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.)

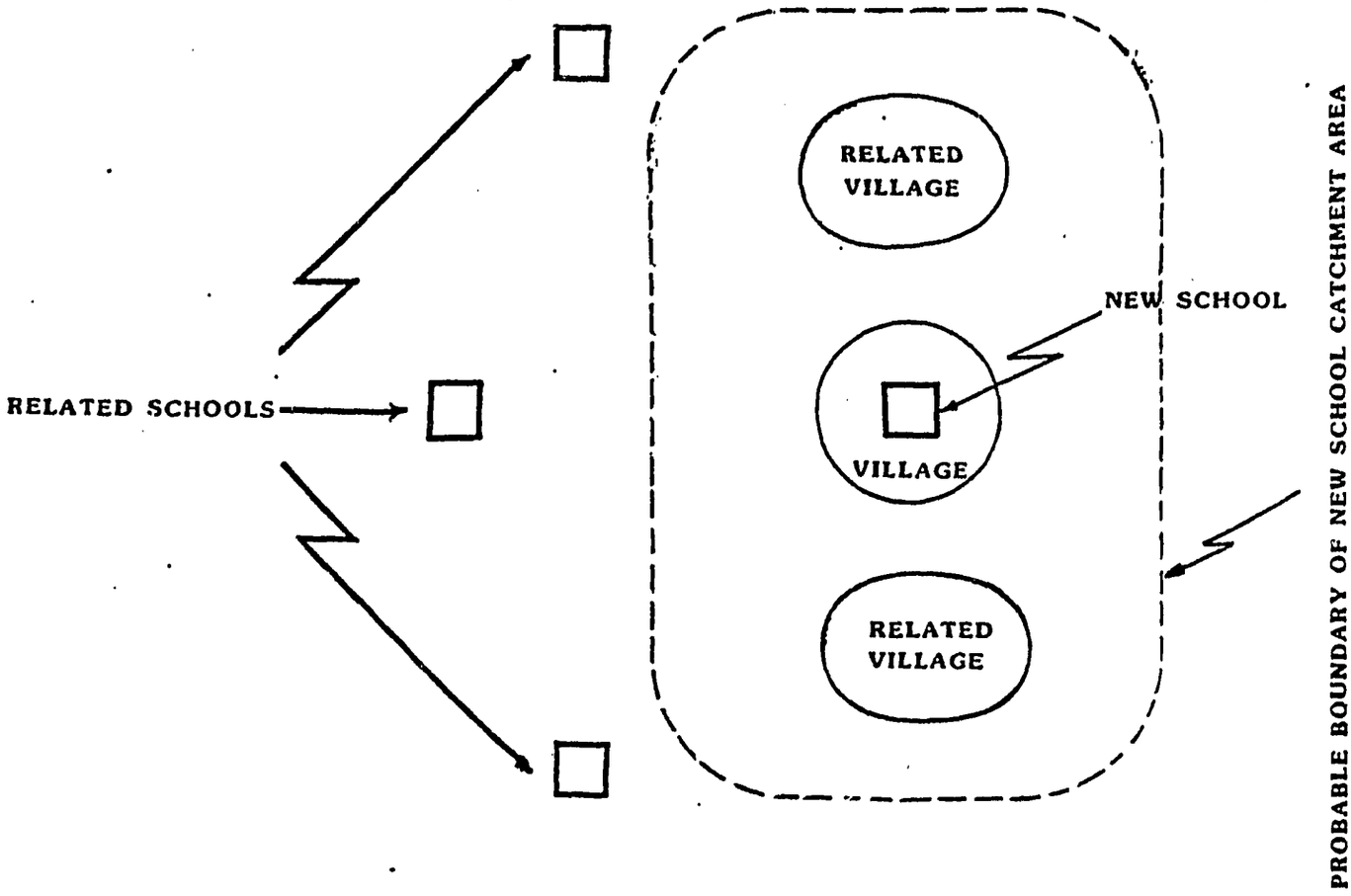

FIGURE i-2: DIAGRAM OF TYPICAL NEW-SCHOOL SITE

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 MAWANI A	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.

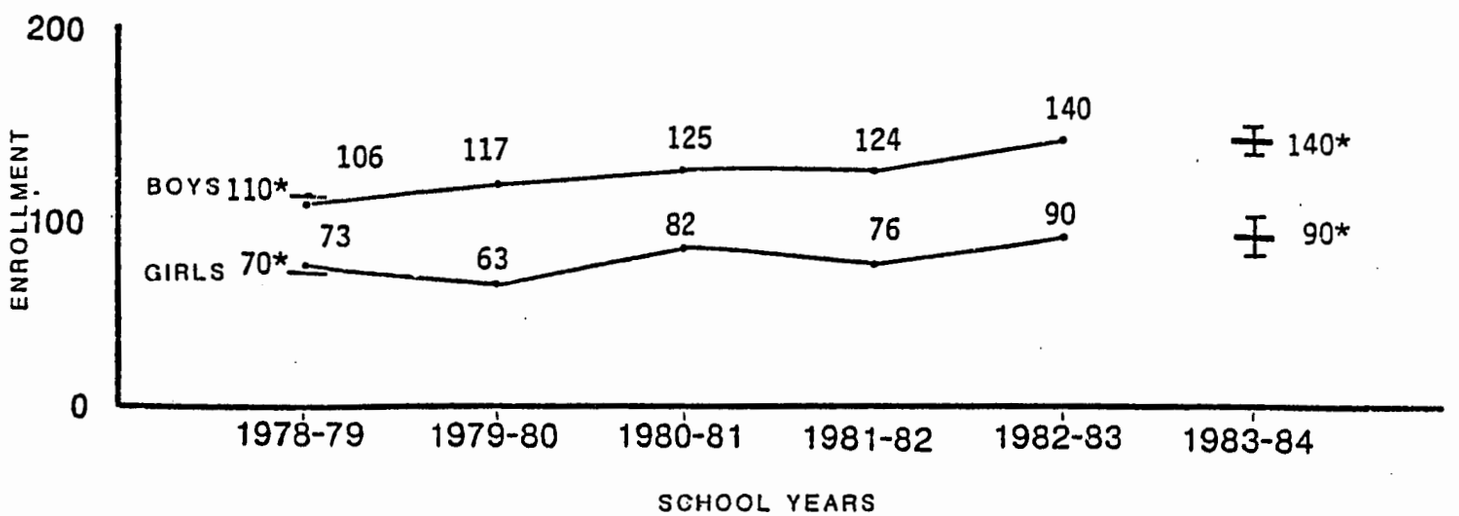

FIGURE I-24: TRENDS IN TOTAL ENROLLMENT FOR GRADE ONE IN SCHOOLS RELATED TO NAG DAHI (621)

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

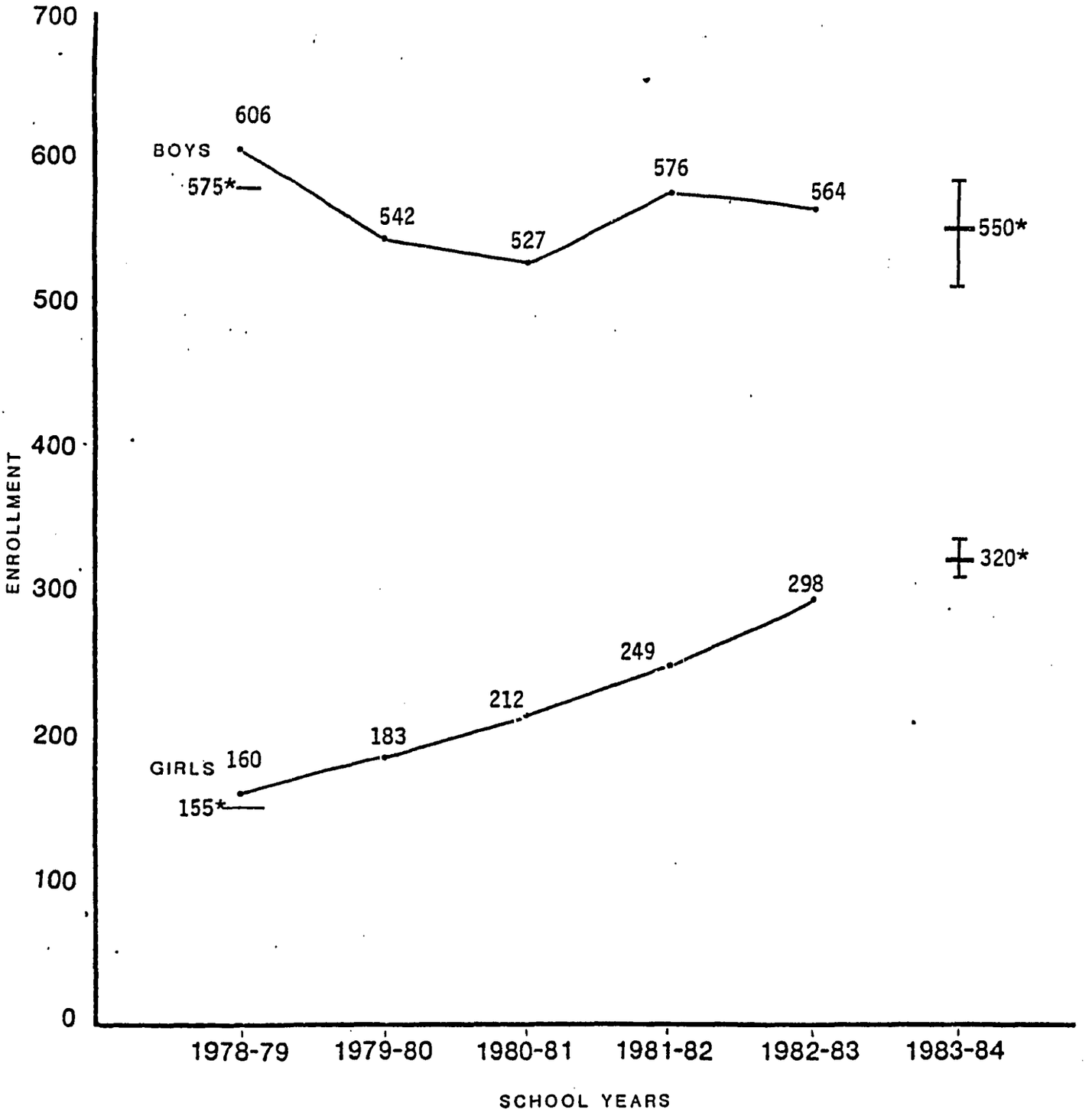

FIGURE I-25: TRENDS IN TOTAL ENROLLMENT FOR GRADES 2 THROUGH 6 IN SCHOOLS RELATED TO NAG DAHI (621).

*** = 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 INCLUDING 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.)

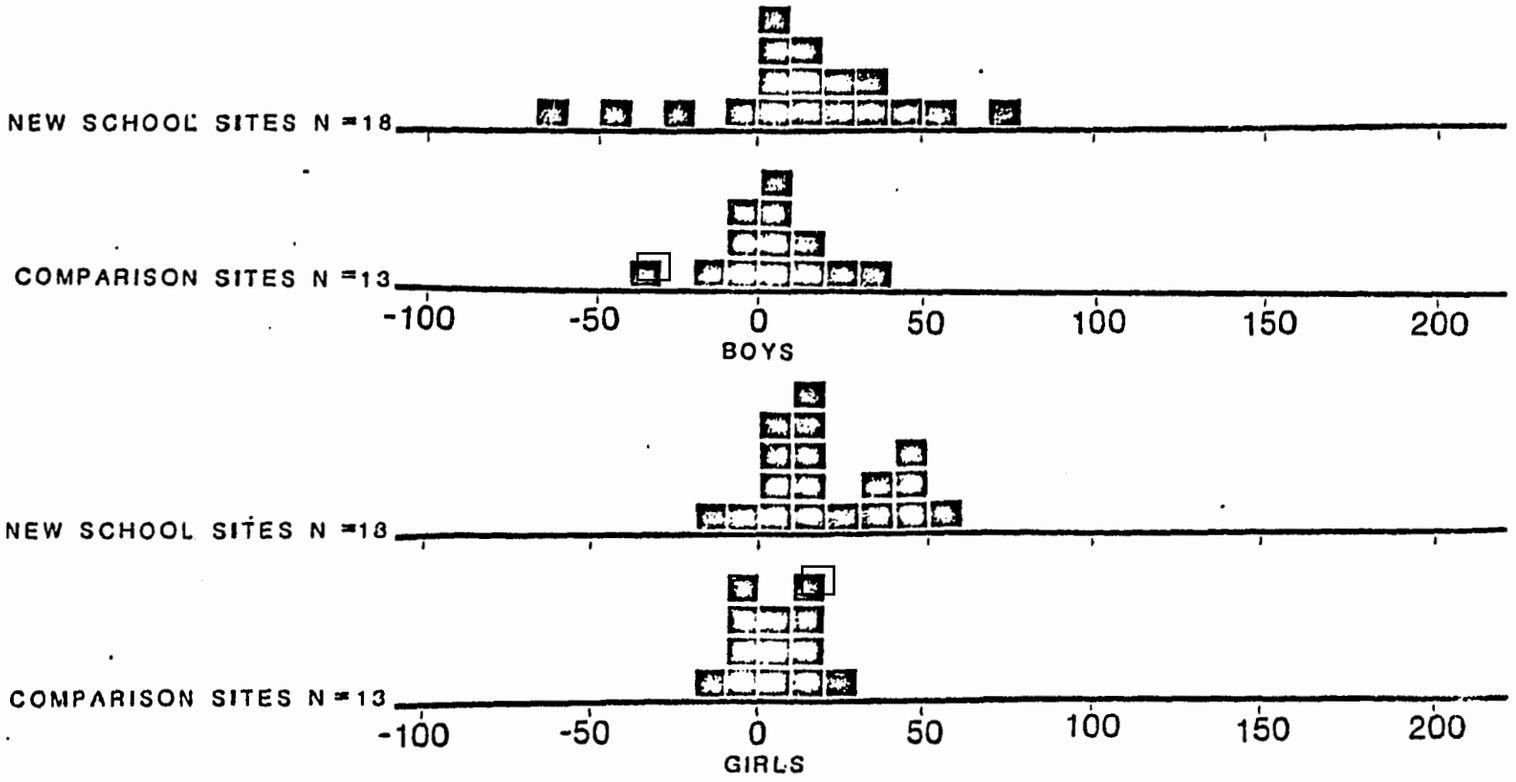

FIGURE I-26: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON BOYS AND GIRLS IN GRADE ONE

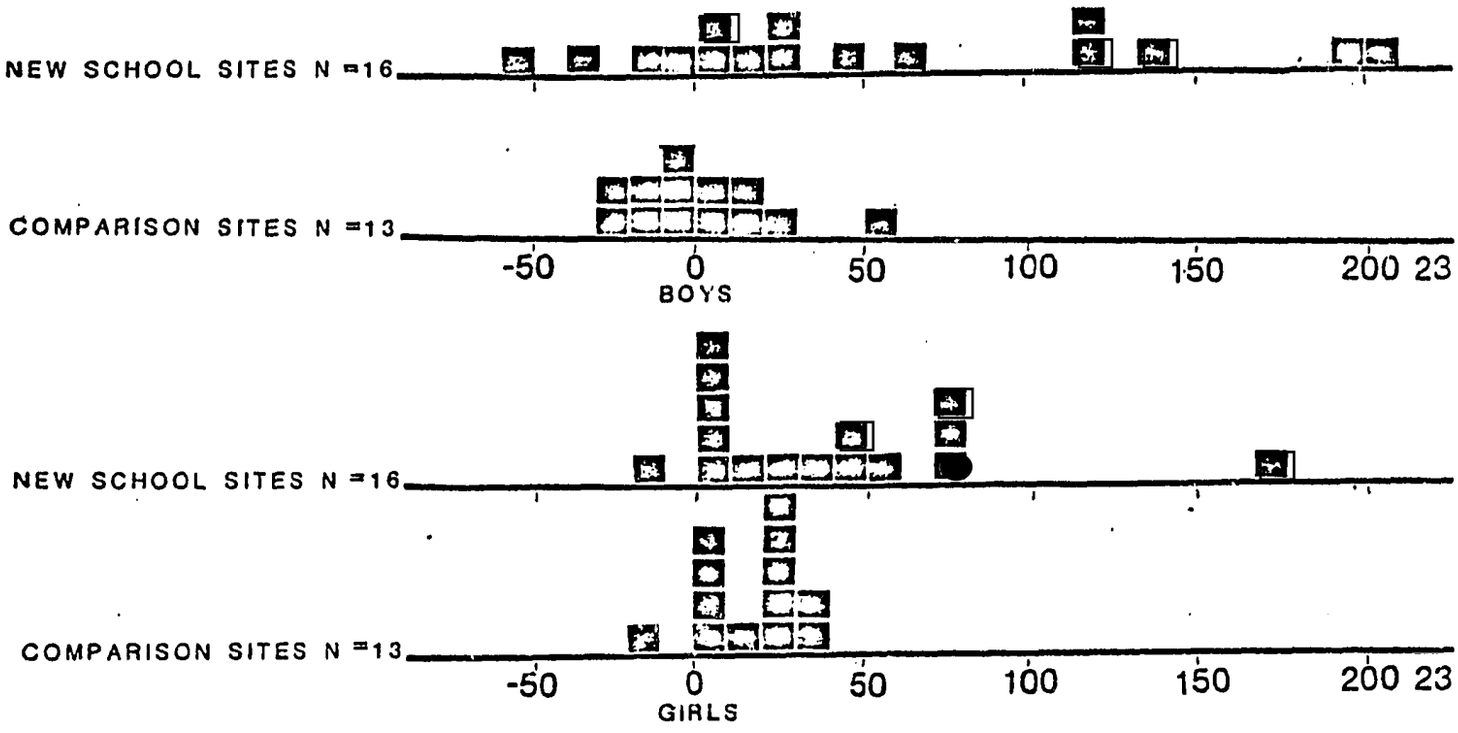

FIGURE I-27: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON BOYS AND GIRLS IN GRADES TWO THROUGH SIX

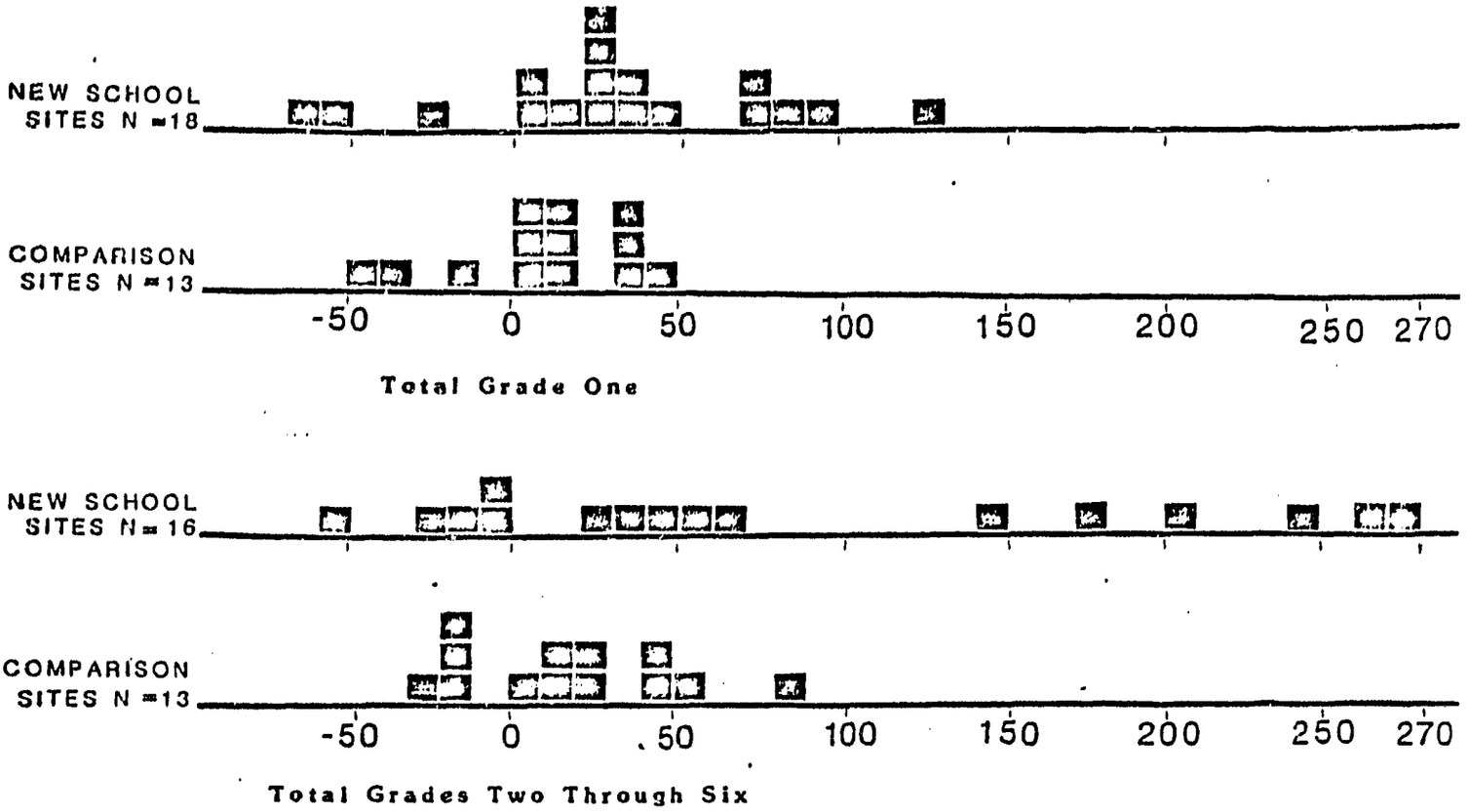

FIGURE I-28: DISTRIBUTIONS OF IMPACTS (OBTAINED TOTAL ENROLLMENTS MINUS PROJECTED TOTAL ENROLLMENTS) ON ALL STUDENTS IN GRADES ONE THROUGH SIX

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 Eqypt 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

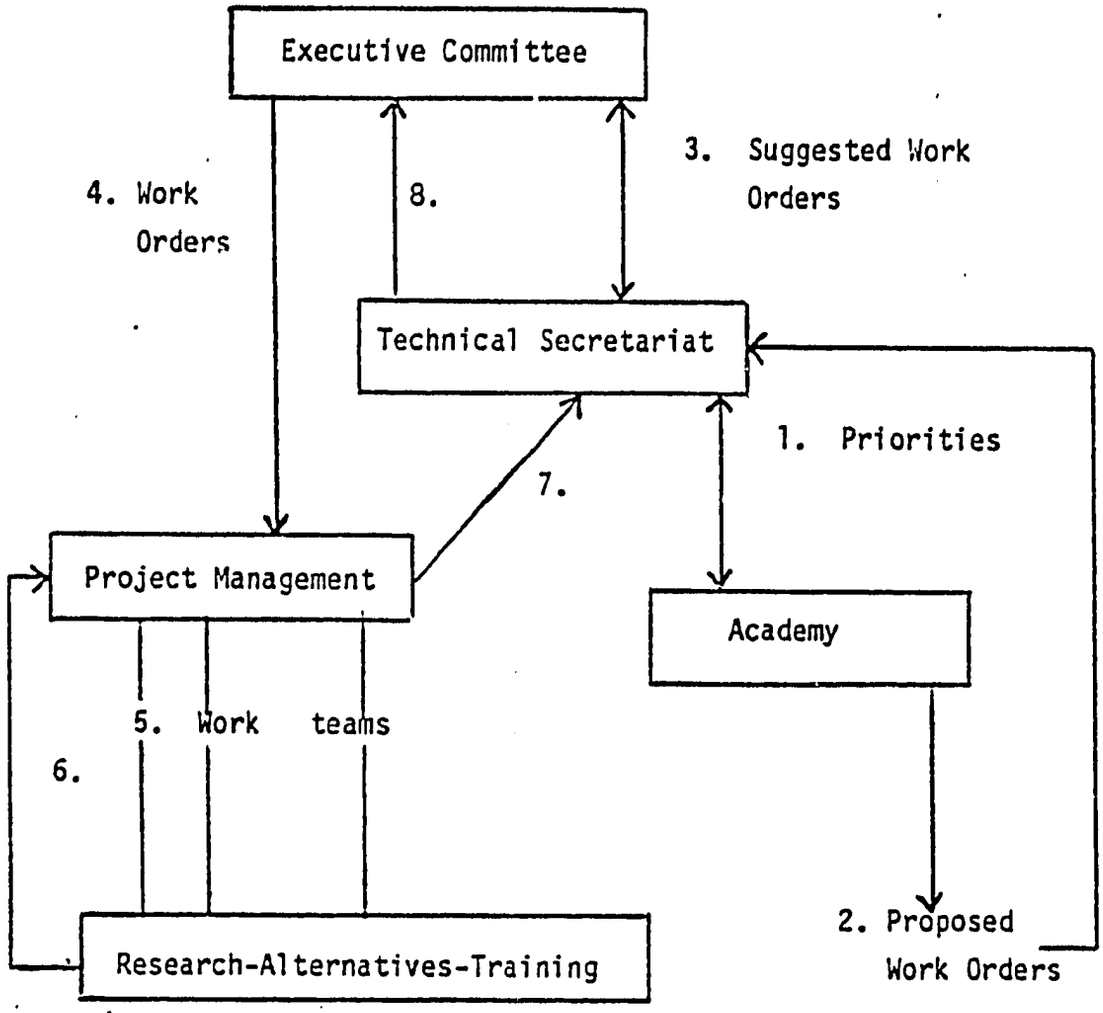

Figure III-1

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.

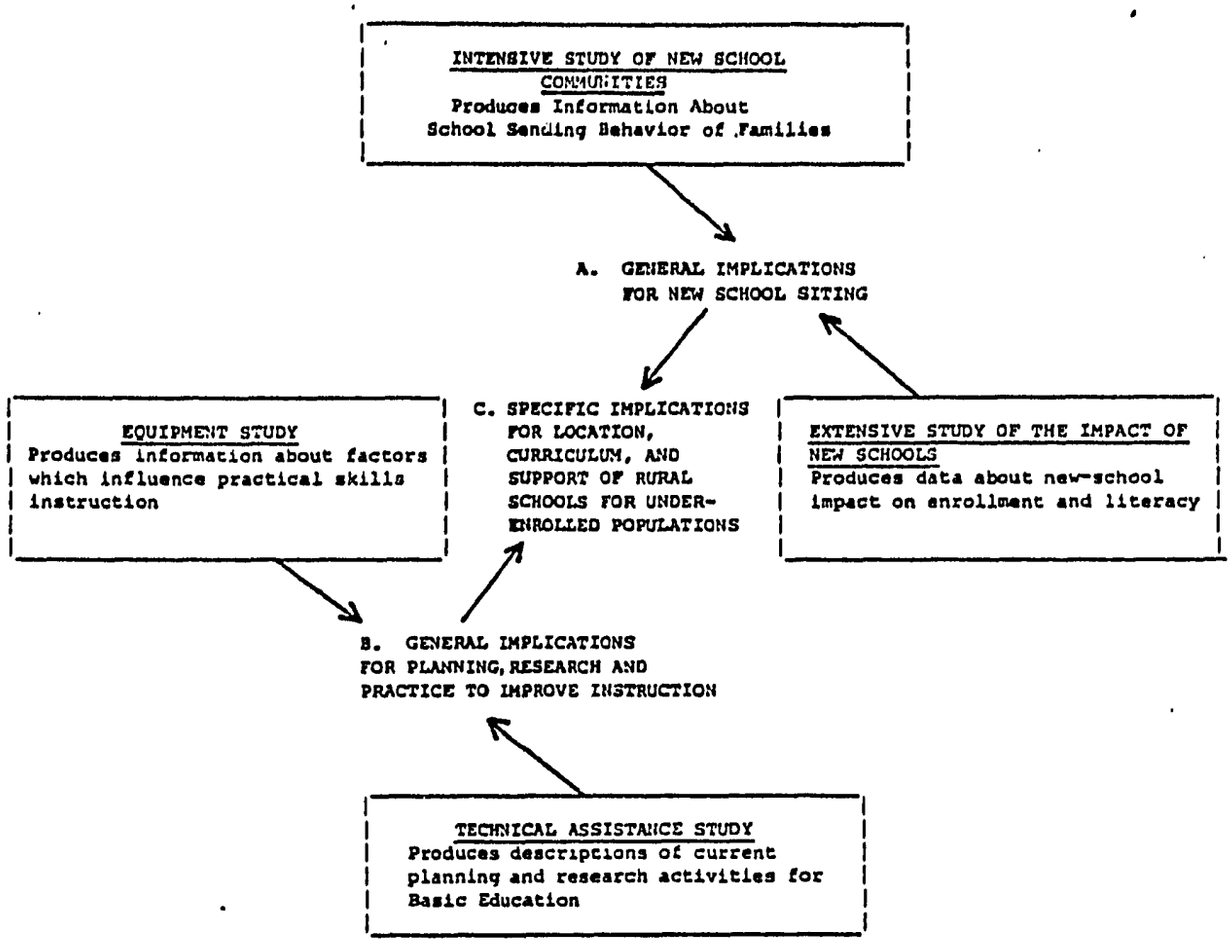

Figure IV-1: Cross connections among the sub-studies of USAID constitutions to the Basic Education Program

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.