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Final Evaluation

of

the Basic Education Project

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Cairo, Egypt

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LIST OF TERMS

bab 3	Capital Investment Line Item in GOE Budget
CAPMAS	Central Agency for Population, Mobilization and Statistics
CCIMD	Center for Curriculum and Instructional Materials Development
EDC	Educational Development Center
EMIS	Educational Management Information System
EPID	Educational Planning and Information Division
EPU	Educational Planning Unit (at NCERD)
GDIST	General Directorate for In-Service Training
GOE	Government of Egypt
HIID	Harvard Institute of International Development
ICSD	Information and Computer Services Directorate
idara	school district
MOE	Ministry of Education
mudiriya	educational zone (MOE branch at the governorate level)
NCEEE	National Center for Educational Evaluation and Examinations
NCERD	National Center for Educational Research and Development
NIB	National Investment Bank
PPU	Physical Planning Unit
RTI	Research Triangle Institute
USAID	United States Agency for International Development/Cairo

EXECUTIVE SUMMARY

The delivery of quality education to Egyptian children is hampered by unequal school access, overcrowded classrooms, curriculum deficiencies, ineffective teaching, and a lack of efficiency throughout the system. Education is unable to keep pace with population growth. As a result, the level of achievement is unacceptably low while dropout and repeater rates are high.

The Basic Education Project has made major contributions to the improvement of primary and preparatory education in Egypt. The project was designed to respond to constraints in the provision of education by expanding student access to, and increasing the relevance, efficiency, and effectiveness of, basic education in primary and preparatory grades. Project components included the design and construction of rural primary schools, development and provision of instructional materials and equipment, and strengthening of educational planning, cost analysis, teacher education, curriculum design, and evaluation.

An evaluation team from Creative Associates International, Inc. worked in collaboration with Egyptian officials from the Ministry of Education, the National Investment Bank, and local governorates during November and December of 1991 to assess project impact on the quality and effectiveness of the educational system. The evaluation team found that overall project management by USAID and the Ministry of Education has been effective, contractor work has been excellent, and the cooperation between USAID, Egyptian officials, and contract personnel has resulted in significant professional accomplishments.

Basic Education• has had a marked impact on access and enrollment figures for primary and preparatory schools, particularly in rural areas. More than 1,850 rural schools were constructed, surpassing the planned target of 1,300. All primary enrollments have increased over the last decade, but rural enrollment increase was particularly dramatic, especially among girls. Thus, the major goal of the school construction program was reached and, in fact, exceeded. Classroom overcrowding remains a concern. Facilities maintenance is also problematic.

In 1989, the Ministry of Education established two major educational reform units: the Educational Planning and Information Division (EPID) within the Ministry, and the Center for Curriculum and Instructional Materials Development (CCIMD). The EPID is responsible for strategic planning, educational facilities planning, creation of a management information system, and the conduct of educational research. The CCIMD is charged with creating a new and innovative curriculum to respond to the

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• *Throughout the document the project will be designated by italics: "Basic Education."*

changes in delivery and content of education envisioned by the Egyptian Educational Reform Act of 1988.

Assistance to EPID and the CCIMD is a relatively new component of *Basic Education,* and USAID and the technical assistance contractors have made major accomplishments in a short period of time. Within EPID, USAID technical assistance helped to establish an infrastructure and train staff for the Educational Management Information System to address the need for a long-term, comprehensive approach to the management and use of information. Project accomplishments were impressive and evidence successful cooperation between the contractor, USAID, the Ministry of Education, and other government entities. Contract personnel from Research Triangle Institute, supported by USAID and Ministry staff, have worked logically and professionally to establish an information system that reaches all 27 governorates, exceeding the contract obligation to serve 15 governorates. Computer hardware and software are appropriate, staff have been trained, and data entry is underway.

The Educational Management Information System has been developed into a descriptive instrument that can provide school census data in a timely and accurate fashion. It is not, as yet, the management tool envisioned, but continued technical assistance, particularly in the organization of data sources and in further training, will help reach this goal.

The Research Directorate within the EPID has also benefitted from *Basic Education* assistance. Just over a year prior to the evaluation, no research capacity existed within the Ministry of Education. The excellent collaboration between USAID, the Ministry and the contractors, in their collective determination to make a difference in this area, has resulted in a professional and competent research unit. The Directorate has completed two national surveys, one of which represents the first instance of applied research in education conducted by the Ministry. The institutionalization of a sustainable capacity to use research and analysis to inform educational policy and planning decisions, however, is still some distance away and will require continuation of the present technical assistance.

The Educational Development Center has provided skilled and personable long- and short-term technical advisors to assist the CCIMD in the development of its managerial and technical capabilities. During the first year, the technical assistance style was direct and hands-on; as the organization grew in experience, the style has become more advisory. Staff development continues to be a priority, and the concept of management by team, timeline, and work plan is slowly replacing the practice of management by fiat and crisis.

The innovative philosophy and curriculum of the CCIMD are a generation ahead of the instructional ideas and approaches presently in use in the schools, in teacher training, in pupil assessment, and in the mind of the public. Current classroom

practices will be difficult to change, however, and teacher training in the use of the new curriculum will be needed. CCIMD is still some distance from the maturity needed to create, disseminate, and evaluate new curriculum. Hence, continued USAID support of CCIMD is vital to the attainment of the USAID goal of increased relevance, efficiency, and effectiveness of the educational system.

Special Education has emerged as an important area of concern for the Government of Egypt. USAID and the Ministry of Education have strong interest in developing support for special education activities in curriculum development, in-service teacher training, and national needs assessment. A small technical assistance component was added to *Basic Education* through which the nucleus of a teacher trainer training staff has been formed.

Support for the National Center for Educational Evaluation and Examinations was never envisioned in the original project paper. This organization was created over a year ago to establish standards for evaluation of education at all levels, to prepare examinations and regulate their quality, to conduct research on evaluation and testing, and to train educators in the use of examinations. USAID technical assistance to the Center, although small, was highly significant, specifying in detail the steps needed for the Center to become functional. Assistance was timely and appropriate, and appreciated by administrators. Continued support, especially in the area of training, is recommended.

In summary, it is strongly recommended that assistance be continued to the Government of Egypt in all project components to allow the impressive accomplishments of the first project to truly come to fruition.

MAJOR FINDINGS AND RECOMMENDATIONS

ACCESS TO EDUCATION

- USAID/MOE's goal to increase enrollment of females and rural youth through the school construction program was attained. Female participation in rural primary schools increased from 36 percent to 42 percent of total enrollment. In rural preparatory schools, girls' enrollment increased from 180,000 to over 700,000, and in urban areas female enrollment doubled. The project will exceed its planned target of 1,300 new schools by 50 percent: at the time of the evaluation 1,850 schools had been completed, with another 100 schools under construction. This represents an increase in capacity for basic education of approximately 875,000 pupils per year. The median per-pupil cost is estimated at 143 L.E., which is very cost-effective. The future growth for basic education is projected at 4% over the next 15 years. This will require an average of 500 new schools each year to keep pace.

RECOMMENDATION

- USAID should continue to support school construction as a cost-effective means for extending access to basic education, particularly for under-represented females.

MAJOR FINDINGS AND RECOMMENDATIONS
(Continued)

THE SCHOOL BUILDING PROGRAM

- School building implementation has both strong and weak features. School placement assumptions and criteria have been good: new schools are placed in areas of high demand. Almost one third of the new schools now require two shifts, and three fourths of the schools are overcrowded. Approximately 70 percent of the sites can accommodate further expansion. Some elements of the school design and construction are weak and are deteriorating under heavy usage. Facility maintenance plans have not been implemented, further accelerating school deterioration.

RECOMMENDATIONS

- The criteria for placing school facilities should be extended to building on or near existing sites to reduce overcrowding.
- Technical documents prepared for tender should describe in detail, with drawings and specifications, how the quality of construction work required is to be achieved. Design criteria for components that have not held up with institutional usage should be upgraded.
- USAID and MOE should collaborate to develop a maintenance policy, implementation strategy, and plan.

MAJOR FINDINGS AND RECOMMENDATIONS
(Continued)

INSTITUTIONAL DEVELOPMENT AND TECHNICAL ASSISTANCE

- USAID technical support to the MOE has been a driving force for implementing government policy to reform basic education. The Project has effectively supported the establishment and development of the Educational Planning and Information Division (EPID), the Physical Planning Unit (PPU), the Center for Curriculum and Instructional Materials Development (CCIMD), and the National Center for Education Evaluation and Examinations (NCEEE). These new institutions are gaining organizational power and competence, but still require technical leadership and development. A central problem is the recruitment and placement of quality personnel, particularly in key leadership positions. The new institutions are playing an expanding role in formulating policy and general plans; managing an increasingly sophisticated information system; conducting policy-related research; establishing standards and plans for school building and maintenance; designing innovative curriculum and materials; and establishing standards, procedures, and instruments for school testing and examinations.

RECOMMENDATIONS

- USAID should provide continued organizational and technical support to the new institutions established under the Education Reform Act: EPID/PPU, CCIMD, and NCEEE.

- The MOE should find ways to recruit, appoint, and retain high quality personnel who can be trained for technical leadership within these institutions.

MAJOR FINDINGS AND RECOMMENDATIONS
(Continued)

EDUCATIONAL PLANNING AND INFORMATION

- The Educational Planning and Information Division (EPID) can claim impressive accomplishments in the relatively short period of two years. Yet much remains to be done for the impact of this work to be felt at the school level. The Information and Computer Services Directorate (ICSD) with the Research Triangle Institute technical support has developed a technical team of systems analysts, programmers, and trainers; created a much improved information system for processing and utilizing school data; installed a VAX minicomputer and PC workstations and completely renovated the ICSD computer center; trained staff on powerful relational database software; installed microcomputers, custom database applications in Arabic; and trained staff in 27 governorates. Tasks ahead include the expansion of the information system and its utilization for management and planning; and the broadening and strengthening of policy analysis and planning.

RECOMMENDATIONS

- The MOE requires a strategic plan for implementation of the Educational Reform Act of 1988 in stages across all units of the Ministry. USAID should support a series of educational forums where input from practitioners, Ministry staff, and university faculty is sought to develop comprehensive strategic and tactical plans. These plans should give careful consideration to clarifying relationships and developing linkages between and among EPID, PPU, GAEB (General Authority for Educational Building), CCIMD, NEEEE, and GDIST (General Directorate for In-Service Training).

- The development of the information system requires data in the areas of school facilities, student performance, and school finances. The elaboration of the system should involve collaboration with implementing divisions in MOE to identify key information requirements for policy monitoring and plan implementation.

- In the governorates, planning and management functions should be strengthened by continuing staff training and systems development. This will support policies of decentralization and local initiative.

MAJOR FINDINGS AND RECOMMENDATIONS
(Continued)

CURRICULUM AND EVALUATION

- Technical assistance provided to CCIMD has enabled the Center to establish an innovative structure for developing quality curriculum related to the goals of the Educational Reform. The MOE has designated the Center as the authoritative body for curriculum matters in basic education. However, retention of high quality staff at CCIMD will require resolving organizational status issues. CCIMD's first product is an excellent curriculum for grades 1 to 3 in Environmental Studies, integrating Science, Social Studies, Health, and Home Economics. The course materials and teachers' guides have been distributed to all schools. It sets a high standard for stimulating pupils' critical thinking and problem-solving skills. Curriculum work in other key subject areas is ongoing, requiring at least two more years before all five grades of primary school are covered. CCIMD lacks a system for evaluating curriculum impact, and linkages with NCEEE are needed to ensure that tests and examinations will reflect curriculum objectives.

RECOMMENDATION

- Continued technical assistance to support organizational development, training, and advisory services is recommended for CCIMD and NCEEE. The two Centers should collaborate to develop an effective system for monitoring and evaluating the impact of new curriculum materials.

I. BASIC EDUCATION: EVALUATING EFFECTIVENESS

A. CONTEXT OF THE BASIC EDUCATION PROJECT

The provision of education in Egypt is severely constrained by unequal access, overcrowded classrooms, curriculum deficiencies, ineffective teaching, and a lack of efficiency throughout the system. Curriculum is poorly integrated and sequenced, texts are inadequate, and teacher guides and materials do not exist. Rapid population growth is outstripping government ability to provide classrooms, and overall educational policies and financial management systems are weak. The result is mediocre learning and achievement, with high dropout and repeater rates and low retention.

The USAID commitment to assist Egypt in improving the quality and relevance of education began in 1981 and was expanded in 1986 with support for classroom construction, instructional materials development, and technical assistance to the Ministry of Education (MOE). The Government of Egypt (GOE) contribution to and involvement with the project has far exceeded the original agreement, indicative of the strong GOE commitment to the effort.

Basic Education was designed to expand student access to, and increase relevance, efficiency, and effectiveness of, basic education in primary and preparatory grades (grades one through nine until 1989 and one through eight subsequently). The project design had two major components: a) school construction, furnishings and equipment; and b) technical assistance and evaluation.

B. EVALUATION APPROACH AND METHODOLOGY

The evaluation was conducted in a collaborative manner with full participation from GOE representatives in all evaluation discussions, in-country travel, and examination of data. The collaborative approach is unique to this evaluation and is a further indicator of the importance with which the GOE views *Basic Education* efforts.

The evaluation scope of work required an assessment of 150 schools in a minimum of eight governorates to determine the adequacy of design and construction and the quality of facilities maintenance. The assessment used five, four-person teams. Each team was composed of one Creative Associates representative, one National Investment Bank (NIB) engineer, one MOE educator, and one representative of the governorate (mudiriya). The headmaster and staff members of every school visited contributed to the team effort.

A random sample of 150 schools was selected using a computer-generated table of random numbers. Schools were then chosen from a master list of USAID-constructed schools. The five teams visited nearly ten percent of the schools that had been constructed in 17 governorates (see Annexes C and D).

The evaluators prepared an exhaustive survey instrument that addressed over 55 points of concern in the functioning of a school (see Annex B). The survey instrument contained seven categories: site adaptation; facility maintenance; quality control of exterior construction; quality control of interior construction; utilization of facilities; safety; and quality of environment. While each category is important to the educational delivery process, the survey instrument placed greatest emphasis on facility maintenance and quality control of construction.

The evaluators gained their overall understanding of the planning process for facilities design, construction, and maintenance through interviews with project participants, USAID staff, and Egyptian officials and through study of the available documentation.

C. *BASIC EDUCATION*--SECOND AMENDMENT

The Second Amendment to the *Basic Education Project (1986)* continued to place major emphasis on the expansion of school enrollments and on increasing efficiency (retention in school) through USAID support to the MOE school construction program. The Second Amendment document stated the following at intended outputs to be achieved during the project (a summary of the evaluation team findings for each category appears in parentheses):

1. Successfully Realized Outputs

- An increase to 90 percent of the enrollment rate of six- to eight-year-olds through construction, equipping, and staffing of new classrooms. (To date, over 1,850 school buildings have been constructed, and the reported enrollment rate of six-year-olds has risen to over 90 percent. Plans call for the completion of over 1,950 schools before the close of *Basic Education.*)

- In-service training for 10,000 basic education teachers. (A total of 13,500 basic education teachers have been trained in the use and maintenance of USAID-donated equipment and materials.)

- A school construction record marked by sound engineering, high quality, and reasonable cost. (Project school construction has been marked by fair engineering, moderate quality, and reasonable costs. Some areas of maintenance and design have posed problems.)

- Effective USAID and MOE project management and implementation. (USAID and MOE management of implemented project components has been effective.)

- Significant project progress in areas defined as project endeavors. (Significant progress has been made in the computerization of a support system for information and planning, in curriculum development support, and in testing and research. Goals for each of these areas were included in earlier plans, either directly or by inference.)

- Two evaluation reports and one audit. (Two evaluation reports and two audits have been completed.)

2. Outputs Not Fully Realized

- Effective distribution and use of educational commodities in grades five to nine in 15,000 schools. (Although the distribution of equipment was done in an efficient manner, observed constraints to efficiency include lack of electricity, insufficient operating funds, teachers bearing the burden of breakage, and commodities not being part of the curriculum and/or examination process.)

- Expansion and improvement of education programs for handicapped children. (An expanded and improved program of special education has not been attained, largely because initial efforts in this regard began only in 1990.)

II. SCHOOL CONSTRUCTION

A. PROJECT IMPACT ON ACCESS AND ENROLLMENT

Basic Education has had a marked impact on access and enrollment figures for primary and preparatory schools, particularly in rural areas. The major goal of the USAID school construction program has been reached and, in fact, exceeded.

1. Female Enrollment Increase

All primary enrollments increased dramatically during the 1980s (see Figure 2.1). Rural enrollment increase was particularly evident, among both boys and girls, with female enrollment growing markedly. Female rural primary school enrollment comprised 35 percent of total enrollment in 1981-82 (897,000 female students) and rose to 42 percent of enrollment by 1990-91 (1,400,000 female students), an increase of almost 60 percent (see Figure 2.2). During this period, urban female enrollments grew by 26 percent, and both rural and urban male primary enrollments increased by 19 percent (see Figures 2.3 and 2.4).

During the same decade, female enrollment in rural preparatory schools grew from under 30 percent to about 40 percent of total enrollment (180,000 to over 700,000 students, an apparent increase of about 400 percent), while urban female preparatory school enrollments doubled. Interpretation of these percentage growths must take into account the 1989-90 change in primary school length from six to five years, which allowed a double cohort to move into preparatory school that year (see Figures 2.2 through 2.4).

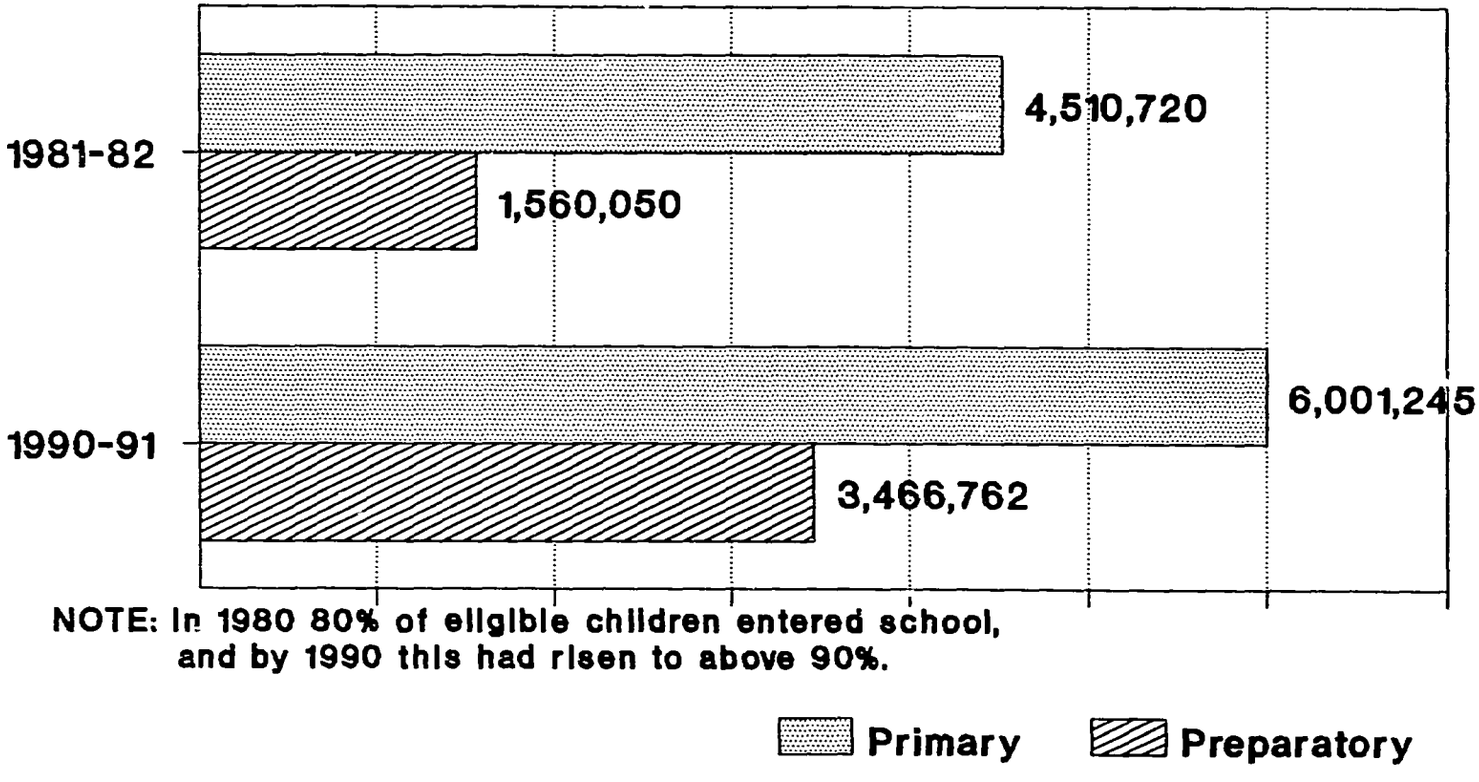
2. Retention Rates and Projections

Retention rates differ little between males and females in the first two years of primary school. However, beginning in grade three, persistence weakens, resulting in losses of about eight percent of both boys and girls in grade four (see Figure 2.5).

It is clear that USAID-financed school construction through *Basic Education* has had a major impact on rural school access and retention rates. The availability of 1,850 new schools has reduced overcrowding, shortened the time required to get to school, and made attendance more appealing. However, it is difficult to quantify this impact, particularly with regard to retention rates, as available data do not differentiate between dropouts from USAID-financed schools and dropouts from

Figure 2.1

Total Enrollment Primary and Preparatory 1981-82 and 1990-91

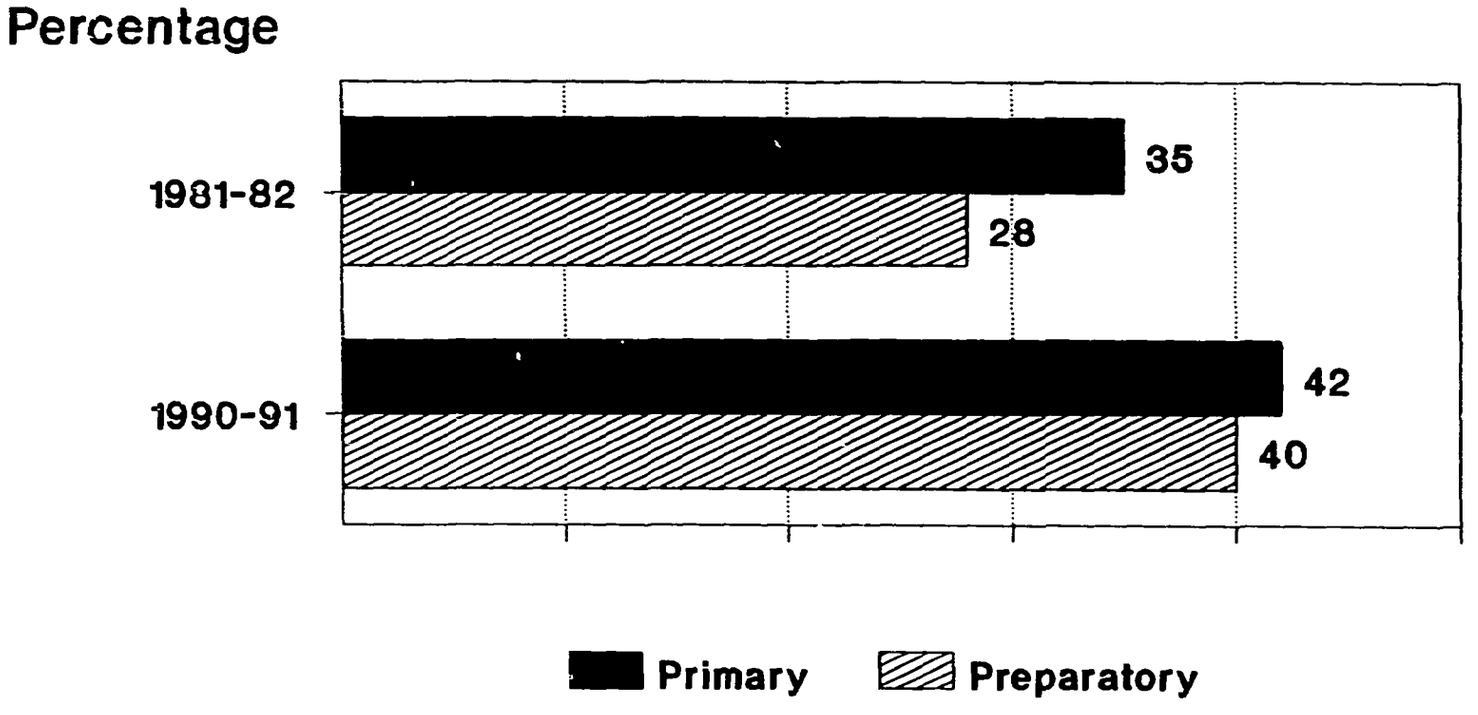


NOTE: In 1980 80% of eligible children entered school, and by 1990 this had risen to above 90%.

Creative Associates International
December, 1991
Source: EPID (EMIS)

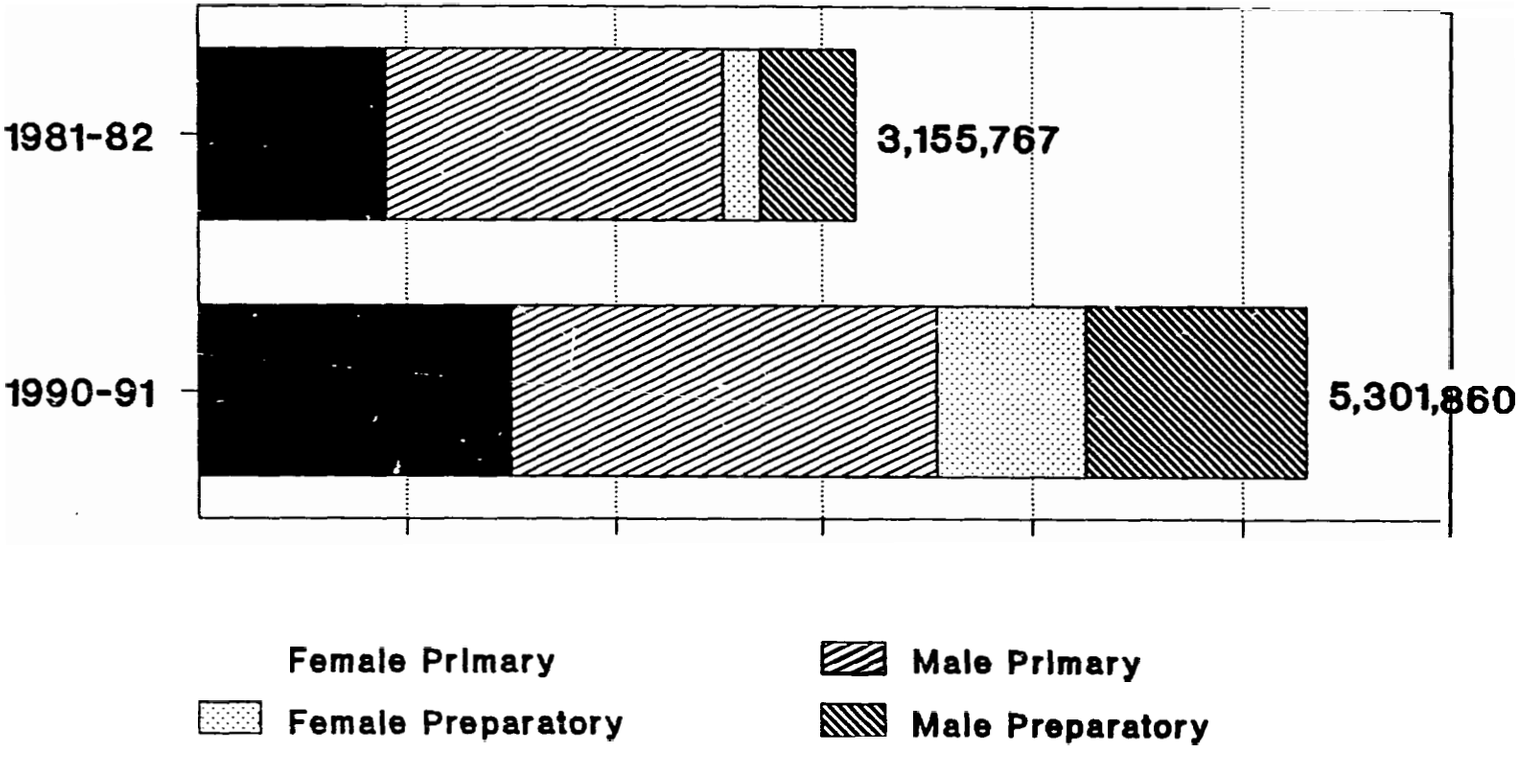
Figure 2.2

Females as Percent of Enrollment Rural Primary and Prep Schools 1981-82 and 1990-91



Creative Associates International
December, 1991
Source: EPID (EMIS)

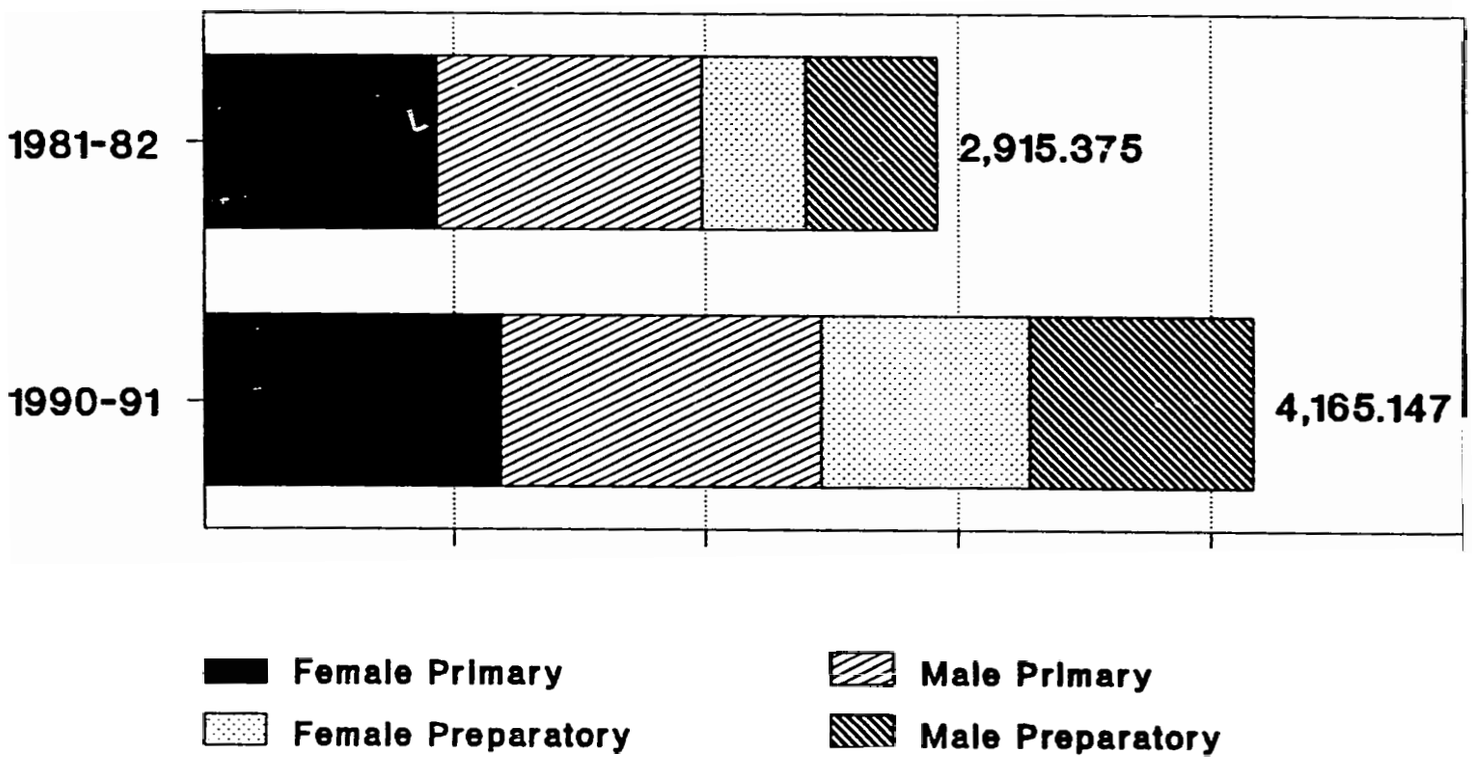
Rural Primary and Preparatory Enrollment by Gender-- 1981-82 and 1990-91



Creative Associates International
December, 1991
Source: EPID (EMIS)

Figure 2.4

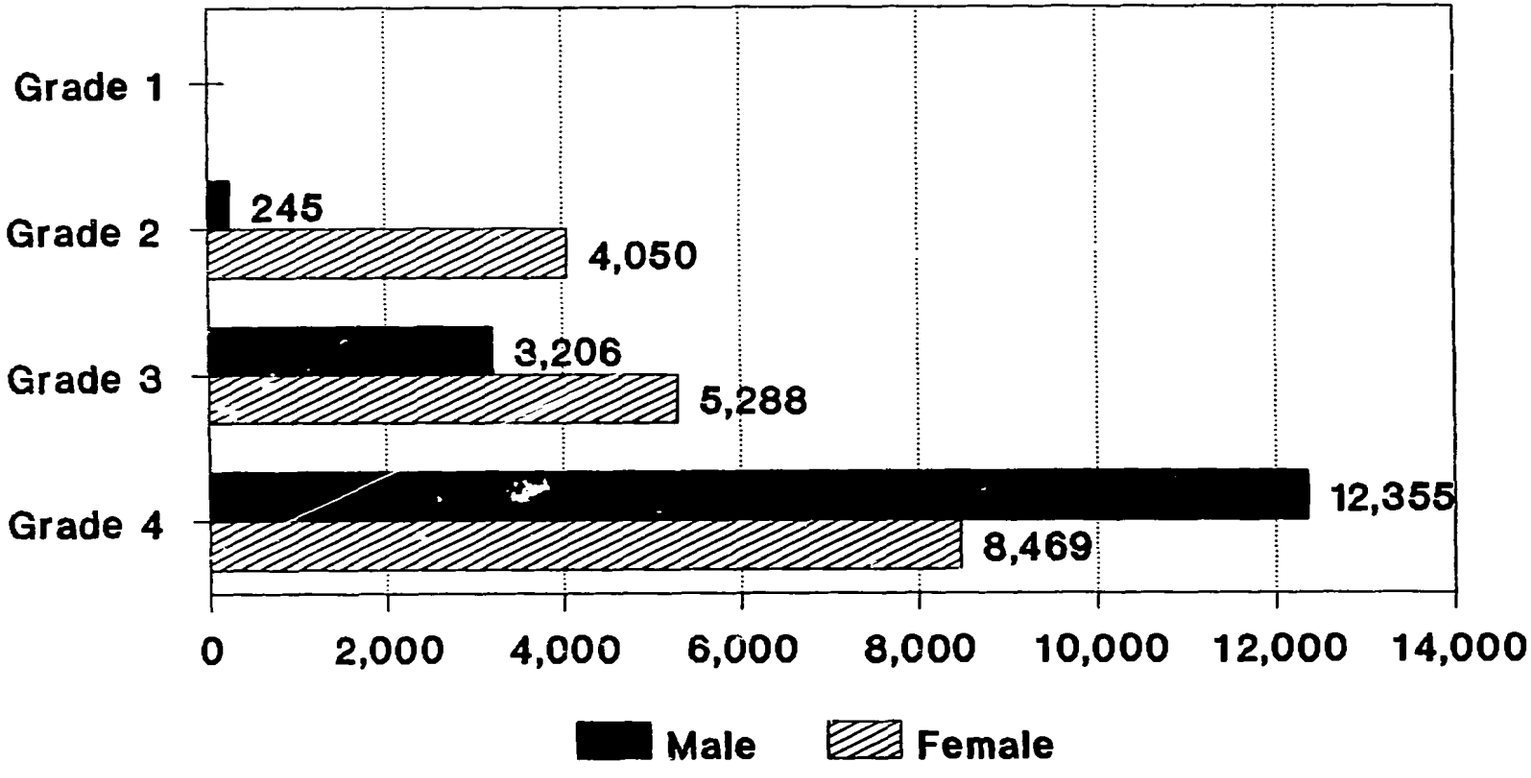
Urban Primary and Preparatory Enrollment by Gender-- 1981-82 and 1990-91



Creative Associates International
December, 1991
Source: EPID (EMIS)

Figure 2.5

Dropout Among Grade 1 Primary Cohort From 87/88 to 90/91



Creative Associates International
December, 1991
Source: EPID (EMIS)

other schools. In other countries, factors contributing to dropout problems include a number of socio-economic forces in addition to school accessibility and classroom size.

Growth rates at primary, preparatory, and secondary school levels are projected to remain fairly stable at about four percent over the next fifteen years (see Figure 2.6). It remains imperative, therefore, that: 1) tracking and analysis of dropouts, repeaters, and teacher supply be updated annually; and 2) projections of enrollments, teacher requirements, and classroom needs also be revised each year. The need for new classrooms and additional teachers will continue to be pressing throughout the period and will require careful planning by the MOE. It is also important to note that the secondary level will require a greater increase in the teacher supply at that level than at other levels (see Figure 2.7).

Recommendations

- USAID support of the GOE school construction program has been cost-effective and highly successful in attaining its objectives in terms of enrollment and access. It is strongly recommended that this assistance continue to be provided.

- Pressure on the higher education sector in Egypt is expected to grow as greater enrollments increase the need for teachers and administrators. USAID should consider appropriate ways to support the GOE in meeting the challenge of preparing educational personnel.

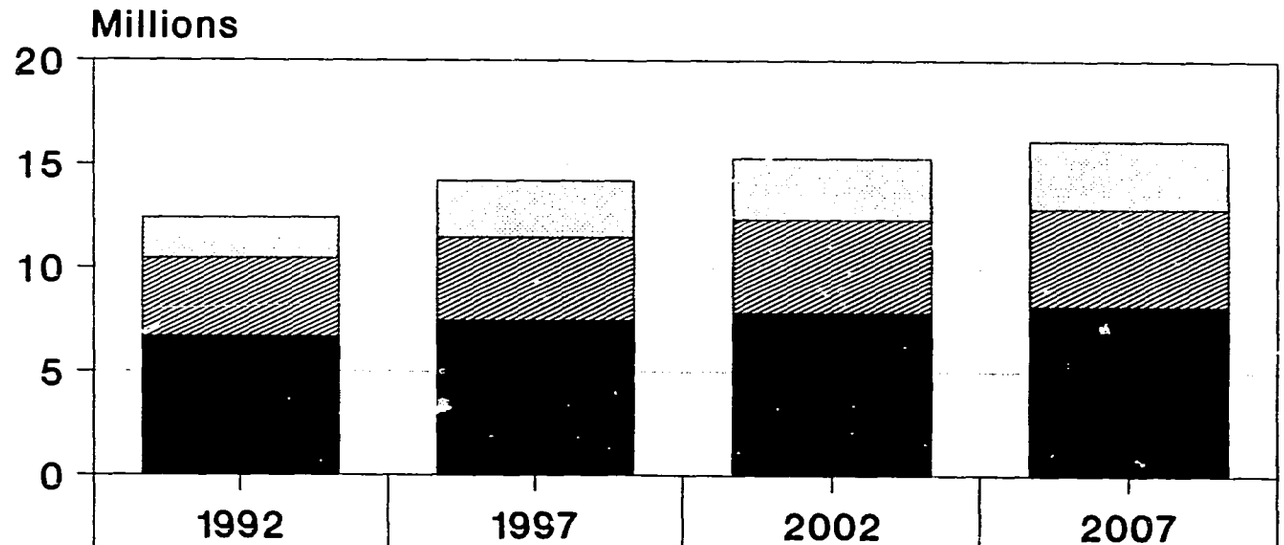
B. NEW SCHOOL PLACEMENT

1. Site Selection

Between 1987 and 1991, the rate of project financial school construction in Egypt averaged one school completed each day. In this period of extraordinary growth in school construction, as many schools were completed (1,350) as had been targeted for the initial ten years of the project (see Figure 2.8).

Criteria for determining rural school placement include: 1) the nearest existing school is over two kilometers distant from another school; 2) female enrollment is below the national average; 3) overcrowding is deemed severe; and 4) existing buildings are clearly substandard. These criteria for school placement are considered excellent and responsive to need. In all schools visited by the evaluators, siting criteria had been properly followed and schools were appropriately placed for maximum impact with the target population. In addition, headmasters in virtually all schools reported that the nearest comparable school was over three kilometers away.

Student Enrollment Projections
1992-2007 (EPID and CAPMAS Data)

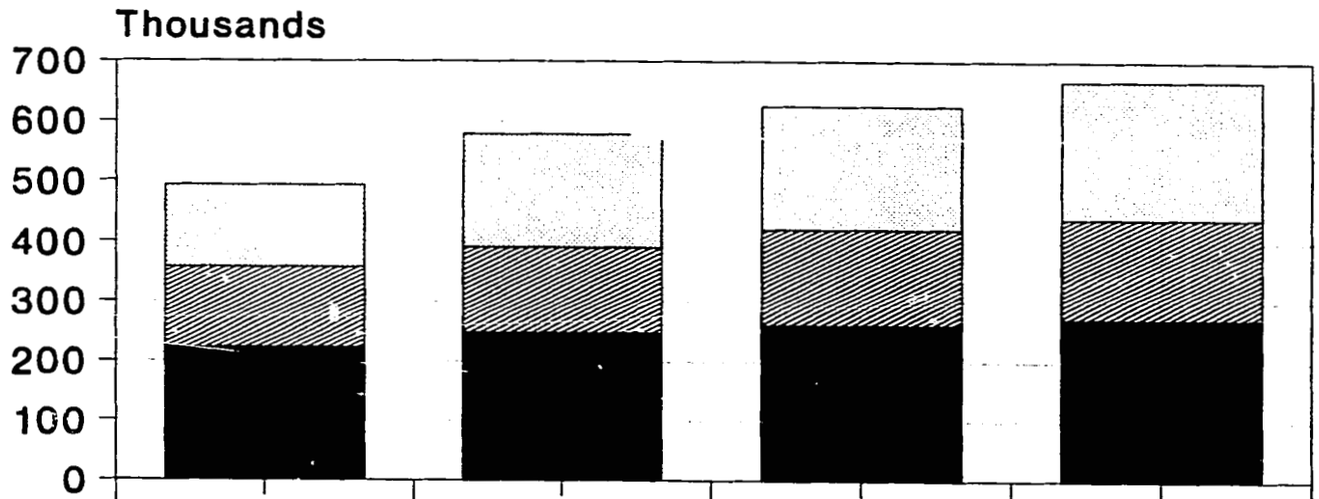


	1992	1997	2002	2007
Secondary	1.975	2.728	2.979	3.299
Preparatory	3.773	3.987	4.464	4.671
Primary	6.663	7.456	7.848	8.174

Primary Preparatory Secondary

Creative Associates International
December, 1991
Source: EPID (EMIS) and CAPMAS

Teacher Need Projections
1992-2007 (EPID and CAPMAS Data)



	1992	1997	2002	2007
Secondary	136.179	188.133	205.425	227.523
Preparatory	134.749	142.408	159.42	166.838
Primary	222.113	248.536	261.586	272.48

Primary Preparatory Secondary

Creative Associates International
December, 1991
Source: EPID (EMIS) and CAPMAS

The only external pressure that had impact on site location was land availability. While actual school placement and expansion capability were not affected (all schools visited had vertical expansion capability, and over 72 percent had horizontal expansion capability), choice of building orientation on the site was sometimes constricted. Improper placement can reduce both thermal comfort and the amount of daylight that enters a classroom, as well as increase glare. Institution of a review and approval process for school orientation on a site could alleviate this problem.

2. School Mapping and Data Collection

In 1980, the first school placement map for the governorate of Kafr El-Sheikh was developed by the General Administration for Planning and Follow-up of the MOE, using a local demographic study. School mapping soon followed in Behera, Assiut, Sohag, and Qena. The map was updated in 1986. The Physical Planning Unit (PPU) within the Educational Planning and Information Division (EPID) is currently engaged in computerization of the school mapping data.

An excellent school planning guide is the PPU publication and data bank, *National Record of School Buildings*, which includes data on student population forecasts, land availability and demand, levels of infrastructure service, and need for additional schools. Expansion of this tool to encompass all governorates is essential.

Support for accurate, complete, and up-to-date school mapping and data bank expansion is an excellent investment in assuring cost-effective school placement. USAID assistance to the mapping computerization and data bank efforts would contribute significantly to project accomplishments.

3. Overuse of Facilities

Of the 150 schools evaluated, 27 percent used double shifts. Schools with more than one shift must offer significantly shorter school days to students, resulting in less time on task and decreased student performance. Expansion of the siting criteria to include construction in order to eliminate double shifts would address this problem.

MOE standards expect a classroom to serve 32 students at a time, with each student having 1.1 meters of the classroom area. Only 36 of the 150 schools sampled met this norm. In other words, over three-quarters of the schools were over-utilized. In 21 percent of the schools, the student:classroom ratio was between 33 and 38 to one; in another 21 percent of schools the ratio was between 39 and 44 to one. In 17 percent of schools, there were over 50 students in a classroom and in some schools the number of students per room was more than double the 32 considered the norm.

There are possibilities that should be explored for increasing the number of classrooms on the existing school sites. The high degree of both horizontal and vertical expansion capability on most sites will facilitate this, and such an approach is likely to be more cost-effective than new construction. Economic and safety feasibility could be verified through NIB and governorate construction records.

4. Urban Area Construction

Projections of increasing enrollments between 1992 and 2007 justify the expansion of *Basic Education* into urban areas. Additional criteria are planned for the siting of urban schools: 1) existing building is clearly substandard and must be replaced; 2) the school operates on more than one shift; and 3) the district being served is newly established or newly expanded. Student enrollment data support these criteria.

Recommendations

- The problem of over-utilization of facilities should be addressed by USAID in two ways: 1) expand rural school placement criteria to include construction for the purpose of eliminating second shifts; and 2) exploit the high degree of both vertical and horizontal expansion capability on existing school sites.

- A review and approval process should be put in place to assure proper orientation of school buildings on their sites. This task would appear to fit with existing NIB responsibilities related to technical document preparation.

- USAID should consider funding support for the PPU efforts to computerize the school mapping process and to expand the National Records of School Buildings data bank to encompass all governorates.

C. DESIGN, QUALITY, AND MAINTENANCE

1. Cost Effectiveness

The median cost per student year for the 150 schools sampled was L.E. 143. The range in calculating the median was from a low of L.E. 7.76 per student year (in a school built early in the program) to a high of L.E. 2110 (in a school that just opened). A high annual rate of inflation and location cost differences account for this large unit cost variation.

Analysis of costs per student year and the number of classrooms constructed indicates that *Basic Education* has been extremely cost-effective in providing a large number of classrooms and seating for roughly one million students per year.

2. Design Specifications

The 1,850 USAID-funded schools are built according to industry standards for small rural construction projects. The USAID review of building designs and specifications was thorough, and the Mission determined that they were acceptable. The evaluation team agrees with this judgement but notes that more detailed performance standards for construction elements are needed.

During the last three years of *Basic Education*, PPU has modified building designs to improve egress in multi-level facilities, increase storage area, give better access to roof levels, and modify stair design. The work of the PPU is thorough and commendable. New prototype designs will reflect attention to environmental concerns in addition to stressing durability of actual construction. Considerable emphasis will be given to facilitating maintenance and repair. The basic plan of the prototype school remains unchanged.

3. Construction Supervision

Monitoring of USAID-funded school construction is the responsibility of the National Investment Bank (NIB). USAID has provided clear and constant guidance to the NIB concerning its responsibility for construction monitoring. Requirements for NIB follow-up were clearly stated, time frames were reasonable, and monitoring forms were developed. At least five site visits at specific construction stages (bimonthly on average) were required of the NIB during construction, with monitoring reports produced for each visit. USAID provided funding for outside consultants to the NIB and for site visit expenses.

However, an examination of past construction documents revealed them to be inadequate and insufficient in specifications and details. Information provided to contractors was initially minimal and often unclear in some construction details, making it difficult for contractors or site engineers to comply with requirements. Quality of construction has suffered, maintenance needs have risen, and renovation will be required in some cases.

Primary responsibility for on-site project supervision remains with the Housing Department or local council engineer at the district level. It is unclear to whom these officials are required to report, but their apparent exclusion from design responsibility may be a contributing factor to the less than desirable level of construction quality.

The PPU has recognized the issues involved in construction document insufficiencies and has completed, in collaboration with USAID, a set of improved drawings. The new documents are thorough and address the issues of quality and supervision that were of concern to the evaluation team.

4. Maintenance of Existing Schools

In 1986, USAID became concerned about deteriorating physical conditions in school buildings and acted promptly to establish the need for, and define the nature of, facility maintenance. Responsibility for implementing a maintenance program was that of the MOE through the NIB, which field-tested its program in one governorate.

Through the survey of 150 schools, the data documented, and through personal interviews, it became evident to the evaluation team that no maintenance policy or implementation strategy is in operation. An informal five-year maintenance plan is not an adequate tool. A list of maintenance intervention actions does not comprise a maintenance program. It requires an assessment of work for individual schools, a financial plan, and an implementation plan by year. Close to 50 percent of the schools visited by the evaluation team were constructed in the years 1982 to 1989 and had seen no maintenance. Those schools coping with overcrowding and double shifts exhibited the greatest amount of stress on the physical plant.

The MOE has taken steps to address the maintenance issue and has a system in place under which more than 300 schools were maintained during 1991, and 350 schools each year for the next four years are planned. An MOE department, possibly the PPU, should coordinate the envisioned maintenance program for basic education schools. This department and USAID could then collaborate in establishing desired maintenance standards and assuring that the concept of maintenance is understood and carried out by the personnel of each school. Issues of sanitation should be included in the definition of maintenance; unsanitary conditions of toilet rooms and

sewerage overflow in some school yards were noted during the team visits to schools.

Financial data sought from the MOE were not available to the evaluation team, so the adequacy of funding allocated to maintenance could not be assessed. World Bank studies show that an annual amount of five percent of capital costs is usually adequate for maintenance purposes.

Recommendations

- It is recommended that NIB prepare value engineering studies as a pilot test to determine their utility in setting future project criteria. Such studies could yield useful cost-benefit data relative to building component alternatives, which could have an impact on future maintenance costs. If the studies prove feasible and useful in economic analyses, they should be made a prerequisite for all building studies.

- PPU and NIB, in collaboration with USAID, should prepare detailed tender documents, with descriptions, drawings, and specifications, of how the quality of work required is to be achieved. Design criteria for building components that have not held up adequately should be upgraded.

- The Local Council engineer should prepare daily site reports that address accomplishments, obstructions, and planned work. A summary report should be sent weekly to the NIB site engineer. These are the elements of a systematic, bottom-up monitoring program and will also provide motivation to the engineers to perform effectively. The summary report document should be designed by the USAID engineering staff to assure adequate coverage of critical construction process issues.

- USAID should assist the MOE in the preparation of a Maintenance Plan based on existing needs, starting with the older schools and leading up to present day requirements.

- USAID and the MOE should collaborate in the development of a policy, implementation strategy, and plan for training headmasters and school and district staff in the concepts and procedures of maintenance. The concept of maintenance must be accepted and its importance understood.

- Efforts should be made to reduce the student:classroom ratio, thereby reducing stress on the facility.

III. PROJECT SUPPORT TO EDUCATIONAL REFORM

In the closing years of *Basic Education*, USAID initiated a strategy of institutional development with the Ministry of Education (MOE). With the passage of the Education Reform Act of 1988, Egypt made a commitment to the improvement of basic education, and the Minister of Education requested USAID to provide technical assistance to support the reform.

A growing body of international research and experience clearly points to the need for a comprehensive approach to investment in basic education. Strengthening education's contribution to economic and social well-being requires more than expanding the physical infrastructure. It entails policy, planning, and management for improving learning systems, training teachers, building and maintaining facilities, strengthening assessment, and evaluating programs.

This strategy of building institutional capacity within the MOE was a risk. The barriers were formidable: a deeply entrenched bureaucracy, driven by long-standing regulations rather than policy objectives; a staffing and personnel system that rewarded loyalty and conformity rather than performance and initiative; a strong undercurrent of suspicion toward foreign technical advisors; and a system in which all business is conducted in Arabic. On the positive side was the strong leadership of the Minister of Education; the clear support of the Educational Reform policies by the Office of the President; and Egypt's active participation and contribution to international forums on basic education, such as the Jomtien Conference.

In 1990 the MOE, with technical assistance from USAID, established two major new agencies: the Educational Planning and Information Division (EPID) and the Center for Curriculum and Instructional Materials Development (CCIMD). In 1991 the National Center for Educational Evaluation and Examinations (NCEEE) was established. These agencies will be discussed separately in the following sections.

A. THE EDUCATIONAL PLANNING AND INFORMATION DIVISION (EPID)

The objective of EPID is to perform strategic planning, develop and utilize a management information system, carry out educational facilities planning, and conduct research aimed at key policy issues in basic education.

Research Triangle Institute (RTI), with subcontracts to the Harvard Institute for International Development and the Academy for Educational Development, was contracted to provide the technical assistance for building the organizational and technical capacity of EPID. This involved collaboration with the Ministry in preparing the organizational development plan for the new Division. The plan includes institutional objectives and strategies; a description of the functions and tasks for the units; organizational and staffing plans; functional job descriptions; required qualifications and training; and annual work plans.

The technical inputs under the RTI contract were in three substantive areas, each relating to a Directorate within the EPID: the development of an educational management information system (the Directorate for Information and Computer Services); the carrying out of research targeted to key policy issues in basic education (the Directorate for Educational Research); and the strengthening of educational planning (the Directorate for Educational Planning and Follow-up).

The major accomplishment of the RTI team to date has been its provision of assistance to the Ministry of Education (MOE) in the establishment and strengthening of EPID. At the outset of the assistance, in September of 1989, the technical assistance was intended to support a new section of the National Council for Educational Research and Development (NCERD) called the Education Planning Unit (EPU). Neither the NCERD nor EPU had any operational linkages with the Ministry of Education - they were created as essentially research bodies and "think tanks." Secondly, the staff of these bodies, and specifically the staff at the EPU, were obviously miscast. They were for the most part academics, with no practical experience in policy analysis, strategic planning, or information systems. It became obvious in the first months of the project that EPU was an inappropriate institutional base for developing capacity in strategic planning and information systems.

Through discussions with the Minister and senior staff within the MOE, the technical description and organization for a new division for educational planning within the MOE was developed. By January 1990, the Minister issued a decree establishing the new Division of Planning and Information, and gave instructions for *Basic Education* support to move from EPU to the new Division.

A significant level of effort has subsequently gone into the organizational development of EPID. First, the articulation of the broad objectives for the Division; then the definition of the organizational components: Information and Computer Services, Research, and Planning and Follow-up. For each Directorate, the specification of objectives, functions, staffing descriptions, recruitment strategies, short, long-term, and local training, and annual work plans have been developed through numerous working sessions and negotiation. USAID and the RTI Team worked closely with the able head of the Division, Undersecretary Sawsan Korra, and with the directors of the three Directorates to bring this about.

The result is that today the Division has achieved a clarity of purpose; the written and public articulation of organizational objectives and functions; coordination among its three Directorates; and an increasingly committed and competent professional staff. It has also grown in its ability to reach out to coordinate activities, training, and advisory services to other units within the Ministry.

Yet there is still much to be done. The mandate for EPID, which is to develop strategic and coordinated plans for investment and management in basic education, is still unrealized. The organizational and technical capacity to obtain and utilize information on human resources, costs and financing, physical facilities, and student achievement is embryonic.

The Division's long-term institutional capability requires strong leadership in the technical areas of EMIS, Research, and Planning. The need for this became obvious during the recent preparations for the National 5-Year Plan. EPID needs to continue efforts to develop coordination of MOE financial information and analysis, staffing and teacher deployment, facilities planning, and the monitoring of policy implementation.

Recommendation

- The MOE requires a strategic plan for implementation of the Education Reform Act of 1988 in stages across all units of the Ministry. It is recommended that USAID support a series of educational forums where input from practitioners, Ministry staff, and university faculty is sought to develop comprehensive strategic and tactical plans. These plans should clarify relationships and linkages between EPID, CCIMD, NCEEE, GDIST, and other relevant agencies.

1. EPID: Information and Computer Services Directorate

A major objective of the educational planning component was to develop an educational management information system, starting with the existing school census. The project adopted a strategy to maximize staff development and ownership for the system. This called for an evolutionary process, building on existing staff competencies and functions within the Information and Computer Services Directorate (ICSD). The decision was made to use RBASE software in a PC environment to develop the Arabic application for entering, validating, processing, and reporting school census data.

During 1990 ICSD staff were provided training and technical support, and they developed a prototype RBASE Arabic application. The first cycle of hardware and software was procured. The developed system was installed at headquarters, and at

five pilot governorates. ICSD staff were also trained as trainers and they provided training in two cycles to the statistical staff in the pilot governorates.

In 1990 two committees were established to provide coordination with other sections of the Ministry, and with external institutions concerned with the educational management information system. The Training Committee has helped develop the strategy, support, and monitoring system for the governorate and Ministerial training program to operate and effectively use the EMIS. It is composed of undersecretaries for basic education and the heads of the EPID Directorates. The EMIS Committee, made up of external experts in database and information systems (from universities, institutes, and the private sector), has provided continuing guidance in the development of the system.

The PC-based RBASE Arabic database application replaced the former central batch processing system at the end of 1990. This resulted in improved data entry, greater control over checking data integrity and validity, flexibility in designing reports, and hands-on access to information.

In 1991 the RBASE Arabic application was further refined, and installation and training were provided in two sessions to an additional fifteen governorates, and then to the remaining seven governorates. This exceeded contract specifications, where the expansion of the system was only expected to reach eighteen mudiriyas during the first phase of the project. The systems at the governorate have computerized the formerly manual system for recording school statistical returns. Further organizational linkages and training are now needed to utilize the computerized systems for improving planning and management. The project could help by providing a desk-top publishing (Arabic) system to support this training activity.

The project helped to finance and redesign the computer center to accommodate the installation of a VAX 4000-300 minicomputer, delivered in May 1991. The center now includes a well-equipped training and data entry room, the powerful VAX mini-computer, and approximately 20 on-line PCs running from a DEC/Pathworks DOS server. The Project continues to conduct staff development and training program in systems design, operations management, and software development. Two additional technical staff have joined the systems/programming section, and two former computer operators have now received training in systems and programming. Also, very recently, three new staff, to be trained as governorate trainers, have joined the section. This is an increase of technical staff from the five persons at the start of the project, to ten today.

The shift to the VAX environment and increased sophistication of the staff led to a decision in 1991 to shift the software environment from RBASE to PARADOX 3.5. This provides an environment that can better accommodate the programming power needed as the system adds further data categories, and as the utilization of the

system requires more sophisticated queries and reports. The staff has been trained in Paradox programming (PAL language), and is now also developing capacity with other development tools (Clipper and Pascal). This increasing technical sophistication means that system design issues can be undertaken with greater confidence, facility, and speed, allowing continual evolution of the system to meet information needs.

The former director of the unit has retired (but continues to assist on a consultancy basis), and the search is on for a new, competent head for this technically demanding Directorate. With the new Law #5 of 1992, requiring public advertisements and open recruiting for senior public service positions, there is reason for optimism that a strong director will be appointed in the next few months.

A summary of the resources that have been developed for the EMIS is given in Figure 3.1.

The work plan for the next phase of the project calls for the data content to be expanded to add categories of data covering school facilities, finances, and student achievement. New instruments for data collection are to be designed, and there will be continued developments for controlling data quality and timeliness. These changes and expansions must be based on a needs assessment carried out with other divisions of the Ministry of Education and with the governorate offices. They will contribute to an EMIS that should provide a really effective tool for planning and managing school expansion and maintenance, teacher deployment, and resource requirements.

2. EPID: Research Directorate

Project-related educational research had been conducted by the National Center for Educational Research and Development (NCERD) until the EPID Research Directorate was created in September 1990. At the time of the evaluation, qualified research staff had been in place less than a year. Two researchers have joined the staff since the evaluation, bringing the total to nine.

Basic Education provided for a 1989 education sector assessment conducted by the Harvard Institute of International Development (HIID) and RTI, with NCERD and local consultant participation. The assessment identified critical policy issues requiring empirical research: the impact of private tutoring on educational outcomes; the nature, effectiveness, and determinants of teaching practices in primary and preparatory schools; and the quality of enrollment and repetition data collected in the school census.

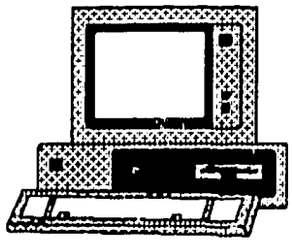
Questions posed by the sector assessment became the subjects of five pilot studies and three literature reviews commissioned and supervised by the Research Directorate and carried out by local consultants in 1990. *Basic Education* provided

RESOURCES DEVELOPED FOR EMIS

EMIS HARDWARE

Personal Computers (Tandy/Wyse)
- 40 at Headquarters
- 54 at Mudiriyas

VAX Minicomputer (DEC 4000-300)
LAN (Local Area Network-SR NET)
Printers (Laser, Dot Matrix)
UPS(Uninterrupted Power Supply)
Power Stabilizers



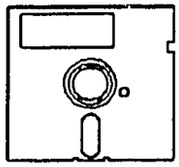
EMIS SOFTWARE

Paradox 3.5
- w/Applications

RBASE (Mudiriyas)
- w/ Arabic Applications

LAN (DECNet)
Arabization (Nafizah, Fagr)
Supporting Software:
- SPSS, Harvard Graphics, Lotus 1-2-3, Quattro-Pro, Word Perfect

E-Mail (Bitnet)
VMS (VAX Operating System)



EMIS HUMAN RESOURCES
INFORMATION & COMPUTER SERVICES DIRECTORATE

Systems Staff (10)
- 2 Systems Managers
- 4 Data Base Programmers
- 4 Training and Support

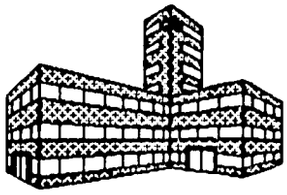
Local Vendor Support
- (Giza Systems, Metra, Alpha-Omega)

Data Entry Personnel (9)
Short Term Consultants
Operators (4)
EMIS & Training Committees

EMIS FACILITIES

Ministry of Education
Renovated Computer Center

27 Mudiriya offices
Equipped with
PC Systems



technical assistance to the Directorate for development and review of proposals and budgets, supervision of consultants, and evaluation of the products. Study results provided the basis for two major national-level surveys that were being analyzed by the Directorate at the time of the evaluation.

National-level Educational Surveys

The purpose of the first national-level survey was to assess primary and preparatory student achievement in Arabic, science and mathematics, and preparatory student English ability, as well as to gather information on students' backgrounds. A total of 18,000 students (9,000 at each level) completed tests and a survey, and interviews were conducted with 2,100 teachers, 600 headmasters, and 180 supervisors.

The project provided technical assistance for the design and construction of the survey instrument. Fieldwork began in 1991 and required the training, mobilization, and supervision of more than 100 survey takers who worked in 12 governorates throughout the country. Data entry, verification, reduction, and analysis are being conducted in a context of intensive on-the-job training provided by short-term research advisors from HIID and RTI. At the time of the evaluation, ten descriptive reports of selected survey findings had been produced by Research Directorate staff.

The survey instrument is clear and impressive. The stratified cluster sampling design was selected to respond to the MOE request that the scientific requirements of the study be balanced with considerations for administrative feasibility and efficiency. Sampling involved selection of governorates within recognized geographic regions, of idaras (school districts) within governorates, and of public schools within idaras. From each school, one fifth grade or eighth grade class was randomly selected and all students in the class, up to 30, were surveyed. In larger classes, students were randomly deselected. The subject teachers of those students, the school headmaster, and regional subject supervisors were interviewed.

The second national survey, also completed in 1991, examined the cost, prevalence, and nature of private tutoring and the willingness of families to pay for it. Intensive project technical assistance aided the Research Directorate in design, conduct, and analysis of the survey. The sample consisted of teachers, parents, and students randomly selected from a sub-sample of groups interviewed for the first survey, permitting a linkage of the two data bases. Additional teachers and families were drawn from a sample of private schools.

Data entry and analysis of the second study have lagged behind work on the first study, primarily due to staff shortages. The recent addition of new staff is expected to ease the work load.

Impressive Progress in Research Capacity

Just over a year prior to this evaluation, no research capability existed within the MOE. The excellent collaboration between USAID, the MOE, and the contractors in their collective determination to make a difference in this area has resulted in a professional and competent Research Directorate. The level of ability of researchers, developed in a short time, is impressive. The institutionalization of a sustainable capacity to use research and analysis to inform educational policy and planning decisions, however, is still some distance away, and will require continuation of the present technical assistance.

The Research Directorate expects to add five staff members in 1992, a growth which reflects MOE confidence in the value of the Directorate and the utility of its efforts. The volume of work from existing and anticipated studies more than justifies the increase in staff.

3. EPID: Planning and Follow-up Directorate and Physical Planning Unit

The Division for Educational Planning and Information includes the Directorate for Planning and Follow-up, and the Physical Planning Unit. The Planning Directorate's central function within the MOE is responsibility for the Capital Budget (bab 3). The Physical Planning Unit, established by USAID and MOE in 1988, has two functions: to develop design and construction standards for school sites, buildings, furnishings, and equipment; and to map the physical infrastructure for basic education.

It is one of the central objectives of the project that the information system, and the policy analysis and research, be utilized to improve the quality of educational planning. At this stage of development, the Planning Directorate is still using its own sources of information for preparing an annual plan for school buildings, and only using the EMIS to check that work. This is partly because the EMIS reports are still produced in late January/early February, which is too late for the Planning Directorate's preliminary estimates. This problem should be rectified as turnaround time from the school November survey and the data processing and reporting continues to diminish.

At the governorate level, Planning Directorate staff and three persons from each of the five pilot governorates were involved in a two-week training course on applying the EMIS to planning tasks in December 1990. That course was not replicated during the rapid expansion of the EMIS to all of the remaining governorates in 1991. Now that that expansion has been completed, consideration should be given to providing the training for planners and statistics staff on how to

link the EMIS to planning functions at the governorate level. Consideration should be given to providing governorate planning staff with microcomputers to assist with this development.

The Physical Planning Unit has done an excellent job at defining standards for siting, design, building, and furnishing of primary and preparatory schools. However, its present manuals define the smallest primary school as having eleven classes. Smaller schools need to be designed for rural areas with low population densities, including multi-grade two and three classroom schools. The PPU should expand its work to include such schools.

The PPU also designed an in-depth school physical infrastructure and mapping survey, and completed that survey for Giza governorate. The software for the mapping and database is very impressive. The reports and database provide complete information for school siting, renovation, repair, and maintenance. This work provides an excellent planning tool and needs to be extended to all governorates. However, two considerations should guide this. There is a strong case to simplify the protocol and database for each school site, so as to make a national survey feasible. Secondly, the PPU database should make maximum use of the EMIS, so that information and effort are not duplicated. This will require close collaboration, which has hitherto been notably lacking.

Recommendations

Information and Computer Services Directorate

- Further staff training and development are needed on EMIS concepts and applications to planning and management. Staff who can perform EMIS needs assessments and systems analysis need to be recruited and trained.

- The appointment of a capable director for the Directorate of Information and Computer Services is essential for the continued growth and effectiveness of this technical unit.

- The EMIS needs to be expanded to include elements on school facilities, student performance, school finances, and costs. It should also be linked to information on school-age population down to the local (village) level and be related to the school mapping to be undertaken through the Physical Planning Unit.

- Within the governorates the project should support continued training and systems development. This development should focus on linking the governorate school database to local level school planning. The addition of staff to help with training, and gaining capacity for desk-top publishing to produce training materials, will increase training effectiveness.

Research Directorate

- Continued provision of on-the-job training in research and analytic methods remains vital to the development of the capacities of this Directorate. Intensive short-term training in a research setting for selected personnel is also advised, to permit an accelerated transfer of skills. In the long term, USAID and the MOE would greatly benefit from the provision of graduate-level, participant training for select staff.

- The supplying of technical equipment and facilities has lagged behind the growth of technical staff, resulting in productivity constraints. Assistance is recommended for the acquisition of additional equipment and materials and the optimization of facility use.

- The ultimate utility of the Research Directorate depends on its capacity to communicate effectively to the decision makers the results of solid research. Basic training and research do not automatically produce this capability. Concrete support of the communication aspects of research utilization will be required. Training in presentation techniques and strategies is suggested, including desk-top publishing facilities and appropriate software.

Planning and Follow-up Directorate and Physical Planning Unit

- EPID needs to strengthen the coordination of overall MOE policy and planning of the capital budget, human resources, and educational financing.

- At the governorate level, support should be given for strengthening the linkage between the EMIS and planning functions. This will include further training, which may be facilitated by providing computing facilities to governorate planning offices.

- PPU should develop architectural specifications for small, rural schools. Its school mapping work should be coordinated with the EMIS and simplified so as to make a national survey feasible.

B. CENTER FOR CURRICULUM AND INSTRUCTIONAL MATERIALS DEVELOPMENT

The curriculum development unit was created in 1989 to respond to and support the Educational Reform Act through innovative curriculum development. It is responsible for design, development, testing, modification, and evaluation of all pre-university curricula and instructional materials; the training of teacher trainers in

the use of the new curricula; and the integration of the curricula across grade levels in all subjects.

The Educational Development Center has provided skilled and personable long- and short-term technical advisors to assist the CCIMD in development of its managerial and technical capabilities. During the first year, technical assistance style was direct and hands-on. As the organization grew in experience, the technical assistance has become more advisory. Staff development continues to be a priority for the contractor throughout the project. A comprehensive management plan developed in the earliest phase is still not in effect, but the concept of management by team, timeline, and work plan is slowly replacing the practice of management by fiat and crisis.

1. Organizational Issues and Staffing

In 1989, a curriculum unit was created under the NCERD. Before that arrangement, curriculum development and textbook writing were the responsibility of subject specialists based in the General Education Directorates. Rather than try to revitalize earlier or existing structures to support the Educational Reform Act, MOE policy makers opted to absorb some existing functions and individuals into the CCIMD and establish it as a quasi-autonomous unit directly under the Minister of Education.

Since its establishment, CCIMD's uncertain status in relation to the MOE and the NCERD has contributed to a sense of organizational vulnerability. For individual members of staff this vulnerability has to do with issues of status, compensation, and recognition.

Organizational maturity and productivity continue to be hampered by staff transience and divided commitments. Most CCIMD staff members are seconded from the NCERD or contracted from a university, and serve at CCIMD without competitive salary or status. Most staff work at least part-time at other jobs. Their career paths, professional networks, and opportunities for advancement lie outside the CCIMD. The resulting sense of impermanence and unpredictability can be expected to continue to negatively affect the working environment until the organizational status of CCIMD is clarified.

On a more positive note, after a period of uncertainty about the authority of CCIMD in relation to the curriculum for basic education, the present Minister has made it clear that CCIMD is the responsible unit for curriculum direction and decisions. This directive is reinforced by the fact that the first materials developed by the Center, the curriculum on Environmental Studies, have been distributed to all primary schools in the country and constitute part of the official curriculum.

2. Innovation in Curriculum Design

The CCIMD innovative instructional system is to replace practices such as memorization and rote learning with classroom management and teaching strategies that include creative thinking, questioning, and application of knowledge to different settings. In a remarkably short period of time, and in spite of its organizational difficulties, the CCIMD has established a curriculum design process that builds quality control into each step, has developed associated instructional materials, and has produced an overall plan for the curriculum that reduces the fragmentation of subject matter and organizes it systematically into learning units.

Internally, the CCIMD is organized by function, and its six departments (design, preparation, technology, field test, follow-up, and training) reflect the order of steps in curriculum and instructional materials development. The organizational structure is based on the assumption that if the *process* is designed to maximize quality at each stage, then the ensuing products and services will be of high quality. The quality control process includes: a lengthy design stage (involving child development experts as well as subject specialists) during which issues of integration, sequencing, age appropriateness, and learning environment are taken into account; specific written quality control criteria for authors and editors; interactive editing during and after the writing process; preparation of a teacher's guide to accompany textbooks and explain how to teach the new curriculum; a team approach to design and authoring; a field test phase in which units are tried in a sample of schools and a guide for teacher trainers on how to use the new materials.

3. Implementation Challenges

The first new materials developed by CCIMD were for an innovative course for grades 1 to 3 in Environmental Studies. This course replaced previous materials in Science, Social Studies, Health, and Home Economics. It sets a high standard and model for stimulating pupils' critical thinking and problem-solving skills. The pupils' workbooks and teachers' guides have been distributed to all primary schools. Based on observations in five primary schools, ranging from a remote, multi-grade poor rural school to an elite English Language school in Cairo, this course appears to be making a positive impact on the understanding and practice of teachers. Teachers say that the teachers' guide is excellent in providing suggestions for pupil-centered activities. Other new textbooks and teachers' guides will be available in schools within two years (see Figure 3.2).

Observations suggest that current classroom conditions and practices mitigate against the new curriculum and approach being easily adopted by teachers. The shift of learning philosophy from teacher-centered to child-centered is a major undertaking that will require a coordinated long-term effort from all involved parties. It is questionable whether such an instructional model can be implemented in the current

Figure 3.2

STATUS OF CURRICULUM AND MATERIALS DEVELOPMENT

SUBJECT	STATUS	SCHOOL ENTRY DATE
Religion 1-5	Text/Guide Completed	9/92
Arabic 1-3 **Arabic 4, 5**	Text/Guide Completed Text/Guide in Preparation	9/92 9/93
Math 1-3 **Math 4** **Math 5**	Texts Distributed Guides Completed Text/Guide to be Printed Text/Guides in Preparation	9/91 9/92 9/92 9/91
Environmental Studies 1-3	Texts Distributed Guides Distributed	9/91
Science 4 **Science 5**	Text/Guide to be Printed Curriculum Guide Preparation to Start	9/92 9/93
Social Studies 4 **Social Studies 5**	Text/Guide Preparation to Start	9/93 9/94
Art 1 **Art 2**	Text/Guide to be Printed Text/Guide Preparation to Start	9/92 9/93
Music 1, 2	Curriculum Guide in Preparation	9/95
Physical Education 1, 2 **Physical Education 3-5**	Teacher's Guides (1-5) Completed (No text)	9/93 9/94
Technology 4 **Technology 5**	Texts/Guides (4,5) in Preparation	9/93 9/94
Home Economics 4	Curriculum Guide to Be Developed	9/94
Agriculture 4 **Agriculture 5**	Curriculum Guides (4,5) Started	9/94 9/95
Industrial Arts 4 **Industrial Arts 5**	Curriculum Guides (4,5) Started	9/95 9/96

crowded learning environment and with the current teaching force, library facilities, and examination system.

Until the materials have been in classroom use for at least a year, quality indicators such as age appropriateness, individualization, effectiveness, and relevancy cannot be thoroughly evaluated. Thus, it is necessary for CCIMD to develop a system to monitor and evaluate the impact that new curriculum has on pupil learning.

Recommendations

- Continued USAID support of CCIMD is vital to the attainment of the USAID goal of increased relevance, efficiency, and effectiveness of the educational system. Most of the organizational difficulties will be eased with time, and there is potential for enormous benefit to Egypt from CCIMD activities.

- Systematic, objective classroom-level research is required to effectively measure questions of efficiency and relevance of the new curriculum.

- USAID should consider the support of two elements: 1) a comprehensive study of textbook production and distribution; and 2) a comprehensive analysis of current instructional practices. Research data from these areas would provide information critical to both logistical and policy planning within CCIMD.

- Space and classroom configuration requirements of the new curriculum require a review of present school design and classroom furnishings.

C. SPECIAL EDUCATION AND TEACHER TRAINING

1. Special Education

According to MOE data, there are slightly more than 10,000 children with handicaps or special learning problems currently enrolled in primary and preparatory schools. The figures include 1,500 blind/partially sighted children, 5,000 deaf/hard of hearing children, and 5,000 mentally retarded (I.Q. between 50 and 75) children. The total number is considered extremely low for a school population of 10 million, suggesting that the majority of children with learning constraints are not enrolled in school.

A 1989 research paper on the subject recommended the establishment of "model" schools to address special education needs. A national organization of mothers seeks to increase public understanding of the situation, and the nation's first

lady, Mrs. Mubarek, is active in the cause. Those involved in establishing special education as a national agenda item believe the first area of priority to be conduct of a national needs assessment and classification of those needs.

Basic Education planned for the support of special education with the 1986 Second Amendment, designating $4 million for this component. In 1991, through a contract with Gallaudet University, twelve persons from the MOE and the CCIMD received U.S. training in education for deaf/hard of hearing and blind/partially sighted learners. These persons now form the nucleus of an in-service staff providing training to other trainers and teachers. In-service teacher training sessions were conducted by joint Gallaudet/MOE teams in November 1991 and the winter and spring of 1992. Gallaudet consultants have also assisted the Egyptian trainers in training and identifying special equipment necessary to programs for the handicapped. An Executive Steering Committee has been created and an undersecretary assigned administrative responsibility for activities in this area.

Less than a quarter of the dollar amount allocated for special education has been disbursed. The principal constraint has been the absence of a strong supporting unit within the MOE.

2. In-Service Teacher Training

Basic Education's Second Amendment called for the improvement of MOE training capacity, improved operations in the six existing in-service teacher training institutions, production of training materials, and conduct of in-service training for 10,000 teachers. A subsequent USAID/MOE management decision deferred the initiation of a teacher training activity until the educational planning and curriculum efforts were successfully launched.

In-service teacher training is undertaken through different units, divisions, and projects in the MOE and it is expected, though often not the case, that this training will be coordinated through the General Directorate for In-Service Training (GDIST). Thirteen thousand teachers were trained in the use and maintenance of USAID-donated equipment. This training was implemented through the Basic Education Training Unit of the MOE utilizing the six GDIST centers.

Recommendations

- It is recommended that through technical advisers, USAID can assist the MOE in coordination/consolidation of training, including short- and long-term participant training in the United States for trainers, curriculum specialists, and special education teachers. USAID support must reflect a practical, long-term approach to the training of all teachers. This means that special education training needs should be incorporated into the overall effort.

- Magnet schools or a national demonstration and training center should be established to accommodate the demonstration and training functions associated specifically with the improvement of special education. Such a specialized environment would enhance pre-service and in-service teacher training effectiveness, provide a laboratory for curriculum development, and aid in the creation of a system of national assessment and classification. Coordination with university departments and specialists is encouraged, although administrative responsibility must rest with the MOE.

D. THE NATIONAL CENTER FOR EDUCATIONAL EVALUATION AND EXAMINATIONS

1. Organizational Structure and Resources

The National Center for Educational Evaluation and Examinations (NCEEE) was created by Presidential Decree over a year ago with the following mission: 1) to establish the standards, norms, and criteria for evaluating all levels of education; 2) to prepare examinations, including the Thanawiya Amma, the Adadiya Amma, and the Advanced Level Examinations for university entrance; 3) to regulate the quality of all examinations; 4) to conduct research on evaluation methods and instruments; 5) to train educators and administrators in the use of examinations; and 6) to provide consultations for universities and other institutions.

The NCEEE is directly under the Minister of Education, although independent from other Ministry branches, and receives guidance from a Board of Directors chaired by the Minister. The Director of the NCEEE supervises two branches: Administration and Finance, and Academic Departments. The Departments are Test Development, Research, Dissemination and Training, and Operations and Information. Each is headed by an outstanding university-level educator. The basic organizational structure was evaluated as appropriate.

The NCEEE resources in personnel, finances, and equipment are limited. Additional permanent staff are being hired, but it is expected that staffing levels will remain short of what is required for the Center to be fully functional. The new Center building at El Moqattam, which is 95 percent completed, sits on 4,000 square meters of land within 42,000 square meters of land donated by the GOE. Furniture, equipment (computers, scanners), and additional staff training will be required once the move to the new building is accomplished. These needs have been specified in the three studies of Woodford, Tyler-Landon, and Spits.

Major support for the establishment of the NCEEE has come from the GOE through the contribution of building, land, and personnel. USAID participation (LE 50,000 and three consultancies) and British input have been relatively small. However, the USAID and British short-term technical assistance was valuable, appropriate, and timely, specifying in detail the steps for NCEEE to take to become functional. The recommendations were realistic and well-received by NCEEE administrators.

2. Organizational Linkages

Formal linkages have been established through the NCEEE Board with CCIMD, GDIST, and NCERD, and informal linkages with CCIMD through the 36 test development committees of the Testing Center. Many test development committee members also serve in various capacities within CCIMD. Coordination with the above-named organizations and with MOE departments occurs only because the NCEEE Board includes the Directors of CCIMD and NCERD and is chaired by the Minister.

3. Activities

Since the completion of the in-service training consultancy, NCEEE has increased the number of test development committees from 15 to 36, continued its work on model items, and continued the development of item banks. A Testing Center newsletter has been printed and disseminated. The new building is nearing completion, and approval has been given to increase staff levels.

The NCEEE mandate to improve pre-university education through improved testing, training, and research rests on the assumption that better testing will lead to improved curriculum. Indeed, testing is an important element in the triad of testing, curriculum, and training, but care must be taken to allow curriculum its full role in this process. Testing should not become a motivator of curriculum.

Recommendations

- Continued USAID support to NCEEE is recommended and would be well received and timely. The areas of greatest need are for staff training, office furniture, and equipment. The appropriate area for USAID intervention is training, including training in computer applications.

- It is recommended that core staff of NCEEE be full time employees of that organization and not draw a portion of their salary as part time university professors. The present fragmented personnel situation creates divided loyalities and inefficiencies in production.

IV. RECOMMENDATIONS

Chapters	Recommendations
Chapter Two:	**A. Project Impact on Access and Enrollment** • USAID support of the GOE school construction program has been cost-effective and highly successful in attaining its objectives in terms of enrollment and access. It is strongly recommended that this assistance continue to be provided. • Pressure on the higher education sector in Egypt is expected to grow as greater enrollments increase the need for teachers and administrators. USAID should consider appropriate ways to support the GOE in meeting the challenge of preparing educational personnel.
School Construction	**B. New School Placement** • The problem of over-utilization of facilities should be addressed by USAID in two ways: 1) expand rural school placement criteria to include construction for the purpose of eliminating second shifts; and 2) exploit the high degree of both vertical and horizontal expansion capability on existing school sites. • A review and approval process should be put in place to assure proper orientation of school buildings on their sites. This task would appear to fit with existing NIB responsibilities related to technical document preparation. • USAID should consider funding support for the PPU efforts to computerize the school mapping process and to expand the National Records of School Buildings data bank to encompass all governorates.

Chapters	Recommendations
Chapter Two: (Continued) *School Construction*	C. Design, Quality, and Maintenance • It is recommended that NIB prepare value engineering studies as a pilot test to determine their utility in setting future project criteria. Such studies could yield useful cost-benefit data relative to building component alternatives, which could have an impact on future maintenance costs. If the studies prove feasible and useful in economic analyses, they should be made a prerquisite for all building studies. • PPU and NIB, in collaboration with USAID, should prepare detailed tender documents, with descriptions, drawings, and specifications, of how the quality of work required is to be achieved. Design criteria for building components that have not held up adequately should be upgraded. • The Local Council engineer should prepare daily site reports which address accomplishments, obstructions, and planned work. A summary report should be sent weekly to the NIB site engineer. These are the elements of a systematic, bottom-up monitoring program, and will also provide motivation to the engineers to perform effectively. The summary report document should be designed by the USAID engineering staff to assure adequate coverage of critical construction process issues. • USAID should assist the MOE in the preparation of a Maintenance Plan based on existing needs, starting with the older schools and leading up to present day requirements. • USAID and the MOE should collaborate in the development of a policy, implementation strategy, and plan for training headmasters and school and district staff in the concepts and procedures of maintenance. The concept of maintenance must be accepted and its importance understood. • Efforts should be made to reduce the student:classroom ratio, thereby reducing stress on the facility.

Chapters	Recommendations
Chapter Three: *Project Support to Educational Reform*	**A. The Educational Planning and Information Division** • The MOE requires a strategic plan for implementation of the Education Reform Act of 1988 in stages across all units of the Ministry. It is recommended that USAID support a series of educational forums where input from practitioners, Ministry staff, and university faculty is sought to develop comprehensive strategic and tactical plans. These plans should clarify relationships and linkages between EPID, CCIMD, NCEEE, GDIST and other relevant agencies. ***Information and Computer Services Directorate*** • Further staff training and development is needed on EMIS concepts and applications to planning and management. Staff who can perform EMIS needs assessments and systems analysis need to be recruited and trained. • The appointment of a capable Director for the Directorate of Information and Computer Services is essential for the continued growth and effectiveness of this technical unit. • The EMIS needs to be expanded to include elements on school facilities, student performance, school finances and costs. It should also be linked to information on school-age population down to the local (village) level and be related to the school mapping to be undertaken through the Physical Planning Unit. • Within the governorates the project should support continued training and systems development. This development should focus on linking the governorate school database to local level school planning. The addition of staff to help with training, and gaining capacity for desk-top publishing to produce training materials, will increase training effectiveness. ***Research Directorate*** • Continued provision of on-the-job training in research and analytic methods remains vital to the development of the capacities of this Directorate. Intensive short-term training in a research setting for selected personnel is also advised, to permit an accelerated transfer of skills. In the long term, USAID and the MOE would greatly benefit from the provision of graduate-level,participant training for select staff.

Chapters	Recommendations
Chapter Three: (Continued) *Project Support to Educational Reform*	*Research Directorate (cont'd)* • The supplying of technical equipment and facilities has lagged behind the growth of technical staff, resulting in productivity constraints. Assistance is recommended for the acquisition of additional equipment and materials and the optimization of facility use. • The ultimate utility of the Research Directorate depends on its capacity to communicate effectively to the decision makers the results of solid research. Basic training and research do not automatically produce this capability. Concrete support of the communication aspects of research utilization will be required. Training in presentation techniques and strategies is suggested, possibly including desk-top publishing facilities and appropriate software. *Planning and Follow-up Directorate and Physical Planning Unit* • EPID needs to strengthen the coordination of overall MOE policy and planning of the capital budget, human resources and educational financing. • At the governorate level, support should be given for strengthening the linkage between the EMIS and planning functions. This will include further training, which may be facilitated by providing computing facilities to governorate planning offices. • PPU should develop architectural specifications for small, rural schools. Its school mapping work should be coordinated with the EMIS and simplified so as to make a national survey feasible.

Chapters	Recommendations
Chapter Three: (Continued) *Project Support to Educational Reform*	**B. Center for Curriculum and Instructional Materials Development** • Continued USAID support of CCIMD is vital to the attainment of the USAID goal of increased relevance, efficiency, and effectiveness of the educational system. Most of the organizational difficulties will be eased with time and there is potential for enormous benefit to Egypt from CCIMD activities. • Systematic, objective classroom-level research is required to effectively measure questions of efficiency and relevance of the new curriculum. • USAID should consider the support of two elements: 1) a comprehensive study of textbook production and distribution; and 2) a comprehensive analysis of current instructional practices. Research data from these areas would provide information critical to both logistical and policy planning within CCIMD. • Space and classroom configuration requirements of the new curriculum require a review of present school design and classroom furnishings. **C. Special Education and Teacher Training** • It is recommended that through technical advisers, USAID can assist the MOE in coordination/consolidation of training, including short- and long-term participant training in the United States for trainers, curriculum specialists, and special education teachers. USAID support must reflect a practical, long-term approach to the training of all teachers. This means that special education training needs should be incorporated into the overall effort. • Magnet schools or a national demonstration and training center should be established to accommodate the demonstration and training functions associated specifically with the improvement of special education. Such a specialized environment would enhance pre-service and in-service teacher training effectiveness, provide a laboratory for curriculum development, and aid in the creation of a system of national assessment and classification. Coordination with university departments and specialists is encouraged, although administrative responsibility must rest with the MOE.

Chapters	Recommendations
Chapter Three: (Continued) *Project Support to Educational Reform*	D. The National Center for Educational Evaluation and Examimations • Continued USAID support to NCEEE is recommended and would be well received and timely. The areas of greatest need are for staff training, office furniture, and equipment. The appropriate area for USAID intervention is training, including training in computer applications. • It is recommended that core staff of NCEEE be full time employees of that organization and not draw a portion of their salary as part time university professors. The present fragmented personnel situation creates divided loyalities and inefficiencies in production.

APPENDIX A

FINDINGS FROM SCHOOL SURVEY: TABLES AND FIGURES

Findings From School Survey

SCHOOL SITING AND ADAPTATION

Distribution of Responses (N=150)

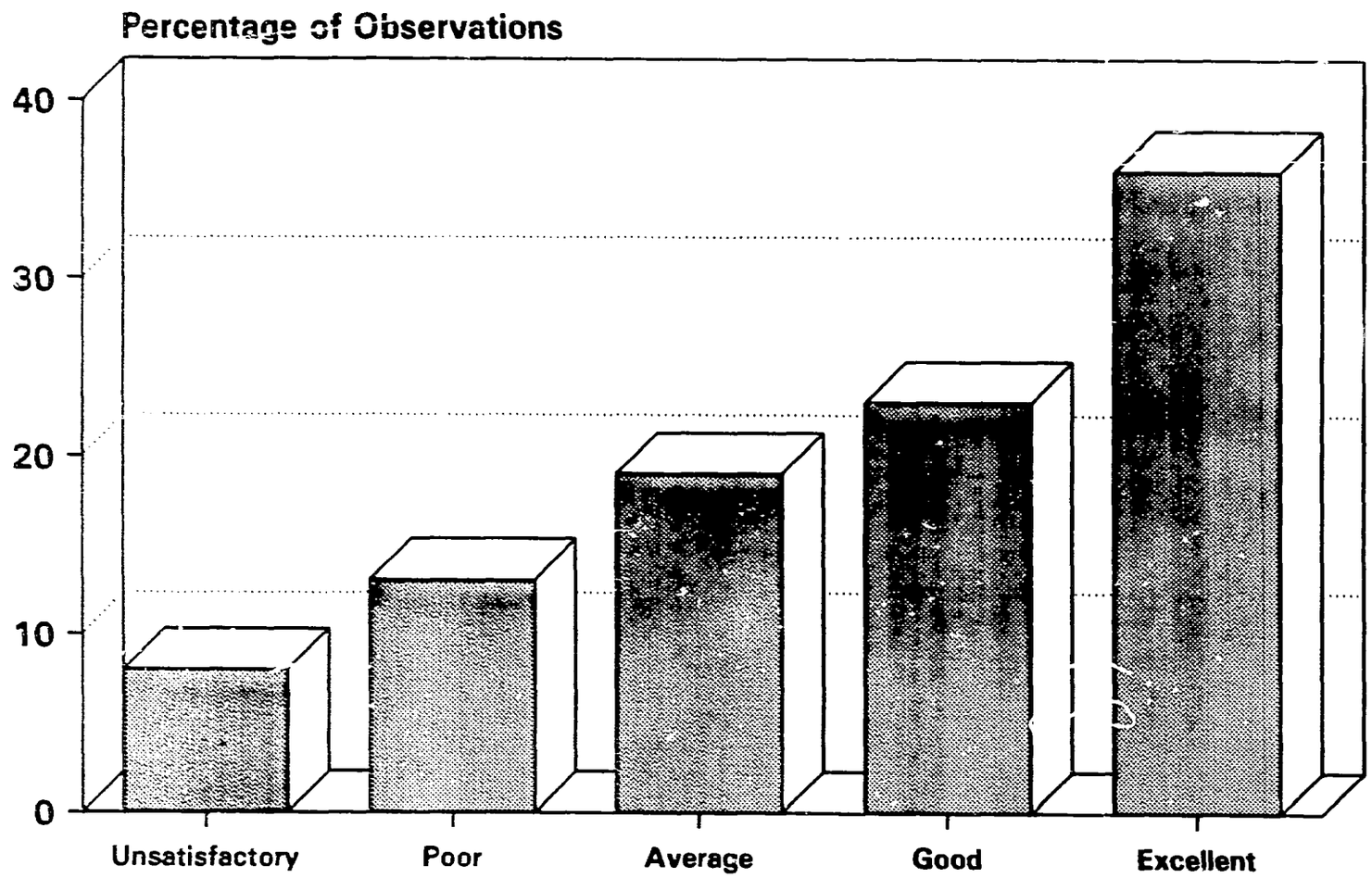
KEY

1 = Unsatisfactory
2 = Poor
3 = Average
4 = Good
5 = Excellent

ITEMS IN SCHOOL SURVEY	N/A	1	2	3	4	5	Weighted Mean
1.0 Siting and Adaptation							
1.1 Suitability of Location	17	25	33	25	21	29	3.0
1.2 Horizontal Expansion	3	22	16	21	25	63	3.6
1.3 Orientation of Prototype	0	2	23	38	27	60	3.8
1.4 Safety	0	0	6	26	62	56	4.1
Totals	20	49	78	110	135	208	3.6
Percentage		8%	13%	19%	23%	36%	

SCHOOL SITING AND ADAPTATION

SUMMARY ASSESSMENT (4 Items from Survey)



Creative Associates International

Findings From School Survey

FACILITY MAINTENANCE

Distribution of Responses (N=150)

KEY

1 = Unsatisfactory
2 = Poor
3 = Average
4 = Good
5 = Excellent

ITEMS IN SCHOOL SURVEY	N/A	1	2	3	4	5	Weighted Mean
2.0 Facility Maintenance							
2.1 Toilet Functioning	4	40	35	30	37	4	2.5
2.2 Washbowl Functioning	4	30	28	36	45	7	2.8
2.3 Condition of Plumbing/Piping	4	28	23	29	61	5	2.9
2.4 Condition of Sanitary Tank	6	23	19	16	67	19	3.3
2.5 Condition of Stucco	0	4	25	39	63	19	3.5
2.6 Condition of Tile Flooring	0	4	14	46	77	9	3.5
2.7 Condition of Tile Walls	1	1	21	54	63	10	3.4
2.8 Condition of Carpentry	1	5	24	42	71	7	3.3
2.9 Condition of Furnishings	0	6	26	45	57	16	3.3
2.10 Condition of Windows	0	3	22	35	69	21	3.6
2.11 Condition of Ext. Paint	0	2	21	46	66	15	3.5
2.12 Condition of Int. Paint	0	5	33	47	48	17	3.3
2.13 Condition of Roofing	0	8	21	31	60	29	3.5
2.14 Light Bulb Replacement	23	28	27	21	31	20	2.9
2.15 Impact of Mntnce. on Utlzn.	0	1	5	53	59	32	3.8
2.16 Condn. Compared to GOE	0	0	2	58	57	33	3.8
Totals	43	188	346	628	931	263	3.3
Percentage		8%	14%	26%	39%	11%	

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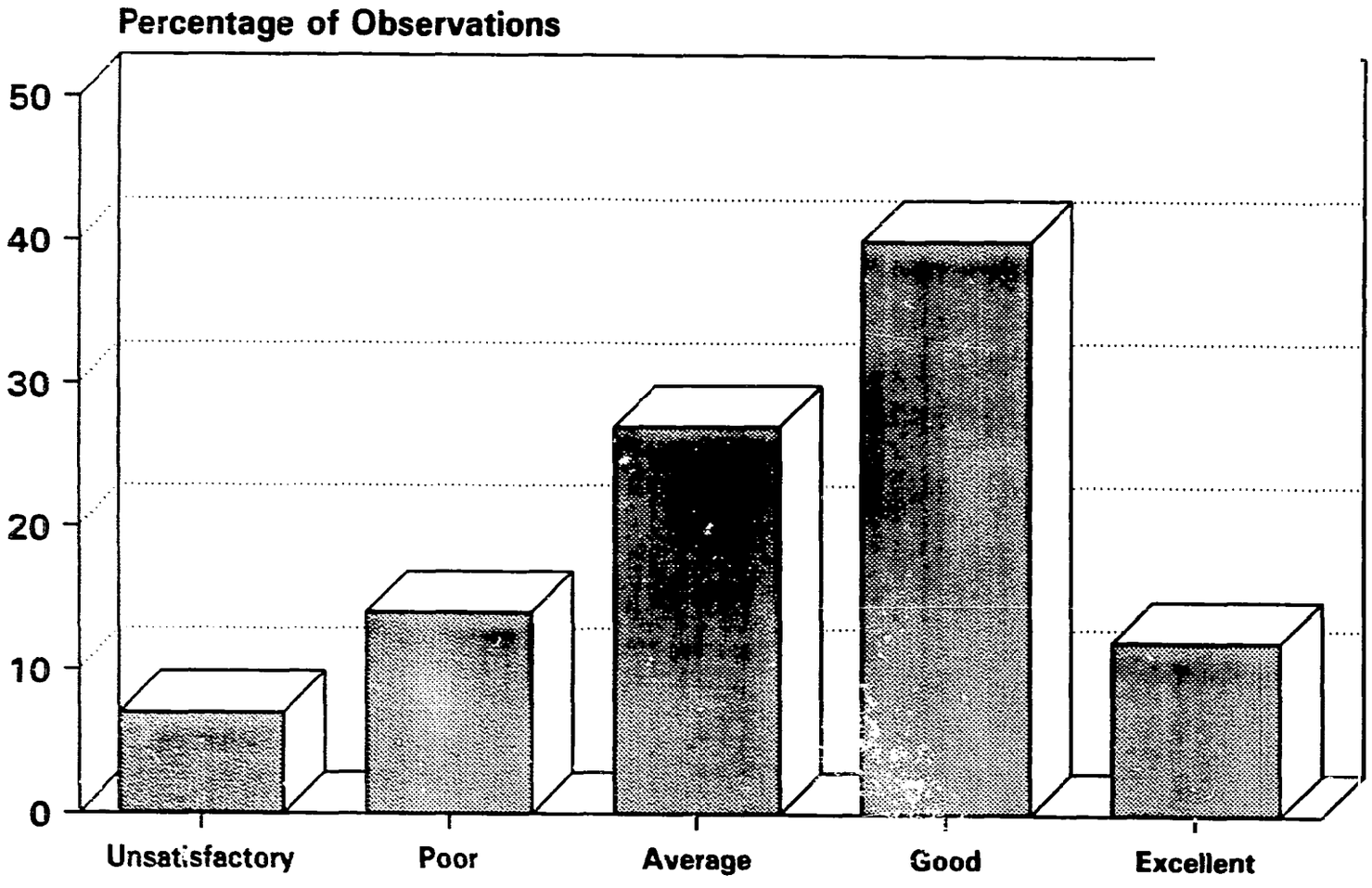
FACILITY MAINTENANCE

SUMMARY ASSESSMENT(15 Items from Survey)



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Findings From School Survey

QUALITY CONTROL OF EXTERNAL CONSTRUCTION

Distribution of Responses (N=150)

KEY

1 = Unsatisfactory
2 = Poor
3 = Average
4 = Good
5 = Excellent

ITEMS IN SCHOOL SURVEY	N/A	1	2	3	4	5	Weighted Mean
3.0 Quality Control of External Construction							
3.1 Sitework Grading and Cndn.	0	4	18	36	51	41	3.7
3.2 Structural Concrete Wkmshp.	0	0	4	19	98	29	4.0
3.3 Paving, Walks and Steps	2	2	26	49	69	2	3.3
3.4 Masonry	0	0	3	44	92	11	3.7
3.5 Roofing	1	8	15	41	74	11	3.4
3.6 Windows	0	29	6	42	66	7	3.1
3.7 Door Frames	0	39	19	33	58	1	2.8
3.8 Doors	0	24	31	49	44	2	2.8
3.9 Stucco	0	0	18	37	73	22	3.7
3.10 Paint Finishes	0	0	14	57	67	9	3.5
3.11 Hardware	0	82	31	22	14	1	1.8
3.12 Signage	0	15	34	35	23	43	3.3
3.13 Site Lighting	81	9	20	15	13	12	3.0
Totals		212	239	479	742	191	3.2
Percentage		11%	13%	26%	40%	10%	

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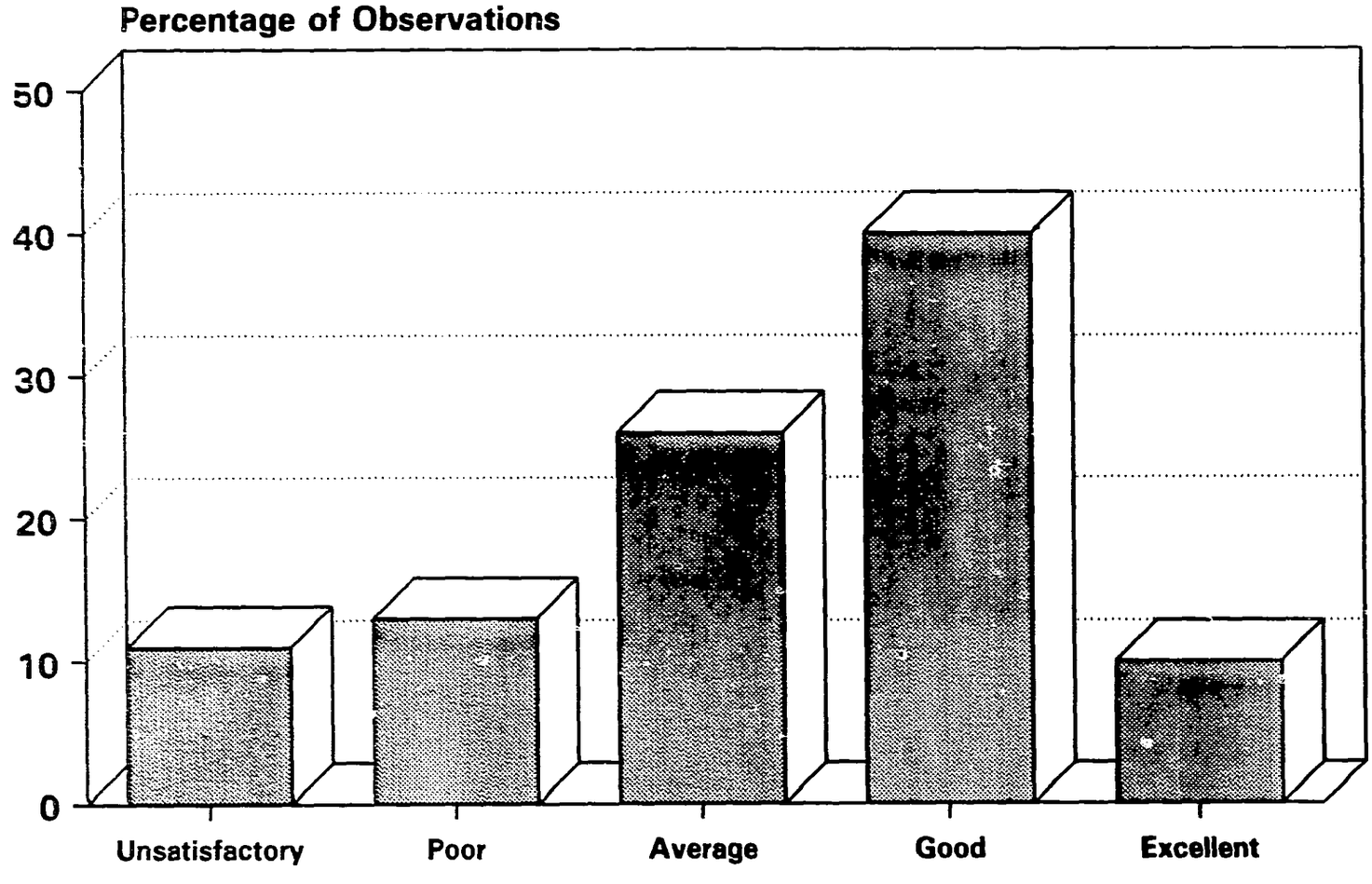
QUALITY CONTROL OF EXTERNAL CONSTRUCTION

SUMMARY ASSESSMENT(13 Items from Survey)



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Findings From School Survey

QUALITY CONTROL OF INTERNAL CONSTRUCTION

Distribution of Responses (N=150)

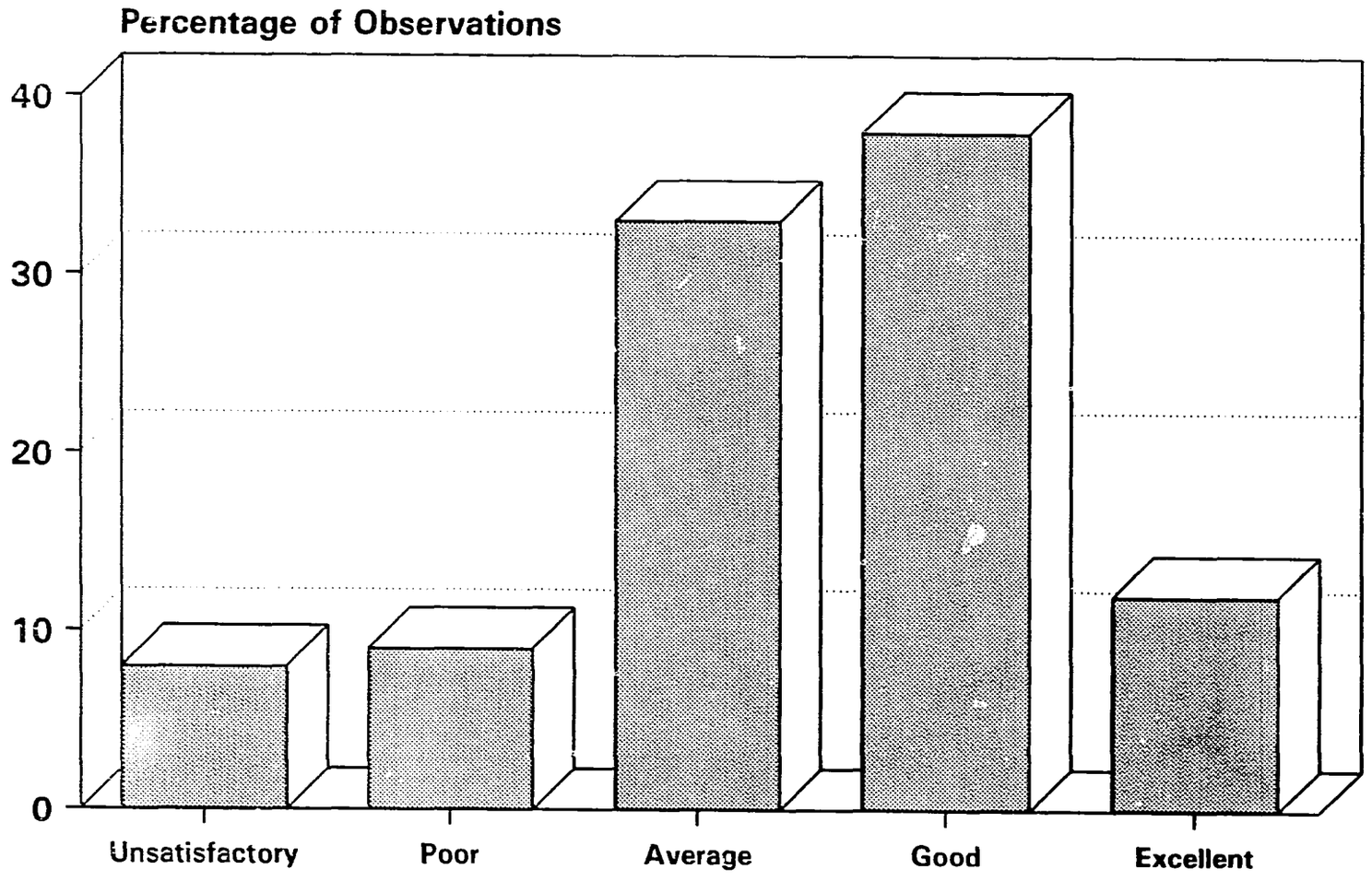
KEY

1 = Unsatisfactory
2 = Poor
3 = Average
4 = Good
5 = Excellent

ITEMS IN SCHOOL SURVEY	N/A	1	2	3	4	5	Weighted Mean
4.0 Quality Control of Internal Construction							
4.1 Floor Finishes	0	2	10	60	74	4	3.5
4.2 Wall Finishes	0	1	12	58	51	28	3.6
4.3 Ceiling Finishes	0	0	3	51	74	22	3.8
4.4 Door Frames	0	38	23	31	58	0	2.7
4.5 Doors	0	23	25	60	39	92	3.6
4.6 Light Fixtures	0	5	5	63	72	5	3.4
4.7 Paint Finishes	0	1	15	61	66	7	3.4
4.8 Hardware	0	80	28	26	15	1	1.9
4.9 Adequacy of Day Lighting	0	1	1	28	80	40	4.0
4.10 Convenience Outlets	2	11	15	81	40	1	3.0
4.11 Adequacy of Sound Isolation	0	2	3	40	74	31	3.9
4.12 Stairways	0	6	26	45	53	20	3.4
4.13 Toilet Rooms	0	2	15	60	72	1	3.4
Totals	2	172	181	664	768	252	3.4
Percentage		8%	9%	33%	38%	12%	

QUALITY CONTROL OF INTERNAL CONSTRUCTION

SUMMARY ASSESSMENT(13 Items from Survey)



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Findings From School Survey

UTILIZATION OF FACILITIES

Distribution of Responses (N=150)

KEY

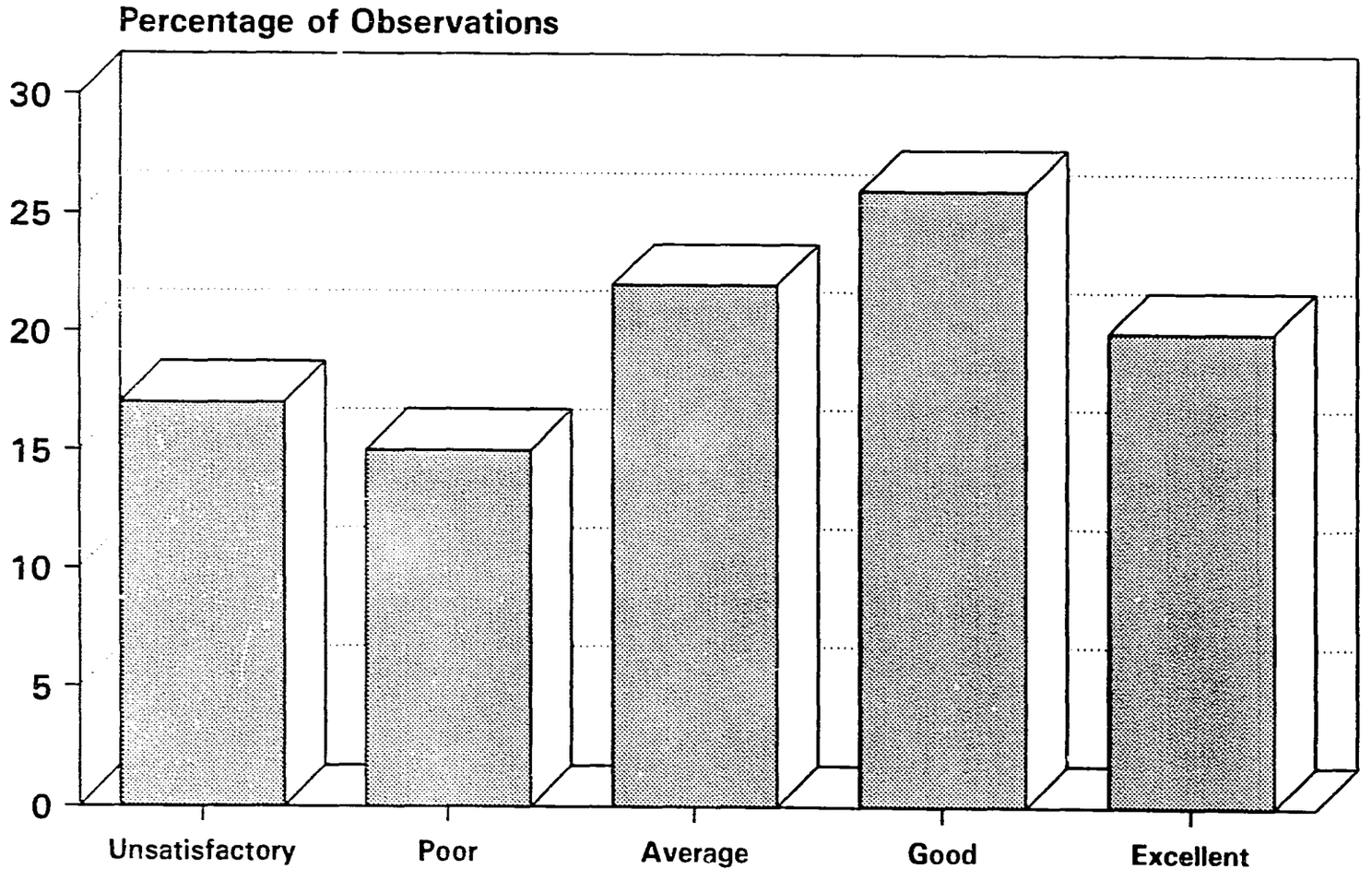
1 = Unsatisfactory
2 = Poor
3 = Average
4 = Good
5 = Excellent

ITEMS IN SCHOOL SURVEY	N/A	1	2	3	4	5	Weighted Mean
5.0 Utilization of Facilities							
5.1 Number of Classrooms	1	23	30	35	28	33	3.1
5.2 Admin. Space	3	6	12	30	55	44	3.8
5.3 Laboratories	46	22	22	23	24	13	2.8
5.4 Workshops	19	34	18	33	32	14	2.8
5.5 Libraries	27	27	14	26	30	26	3.1
Totals	96	112	96	147	169	130	3.2
Percentage		17%	15%	22%	26%	20%	

-57

UTILIZATION OF FACILITIES

SUMMARY ASSESSMENT (5 Items from Survey)



Creative Associates International

Findings From School Survey

SAFETY

Distribution of Responses (N=150)

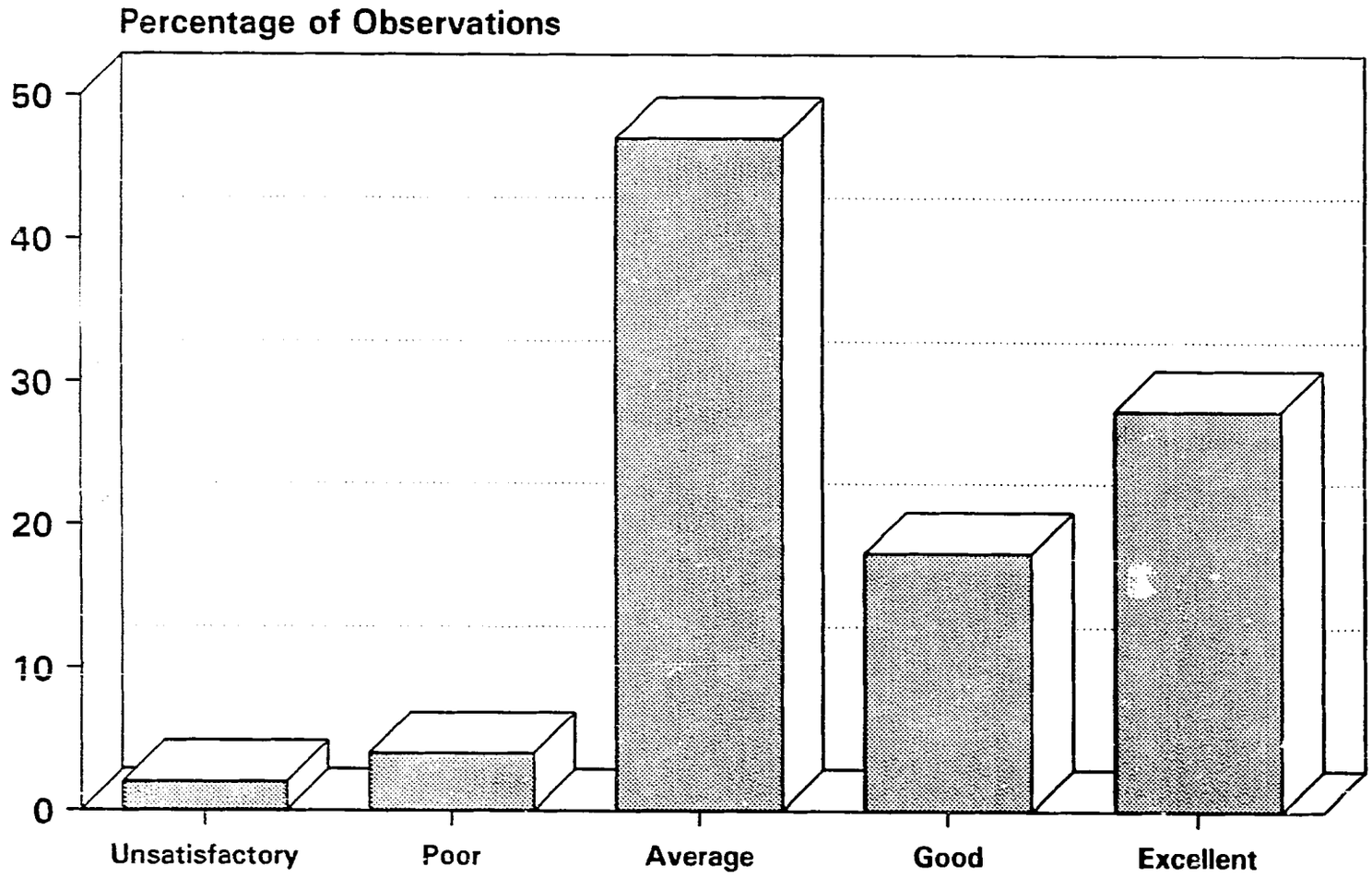
KEY

1 = Unsatisfactory
2 = Poor
3 = Average
4 = Good
5 = Excellent

ITEMS IN SCHOOL SURVEY	N/A	1	2	3	4	5	Weighted Mean
6.0 Safety							
6.1 Egress Upper Stories	1	7	12	44	30	56	3.8
6.2 Egress Instructional Space	0	0	0	97	25	28	3.5
Totals	1	7	12	141	55	84	3.7
Percentage		2%	4%	47%	19%	28%	

SAFETY

SUMMARY ASSESSMENT (2 Items from Survey)



Creative Associates International

Findings From School Survey

APPEARANCE AND COMFORT

Distribution of Responses (N=150)

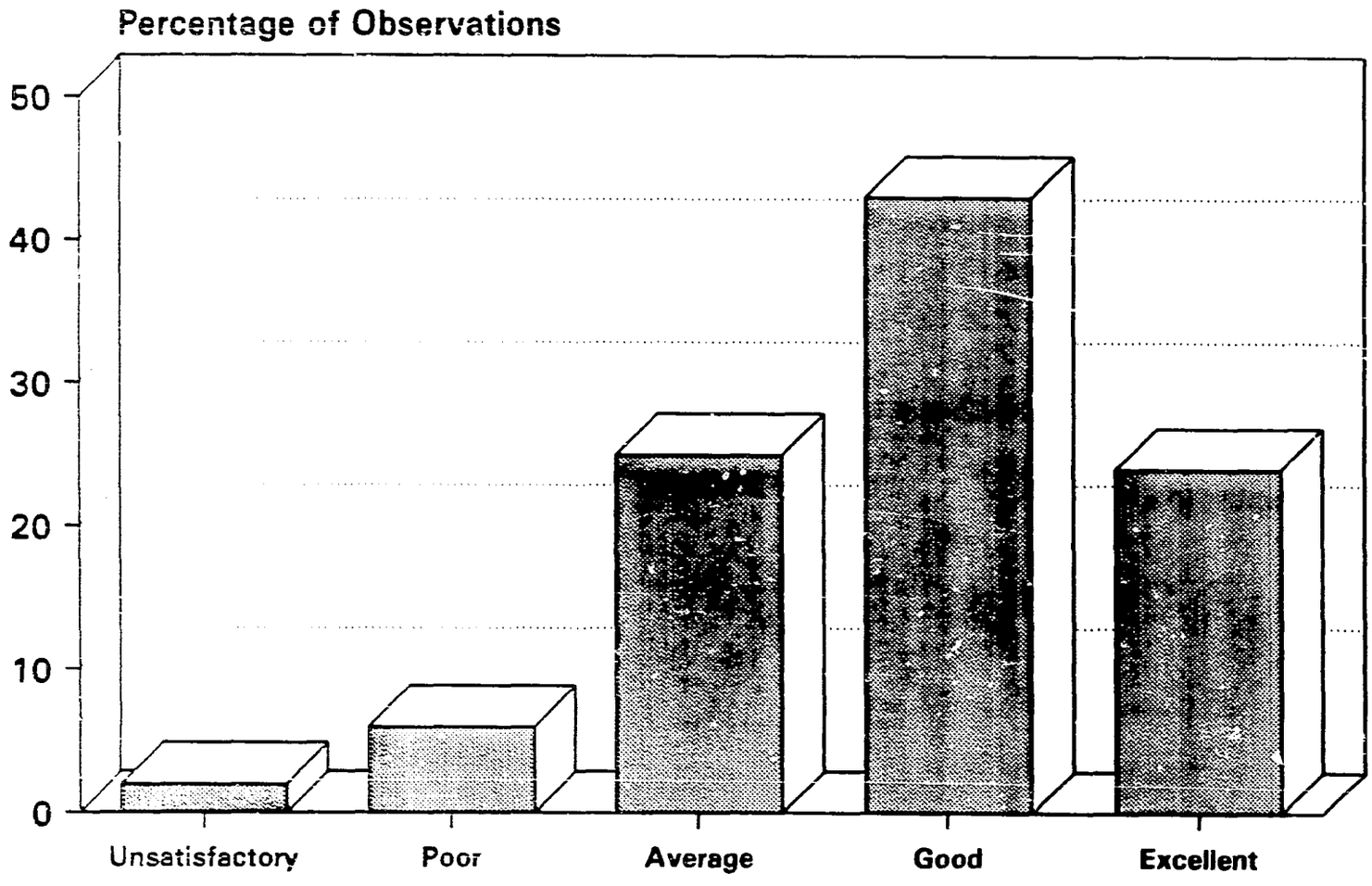
KEY

1 = Unsatisfactory
2 = Poor
3 = Average
4 = Good
5 = Excellent

ITEMS IN SCHOOL SURVEY	N/A	1	2	3	4	5	Weighted Mean
7.0 Appearance and Comfort							
7.1 Thermal Comfort	0	0	1	28	69	52	4.1
7.2 Overall Appearance	0	5	16	47	61	21	3.5
Totals	0	5	17	75	130	73	3.8
Percentage		2%	6%	25%	43%	24%	

APPEARANCE & COMFORT

SUMMARY ASSESSMENT (2 Items from Survey)



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APPENDIX B

SCHOOL EVALUATION INSTRUMENT

Ministry of Education
USAID/Cairo
Basic Education Project

School Evaluation Instrument

Evaluation Team Members

_____

_____

Date: _____

School Name: _____

Village/Town: _____

District: _____

Mudiriya/Governorate: _____

Type of School: _____Primary _____Preparatory _____Basic

No. of Classrooms: _____

Age of Building (years): _____

Previously Audited by USAID: _____

Setting: _____Rural _____Urban

Contributing Staff: _____

	ENROLLMENT			TEACHERS			STUDENT TEACHER RATIO	STUDENT CLASSROOM RATIO
	Male	Female	Total	Male	Female	Total		
Shift 1	_____	_____	_____	_____	_____	_____	_____	_____
Shift 2	_____	_____	_____	_____	_____	_____	_____	_____
Shift 3	_____	_____	_____	_____	_____	_____	_____	_____

		EXCELLENT	GOOD	AVERAGE	POOR	UNSATISFACTORY	[illegible]
1.0	SITE ADAPTATION OF PROTOTYPE	*	*	*	*	*	*
1.1	Suitability of Location	5	4	3	2	1	0
1.2	Horizontal Expansion Capability	5	4	3	2	1	0
1.3	Orientation of Prototype	5	4	3	2	1	0
1.4	Safety	5	4	3	2	1	0
1.5	Local Contribution of Wall		4 YES		2 NO		
1.6	Remarks						

SUBTOTAL_____

2.0	FACILITY MAINTENANCE						
2.1	Toilet Functioning	5	4	3	2	1	0
2.2	Washbowl Functioning	5	4	3	2	1	0
2.3	Maintenance of Plumbing Piping	5	4	3	2	1	0
2.4	Maintenance of Sanitary Tank	5	4	3	2	1	0
2.5	Maintenance of Stucco	5	4	3	2	1	0
2.6	Maintenance of Tile Flooring	5	4	3	2	1	0
2.7	Maintenace of Walls	5	4	3	2	1	0
2.8	Maintenance of Carpentry	5	4	3	2	1	0
2.9	Maintenance of Furnishings	5	4	3	2	1	0
2.10	Maintenance of Windows	5	4	3	2	1	0
2.11	Maintenance of Exterior Paint	5	4	3	2	1	0
2.12	Maintenance of Interior Paint	5	4	3	2	1	0
2.13	Maintenance of Roofing	5	4	3	2	1	0
2.14	Light Bulb Replacement	5	4	3	2	1	0
2.15	Impact of Maint. on Utilization	5	4	3	2	1	0
2.16	Condition Compared to GOE Schools	5	4	3	2	1	0
2.17	Remarks						

SUBTOTAL_____

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3.0 QUALITY CONTROL OF EXTERIOR CONSTRUCTION

3.1	Sitework Grading and Condition	5	4	3	2	1	0
3.2	Structural Concrete Workmanship	5	4	3	2	1	0
3.3	Paving, Walks and Steps	5	4	3	2	1	0
3.4	Masonry	5	4	3	2	1	0
3.5	Roofing	5	4	3	2	1	0
3.6	Windows	5	4	3	2	1	0
3.7	Door Frames	5	4	3	2	1	0
3.8	Doors	5	4	3	2	1	0
3.9	Stucco	5	4	3	2	1	0
3.10	Paint Finishes	5	4	3	2	1	0
3.11	Hardware	5	4	3	2	1	0
3.12	Signage	5	4	3	2	1	0
3.13	Site Lighting	5	4	3	2	1	0
3.14	Remarks						

SUBTOTAL_____

4.0 QUALITY CONTROL OF INTERIOR CONSTRUCTION

4.1	Floor Finishes	5	4	3	2	1	0
4.2	Wall Finishes	5	4	3	2	1	0
4.3	Ceiling Finishes	5	4	3	2	1	0
4.4	Door Frames	5	4	3	2	1	0
4.5	Doors	5	4	3	2	1	0
4.6	Adequacy of Lighting Fixtures	5	4	3	2	1	0
4.7	Paint Finishes	5	4	3	2	1	0
4.8	Hardware	5	4	3	2	1	0
4.9	Adequacy of Day Lighting	5	4	3	2	1	0
4.10	Adequacy of Convience Outlets	5	4	3	2	1	0
4.11	Adequacy of Sound Isolation	5	4	3	2	1	0
4.12	Stairways	5	4	3	2	1	0
4.13	Toilet Rooms	5	4	3	2	1	0
4.14	Remarks						

SUBTOTAL_____

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5.0 UTILIZATION

5.1	Adequacy of Number of Classrooms	5	4	3	2	1	0
5.2	Adequacy of Admin. Space	5	4	3	2	1	0
5.3	Adequacy of Laboratories	5	4	3	2	1	0
5.4	Adequacy of Workshops	5	4	3	2	1	0
5.5	Adequacy of Libraries	5	4	3	2	1	0
5.6	Remarks						

SUBTOTAL _____

6.0 SAFETY

6.1	Egress Upper Stories	5	4	3	2	1	0
6.2	Egress Instructional Space	5	4	3	2	1	0
6.3	Remarks						

SUBTOTAL _____

7.0 QUALITY OF ENVIRONMENT

7.1	Thermal Comfort	5	4	3	2	1	0
7.2	Overall Appearance	5	4	3	2	1	0
7.3	Remarks						

SUBTOTAL _____

APPENDIX C

LIST OF SCHOOLS IN RANDOM SAMPLE

LIST OF SCHOOLS IN RANDOM SAMPLE

School	Classrooms	Cost	District	Completed
Aswan				
Al Akaab	9	LE 144,770	Aswan	1990
El Alaky Preparatory	9	LE 189,538	Kom Ombo	10/91 - 11/91
El Basaly Preparatory	9	LE 189,538	Kom Ombo	10/91 - 11/91
Beheria				
El Ibrahimia	11	LE 46,942	El Ibrahimia	02/83
El Esh Primary	9	LE 50,353	Rashid	05/83
Maroon Primary	9	LE 62,352	Kafr El Dawwar	07/84
Antoniades Preparatory	9	LE 91,024	Kafr El Dawwar	10/84
Ganakles Preparatory	9	LE 83,114	Abu El Matamir	03/85
Fazara Preparatory	9	LE 99,476	Mahmandeya	06/85
Ef Laka Preparatory	12	LE 104,737	Damanhour	09/85
El Geddiya Preparatory	10	LE 88,102	Rashid	09/85
Aly El Sheikh Primary	9	LE 54,848	Hoash Issa	10/85
Ibia El Hammara Preparatory	10	LE 99,714	Delengat	06/86
Garar Primary	9	LE 82,568	Abu Hammos	04/87
Samaan	9	LE 109,939	Abu Hammos	09/88
Ashor Primary	7	LE 125,729	Abu El Matamir	12/88
Mehateb 14 "Beltahaddi" (Basic)	6	LE 123,115	Kom Hamada	04/89
Salem Gibril Basic	7	LE 138,309	El Deegat	06/89
El Sadd Primary	9	LE 123,862	Kom Hamada	07/89
El Gazayry	6	LE 131,078	Rahmaneya	1989
Beer Shalabi	9	LE 151,674	Idco	1989
El Karakole (Basic)	11	LE 179,623	Kafr El Dawwar	07/90
Sednawy El Makateb Primary	10	LE 155,572	Kafr El Dawwar	1990
El Sakhawy Beeban Preparatory	11	LE 173,097	Kom Hamada	1990
Beni Suef				
Abu Sharban	12	LE 114,566	Beba	05/28/86
Geziret El Masaada	9	LE 93,060	El Wasta	05/25/87
Maagoon	9	LE 82,722	Somosta	02/11/88
Hamdy Brake	6	LE 167,923	Somosta	1988
El Shamashergy	6	LE 117,954	Somosta	03/07/89
Menshat El Omara	6	LE 102,082	Ahnasya	09/05/89
Koam El Raml El Bahary	6	LE 13[illegible],329	Ahnasya	01/91
Abu Kabr Khaled	6	LE 126,611	Beni Suef	01/91
Maydoom	6	LE 150,367	El Wasta	05/91
Dakahleya				
El Neseemeya Preparatory	6	LE 165,935	El Mansoura	01/25/89
Kafr Dawood Matar Primary	6	LE 122,502	Meet Ghamr	07/08/89
Meet Mahmoud Village Preparatory	9	LE 193,425	El Mansoura	10/09/89
Koam Bani Marass Preparatory	9	LE 173,028	El Mansoura	12/27/89
Bashaloosh	12	LE 181,786	Meet Ghamr	01/90
Bashaloosh Preparatory	9	LE 181,786	Ghamr	01/09/90
Kafr El Zahayra Preparatory	12	LE 161,216	Bekerness	05/17/90
Kofoor El Bahayta Primary	6	LE 158,751	Meet Ghamr	10/01/90
Bosat Preparatory	10	LE 186,583	Talakha	1990

LIST OF SCHOOLS IN RANDOM SAMPLE
(Continued)

School	Classrooms	Cost	District	Completed
Dumiat				
Ejbet El Gamea Primary	9	LE 146,155	Faraskoor	12/23/88
Meet El Khoaly Primary	12	LE 164,940	El Zarka	06/25/88
El Kazzazeon Primary	9	LE 149,812	El Zarka	08/04/88
Kafr Hameeds Preparatory	9	LE 145,698	Dumiat	02/20/89
Fayoum				
Zawyet El Karadsa Primary	12	LE 92,667	Fayoum	04/28/86
Menshat El Gammal Preparatory	12	LE 94,425	Tameya	05/03/86
Menshat El Sadat Primary	9	LE 94,153	Sennooris	07/03/86
El Arbeyeen Primary	9	LE 94,148	Ebshway	12/23/86
Nasariyya Preparatory	9	LE 116,982	Ebshway	1987
Sakran Primary	9	LE 105,213	Etsa	11/14/88
El Lawag Primary	6	LE 111,094	Ebshway	11/21/89
El Kaaby II Qudima Primary	6	LE 140,856	Sennooris	01/90
El Agameyeen Preparatory	9	LE 176,067	Ebshway	1990
Gharbeya				
	12	LE 142,169	Tauta	02/05/88
El Ragdeya Preparatory	12	LE 175,240	Bassyoon	09/26/88
Kafr Gaafar Preparatory	6	LE 108,522	El Mehalla El Kobra	11/30/89
Kafr Damatno Primary	12	LE 166,953	Qotoor	01/15/90
Shubra Banas Preparatory	12	LE 143,292	El Santa	09/08/90
Shobrabeel Preparatory	6	LE 146,905	Tanta	10/16/90
Boareik El Hagar Preparatory	6	LE 142,286	El Mehalla El Kobra	02/1991
Namret El Basal	12	LE 132,000	El Santa	02/1991
El Sayada Aasha				
Giza				
	9	LE 113,154	Abdul Nomross	01/25/88
El Haraneya Primary	9	LE 82,874	El Hawamdeya	04/27/88
Arab El Hawamdeya Primary	9	LE 176,996	El Saf	08/19/89
Arab El Hessar El Bahareya Primary	9	LE 177,129	Abdul Nomross	08/23/89
Hussein Awael Primary	9	LE 193,803	Ayyat	06/14/90
El Katoory				
Ismailiya				
	8	LE 128,885	Qantara Shark	04/03/89
Abu Orook	8	LE 122,094	Qantara Shark	04/05/89
Gelbana	8	LE 154,325	Ismailiya	05/20/90
Farag Rabee	6	LE 166,498	Ismailiya	08/29/90
El Ghabboosh	14	LE 208,136	Fayed	09/25/90
Ezbet Haseeba				
Kafr El Sheikh				
	6	LE 41,847	Kafr El Sheikh	02/83
El Oweira	9	LE 84,295	Kafr El Sheikh	11/12/84
Matbool	12	LE 67,851	Kafr El Sheikh	11/84
El Tayfa	6	LE 122,546	Kelleen	08/88
Esbet Goda	12	LE 132,758	Kafr El Sheikh	1988
Abu Tabl El Shameed Mohd Asem	12	LE 187,143	El Reyad	08/20/89
El Hasafa				

LIST OF SCHOOLS IN RANDOM SAMPLE
(Continued)

School	Classrooms	Cost	District	Completed
Matruh				
El Mathany Preparatory	9	LE 122,463	Matruh	1988
El Roman Primary	3	LE 81,483	Matruh	1988
Anlod Gebreel Primary	3	LE 88,921	Matruh	1988
Wadi Maged Primary	3	LE 83,168	Matruh	05/89
Awlad El Hag Aly	3	LE 81,467	Matruh	07/05/89
Alam El Room Primary	3	LE 82,284	Matruh	1990
Zawait El Garara Primary	3	LE 94,365	Matruh	1990
Al Sadat Primary	6	LE 137,344	Matruh	1991
Menoufeya				
Ezbet Koam El Daba Primary	6	LE 146,169	El Bagoor	01/30/89
Shenway Preparatory	9	LE 165,233	Ashmoon	07/22/89
El Beisha Primary	9	LE 174,263	Ashmoon	09/10/90
Abdel Fatahnasar	9	LE 131,112	Tala	04/91
Kafr El Sheikh Ibraheem Preparatory	9	LE 160,392	Quesna	04/91
El Pharoneya Preparatory	12	LE 189,992	Ashmoon	09/91
Minya				
Beni Khiar	10	LE 77,560	Abu Qorqas	1985
Al Amal At Issaweyya	9	LE 113,035	Abu Qorqas	12/02/87
Menshat El Shereiy	9	LE 76,034	Samaloot	12/04/87
Dafash	6	LE 74,766	Samaloot	1987
El Gharabawi	11	LE 101,938	Samaloot	1987
Tuna El Gabal	9	LE 84,864	Mallawi	04/04/88
El Barageel	9	LE 76,831	Mallawi	04/13/88
Sharara	9	LE 97,616	Abu Qorqas	07/16/8[illegible]
Tamnasha	12	LE 142,894	Minya	07/88
Talla	12	LE 118,591	Minya	07/88
Gaarees	9	LE 94,934	Mallawi	09/26/88
Abioha	9	LE 69,419	Abu Qorqas	1988
Om Tessa	9	LE 84,245	Mallawi	1988
Kloana	12	LE 119,852	Samaloot	1988
Naziet Grace	9	LE 94,900	Abu Qorqas	1988
El Bersha	9	LE 91,093	Mallawi	03/25/89
El Galaa al Roda	9	LE 126,072	Mallawi	10/31/89
Bani Mosa	9	LE 137,584	Abu Qorqas	07/16/90
Fana	9	LE 189,230	Matay	03/91
North Sinai				
Abu Taweela Primary	9	LE 100,875	El Sheikh Zowayed	06/05/88
Nag Shabana Preparatory	6	LE 121,496	Rafah	07/08/88
El Safa (El Makrooneen) Primary	8	LE 117,937	Rafah	07/08/88
Beer El Hamma Primary	3	LE 74,720	El Hasana	10/23/90
Ibn Khaldoon Preparatory	9	LE 174,230	El Arish	1991

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LIST OF SCHOOLS IN RANDOM SAMPLE
(Continued)

School	Classrooms	Cost	District	Completed
Qalioobeya				
Abul Ghate Primary	9	LE 108,682	Qallub	04/17/88
Kafr Tesfa Primary	9	LE 107,270	Kafr Shokr	04/19/88
Geziret El Ahrar Preparatory	6	LE 111,280	Tookh	04/20/88
Kafr Sanadooh Preparatory	6	LE 121,620	Shebeen El Qanater	05/15/88
El Salmaneya Preparatory	6	LE 114,145	Shebeen El Qanater	06/28/88
Kafr Kordy Preparatory	6	LE 110,515	Kafr Shokr	08/22/88
Shobra Harris Preparatory	6	LE 155,256	Tookh	09/01/88
Kafr El Shoabak Preparatory	6	LE 122,384	Shebeen El Qanater	12/26/88
El Dare Primary	9	LE 145,172	Tookh	11/27/89
Kafr Abdel Sayed Primary	6	LE 163,467	Kafr Shokr	05/10/90
Namool Primary	9	LE 163,442	Tookh	09/10/90
Koronfeel Primary	6	LE 141,306	Shebeen El Qanater	11/10/90
Qena				
El Tonab Primary	9	LE 82,287	Esna	09/09/84
Hager El Dahsa Primary	6	LE 59,455	Farshoot	11/15/84
El Shaarany Primary	9	LE 72,627	Qouss	01/14/85
El Kady Primary	6	LE 60,751	Farshoot	08/05/85
Geziret Gabr Primary	6	LE 53,917	Nagada	10/25/87
Eldeir Elgharbi	9	LE 131,221	Qena	1989
Algesr Eltaleh	9	LE 73,264	Armant	03/90
Hamed Soliman Preparatory	12	LE 167,250	Qena	11/21/90
Nag El Towayrat Preparatory	12	LE 142,619	Qena	11/27/90
El Ashraf El Sharkeya Preparatory	9	LE 173,700	Qena	12/09/90
Awalad Amr Primary	13	LE 183,299	Qena	12/90
El Qenaweyya Preparatory	9	LE 159,000	Qena	1990
Sharkeya				
Hoad Negeih Preparatory	9	LE 111,200	Hehya	03/30/86
El Okda Preparatory	12	LE 117,100	Menya El Qamh	03/08/87
El Akhmeyyeen Preparatory	12	LE 115,200	Fakoos	09/15/87
Menshat El Tahreer Primary	9	LE 101,800	El Ibraheemeya	09/23/87
El Akayla Primary	9	LE 100,700	El Hesseineya	10/25/87
Kafr El Saeedy Preparatory	12	LE 117,200	Menya El Qamh	04/10/88
El Nagdy Primary	9	LE 127,400	Zagazig	01/08/89
El Sods Primary	9	LE 95,500	El Ibraheemeya	09/23/89
Elbyroum Preparatory	8	LE 136,600	Fakoos	1989

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APPENDIX D

PERCENT OF SCHOOLS VISITED BY GOVERNORATE

PERCENT OF SCHOOLS VISITED BY GOVERNORATE

Governorate	No. Schools Reviewed	No. Schools Constructed	Percent Visited
1. Aswan	3	34	8.8%
2. Beheria	21	208	10.1%
3. Beni Suef	9	99	9.1%
4. Dakahleya	9	105	8.6%
5. Dumiat	4	35	11.4%
6. Fayoum	9	110	8.2%
7. Gharbeya	8	80	10.0%
8. Giza	5	49	10.2%
9. Ismailiya	5	54	9.3%
10. Kafr El Sheikh	6	71	8.4%
11. Matruh	8	63	12.7%
12. Menoufeya	6	49	12.2%
13. Minya	19	159	11.4%
14. North Sinai	5	53	9.4%
15. Qaliobeya	12	128	9.4%
16. Qena	12	126	9.5%
17. Sharkeya	9	95	9.5%
Total	**150**	**1518**	**9.9%**