts of money, materials and time available. Critical decisions on resource allocation have to be negotiated, for these resource allocation decisions will determine the relative scope and depth of the total technical assistance effort itself.

Finally, some systems feature problem-solving as the central process through which to involve members of the recipient organization and build their

ownership of the problems and potential solutions. Such systems usually have the goals, as well, of ensuring that the most salient problems of the recipient organization have been accurately and consciously formulated, that a full range of solutions, and solution sequences, have been identified and examined, that an appropriate solution or solutions have been chosen in a mutual process involving those same members, and the means of evaluating the effectiveness of the solution(s) have been identified.

Clearly, not all technical assistance systems, are, will be, or even can be fully comprehensive. Yet it is useful to analyze each on a set of idealized dimensions such as was listed above. Consequently, as we follow each work order and its consequent activities through the system that has been established between the Academy and the Ministry of Education, we will attempt to examine how the efforts surrounding each work order are affected by the properties of the technical assistance delivery system as it was designed, and as it is modified in practice over time.

ORGANIZATION OF THE TECHNICAL ASSISTANCE PROJECT

The design of the technical assistance delivery system and its formal organizational structure were the products of Work Order No. 1. The Academy's first effort was to create a formal, yet temporary, organizational structure through which to deliver services. Service delivery was not to be informal or casual but rather formal and deliberative. To say it was a "formal" structure is to say that it contains the mechanisms for and depends on the formal negotiation of rights, responsibilities, obligations, and procedures. It is a "temporary" structure in that it is established to function only for the life of the project.

Early on, the Academy and the Ministry of Education reached agreement on the operational aspects of this temporary structure--the technical assistance delivery system--through creating what was in effect a "charter" for its operations. This description of the organizational structure of the project delineated the function each element in the organization was to perform, empowered each with the appropriate authority and responsibility, listed the membership of each group, and described general procedures to be followed from the inception of a piece of work to its completion.

The structure includes an Executive Committee, chaired by the First Undersecretary of State for Education, and a Technical Secretariat. The Executive Committee has the ultimate "within project" authority for policy, procedural matters, and project evaluation. It relies on the Technical Secretariat for technical opinion and advice. The Technical Secretariat, which is composed, in the main, of those in the Ministry in charge of the departments most likely to be affected by the project (such as the Undersecretary of Basic Education, the Director of Primary Education, the Director of Preparatory Education, and so forth) plays a gatekeeper role, and serves as a technical advisor to the executive committee.

In addition, the Technical Secretariat also acts as a bridge between the executive committee and project management, rendering advice and opinion on task requirements, and reviewing and recommending approval or rejection of expert personnel nominated for work teams. It reviews and approves schedules, evaluates project deliverables, and evalutes the progress for the Executive Committee. It may also conduct studies. It is not yet clear what role, if any, the Technical Secretariat may play in establishing new work priorities, or in formulating or conducting further needs assessments.

Figure III-1, copied from one of the Academy for Educational Development project director's early working papers, shows the flow cycle of project activities. Note that the cycle commences with the Technical Secretariat working with management to convert priorities into work orders, which are then submitted to the Executive Committee for approval. Once approved, project management then selects personnel and forms the work teams. Upon completion of the work, products are fed back through project management to the Technical Secretariat for its consideration. In turn the Secretariat make recommendations to the Executive Committee for product disposition.

Note also, that unlike most technical assistance efforts, this one contains no needs-assessment cycle. Nor is there any mention, in early project papers, of the process of product implemention--that is, of how or whether any of the results will be put into practice or "institutionalized."

The Academy's project director prepared and presented the Ministry with Working Paper No. 2, dated May 1984, which laid out an overall plan for the conduct of the project's work (see Appendix). Resembling a comprehensive educational research and development plan, minus the needs assessment and implementation phase, the working paper lists seven successive stages through which project activities would flow. The seven stages were described in the working paper as follows:

1. "Basic studies" stage in which two "mutually complementary" studies were to be conducted--one on goals and standards for basic education and the other on the economics of basic education.

2. A preparatory stage in which questionnaires, interview guides, and other field research tools were to be developed, field research plans and experiments designed, and pilot interviews conducted with appropriate officials.

Project Implementation Process

Figure III-1: Showing the flow cycle of project activities

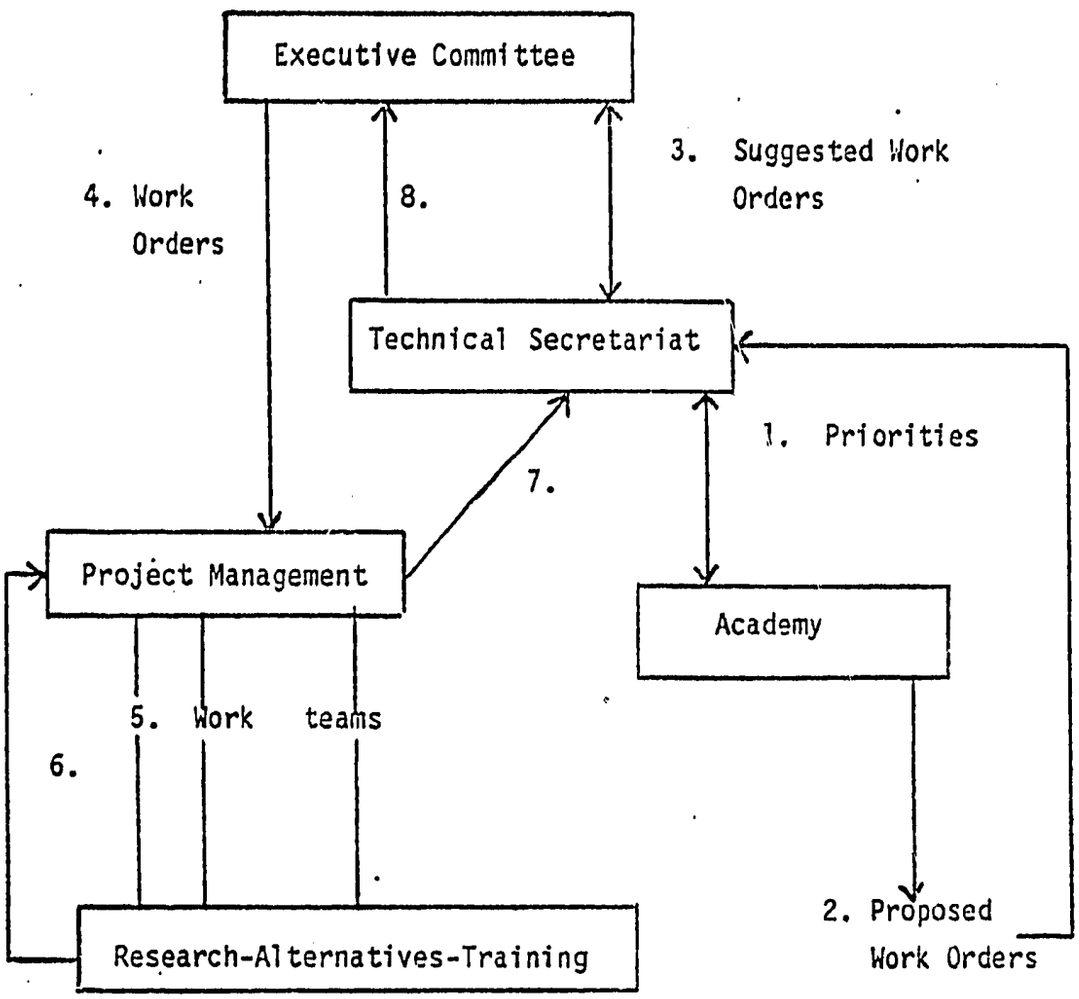

Figure III-1

3. Preliminary pilot-testing: a period for the trying out of ideas, curricula, and instructional materials in a sample of traditional and experimental schools and a time to be used for the training of field researchers.

4. Conduct of field surveys.

5. Field-survey results are to be analyzed and used for the preparation of formal models for
   - training of trainers;
   - training of instructors and administrators in the schools;
   - conducting training workshops in curriculum and instructional materials preparation;
   - training of staff to produce instructors' manuals.

6. Testing of the formal models in limited settings and revisions as appropriate based on test results, and

7. Presentation of the final results of the project in the form of curricula developed and tested--...to the Ministry of Education in final versions."

TECHNICAL ASSISTANCE--FIRST YEAR WORK SCHEDULE

The Academy's project director had prepared and negotiated the first five work orders for the contract by mid-May. Those first work orders, and the technical assistance delivery system design, were guided in large measure by the Ministry paper previously mentioned: Priorities of Special Importance in the Different Areas of the Required Studies on Basic Education (October, 1982).

Studies were called for in the areas of:

- curriculum and the preparation of instruction materials;
- teacher training;
- educational planning;
- educational economics;
- school administration;

- student flow, dropouts in basic education; and
- school building design.

Work Order No. 1 authorized the work that resulted in the design of the technical assistance system, its organizational structure, and the general operating procedures that were laid out to govern project work.

The next three work orders,

No. 2 - "Assessing the State of the Art of Basic Education" (curriculum and instruction);

No. 3 - "Educational Economics of Basic Education; and

No. 4 - "School Designs for Basic Education."

were specifically responsive to the call in the MOE priority paper, except for the school-administration study and the school site mapping project. The school mapping was already an extant project, separately funded by AID and being ably performed in the Minstry's general administration of planning and follow-up.

Work Order, No. 5, a "Computer-based Planning Model for Basic Education", had not originated in the MOE priority paper, but rather came from the Academy as an outgrowth of their prior experiences in designing educational planning systems for developing countries.

Contents of the Work Orders

Work Order No. 2, "Assessing the State-of-the-Art of Basic Education" was to review the focus and content of the curriculum (see the appendix for the work orders).

A. Objective:

To assess the state-of-the-art of Basic Education and develop a model for delivery systems.

B. Description of Services:

The Contractor shall appoint a committee of 3 consultants and 3 Egyptian experts who will establish philosophical bases and legal requirements for Basic Education by:

1. Reviewing and examining all relevant studies, reports, experiments, policies, and laws related to Basic Education in Egypt.

2. Assessing the curriculum for Basic education in light of No. 1 above.

3. Suggesting alternative models for curriculum and delivery systems.

4. Establishing criteria for selecting, preparing, and training Basic Education teachers and school administrators.

Work Order No. 3, "The Educational Economics of Basic Education," (the other of the two "mutually compatible" basic studies), was to yield data on three general areas:

1. The student population, its size, age--grade distribution, ways to reduce dropouts and grade repetitions, and way to make optimal use of physical resources through studies of class sizes and numbers of school shifts;

2. To prepare projections for the coming development plan based on the variety of planning assumptions; [and]

3. To rationalize the Ministry's budget for basic education through developing an integrated system that ties in the numbers of teachers, students, administrators, equipment, and supportive staff, with alternatives developed on a cost-effectiveness basis.

Aside from the potential for its immediate application within the next MOE budget cycle, and preparation of the next five year development plan, the most lasting impact of Work Order No. 3 was seen to be its counterpart to the Computer-Based Planning System. The Economics results were intended to feed into Phase II of that system.

Work Order No. 4, "School Designs," called for a team to

1. Survey a sample of current basic education school buildings in relation to meeting the needs of basic education, curricula and activities, and suggest alternatives;

2. Survey local raw materials that can be used in the construction of new schools to reduce costs and be more adaptive to the environment;

3. Design alternate models for a nine-grade basic education school (urban/rural); [and]

4. Present criteria for selecting materials, sites, and requirements for different models for basic education schools."

The findings, recommendations, and new models for school designs generated by the architecture group, were intended to feed directly into the AID/MOE school construction program.

Work Order No. 5, "Computer-Based Planning Model for Basic Education," called for a team of specialists to carry out the following five phases:

Phase I: Establishing Data Bank Procedures and Developing Strategies.

(6 months: June 83 - December 1983)

Basic gathering and analysis of data including establishment of level of accuracy by governorate and district, with regard to students, teachers, adminitrators, salaries, financial support, supplies, and facilities.
Preliminary research on available options for Basic Education.

Phase II: Model Design and Modification.

(3 months: January 84 - March 1984)

Formulation of a planning Model for Egypt based on available data and administrative structure. Custom programming on existing Ministry of Education computer or compatible microcomputers for Arabic and/or English presentation and preliminary testing with actual data from governorate and districts.
(Installing Hardware).

Phase III: Full Implementation and Presentation.

(4 months: April 84 - July 1984)

Loading of model with tested data from all governorates and districts for all categories, and development of major alternatives in terms of student mix, student/teacher ratio, teacher salaries and qualifications, levels of material support, school location and condition.
Presentation of complete model with major options to MOE officials and to other government agencies if MOE so desires.

Phase IV: Training.

(5 months: August 84 - December 1984)

Completion of technical training for a selected group of 10 MOE personnel in maintenance of Model, updating information, and continued training of five other MOE personnel to become trainers of governorate personnel including key administrators, selected teachers and other governorate and district level personnel.

Phase V: Follow Up and Monitoring.

(6 months: January 85 - June 1985)

Monitoring the operation of the system and the outputs of the model. Help in discussing technical matters related to the maintenance and updating of the Model.

Clearly, if the technical assistance work was to have optimum application within the contract period, particularly the ambitious work plan envisaged for curriculum and teacher education with its highly-ordered and sequenced activity flow, an early start and the timely completion of the work was imperative. Moreover, an early start was made even more imperative by the knowledge that some time inevitably would be lost due to logistical slippage, as it was obvious there would be problems in finding, getting approval for, and hiring both American and Egyptian consultants of the caliber wanted, who were free to work on the team in a time frame acceptable to the planned work schedule.

Figure III-2 contains the initial schedule derived from the work orders.

FIGURE III-2

TECHNICAL ASSISTANCE FIRST-YEAR WORK SCHEDULE

Work Orders	Start Work	Draft Report Due	Final Report Due
#2 Assessing the state-of-the-art of Basic Education (curriculum and teacher education)	early August 1983	early September 1983	early October 1983
#3 Educational Economics of Basic Education	early Oct '83	early Nov '83	early Dec '83
#4 School Design for Basic Education	early Aug '83	early Sep '83	early Oct '83
#5 A Computer-based Planning Model for Basic Education			
Phase I - Establishing data bank procedures and developing strategies	early June '83	early Dec '83	N.A.
Phase II - Model design and modifications	Jan '83	end of Mar '83	N.A.
Phase III - Full implementation and presentation	April '83	July '84	end of July '84
Phase IV - Training	Aug '84	Dec '84	N.A.
Phase V - Followup and monitoring	Jan '85	end of June '85	N.A.

Note this schedule sets the due date for the final report on Work Order No. 2 (the end of the First Stage of the proposed seven-stage overall work plan for curriculum and teacher education) early enough to allow sufficient

time for completion of the remaining work through the seventh stage--two and one-half school years and two full summers.

Work Order No. 3 was scheduled for completion in time to feed directly into the beginning of phase II of the computer-based planning system, when their data would be of great use in the design and modification of the model.

Should there be subsequent work orders flowing from the recommendations made with regard to curriculum and teacher education in the final report of Work Order No. 2, and should it follow the seven-stages pattern as proposed by project management in May '83, there could well be additional needs identified. Stages 3 and 4, pilot testing and subsequent field research, should uncover additional needs, especially for training and school systems improvement. Those would then become grist for the review, re-analyses, and re-formulation of "models" for testing in stage 6.

Note also the early start and completion planned for The School Designs Work, presumably in response to the hope that its early completion would allow time for its recommendations to be considered prior to the beginning of the new-school construction cycle.

FIRST-YEAR ACCOMPLISHMENTS

Following negotiation of the work orders and their scheduling, the project director had quickly selected and nominated a slate of experts for each work order for the consideration of the Technical Secretariat and Executive Committee. He was then to have been presented with a slate of nominees for the counterpart members of each work team. The due date of July 15th passed with no nominees presented for the counterpart members, nor had any action been taken on the Academy's expert nominee list. In fact, for reasons internal to

the government of Egypt, no further overt action on the approval of experts or the nomination of the counterpart team took place until the Academy proposed to begin on Work Order No. 2 in early December. At that point, their American experts had about a month's time remaining which they could commit to the project.

Following approval, two of the three American experts arrived in Egypt on December 12, 1983, ready to begin work. Unfortunately, at the last minute the third member of the team had to cancel his plans to participate, but the Academy project director was able to fill in for a portion of the time. The counterpart team was finally appointed, but not until over half the time available to the American experts had elapsed. By prevailing on the American experts, the project director was able to extend their stay in Egypt by about three weeks, enabling them to meet with the counterpart team on a few occasions, and to include some of the counterpart team's work in the draft report of the work team.

The full team met on January 18 to discuss the draft report and present it to the MOE. It was presented to the AID staff on January 19, 1984 by the two American experts and the TEAM/MISR Coordinator. The Technical Secretariat met on January 25, February 1, and February 8 to discuss the preliminary report and to prepare a critique for use by the American experts in the preparation of the final report, which was completed in March of 1984.

By late February, the two Egyptian counterpart members of the Work Order #3 Team - (Educational Economics) had begun preparing a paper for the American expert to use. He began work in mid-May 1984, having arrived in Egypt on May 16. That week, May 13 - 19, was a banner week for the technical assistance project, for not only did the economics expert arrive to begin work, but so

did an American-selected cypriot architect to begin work on Work Order No. 4, (School Designs) and two American experts to begin on Work Order No. 5 (Computer-based Planning).

This account brings us to the end of the time period covered by the present report. As an examination of Figure III-3 shows, for reasons over which the Technical Assistance Project management had no control, the first year's schedule had fallen severely behind.

Comparisons between the planned start, first draft, and final report due dates and the actual events show that work on Order No. 2 began some four to four and one-half months later than it had been planned. Work Order No. 3 was eight to eight and one-half months late in getting started; work on No. 4 was some nine and one-half months late in beginning, and Work Order No. 5 began some eleven months later than originally called for.

Work Order No. 2 was the only one in which work was completed during the time period covered by the present report. As such, it was the first to go through the entire process, from the conversion of the MOE's priorities into a work order, through the Technical Secretariat's review, evaluation, and submission of recommendation's to the Executive Committee. At this writing it is unclear what disposition the Executive Committee will make of the report.

VIEWS OF PROCESS--FIRST YEAR

The following is an outline of the process stages through which the technical assistance work effort whould ideally flow from the inception of the system itself to the final disposition of a work product by the Executive Committee.

FIGURE III-3

TECHNICAL ASSISTANCE PROJECT WORK SCHEDULE
PLANNED VS ACTUAL (AS OF JUNE 2, 1984)

Work Orders	Start Dates		First-Draft Due Dates		Final Report Due Dates	
	Planned	Actual	Planned	Actual	Planned	Actual
#2: Assessing the State of the art of Basic Education (curriculum and teacher education)	early Aug. '83	mid Dec '83	early Sept. '83	mid Jan '84	early Oct. '83	Mar. '84
3: Educational Economics of Basic Education	early Oct. '83	* mid May '84	early Nov. '83		early Dec. '83	
#4: School Designs for Basic Education	early Aug. '83	mid May '84	early Sept. '83		early Oct.' 83	
#5: A computer-based Planning Model for Basic Education						
Phase I - Establishing Data bank procedures and developing strategies	beginning June '83	mid May '84	early Dec. '83		N.A.	
Phase II - Model Design and modification	beginning Jan '84		end of Mar. '84		N.A.	
Phase III - Full implementation and presentation	beginning Apr. '84		end of July '84		end of July '84	
Phase IV - Training	beginning Aug. '84		early Dec. '84		N.A.	
Phase V - Followup and monitoring	beginning Jan. '85		end of June. '85		N.A.	

*The preparation of technical papers by the two Egyptian experts began in Feb. '84. The American expert arrived in Egypt May 16 to begin the "in country" phase of his work.

FIRST-YEAR WORK ACTION STAGES

A. Design stage

- Design TA system in consultation with MOE officials.
- Propose System to MOE.
- Negotiate System with MOE.
- MOE approves.
- MOE appoints committees.
- Committees meet, are charged with responsibilities.

B. Needs assessment

- Needs assessment could happen at this point, or if already accomplished, should be considered and accepted or modified.
- Translate priorities into formal work orders which contain objectives, describe services to be performed, including person-power needs, estimate levels of effort, and stipulate activities and deliverables, and budget.

C. Work specification

- Negotiate work orders, making any changes called for.
- MOE approves work orders and authorizes project management to proceed.

D. Expert selection

- From expert candidate pool--Americans, Egyptians and MOE, select and nominate three candidates for each two positions, both Egyptian and American.
- Names submitted for approval.
- After approval, experts hired, schedules modified as necessary, all travel, logistics plans arranged.

E. Pre-Visit Preparation

- Prepare general background and other briefing materials for experts if necessary; counterpart experts or MOE staff prepare specific papers, reports or data analyses.
- Collect information needed for experts to use.
- Brief American and other experts, provide necessary materials pertinent for work to be done.

F. Team(s) begin work

- Send American experts to Egypt.
- Form teams in country; redefine work if necessary.
- Prepare definitive work schedules and assignments, and begin work.
- Team completes in-country work and preliminary draft report, makes oral report to MOE and AID before departure of American experts.

G. Technical Review I

- Preliminary report submitted to the Technical Secretariat.
- Technical secretariat reviews, evaluates preliminary report and prepares a critique for experts to use in preparing final report.
- Critique sent to experts.

H. Final Report Preparation

- Experts revise preliminary draft, prepare final report.
- Final report submitted to Technical Secretariat.

I. Technical Review II

- Technical Secretariat reviews, evaluates final report, prepares recommendations for action of Executive Committee.

J. Executive Action

- Executive Committee meets and takes action on the final report.

It may be instructive to compare what has happened so far in the Technical Assistance Project with the sequence outlined above. The discrepancies will suggest where processes need to be improved. The following is a description of Work Flow Status, as of May 31, 1983:

A. Design stage -- completed in May 1983.

B. Needs assessment -- no specific needs assessment was made. MOE's statement of priorities was accepted by the contractor except for the study of school administration and school mapping. A new topic area, computer-based planning, was added. Priorities were translated into work orders in May 1983.

C. Work specification -- completed in May 1983.

D. Expert selection -- experts were named early by the Academy but approvals by MOE were held up until it was too late to begin work as planned on in the original schedule; this was a serious problem.

E. Pre-Visit Preparation -- this was an area of difficulty for the first two teams in Egypt (Work Orders No. 2 and 3). It was seemingly remedied for the two later teams.

F. Team(s) begin work -- all teams began work, though starts were much delayed. In-country work, preliminary draft report, and oral report to MOE/AID were completed by the first two work teams (Work Orders No. 2 and 3).

G. Technical Review I -- completed for Work Order No. 2 only.

H. Final Report Preparation -- completed for Work Order No. 2 only.

I. Technical Review II -- completed for Work Order No. 2 only.

J. Executive Action -- completed for Work Order No. 2 only.

As noted above, Work Order No. 2 is the only one we have observed through all its process stages.

It is difficult to estimate what damage, if any, has been done to the Ministry's program plans by the first-year delays. Certainly much time has been lost. Major revisions may have to be made in the plans for follow-up activities in the curriculum and teacher education program (Work Order No. 2), if they are to occur within the current contract. The reader is directed to

the Appendix for excerpts from the curriculum and teacher education final report, which list the priority items and recommendations made. See particularly page IV-12 for the schedule of work activities proposed for curriculum development.

It is tempting to speculate about what might have been done differently to have both improved the work process and the reception of Work Order No. 2. Clearly, the work plan was ambitions, the time allowed very short, the team short-handed. (Only two of the three American experts turned out to be available, the counterpart team was appointed very late, the American experts were not furnished with all the pertinent information they needed. In fact, they had to make personal inquiries in various MOE offices to find much of the material they needed.) There were no meetings of the teams with the Technical Secretariat, either early on to discuss and modify the work plan if necessary, nor at the end of the visit to explain and discuss the accomplishments fully.

Because of the delay in approving the nominated experts, they missed the early time slot available for work--August and September--and thereby compressed the work into a shorter and more critical time period.

The Technical Secretariat's judgment that the final report of Work Order No. 2 met only "minimal specifications" probably resulted from their misunderstanding of what to expect in the report. For many in the Technical Secretariat, the report dealt too much with assessment. It was too diffuse, too general, and too global in character. They evidently expected a tightly written and reasoned report that dealt with specific, key operational aspects of the two areas of study, as we discovered in early interviews with senior MOE officials involved in planning the scope of work.

Yet Work Order No. 2 as written, says the

> "Contractor shall appoint a committee of three consultants and three Egyptian experts who will establish philosophical bases and legal requirements for Basic Education by:
>
> - "Reviewing and examining all relevant studies, reports, requirements, policies, and laws related to basic education in Egypt;
> - Assessing the curriculum for basic education in light of No. 1 above;
> - Suggesting alternative models for curriculum and delivery systems [establishing criteria for selecting, preparing, and training and basic education teachers and school administrators]."

The wording of the work statement is general enough to be susceptible to varying interpretations, not only as to the amount of emphasis to place on each aspect of the work, but also as to how detailed, specific, and operational it should be. Unfortunately, it seems that little or no attempt was made to refine the tasks further or to make them more specific and operational. Nor did the Technical Secretariat and the work team meet to clarify their understandings of exactly what was to be done. The team had requested one or more meetings with the Technical Secretariat, but to no avail. The controversy about the report might well have been avoided if the differing perceptions had been apparent before work began so that appropriate adjustments could have been made early on.

Two important agreements were negotiated by the Academy's project director with the head of the Executive Committee as a result of the experiences with Work Order No. 2:

> Background and other working papers that have to be prepared in advance in order for the foreign expert to begin work, will now have to be completed and available well before the scheduled start date. The Project Director will delay that start date for an appropriate period after receipt of these materials to give the experts time enough to assimilate them.

> The counterpart members are to be appointed in advance of the arrival of the foreign experts, so there will be no delay in forming the team and getting it to work once the foreign experts have arrived in Egypt.

The process problems that occurred in the first year may not necessarily repeat themselves. Presumably, some resolution mechanism will be initiated to handle the inevitable conflicts that will arise in the course of the work, especially with regard to issues concerning the quality of the work and whether it meets expectations. Although it is possible for senior MOE officials in policy positions to assume the contract should be monitored as though it were a "pay for quality performance" contract, yet, philosophically, this contradicts the contract's very nature, for as the equivalent of an indefinite quality contract, it uses short-term experts to work according to written work orders.

Perhaps more management time devoted to the project in Egypt would alleviate some of the process problems. Certainly more frequent discussions between project staff and the Technical Secretariat and the Executive Committee on quality criteria would help matters greatly. It would also be useful to set up conflict resolution procedures.

To an outside observer, in the first year the technical assistance delivery system seems to have operated as a limited system. It employed a content approach, working on primarily client-identified. The system was fixed, reactive, and emphasized direct aid, not capacity building. According to the early interviews with senior MOE and AID officials, this was the approach desired by the Ministry, but it caused problems.

Some of the process problems sprang, in part, from the lack of clear communication among the partners as to the details of the work and its aims and objectives. All parties concerned should make a major effort to clarify these

and other issues in a review the project and its future planned activities so as to enable it to forward with a mandate that is clearly understood.

IMPLICATIONS

Summaries of each of the sub-studies of USAID Contributions to the Egyptian Basic Education Program have been given at the end of each of their reports in chapters one and two (Volume I) and three and four (Volume II). In this chapter, we present a general summary of implications derived from a birds-eye view of the four studies taken together. It may be helpful now and in the future to place in mind a schematic picture of the relationships among the four sub-studies and the ways in which the findings of each cross-connect with one another.

A picture of the cross-connections among the studies is shown in Figure IV-1. Immediately under the title of each of the studies shown in the figure is a brief notation describing the major product of the study. The Intensive Study of New-School Communities is devoted to producing information about the school-sending behavior of families. The Extensive Study of the Impact of New Schools is devoted to producing data about new school impact on enrollment and literacy. The Study of Equipment is devoted to producing hypotheses about factors that influence practical skills instruction, particularly the use and availability of the equipment. The Technical Assistance Study is devoted to producing descriptions of current planning and research activities for Basic Education. The outcomes of these studies flow together to generate different kinds of implications that are labeled in the figure as A, B, and C. Group A constitutes general implications for new school siting, Group B includes general implications for planning, research, and practice that may improve instruction, and Group C includes specific recommendations for the location,

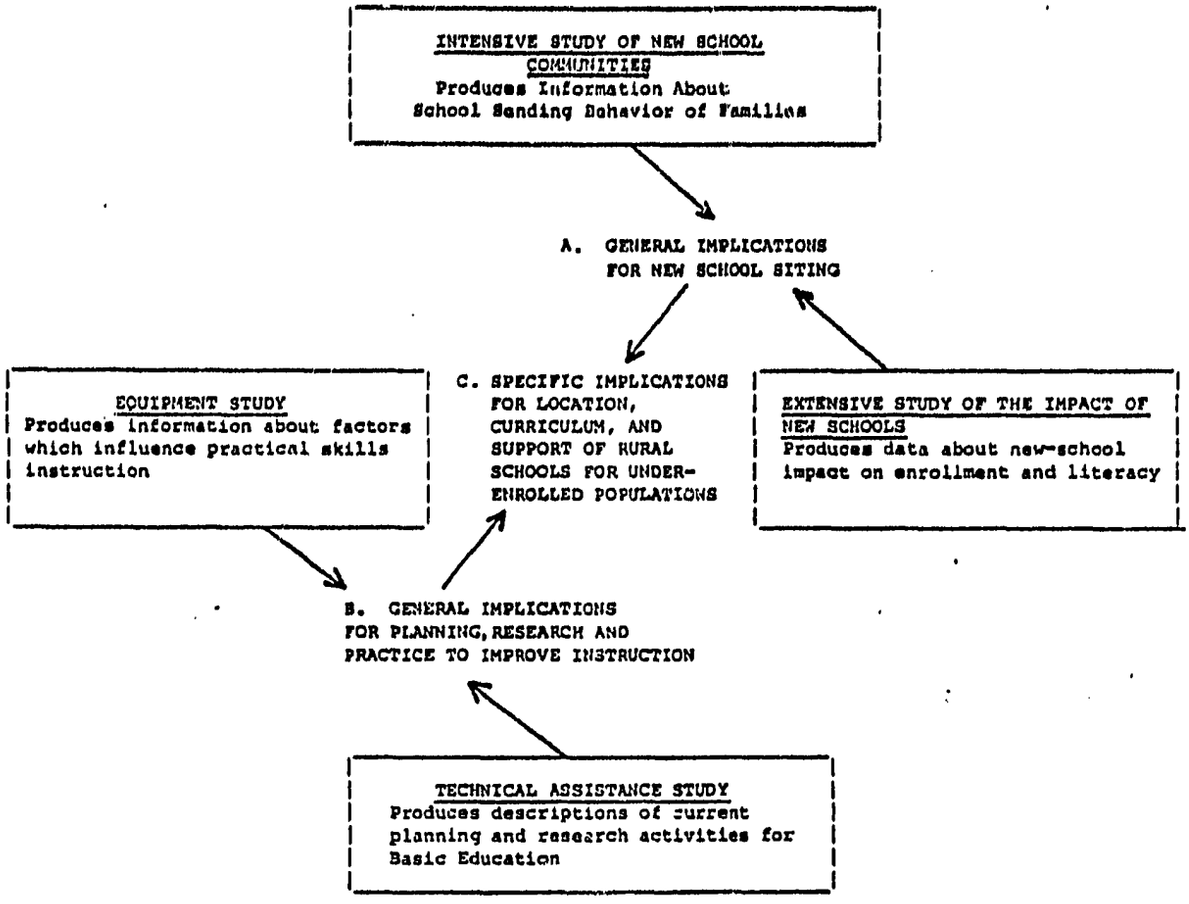

Figure IV-1: Cross connections among the sub-studies of USAID constitutions to the Basic Education Program

curriculum, and support of rural schools designed to attract underenrolled populations. As the four-year study continues, these lists of implications will hopefully become more complete, better articulated, and more thoroughly informed through further research and through conversations with officers of USAID and the Ministry of Education. The following is a brief review of the implications from the first year of study.

GENERAL IMPLICATIONS FOR NEW SCHOOL SITING

1. School-Sending Readiness. It appears feasible to develop convenient and inexpensive indices of the school-sending readiness of rural communities--indices that could be used in future facilities planning for grades one through nine. These indices, our preliminary findings show, relate to such factors as crowding of existing schools, enrollment trends of boys and girls, indicators of village economic levels, pre-existing formal and informal facilities, and attitudes of community leaders.

2. School Shortages. All evidence points to a severe shortage of facilities at the preparatory and secondary level in rural areas in the near future. The policy of building grade one to nine schools in local communities, as opposed to one to six schools, appears valid and important. Communities should be encouraged to add on grade levels in successive years until the full nine years of basic education are achieved in the new school.

3. Girls' Enrollments. To have the greatest impact on girls' educational participation, schools should be community-based. Rather than coming from the surrounding countryside into bigger facilities, girls are most likely to come to smaller community-based institutions. Consideration needs to be given to the effects of school crowding on the expandability of girls'

enrollments, a factor that tends to constrain the potential for increases more for girls than boys. In some communities, girls' schools serve to guarantee a certain minimum number of spaces for girls as well as encourage the enrollment of girls from more conservative households.

4. Effects of Distance. Arbitrary measures of the distance primary schools should be located from each other should be used more as a measure of equitable distribution of resources than as a strategy to increase enrollment. Distances less than two kilometers between schools should be considered valid points to locate schools in cases where communities are ripe for rapid increases in enrollment and at present do not have adequate facilities.

GENERAL IMPLICATIONS FOR INSTRUCTIONAL PRACTICE

1. Assessment of Student Performance. In order to ensure that students and teachers take the practical courses seriously, and in order to evaluate whether the courses are building the attitudes, knowledge, and skills they were designed to produce, a consistent, objective system of measuring student performance needs to be developed and implemented. Such a system seems to be desired by most teachers and administrators.

2. Training. Training and supervision of teachers in the practical skills courses appears to be a problem in rural schools. Training headmasters to be leaders in the Basic Education curriculum might be a solution. Such training could be carried out through a system of exemplary schools.

3. Program Development. Imaginative solutions to problems of instruction in practical skills courses might be stimulated by encouraging governorates to support innovative projects, by creating a vehicle for sharing the

results, and by providing incentives to schools for developing innovative programs.

4. Certification of Technical Assistants. Problems of teacher shortages in basic education courses may be alleviated by allowing technical assistants who are not fully certified to teach these courses while earning their degrees at the same time.

5. Inventory of Maintenance and Equipment. Improved governorate-level systems of inventory and maintenance of equipment are needed, and in the long run it would appear that equipment for the practical courses might better be produced by Egyptian manufacturers than come from overseas.

6. The Recruitment of Women Teachers. Enrollment in rural villages might be substantially stimulated by recruiting and training local women as primary school teachers. In some cases incentives might be offered to induce women to enter teaching fields; in others, exceptions may be required to permit local women to enter teacher training institutions with lower than the required admission scores.

IMPLICATIONS FOR RESEARCH AND POLICY STUDY

The following is a list of areas in which the study project staff feels a need for more information. Much of this information may already be known by others, but some may suggest new studies.

1. Local Relevance of Basic Education Courses. Many rural villagers are turning toward education in the hope that it will help their children move out of agricultural occupations into other employment. How should the curriculum in rural schools respond to this perceived need? Can educational planning be more closely connected to community development activities? Problems of

relevance in the school curriculum in rural villages are illustrated by the discrepancy between parents' hopes that education will provide their children alternative employment to farming and educators' desires to locate practical courses according to the occupational environments in which schools are located. Decisions that commercial courses typically should not be taught to rural children may not be entirely valid as far as parents are concerned, especially in rural communities within commuting distance of urban areas. In other words, what are the implications of curriculum decisions in rural schools? More generally, what theory guides the development of Basic Education as a whole (see Appendix C to Technical Assistance Work Order 2)?

2. Educational Alternatives at the Secondary Level. Most rural villagers desire few educational alternatives other than primary level education or a full course of general studies through the university. What viable alternatives are available and how can their costs and benefits be communicated to students and parents in such a way that more will seek them?

3. Curriculum Supervision. How can the activity of instructional leadership be strengthened in rural schools?

4. Recruiting and Training Women Teachers. What are the factors that influence the training and recruitment of women teachers for rural schools?

RECOMMENDATIONS FOR RURAL SCHOOLS SERVING UNDER-ENROLLED POPULATIONS

Briefly, the following are tentative recommendations.

Recommendation 1: In siting schools, follow a mixed strategy of placing some schools in communities that are "ripe" for enrollment increases and others in communities where a new school might not immediately be filled up, but where it might itself

stimulate change in chronic low levels of enrollment. This way the effect of new-school facilities can be both immediate and long-term. In the long run, a mixed strategy might meet MOE goals of universal education more rapidly than a policy of building schools only where there is immediate need.

Recommendation 2: Place small schools in local, psychologically defined communities rather than creating consolidated schools serving more than one community.

Recommendation 3: Gradually extend the new-school grade levels where appropriate to full nine-year Basic Education Schools.

Recommendation 4: Recruit and train local women teachers, providing special incentives or exceptions where necessary.

Recommendation 5: Train and support the headmaster or headmistress of the school as its instructional leader.

Recommendation 6: Develop initial enrollment campaigns around the new school through community leaders.

Recommendation 7: Choose Basic Education offerings as carefully as possible to meet the range of needs in rural communities, which may not always be solely related to instruction in agriculture.

TEAM MEMBERS FOR FALL 1983 AND SPRING 1984

DATA GATHERING

Baseline Data Gathering
October 29 - December 2, 1983
Beheira, Assiut, Qena

Team Members

Representing the Ministry of Education*
- El Sawi Abdel Samei Ahmed
- Esam Abdel Metaal

Team for the Intensive Study of the Effects of New Schools -

The Community Team	
Leader	Andrea Rugh
Field Research Supervisor	Sayeda Amin Abdullah
Researchers	Said Ali Mohammed El Deeb
	Azza Hamid Yussef
	Caddah Hassan Ali
	Ikbal Mohammed Abdel Fateh

Team for the Intensive Study of the Uses of New Equipment -

The School Team	
Leader	Wade M. Robinson
Field Research Supervisor	Gamal Abdel Fateh
Researchers	Hazem Mohammed Naim
	Mostafa Hussein Khalifa
	Yousri Mohammed Ahmed
Project Director	Wells Hively

* Responsible for liaison and coordination with governorate and local officials, with schools, and for helping to gather data for the "Extensive Study of New Schools", these officials also participated directly in the work of both teams. We are grateful for their extensive and deep involvement in our work. It would have proven impossible without them.

STUDY OF THE USES OF NEW EQUIPMENT

Second Site Visit

March 2 - 22, 1984

Representing the Ministry of Education

El Sawi Abdel Samei Ahmed

Esam Abdel Metaal

"School" Team

Leader: Dr. Wade Robinson

Researchers: Said Ali Mohammed El Deeb
Hazem Mohammed Naim

QUESTIONS ASKED IN STUDY OF NEW EQUIPMENT

SCHOOL CHARACTERISTICS[1]

Type of schools? boys, girls, mixed?

Number of teachers? male female

Enrollment and Number of classes? By grade, sex, and class

Number of classrooms?

Number of rooms used for special purposes?

Do all rooms have working electrical outlets? If not list those (out of the above categories) that do not.

Number of teachers from local communities? Number of teachers assigned from other areas?

Are living arrangements available for female teachers, male teachers?

Enrollment in the offered "practical" courses by grade 7?

Number of hours each practical course is taught each week by grade 7?

Average class size for each "practical" course taught by grade 7?

In school year 1983-84, school began on what date and will end on what date?

Number of days school is not in session during the 1983-84 school year, not counting Fridays (holidays, vacation, crop times)?

Number of days used for monthly examinations?

Number of days used for mid-year examinations?

(If these numbers differ from one grade to the other) please report the details

Does teaching take place on days used for monthly exams, mid-year exams?

School building/grounds has: water, electricity, WC, a garden, a playground, and a nurse's offices?

---

[1]Questions asked of school headmasters.

EQUIPMENT AND MATERIALS[1]

Number of USAID equipment packages received by school?

Do intructions accompany each package?

If yes, list the packages and whether instructions are in Arabic or English.

When was equipment received?

When did school start using equipment?

Amounts of UNICEF equipment in the school used for each practical course and science?

List the last three dates the school received UNICEF equipment?

When did school start using UNICEF equipment?

Amount of "other" (non-AID, non-UNICEF) equipment in the school used for practical courses?

When was "other equipment" received?

Were there special or unusual items of equipment purchased or received by the school in 81-82, in 82-83? If yes, list number of packages or equipments by courses and dates received?

Do you have an equipment repair budget? If yes, how much is it?

If no, what do you do when a piece of equipment needs repair?

Do you have an equipment budget for something that is lost, destroyed, or worn out? If yes, how much? If no, what do you do when you need to replace a piece of equipment?

What rules, procedures, etc., have been established for storing equipment, checking it out, returning it, etc.?

If a piece of equipment is lost, broken, or somehow damaged in use, what is the teacher required to do?

Who bears financial responsibility for the loss or damage?

---

[1]Questions asked of school headmasters.

The school had a materials budget in 1983-84 from the Ministry of Education. Referring to this budget, what amounts have you allocated for materials for each practical course and science?

List for each practical course the major materials (type and quantity) items the school purchases during the year 1983-84, and the general timing of purchases?

How and when is the spending plan (for material) developed?

Who controls and monitors (or checks) the expenditures?

Is the amount given by the Ministry per classroom enough to buy the materials the teachers need?

If no, what figure per classroom would you need?

How much would that be for the school?

How much of that would you allocate to which courses? Explain.

Would this allocation be a temporary one (this school year or next), or do you see it as a need for the foreseeable future?

Yes, temporary, No, permanent?

As you consider the AID equipment you have, in your judgment is it adequate or inadequate in amount, in quality, and in kind, for satisfactory teaching of the practical courses, science, and social studies?

What recommendations would you make for new or different equipment?

If you could have five choices of things that would improve the teaching of practical courses in your school, what would they be?

TEACHER INTERVIEW[1]

Number of years teaching experience?

Number of years teaching in this school?

Gender?

Subjects and grades taught in the last three years?

Where did you receive your pre-service teacher training?

Have you had any special training within the last two years for the courses/grade levels you teach?

If you answered yes, list the last 3 or 4 events, where they were given, by whom, and for how long (days or months)?

How helpful to your teaching did you find each course or workshop?

Are you now taking any special courses related to your teaching duties?

If yes, describe.

If no, do you plan to take any such courses in the near future (this summer, next year, etc.)?

What degrees or certificates do you hold? Describe.

In order to know how much emphasis you place on theoretical learning and how much on practical learning in each of the subjects you teach, please write the name of the subject and the grade at which you taught it, then place a number from 1 to 5 under "Theoretical" to indicate your emphasis on the theoretical learning- Do the same for the column labeled "Practical." The rank 1 corresponds to "very little" emphasis and the rank 5 correspondes to "very much" emphasis.

Please fill in the following table by writing in the name of the subject and the grade; then in the column "theoretical" put one of the numbers = 0, 10, 20,....90, 100 to indicate the percentage of classtime, on the average, you spend demonstrating to students how something is used or done to emphasize learning of theories. Do the same for the column "practical."

---

[1]Questions asked of practical skills teachers.

Is the amount of money furnished by the Ministry per classroom enough money to buy the materials teachers need?

If no, what figure per classroom would you need?

Would the allocation be a temporary one (this school year or next), or do you see it as a need for the foreseeable future?

As you consider the AID equipment you have, in your judgment is it adequate or inadequate in amount, in quality, and in kind, for satisfactory teaching of the practical courses and science?

If a piece of equipment is lost, broken, or somehow damaged in use, what is the teacher required to do?

Who bears financial responsibility for the loss or damage?

What recommendations would you make for new or different equipment?

If you could have five choices of things that would improve the teaching of practical courses in your school, what would they be?

CLASSROOM OBSERVATION REPORT

Teacher code

Course

Grade level_____

Size of class; No. of boys? No. of girls? Total?

Class began at_____ a.m.; class ended at _____ a.m; or _____ p.m.?

No. of adults usually in classroom?

Ratio of adults to children?

Job title and duties of each adult?

What is/are the objective(s) of today's class?

Was equipment being used?

If yes, what equipment?

Briefly describe how--that is, for what purpose--the equipment was being used and by whom and describe how the lesson developed?

Was any of the equipment new or unfamiliar to the students?

Were any pieces of equipment in the classroom clearly not usable for any reason?

Were there samples of the students' work displayed in the classroom?

If so, ask the teacher if they are mainly imitative, or creative, required, or voluntary? The proportion apparently imitative? The proportion apparently creative?

If most samples were required, what was the purpose of requiring them?

How much of the instruction you observed in this class was whole group? small group? individual?

In the classroom the:

teacher talked most of the time, students talked most of the time?

students often asked questions, students rarely asked questions?

teacher seemed to make all classroom decisions?

No decisions were made in the classrooms?

Teacher and students made decisions?

Students were self-directed, students were teacher-directed?

Students were active, students were passive?

How much use of equipment in instruction did you see?

Was the class grouped by ability?

WORKING PAPER THAT ESTABLISHES ORGANIZATIONAL

STRUCTURE OF TECHNICAL ASSISTANCE PROJECT

89

Draft
5/12/83

BASIC EDUCATIONAL TECHNICAL SERVICES PROJECT

A. Introduction:

The purpose of this project is to assist the Ministry of Education (MOE) in persuing [sic] its efforts in the area of Basic Education.

To this end, and in accordance with the agreement signed by the MOE and the Academy for Educational Development (Academy), the latter proposes the following organization and functional structure to implement the agreement (Figure 1). This should help implementing the agreement throughout all planning activities and will monitor the execution of its different stages.

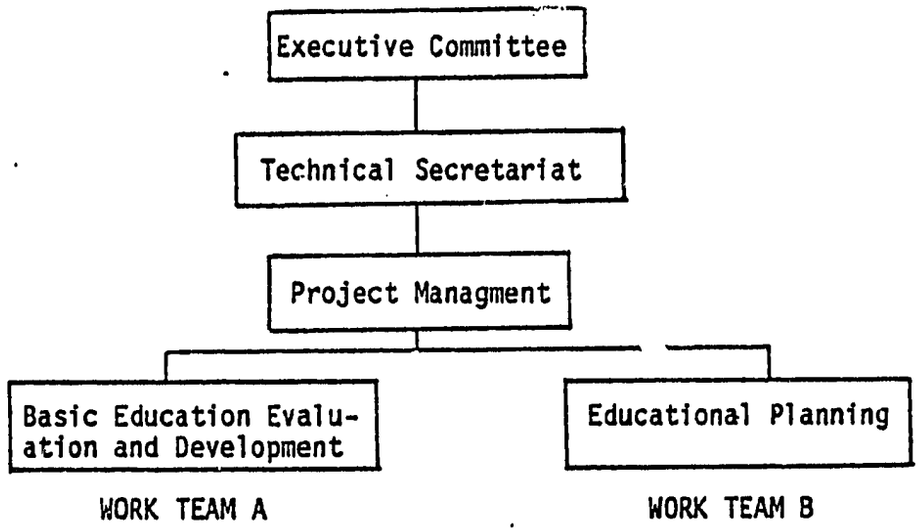

Fig. 1 - Organizational Structure of Project

B. <u>The Executive Committee:</u>

1. The Executive Committee will be appointed by the First Undersecretary of State for Education who will serve as the chairman and will include:

   1/1. First Undersecretary of State for Educational services.

   1/2. Undersecretary for Basic Education.

   1/3. Dean, Collage of Education - Ain Shams University.

   1/4. 3 Experts in Basic Education appointed by the Chairman.

   1/5. The Executive Vice President of the Academy.

   1/6. The Director of Middle East Programs at the Academy.

   1/7. The Associate Director of Middle East Programs Project Coordinator.

   1/8. Team Misr Vice President for Educational and Social Development.

   1/9. Assistance Coordinator of the Project.

2. The Executive Committe will meet twice a year upon the written invitation of the Chairman sent two weeks in advance to the members. The committee

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however can meet at any other time upon the request of two-thirds of its members. The majority of the members constitute a quorum provided that at least one of those present represents the Academy.

3. A majority vote of those present is needed for decisions. In case of a tie the Chairman's vote decides.
   The Executive Committe [sic] members will receive an honararia for participating in the committee meetings.

4. The Executive Committe [sic] will have the prime responsibility for:

   4/1. Setting policies, monitoring and evaluating project execution.

   4/2. Reviewing and approving work plans presented by the Academy.

   4/3. Reviewing and approving key personnel - American Consultants and Egyptian Educators - and issuing work orders.

   4/4. Establishing schedules for Consultant visitations nad [sic] completion of tasks.

   4/5. Acting as an overview authority in reviewing deliverables produced by the consultants.

4/6. Deligating [sic] authority to the Technical Secretariat to handle some of the Executive Committees responsibilities in order to expedite execution.

C. <u>The Technical Secretariat:</u>

1. The Technical Secretariat will be the liason between the Executive Committee and the Project Management. The Secretariat will include:

   1/1. The first Undersecretary of State for Education as Chairman.

   1/2. The Basic Education Advisor (MOE).

   1/3. The Director of Elementary Education.

   1/4. The Director of Preparatory Education.

   1/5. 3 experts in Basic Education, members of the Executive Committee.

   1/6. The project coordinator.

   1/7. The project assistant coordinator.

2. The Technical Secretariat will meet bi-monthly. The chairman can call for extra meetings whenever required. Half the members constitute a quorom

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provided that an Academy representative is present. The Chairman can invite external technical specialists whenever required. Honoraria will be paid for attending the meetings.

3. The prime responsibility of the Technical Secretariat includes:

   3/1. Conducting studies and executing tasks requested by the Executive Committee.

   3/2. Reviewing all plans and work orders prepared by the Academy prior to their presentation to the Executive Committee.

   3/3. Reviewing nominations of consultants presented by the Academy prior to their presentation to the Executive Committee.

   3/4. Monitoring the progress of work teams ensuring the timely execution of deliverables.

   3/5. Reviewing the deliverables to ensure that they meet the specifications of the work orders.

   3/6. Preparing reports about studies presented by work teams to the Executive Committee.

   3/7. Undertaking any responsibility delegated [sic] by the Executive Committee.

D. Project Management

The project will be run by the project coordinator appointed by the Academy, and his assistant coordinator according to the responsibilities and authorities deligated [sic] to them by the contract signed between MOE and the Academy.

E. Working Teams

Working teams will executive the tasks required by the work orders that specify deliverables and schedules.

F. Project Implementation Process

The flow cycle of the project activities will be as follows, (figure 2):

1/1. The Technical Secretariat will be convened to study plans presented by the Academy.

1/2. The Executive committee will be convined [sic] to study the plans.

1/3. The Technical Secretariat presents their recommendations about the plans and work orders to the Executive Committee, who will issue the work orders after approving them.

1/4. Project management initiates execution of work orders.

1/5,6. Work teams are formed to do the studies and present alternatives for MOE's choise [sic] before carrying on training and workshops under the supervision of Project Management.

1/7,8. Project management presents findings and alternatives to the technical secretariat for review prior to the submission of deliverables to the executive committee for approval and dissemination.

Project Implementation Process

Figure 2 - Showing the flow cycle of project activities

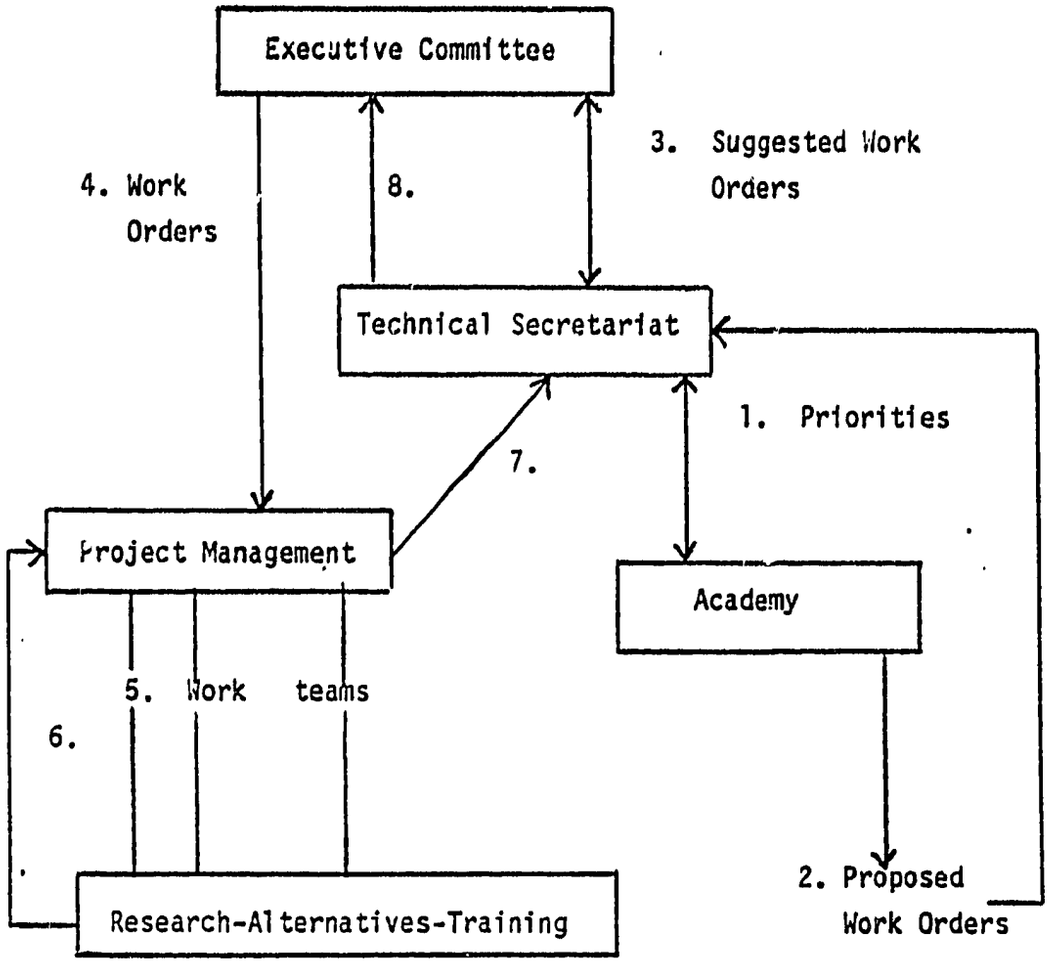

Figure 2.

WORKING PAPER NO. 2, THE OVERALL PLAN FOR THE

TECHNICAL ASSISTANCE PROJECT

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Technical Assistance for
Basic Education Project
Working Paper #2
Date: 14/5/1983

SUGGESTED PLAN FOR THE PROJECT'S STAGES AND THE ACHIEVEMENTS OF EACH STAGE

The General Framework

The project aims to advance technical assistance to the Ministry of Education which will enable it to apply the system of basic education and increase its effectiveness, as well as achieve its goals.

The Academy suggests that this technical assistance be carried out in the context of an intellectual framework in which goals, principles and theoretical concepts are mixed with the current reality of basic education, including in that both current possiblities and latent ones which could be made to emerge and utilized. On the basis of the adherence of the theoretical and intellectual to practical reality, it is possible to build various models which will be useful in the development of basic education.

On the basis of this concept, we suggest that the following stages be followed in the project's course:

The First Stage

The Basic Studies Stage

In this stage, two types of mutually complementary studies are to be completed which can be started at the same time. This will occur in the following fashion:

a) Goals and Standards

A work group will be formed to examine the basic goals of basic education as well as the various standards to be used in choosing the contents of the curricula and in organizing them, in preparing instructional materials and in determining the capacities and training of the instructors and their work manuals, and in determining the capabilities of the administrators and measuring the growth of the students. To accomplish this, analytical studies will be made of the following.

1. the Basic Education Law and related local statutes
2. research, reports and studies available in Egypt
3. the results of the experience of Egypt and other states

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4. the qualifications which must be possessed by the instructors and trainers

5. the quality of the curricula, decisions and supporting activities needed to achieve the goals of basic education, inclusive of both academic and practical studies

6. the results of basic education as represented in knowledge, skills, tendencies and varieties of student behavior

b) The Economics of Basic Education

The purpose of these studies is to guide spending on basic education. They comprise what follows:

-- basic instruction budgets and the extent to which their various clauses balance
-- current per student expenditure, and the means of controlling it
-- student activities
-- school sites
-- class density
-- study periods and the school schedule

The Second Stage

Preparing the tools with which the current reality of basic education can be studied. In this stage, there will be a profusion of work groups suited to prepare the necessary tools to describe the reality of basic education, characterize its various conditions, and learn its strong and weak points. These tools include the following:

-- Questionnaires to be sent to target groups in basic education (instructors, students, administrators and local leaders)
-- Experiments to measure the current state of student attainment, as well as their directions and current skill levels
-- Generalized interviews with a suitable sample of officials, instructors, administrators and local leaders
-- Laying the basis of an analysis of curricula content in its current and suggested forms, as well as instructional materials, teachers' manuals and instructional devices
-- An objective, empirical standards by which to measure the qualifications of instructors and administrators

The Third Stage

Testing samples of the study and training field researchers. In this stage, a suitable sample representing traditional and esxperimental schools will be tested, and in addition, a guidebook for field work will be prepared. Field researchers will be tested and trained.

The Fourth Stage

The Field Survey

In this stage, the field survey will be done under the supervision of the project's administration.

The Fifth Stage

Analysis of the results of the field survey and preparation of formal models. In this stage, the results of the field survey will be analyzed. These results will be correlated with the basic studies and transformed into practical needs in the areas of curriculum development, the development of the qualifications of the instructors and administrators, and the system of study.

This stage will end with the compiliation of formal models and substitutes relating to the following operations:

- -- Preparation of instructors in teacher training schools colleges of education
- -- Models for the development of academic and practical training curricula, as well as instructors' manuals
- -- Inservice training for instructors
- -- Standards for selecting school supervisors and for training them
- -- Devices needed for learning and instruction
- -- Activities to accompany basic education operations

The Sixth Stage

Testing and Application, and a desire to test the extent of the fitness of the models produced by the prior stage. In this stage, these models are to be tested as follows:

- -- Holding training sessions for a sufficient number of trainers who will take over the training of instructors and other trainers
- -- Holding training sessions for instructors and administrators
- -- Organizing quality workshops to prepare curricula, instructional materials and certain devices for learning and instruction, as well as instructors' manuals for practical and academic subjects

The Seventh Stage

The Final Results of the Project

In this stage, the project's administration presents the final results of the project in the form of formal curricula developed and tested with regard to their fitness. These are presented to the Ministry of Education in their final versions.

WORK PLAN

Study of the Situation

Economics of Basic Education. Budget Expenses - student movement - density

Study of the Situation

Review of studies, reports, laws and curricula dealing with basic education.

Setting standards helpful in developing curricula and preparing instructors, school admin. and instructional material.

Field study of sample of experimental and normal schools, comprehensive survey: student attainment, instructor qualifications - supervisor qualifications and school environment relationship - evaluation.

Review of curricula, instructional materials and current preparation and training programs.

Suggested alternatives and formal models of curricula, preparation, training, administration, and instructional materials.

Ministry of [illegible]ation

formal models

teacher training

Testing and Evaluation and Reviewing Models

Generalizing Models and Alternatives

TECHNICAL ASSISTANCE WORK ORDERS

EGYPT BASIC EDUCATION PROJECT
CONTRACT NO. EGY-263-0139 E-1
STATEMENT OF WORK

WORK ORDER NO. 2
Assessing the state of the Art
of Basic Education

A. OBJECTIVE :

To assess the state of the Art of Basic Education and develop a model for delivery systems.

B. DESCRIPTION OF SERVICES :

The Contractor shall appoint a committee of 3 consultants and 3 Egyptian experts who will establish philosophical bases and legal requirements for Basic Education by ;

1. Reviewing and examining all relevant studies, reports, experiments, policies and laws related to Basic Education in Egypt.

2. Assesing the curriculum for Basic Education in light of 1 above.

3. Suggesting alternative models for curriculam and delivery systems.

4. Establishing criteriar for selecting, preparing and training Basic Education teachers and school administrators.

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Draft reports will be submitted before departure of consultants. Final reports will be submitted one month later.

C. ESTIMATED LEVEL OF EFFORT:

PROFESSIONAL LEVEL	TOTAL PERSON DAYS
2 Curriculum Design and Development Consultants	58
1 Teacher Training Consultant	29
2 Curriculum Design Development Specialists	40
1 Teacher Training Specialist	20

D. PERIOD OF PERFORMANCE AND EFFECTIVE DATE:

This work order shall become effective upon the approval of the executive committee and the signature of the work order by the First Undersecretary of State for Education.

The Consultants will be in country within three months. The reports, alternatives and prototype of models should be delivered one month after the commencement of the working team.

E. BUDGET:

The Budget delineated below shall not be exceeded without the prior approval of the First Undersecretary of State for Education and Chairman of the Executive Committee.

2/ 6 / 1983

EGYPT BASIC EDUCATION PROJECT
CONTRACT NO. EGY-263-0139 E-1
STATEMENT OF WORK

WORK ORDER NO. 3
Educational Economics
of Basic Education

A. OBJECTIVE:

To study and assess the economics of Basic Education in Egypt and to suggest various alternatives to reduce per student cost and to raise the effectiveness of Basic Education by studying flow and drop out ratios, class size and school shifts.

B. DESCRIPTION OF SERVICES:

The Contractor shall appoint three experts and five researchers in the areas of economics of education and basic education who will:

1. Study the flow of students and the numbers of age groups in the various levels of Basic Education and suggest approaches to reduce drop out and repetition, study class sizes and school shifts.

2. Prepare projections for the coming development plan using a variety of planning assumptions.

3. Study the budget of MOE in terms of its effects on Basic Education tying numbers of teachers, students, administrators, equipments and supportive staff into an integrated system. Alternatives, will be developed based on cost effective teachniques to maximize use of funds.

Draft reports will be submitted and discussed with MOE officials prior to the departure of consultants. Final reports will be submitted one month later.

C. ESTIMATED LEVEL OF EFFORT:

PROFESSIONAL LEVEL	TOTAL PERSON DAYS
2 Educational Economists	63
1 Basic Education consultant	25
5 Researchers	50

D. PERIOD OF PERFORMANCE AND EFFECTIVE DATE:

This work order shall become effective upon the approval of the executive committee and the signature of the work order by the First Undersecretary of State for Education.

The Consultants will be in country within five months. The reports, and preliminary alternatives should be delivered one month after the commencement of working team.

E. BUDGET:

The budget delineated below shall not be exceeded without the prior approval of the First Undersecretary of State for Education and Chairman of the Executive Committee.

Individual cost items may be adjusted by a factor not exceeding 15% without the prior written permission of the First Undersecretary of State for Education.

The total direct cost line shall not be adjusted upward at all without the prior written permission of the First Undersecretary of State for Education.

EGYPT BASIC EDUCATION PROJECT
CONTRACT NO. EGY-263-0139 E-1
STATEMENT OF WORK

WORK ORDER NO. 4
School Designs
for Basic Education

A. OBJECTIVE :

To study the Basic Education School Design, and to suggest models using alternative materials and construction techniques to fit the environment and the philosophy of Basic Education in Egypt.

B. DESCRIPTION OF SERVICES:

The Contractor shall appoint two school design architects and one draftsman and four experts in Basic Education who will:

1. Survey a sample of current Basic Education School Buildings in relation to meeting the needs of Basic Education curricula and activities and suggest alternatives.
2. Survey local raw materials that can be used in the construction of new schools to reduce costs and be more adaptive to the environment.
3. Design alternate models for a nine grade Basic Education School. (Urban/Rural).
4. Present criteria for selecting materials, sites and requirements for different models for Basic Education Schools.

Draft reports will be submitted and discussed with officials before departure of consultants. Final reports will be submitted one month later.

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C. ESTIMATED LEVEL OF EFFORT

PROFESSIONAL LEVEL	TOTAL PERSON DAYS
1 School Design Architect (Foreign)	44
1 School Design Architect (National)	35
1 Draftsman (National)	10
4 Experts in Basic Education	12

D. PERIOD OF PERFORMANCE AND EFFECTIVE DATE:

This work order shall become effective upon the approval of the executive committee and the signature of the work order by the First Undersecretary of State for Education.

The Consultants will be in country within three months The reports, alternatives and prototype of models should be delivered one month after the commencement of the working team.

E. BUDGET:

The Budget delineated below shall not be exceeded without the prior approval of the First Undersecretary of State for Education and Chairman of the Executive Committee.

Individual cost items may be adjusted by a factor not exceeding 15% without the prior written permission of the First Undersecretary of State for Education. The total direct cost line shall not be adjusted upward at all without the prior written permission of the First Undersecretary of State for Education.

EGYPT BASIC EDUCATION PROJECT
CONTRACT NO. EGY-263-0139.E-1
STATEMENT OF WORK

WORK ORDER NO. 5
A Computer Based Planning Model
for Basic Education

A. OBJECTIVE:

To establish a computer based planning and monitoring model for data gathering, organization, simulation, and presentation of a variety of options for Basic Education in Egypt using an integrated data base.

B. DESCRIPTION OF SERVICES:

The contractor shall appoint a team of specialists as shown below to carry out the following five phases.

PHASE I: ESTABLISHING DATA BANK PROCEDURES AND DEVELOPING STRATEGIES.

(6 months: June 83 - December 1983)

Basic gathering and analysis of data including establishment of level of accuracy by governorate and district, with regard to: students, teachers, administrators, salaries, financial support, supplies and facilities.
Preliminary research on available options for Basic Education.

PHASE II: MODEL DESIGN AND MODIFICATION:

(3 months: January 84 - March 1984)

Formulation of a planning Model for Egypt

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based on available data and administrative structure. Custom programming on existing Ministry of Education computer or competable microcomputers for Arabic and/or English presentation and preliminary testing with actual data from governorate and districts. (Installing Hard Ware).

PHASE III: FULL IMPLIMENTATION AND PRESNTATION:

(4 months:April 84 - July 1984)

Loading of model with tested data from all governorates and districts for all categories, and development of major alternatives in terms of student mix, student/teacher ratio, teacher salaries and qualifications, levels of material support, school location and condition.
Presentation of complete model with major options to MOE officials and to other government agencies if MOE so desires.

PHASE IV : TRAINING

(5 months: August 84 - December 1984)

Completion of technical training for a selected group of 10 MOE personnel in maintenance of Model,updating information, and continued training of 5 other MOE personnel to become trainers of governorate personnel including key administrators, selected teachers and other governorate and district level personnel.

PHASE V : FOLLOW UP AND MONITORING

(6 months:January 85 - June 1985)

Monitoring the operation of the system and the outputs of the model. Help in discussing technical matters related to the maintenance and updating of the Model.

C. ESTIMATED LEVEL OF EFFORT:

PROFESSIONAL LEVEL	TOTAL PERSON DAYS
PHASE I:	
Computer Modeling Specialist	32
Educational Planner	32
Educational Planner (Egyptian)	20
2 Assistants (Egyptian)	20
PHASE II:	
Computer Modeling Specialist	32
Education Planner	32
Computer Specialist (Egyptian)	22
Educational Planner (Egyptian)	10
PHASE III:	
Computer Modeling Specialist	38
Computer Consultant	24
Computer Consultant (Egyptian)	30
PHASE IV:	
2 Computer Modeling Speicalists	90
2 Computer Consultants	90
Computer Consultant (Egyptian)	45
PHASE V:	
Computer Modeling Specialist	16
Computer Consultant (Egyptian)	10

D. PERIOD OF PERFORMANCE AND EFFECTIVE DATE:

This work order shall become effective upon the approval of the executive committe and the signature of the work order by the First Undersecretary of State for Education.

The Consultants will be in country within three months. The products of each phase will be presented and discussed with MOE personnel at the end of the phase. The Model and the trained personnel will be ready at the end of phase four.

E. BUDGET:

The budget delineated below shall not be exceeded without the prior approval of the First Undersecretary of State for Education and Chairman of the Executive Committee.

Individual cost items may be adjusted by a factor not exceeding 15% without the prior written permission of the First Undersecretary of State for Education.

The total direct cost line shall not be adjusted upward at all without the prior written permission of the First Undersecretary of State for Education.

EXCERPT FROM THE FINAL REPORT OF WORK ORDER NO. 2

G. Summary of Proposed Tasks

Exhibit IV.2 presents a summary of all activities, in process or planned, required for systematic implementation of Basic Education. The table incorporates the work that has already begun, dating back to 1980-81. Under the column "To Be Initiated" is work that needs to begin as soon as possible, especially as it relates to the first four stages of the curriculum development process. The implementation and quality control stages are long-term and are so indicated on the chart. For these two stages there are no special activities or workshops proposed at this time.

The column, "Proposed Workshop," indicates the general activity needed in order to provide direction and substance to the various stages of the curriculum change process. Some of these workshops have been described in more detail in the beginning of this section of the report. Naturally, more elaborate descriptions will have to take place prior to scheduling this series of workshops.

H. Priority Items and Recommendations

In this section of the report we are presenting a number of suggestions prepared by individual consultants and experts of the team. These suggestions follow from the analysis of the present state of Basic Education which constitutes the first part of the report. Also these recommendations seek to clarify further the section of the report which deals with alternative implementation models and delivery strategies.

Priority Needs for MOE

1. Enrollment statistics for grades 1-9 should be collected and available from MOE in order to establish, on a yearly basis, the rate of expansion in Basic Education. These data should include enrollments:

   a. as percentage of age group beginning with age six,
   b. by place of residence: urban, rural, desert, remote, etc.,
   c. by sex,
   d. by level of local socio-economic development.

2. School attendance statistics should be made available in aggregate form by (a) school, (b) sex, (c) place of residence, (d) level of socio-economic development. To establish the functionality of the school there is a need to develop an index of student and teacher absenteeism. The point is that while enrollments increase every year there is no evidence that daily attendance increases as well. MOE schools should develop a means to record average daily attendance (ADA) and transmit it to a central agency (as is done in the USA where school subsidies by the state are based on average daily attendance). Accuracy in reporting attendance should be obtained from all school administrators.

3. In addition to the statistics above, there should be accurate figures on drop-outs, repeaters, and those who fail various examinations. These statistics should be reported in categories as indicated in items 1 and 2 above.

4. On the basis of the figures above, the MOE would be able to establish whether or not Basic Education attends to the needs of its intended beneficiaries, as they are defined in earlier sections of this report.

Stages in Curriculum Development for Basic Education

(1980-1993)

Stages	In Process	To Be Initiated	Completion Date	Proposed Workshop On
Determination of Aims				
a. General and specific aims	80-84	Spring 84	Fall 84	Aims/Curriculum Organization (Summer 84)
b. Organization	80-84			
Planning				
a. Teacher Guides	-----	Summer 84	Summer 85	Teacher's Guide (Summer 84)
b. Basic Implementation Handbook	81-84	Fall 84	Winter 85	Basic Education Implement. Handbook (Winter 85)
c. Textbooks	84	Spring 85	Fall 86	Textbooks (Summer 85)
d. Student Evaluation System	84	Fall 84	Fall 85	Student Evaluation (Winter 85)
e. Teacher Training Program	81-84	Fall 84	Fall 86	Training of Teacher Trainers (Winter 85)
f. Field Schools	-----	Fall 85	Fall 87	Field Schools (Summer 85)
g. Teacher Centers	-----	Fall 85	Fall 88	Teacher Centers (Spring 85)
Try Out				
a. Judgemental data	-----	Winter 85	Winter 86	
b. Observational data	-----	Spring 85	Spring 86	
c. Revision	-----	Winter 85	Spring 86	
Field Trial	-----	86-87	86-87	Program Evaluation (Spring 87)
Implementation	------	87-88	On-going	
o Link with supervisors				
o Links with examination system				
o Links with teacher training				
Quality Control				
o Follow up/assess effectiveness		88-93	on-going	
o Update				
o New programming				

5. The MOE through its Center for Educational Research should conduct annual surveys of students to establish the reasons why some students decide to stay in school and some to drop out. These studies should not be as elaborate as the World Bank study of retention but should follow a similar format.

6. Evaluation studies of the results of Basic Education, perhaps combined with the surveys listed under item 5 above, should be carried out beginning in 1984. Some of these studies should be based on cohort follow up so that the pattern of student recruitment, training, retention, placement, etc.,is clearly established and the school performance of different groups (rural-urban, boys-girls) is carefully analyzed.

7. Given the products mentioned in items 1-6 above, the MOE should strengthen its documentation center using the most advanced technology. Presently, documents, materials, books, papers, pamphlets, circulars, etc., on Basic Education are scattered around in different offices and organizations. It is very difficult for any single office or person to know what the other one is doing. Therefore, it is imperative to collect all the documents in a central location and if possible to use microfilm or microfiche facilities to store them. Bibliographies of all available materials should be prepared and made available to authorized personnel. Enrollment and attendance statistics, should also be made easily available through the MOE's computer facility. Statistical yearbooks containing all this information should be made available on an annual cycle. The Republic of Cyprus, for example, and the United States, produce annually an educational statistical yearbook. As of the time of this writing, the yearbook for 1982-83 is available.

Curriculum Matters

1. The curriculum of the schools should be tailored to satisfy the aims of Basic Education.

2. The five aims of Basic Education should be translated into specific operational objectives. General terms such as good citizen, spiritual values, individual needs, relationships between theory and practice and between school and environment should be defined behaviorally.

3. "Brain stroming" seminars which include politicians, thinkers, philosophers, businessmen, professionals and practitioners in industry and agriculture, educators, consumers, humanpower authorities, parents, teachers, and pupils should be held to determine content relevant to the objectives of Basic Education.

4. Professional curriculum designers and developers can determine what content in their particular areas would contribute to these objectives.

   Only sections of the content—not entire subjects—should be included in the curriculum to the extent that they contribute to the objectives of Basic Education.

5. Courses of study should be classified as follows:

   a. Basics which are obligatory for each student all over the country, and
   b. electives which can be differentiated according to localities.

   Each course has to introduce a minimum of content/activities and enrichment portions which should not be required for all learners.

6. The school day must be lengthened, say, from 8 a.m. to 3 p.m., and schools should operate only five days a week. This suggestion is based on the assumption that new buildings and facilities will eliminate the need for double or triple shifts.

7. There should be coordination between local authorities and schools in order to use one or two days weekly to make field studies related to the community activities and to integrate formal with non-formal education. The organization can be flexible to make it possible to adapt schooling to seasonal farming activities in villages and rural areas.

8. Area vocational training centers should be developed around each group of schools to serve their vocational training needs. These centers can also be used as productive units in which the advanced learners can joint the operation as workers or interns according to their desire.

9. There should be a direct link between the curriculum and the local environment so that the school, itself, becomes a laboratory for teaching social studies. This will help students to acquire many of the required skills in light of the aims of Basic Education such as decision making, problem solving, and critical thinking skills.

Textbooks, Materials, and A-V Aids

1. Textbooks need to be rewritten to reflect the philosophy of Basic Education. All textbooks should be field tested prior to their use.

2. At the end of each textbook, one or more units may be developed in the form of a "work-project" which is linked to each subject, i.e., filtering drinking water in science; making a plan for a bedroom in geometry; writing a weekly budget for a family in arithmetic; making a map of a village in social studies, etc.

3. There should be a better selection of tales and illustrative pictures in the Arabic Reading books. Often workers and peasants look as if they are different people or "servants" rather than educated people with whom the learner can associate.

4. Descriptions of typical environments can be included in the textbooks. Statistics regarding local activities must be made part of these textbooks, i.e., planted areas, different seasonal crops, local products, etc. Also textbooks should provide special instructions for weekly or monthly visits of students to local centers of activities for observation purposes. Teachers should also make arrangements to have an open day each week or every two weeks in which the students actually participate in activities in the local enterprises and organizations. This operation can be coordinated with the local authorities.

5. Social studies, civics and part of the general science courses should address issues in real situations in typical environments. Textbooks may include different alternatives and areas of selections.

Facilities

1. Schools need to have more laboratories and facilities for use with the pre-vocational or practical subjects. Also additional equipment is needed, including machines, tools, etc., with an accompanying user's manual in Arabic.

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2. New school libraries should be created or those that are available should be augmented to include new books, periodicals, and other suitable references for both teachers and students.

3. Each school should have access to A-V materials selected from readily available catalogues. The gap that presently exists between the new curricula and A-V materials should be remedied.

E. Staff

1. Specialized librarians specially trained in indexing and classification should be in charge of school libraries.

2. Supervisors should develop new competencies so that they may be in a position to help teachers evaluate their own performance levels. For example, they can be trained in the use of observation cards as well as observation schedules for analyzing verbal and non-verbal interaction patterns. Through these means the newly-trained supervisor should be in a position to assist teachers in their lesson plans, classroom methodology, and evaluation of student progress.

3. Ask teachers to visit regularly the "field schools" in their districts and as a result, prepare plans to improve their teaching methods using small-group activities and student individual participation in their own learning.

4. Through short-term workshops associated with visits to the field schools, provide opportunities for teachers to learn test construction or other measures of student achievement not based on memorization. Teachers should learn how to expand the measurement of student achievement to go beyond the cognitive and include the affective and pyschomotor domains of Basic Education.

5. Authors of textbooks and other materials need to be trained in seminars, workshops, or simulated environments, on refining their skill in writing material which relates knowledge stemming from the traditional disciplines to daily life.

6. Selected teachers should be given additional training in order to develop the appropriate skills to participate in the development and refinement of the national Basic Education program and the new textbooks accompanying it. Teacher participation in this process is very important since he/she has original insights of the learner's needs, interests and abilities. The teacher should not merely be the local executor of the "experts'" wishes at the central level.

7. Basic Education teachers should be trained to use local resources as a means for bridging the gap between theory and practice. For example, they should develop ideas about the creative use of the students' summer vacation so that they may participate directly in the work of local firms, farms, and other productive units. Students' work performance in the summer may be applied toward their overall school progress during the regular academic year.

8. Teachers should be trained to use student rewards (such as those described in No. 7 above) which go beyond the traditional grading system.

should be on providing techniques and materials and then have the trainee placed in situations where he decides which methods and materials are the most appropriate.

Problem resolution does not dictate instruction methods. It forces the trainee to develop instructional techniques which are related to the nature of the problem at hand. It encourages teachers and pupils to view new situations with an open mind focusing on problem resolution rather than absolute knowledge. Only under such circumstances can a teacher become a change agent. Trainees taught in this innovative manner will pass these reasoning skills on to their pupils.

All learning processes in the problem resolution approach involve four steps:

1. **Input:** The assimilation of information, concepts and principles.

2. **Utilization:** The selection through synthesis of the input.

3. **Output:** The application of information structured in the utilization phase.

4. **Evaluation:** The evaluation of the output in terms of validity, reliability, utility or refined perception.

Recommendation:

Utilizing the Problem Resolution Approach Within the Context of the Instructional Systems Model (Model 3)

It is the recommendation of this study that the aims and goals of the Basic Education System in Egypt would be best served through the implementation of the problem/resolution approach. This model (Model III in the previous section) promises the greatest probability for success in today's circumstances.

This is not to say that the other models are not suitable, since each has its own advantages and unique features, but the systems approach offers the best synthesis flexibility and responsiveness to the community, combined with concentration upon instructional management and leadership which the changing educational system in Egypt demands.

The following section details the strategies for implementing this approach as a new method for training Basic Education teachers and administrators.

Strategies for Implementing the Recommended Approach

In order to reform the current Teacher Training System in Egypt, these approaches are suggested:

- As the Basic Education in Egypt Report of 1979 recommended, teacher training should be developed along with the curriculum, the textbooks, instructional methods, student evaluation, and program experimentation. Those who are also engaged with such development and field testing work in the MOE should be asked to participate in teacher training as well. One recommendation is to train teachers of teachers and to build upon the in-service training and teachers' centers concept.

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- Such work should be cooperatively linked and more closely developed between TTIs and Faculties of Education.

- Teacher's centers, in association with the existing field and demonstration schools, should be used for field testing, experimentation, and development of new curriculum materials and evaluation procedures. In doing this, an important link would be created between teacher training (pre-service and in-service), curriculum, instructional materials development, and the instruction of teacher trainers.

The priorities for reform (although in many respects, all have high priority) should be as follows: (1) develop an effective program for TTI's and Faculties of Education so that their graduates can carry on the objectives of Basic Education; (2) develop a short range and long range in-service training plan for teachers and administrators of Basic Education; and (3) develop national, regional, and local teachers' centers in order to continue quality educational activities for the improvement of instruction. For more discussion on this topic, see Razik (1972 pp. 126-135). The following pages detail the implementation of these strategies.

Exhibits V.1 and V.2 below relate learning goals to curriculum components and sequence presentations during the four-year period.

Exhibit V.1
Basic Education Teacher Training Curriculum Pre-service Component

	Theoretical Components of the TT Curriculum					
Learning Goals Teacher Trainees	Liberal Ed.	Social Values	Hum. Develop.	Teaching Theory	Methods & Cur.	Professionalism
Evaluation	3A	3A	3A	4B	4B	4B
Application	2B	2B	2B	4B	4B	4B
Organization	2A	2A	2A	4A	4A	4A
Assimilation	1A-1B	1A-1B	1A-1B	3B	3B	3B

Note: Numbers in boxes = initial year of components to be studied
Letters in boxes = A = First term, B = Second Term

- More of the information giving and correcting functions normally performed by the teacher. This allows him to put time into other functions such as group discussion, counselling and guidance.

- As the teacher develops control over these procedures he becomes more proficient in the understanding and use of the system involved. New teaching skills thus focus on methodology, which affects both pre- and in-service teacher training.

- Developing technical competencies require differentiation of new professional roles.

The alternatives for upgrading the current system:

- Upgrade TTI instructors to the same level as the Faculties of Education. There are currently approximately 88 TTI's.

- Give all teacher training responsibilities to the Faculties of Education. This approach would place tremendous strain on these Faculties, since approximately 26 of them would have to absorb the responsibilities of the 88 TTI.

- Integrate the TTI and Faculties of Education with modifications to the roles of each. This last approach would seem the best solution to the current situation in Egypt, considering the great need for teachers, and the limited training staff. This approach envisions a total teacher training system with the research and theoretical approaches of the Faculties of Education being carried out in teacher training programs at TTI's.4/

Of course, in any of the above alternatives, cooperation and close communication is essential between Faculties of Education, TTIs, Teachers' Centers, Ministry of Education, National Education Research Center, Curriculum Development, Textbooks, Examination Department, Instructional Materials Centers, and the Education National Manpower Planning Committee.

To carry out this plan, several phases are necessary:

1. Upgrade the skills of TTI staff and Faculty of Education staff to enable them to teach these new approaches. It is suggested that a workshop or series of workshops be provided for introducing the concept of teaching as facilitating learning, and how this applies to various subject areas and grade levels.

2. Develop administrative Instructor Guide Manuals for each subject area at all levels. These Guides should suggest a variety of approaches for teaching each concept so that teachers will have more options in implementing these new ideas.

4/ For a longer range of alternative administrative units of training see Appendix H, prepared by Dr. Said Kheirulla, a member of the team.

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3. Workshops should be provided for supervisors and headmasters regarding new criteria for evaluation of teacher performance. These criteria should be measurable and should be directly related to the new roles of teachers as discussed in this report. In-service training should be immediately arranged for teachers who fall short of the criteria during this evaluation process.

4. Over a period of no more than 10 years, establish specific restrictive guidelines to prevent teachers without professional skill development in instruction from entering the teaching field. Diplomas and/or certificates should be required, and the changeover can proceed as follows:

   a. Require all teachers of grades 1-9 to be trained by a combination of TTI's and Faculties of Education. In this approach, the TTI is to be merged into the Faculties of Education so that no impact will be felt on the number of staff necessary to train increased numbers of teachers. The Faculties of Education and TTIs will work closely with each other to provide both academic and practical teacher training courses,(in addition, Faculties of Education will assume full responsibility for training secondary teachers).

   b. Discontinue the distinction between practical and academic specialty areas. Teachers who select academic majors should be required to minor in a selected practical subject and vice versa. This will produce a pool of generalists which can be tapped to provide instruction in various areas as national, governorate, or local community needs dictate. This will also intensify the relationship between practical and academic concepts as required by the Basic Education law. As this approach is implemented, no persons without a certificate from a TTI or Faculty of Education should be allowed to commence teaching. Existing practical subject teachers should be upgraded with professional training from TTI's if they do not already possess teaching diplomas.

   c. Through the Teachers' Centers, as well as the TTI's and Faculties of Education, provide inservice training to existing teachers following an assessment of those areas in which they need to improve their professional skills. (See Item 3 above pertaining to teacher skill evaluation).

   d. Continue to monitor and evaluate teacher skill, providing re-training as necessary. After several years, the teacher population will be gradually up-graded to enable them to more skillfully apply Basic Education concepts. With the additional restrictions for professional training and re-training, the caliber of teachers nationwide will improve greatly.

The proposed system of training teachers is featured in Exhibit V.3.

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Exhibit V.3
System of Training Teachers

Teaching Level	Pre-Service Training	In-Service Training
Grades 1-9	4 years training administered jointly by Faculties of Education and TTI. Teaching Certificate to be issued (Basic Ed. Div.)	On-going through Teacher's Centers and TTI Special Programs
Secondary Schools	Colleges of Education Diploma (from the "Secondary Schools Division")	As appropriate

The Evaluation Component 5/

It is proposed that, in conceptualizing an integrative-responsive model to improve educational evaluation all of the major features discussed in the preceding pages should be incorporated. Whereas the primary components of the proposed evaluation model are **program evaluation, student evaluation,** and **teacher evaluation,** it is not implied that other factors such as teacher education, salary, structures, quality of educational facilities, etc. have no effect. Rather, these primary components are the particular focus of this report.

One of the difficulties involved in the re-design of evaluation processes is that educators, students, and parents in Egypt are firmly convinced that final examinations are summative. On the contrary, final examinations measure only a small part of what a student knows or what a teacher has been successful in conveying. A first step needed in the construction of a new evaluation model is to clarify misconceptions about what already exists.

The relationship between learning objectives and final testing is indirect at present, if it exists at all. The time lapse between instruction and examination is so long that students tend to lose their sense of what is important. Even if final examinations were so well constructed as to "cover" all information in a particular course, they would still not be summative. The term summative, derived from summary, means that a **summary** of all classroom assessments, test scores, performance measures and other pertinent information about a student's achievement is prepared at the end of each year.

Equally difficult for teachers, students, and others to understand and implement is the concept of formative evaluation, which enables teachers to use diagnostic measures,

5/ Evaluation here can be applied not only to the evaluation of trainees, but also to the overall evaluation of the program and the Basic Education system as a whole.

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E. Concluding Remarks on the Management of Educational Change in Egypt

It should be considered that the impact of change in Basic Education is a powerful force with which the Teacher Training Institutes and Faculties of Education must deal.

The last sections of of this report identify the need for diagnosing the problems facing teachers prepared to enter Basic Education and Teacher Training Institutions and also identify conceptual frameworks for developing alternative models for applied change in the Basic Education system of Egypt. Ideally, the educational community should be concerned with the need for planned change and the methodology which may be employed to bring about such change. If such a consensus cannot be achieved, it is still possible to meet the challenge through efforts on the part of affected subsystems, regional governorate partnerships, Faculties of Education, Teacher Training Institutes, In-service training centers, the National Educational Research Center, and schools.

The question is: how can the Basic Education system of Egypt or its subsystems implement gradual and permanent changes and how can it become self-renewing? The answer to these questions (as shown in this report) lies in problem resolution which requires analysis, structure, planning and purpose. It must also view the teacher as change agent. This requires new direction and new designs in teacher training, which should proceed from a model providing causative and process guidelines for a new foundation of educational methodology.

As change agents, there are four critical roles that Basic Education teachers in Egypt must play:

1. A catalyst who applies pressure to galvanize the Basic Education organization into action.

2. An expert who not only has a grasp of the possible solutions, but is able to present and apply them with tact and good timing.

3. A supportive person in the process of change who helps the system identify and define needs, acquire resources, and create, adapt, implement and evaluate solutions.

4. A coordinator of resources who can bring together people, facilities, money, ideas, and energy. The change agent may effect change from outside the training institutions once decisions for change have been made.

Therefore, it is a priority for teacher training programs for Basic Education in Egypt to prepare candidates for their new roles.

The primary agents for change must have the decision making power which enable old guidelines, programs, and goals to be replaced with new. But the principle environment where change must occur is at the pre-service and in-service levels of teacher training. There should be six stages of change:

1. First, a working relationship with the recipient of change (Basic Education system) must be developed. An essential ingredient to the viability of this relationship is the assistance or help which the change agent (teacher) may be either authorized and/or willing to provide.

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2. Once the client system (Basic Education) has accepted the change agent, the change agent must assess client needs and find a way of making the client aware of these needs. Finally, the change agent acting in this stage of diagnosis must assist the client system in defining the needs identified.

3. Once problems are defined, one must then identify and secure the resources necessary to enable solutions.

4. With the problems defined and resources made available, it is then necessary to identify possible implications, develop a set of alternate solutions, and decide on the solution or solutions which will be best for the system.

5. Solutions must be presented to the system through discussion, demonstration, and other means of open and clear communication to gain system acceptance of the innovation. This requires the ability to tap innumerable resources and to coordinate the stage of acceptance through leadership combined with effective communication. If communication and leadership are provided, the client system will develop the attitudes and behaviors necesary for support of the innovation.

6. The client system should implement the innovation through self-renewal. The most effective method for accomplishing this goal is based upon a minimax rule--minimum effort with maximum results. Members of the client system must be trained in the skills, behaviors, and attitudes necessary to become effective change agents, reacting to outside influences from within the system.

This process is compatible with, supportive of, and reflected through the position and precepts presented in this report. Change must occur in teacher training programs, and that change must embody a process for developing individuals who are capable of dealing with, managing, and effecting change while skillfully performing the active tasks of interactive classroom teaching behavior. It is believed that the steps outlined in this report to bring about this process will achieve the philosophies, aims, and objectives of Basic Education in Egypt. Mutual cooperation with attention to the physical facilities necessary to adequately support the approach will be the key to guiding this system to successful atainment of its goals. Change may be uncomfortable and costly, but it is essential to provide the social progress necessary in future generations of Egyptians. Unless these changes come from the Faculties of Education and the TTIs, the program of Basic Education in Egpt will eventually fail. These institutions must lead the way in spear-heading the long-range improvement in administration and instruction, and they must begin this process through internal change.

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APPENDIX C FROM WORK ORDER NO. 2

THEORETICAL PAPER BY

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Appendix C

Practical Subjects

Prepared by
Dr. Abo Bakr Abdeen Badawi

Basic Education aims at changing the educational system in Egypt. A special concentration is given to what is related to skills acquisition. Article 16 of the Law 139/81 identifies the aim of Basic Education to be "knowledge and practical and vocational skills that are in harmony with the conditions in their respective environments."

Article 17 of the same law breaks this general aim into five specific aims. Four of these five aims are related to practical skills in one way or another.

Throughout the documents related to Basic Education, several terms are used as if they are interchangeable. Some of these terms are: prevocational, practical, skills, skilled and semi-skilled. To clarify these terms and to derive a curriculum for the practical subjects, we need to review the following:

1. Development of career choice and skills.

   - Stages of career-vocational-development
   - Stages of skill acquisition by learner

2. Objectives and meaning of:

   - Prevocational education in elementary schools
   - Prevocational education in middle schools
   - Vocational education

3. Curriculum model suggested for practical subjects integrated with other disciplines.

4. Teacher preparation for instructing the suggested curriculum.

<u>Developmental View</u>

Work has always had the potential of meeting more than the economic needs of a person. Choice of work is a complex process. Social and economic factors affect the choice of individuals but their age is the most important factor. Several approaches have been utilized to explain this process, the most inclusive of which has been the developmental approach. This approach views the choice of work as a developmental process—not a single decision—each stage of this process linked with the life stage of the individual.

Five stages have been identified by a number of researchers—Super, Ginzberg, Buchler, Lazarsfeld, etc.—these stages are as follows:

1. <u>Growth Stage</u>

   - Fantasy substage age 4-10
   - Interest substage age 11-12
   - Capacity substage age 13-14

2. <u>Exploration Stage</u>

   - Tentative substage age 15-17
   - Transition substage age 18-21
   - Trial substage age 22-24

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3. Establishment Stage

- Trial substage 25-30
- Advancement substage 31-44

4. Maintenance Stage

- Age 45-64

5. Decline Stage

- Declaration substage age 65-79
- Retirement substage age 70 on

Since we are dealing with Basic Education (age 6-15) we need to clarify the meaning of the growth substages—fantasy, interest, capacity—and the exploration stage.

Grade	Developmental Stage	Work Choice
1-4	Fantasy	• choices are changeable and encompass a wide range of items • choices are not guided by any consideration of reality
5-6	Interest	• choices are related to interets but not to their capabilities • range of choices is narrower
7-8	Capacity	• choices are related to capacities • range of choices is again narrower
9	Exploratio	• choices are tentative • students start exploring occupations

We can conclude that in view of vocational and career development, Basic Education is expected to help the students to identify their interests, capacities and identify the available opportunities in the world of work. This type of education can be

called to "know about." Some prefer to call it pre-vocational education, others call it vocational education. Both agree that it is a "know about" type of education.

Stages of Skill Acquisition

Industrial psychology researchers have identified four stages in which the trainer or learner passes to acquire a psychomotor skill. Field specialists suggested the suitable strategies for training through each stage. They are as follows:

Stage of Skill Acquisition	Learner Behavior	Suggested Strategy of Training
Introduction	• like to know about	• verbal and audio-visual introduction
	• not confident of skill performance	• modeling
Skill Acquisition	• like to perform	• follow-up of a step to step performance
	• not confident to move from one step to another	• identify points at which learner moves from one step to another
Skill Upgrading	• like to perform the whole skill	• coaching skill performance point out judgement rules
	• look for points of judgement	• stress training
Mastery of Skill	• stress saving of time and materials	• clarify points affecting quality, cost, etc.
	• automatic feedback from other senses	• stress training and repetition for mastery

We can conclude that psychomotor skills can be acquired in a series of stages, most of these stages being "learning by doing," with emphasis on how to perform each step and how to proceed from one step to another. This type of education can be called

to "know how." Some prefer to call it vocational education, if the learner intends to find a job with these skills, and call it industrial arts, if the learner does not intend to find a job (not saleable skills).

Basic Education and Pre-Vocational Education

The draft report has already covered the definition and aims of Basic Education. We now try to identify prevocational and vocational education and find out how they relate to Basic Education. Prevocational education can and should begin in elelmentary schools—the first stage of Basic Education—and continue through the middle school—the second stage of Basic Education.

The fundamental purposes of the prevocational education in the elementary stage should be:

1. To familiarize the student with his world.

2. To help the student discover himself.

3. To help the student discover the intellectual tools and rational habits of thought that give meaning to a satisfying occupational role in society.

Based on these aims, the objectives of prevocational education in the elementary school will be: "the cognitive information and affective awareness that there are a variety of ways to make a living, that within each occupation there are numerous jobs, that man has dignity and his job contributes to that dignity, and that there is an interrelationship between jobs and occupations."

From the available activities in the elementary school, field trips, games, dramatization, movies and the like are the most appropriate for achieving the goal of prevocational education. We do not need to stress practical manipulation in this stage since skill acquisition is not one of the objectives of this stage. Two keys for achieving such objectives are suggested by Thompson1/:

1. New teacher orientation
2. New curriculum materials

In the second stage of Basic Education, prevocational education will continue. The main objective of this stage is, according to Borow2/: "Acquiring of basic habits of industry." This can be achieved through:

1. Each individual obtaining a broad, fundamental understanding of the world of work;

1/ John F. Thompson, Foundation of Vocational Education, Englewood Cliffs: Prentice-Hall Inc., 1973, p. 241.

2/ Henry Borow, ed., Man in a World of Work, Boston: Houghton Mifflin Co., 1964, p.216.

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2. Each individual obtaining a personal sense of his ability to control and manipulate his world.

The above can be realized by having the students work with materials. Interdisciplinary units rooted in a child's knowledge enlist his reasoning power, deepen his understanding, and open new vistas for exploration.

Teaching of saleable skills is not the objective. This fact coupled with the facts given earlier leads to the conclusion that a laboratory-oriented course with open ended experiments will be the appropriate choice. The student must discover—through real experience—the need for mathematics as well as other basic subjects. Again, new teacher orientation and new curriculum materials are basic to change.

The International Development Bank report agrees with this notion: "The General Knowledge for age 12-15 must consist of vocational knowledge but not preparation for a specific job. This should be one of the foundations for Basic Education."3/

Vocational education programs at the high schools level tend to develop skills for useful employment. These programs relate school work to a specific occupational goal but involve more than training for specific job skills. In this view, vocational education tends to help the student go through the stages of skill acquisition as mentioned earlier. The emphasis of these programs is on performance, i.e., students must know "how" to perform. Strategies for instruction are directed toward achieving mastery. Learning by doing and repeating until mastery is achieved is the focus of these programs.

Having this review of the definition and appropriate activities of prevocational and vocational education, we may conclude that Basic Education as specified by the Law 139/81 is more or less a prevocational education program. Table I shows the objectives, aims and learning activities of Basic Education prevocational education and vocational education.

3/ International Development's Bank Report, August, 1975.

Table I

Education	Basic Education	Prevocational Education	Vocational
Main Objective	Developing the abilities and aptitudes of students	1. Acquiring a realistic picture of the world of work 2. Acquiring the basic habits of industry	Develop skills for useful employment
Aims	1. Emphasizing religious and national education 2. Emphasizing the relation between education and productive work 3. Establishing a closer link with the environment 4. Achieving integration between the theoretical and applied aspects 5. Linking education with lives of rising generations	1. Cognitive informtaion about the world of work 2. Affective awareness about the world of work 3. Acquiring the basic habits of industry	Develop psychomotor skill Relate school to work
Main Learning	Not defined clearly	• field trips • role playing • dramatization • working with materials "lab oriented"	skill training

Curriculum

Several approaches to curriculum design in elementary and middle schools with implementation of prevocational programs were studied. The following model is suggested by the writer in view of the objectives of the stage and the available teachers. Special attention is given to the proposed integration between theory and practice. This quest led to learning situations where integration is natural.

Grades I-A

Objective: Cognitive information and affective awareness of self and world of work.

Student: In fantasy stage.

Teacher: A self-contained classroom teacher.

Learning Activities: The program would not be divided into disciplines. Instead, a large number of small interdisciplinary units covering a broad range of the world of work would be developed to relate to the different environments of Egyptian society. Each unit would consist of a group of well designed student activities, teacher roles, necessary materials, and methods of evaluation. The unit would allow the teacher to choose according to the student's environment. Meanwhile, students would be able to choose according to their interests. Field trips, dramatization, movies, role playing, etc. would be the media of instruction.

Example:

Preparation of Building Foundation

Activities:

- Visiting a building area where digging for a foundation is carried on
- Students measure the dimensions of the building
- Students report what workers do
- Students use a compass to find the directions
- When back at school students will be asked to:
  - draw what they observed
  - calculate the area, volume, etc. of the place
  - count the necessary materials, cost, etc.
  - conduct a discussion session
  - write about the trip and related activites

Method of Implementation: The minicourse approach

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Evaluation: Continous assessment by teacher observation, written exam, attitude scales, etc.

Grades 5-9

Objective: To acquire the basic habits of industry.

Students: Show an interest and capacity to perform in the tentative stages

Teacher: Subject matter teacher with strong background in the fields of practical subjects.

Learning Activities: Well-designed integrated activities are to be offered. Separate disciplines are to be taught but through an integrated approach. Books, teachers, student activities, practical and theoretical components are to be integrated. Some activities as those mentioned for grades 1-4 are to be used with added practical manipulation. For example, a metal casting assignment can be given to students in practical subjects. It must be an open-ended assignment where students choose the shape, material and size. Meanwhile the whole school system will integrate their points into this work. The science teacher would be dealing with metals, melting points, etc. The mathematics teacher would apply both math rules in profit and loss calculations, and so on.

Method of Implementation: Infusion approach

Evaluation: Continuous evaluation through teacher's observation, written exam, attitude scales, practical performance, etc.

Teacher Preparation

Practical subjects would not be isolated from other activities and disciplines. Meanwhile the objective of teaching practical subjects would not be a skilled or semi-skilled worker preparation. We do not need a highly skilled teacher in practical subjects.

Our suggested teacher is one able to integrate his/her subject matter with other subject matter as well as practical subjects. He/she must be able to guide his/her students in their career choice process. This can be realized through a special program in colleges of education aiming at building the four principal foundations of the teacher:

1. Career guidance abilities.
2. Subject matter knowledge.
3. Practical field knowledge.
4. Pedagogic repertory.