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IMPROVING GIRLS' PARTICIPATION IN BASIC EDUCATION IN EGYPT: USAID AND OTHER DONOR CONTRIBUTIONS

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EXECUTIVE SUMMARY

Background

Over the past 30 years, the United States Agency for International Development (USAID) has provided assistance and technical support to basic education in several Near Eastern countries One of the main objectives of the assistance has been to reduce gender inequities and enhance girls' access to and persistence in basic education

This report is the outcome of a study conducted by Creative Associates International, Inc (CAII) for the Asia/Near East Bureau to review USAID and other donor achievements in basic education, particularly girls' education, in Egypt and to make recommendations for future education activities

The study had several major objectives

- identify programs and projects that have worked and have not worked in improving children's, and particularly girls', enrollment, persistence, and achievement,
- identify elements that contributed to the success of certain programs and projects,
- identify persistent constraints to girls' education, and
- provide suggestions for future activities by USAID, the national government, or other donor agencies (e g , the World Bank, UNICEF) to advance basic education, particularly girls' education

CAII assembled a team of staff and consultants to identify and review the most relevant literature and analyze a variety of data, including the Egypt Ministry of Education's (MOE's) school census database, school construction data compiled under USAID's Basic Education Project (see below), and data from national surveys of students and parents conducted by the MOE Team members also conducted field interviews and site visits in Cairo, Souhag, and Menya governorates during the summer of 1994

USAID and Other Donor Basic Education and Girls' Education Programs and Projects

USAID Contributions

From 1981 to 1994, USAID sponsored the Basic Education Project, a project that included three major components school construction to make schools more accessible to girls, technical assistance in information system development to improve educational planning and progress monitoring, and assistance in curriculum development and instructional materials to improve instructional content and ensure a more accurate reflection of the realities of

women's lives as well as a more equitable representation of girls' and boys' aspirations Project outcomes are as follows

School Construction

- a total of 1,942 schools (comprising roughly 16,500 new classrooms) completed between 1983 and 1994, with over half a million (at MOE standard of 32 students per classroom) student places created, and

- a database of schools and classrooms completed by year, with maintenance assessments and expenditures, construction costs and structural materials used, furniture, utilities, and student places created by each school

Information System Development

- a new computerized system used to store and report gender-disaggregated data on student enrollment, promotion, and achievement and data on teaching staff qualifications and gender,

- increased MOE expertise, computer power, and raw data to conduct more sophisticated analyses of educational patterns by student gender and to analyze teacher recruitment, qualifications, and/or deployment along gender lines, either cross-sectionally or over time,

- a variety of statistical yearbooks, analyses, topical reports, and conference presentations, and

- several large-scale research efforts, including a Sector Assessment (1989) the National Survey of Teaching Practices and Student Achievement (1991-93), and the National Survey on Private Lessons (1991-94)

Curriculum and Instructional Materials Development

- new, gender-sensitive curriculum guides and textbooks in traditional subjects for all primary grades,

- an innovative "environmental studies" course (which integrated science, social studies, home economics, and health subjects) for grades 1-3,

- teachers' guides for all student texts, and

- teacher training in the use of the new curricula and materials in their classes

Other Programs and Projects

At the national level, President Mubarak initiated a program to build 3,000 one-room, multi-grade schools to provide primary education for girls ages 8-15 Influenced by the research on

what has proven effective in girls' education, the program provides for schools to be constructed in remote villages or hamlets with no access to schools Women preferably from the same community, are encouraged to teach Other characteristics include flexibility with student programming and scheduling, formal recognition for project completion, a more relevant curriculum, and an avenue for continuing into preparatory (grades 6-8) or secondary technical schools upon completion of primary education The schools are constructed on land donated by the community, and the location of each school is chosen by the governor in coordination with the local community The MOE accepted donations from the business community to help pay for school construction Currently between 400-500 of the planned 3,000 schools are completed, with 5-10 new one-room schools constructed daily

Other donors and agencies, include UNICEF, CARITAS, the World Bank, GTZ, the Association of Upper Egypt for Education and Development, and the National Council for Childhood and Motherhood, have provided assistance to the primary reform effort Projects and programs, which have focused largely on reaching girls and women in rural areas, have supported school construction, multi-grade community schools, and comprehensive programs that combine literacy or basic educational instruction with health care, health and nutrition instruction, child care, and/or life skills training

Results of Above Interventions

As a result of these and other programs, Egypt can report significant progress in basic education as a whole and particularly girls' basic education

- In 1991-92, over 6 million children were enrolled in primary school and 3 46 million were enrolled in preparatory school, a 33% increase in primary enrollment and over 100 percent increase in enrollment in preparatory school Rural enrollment increase was particularly significant, with female enrollment increasing the most Female rural primary school enrollment reached 42 percent of enrollment by 1990-91, and increase of almost 60 percent over 1981 Urban female enrollments grew by 26 percent At the preparatory level, female enrollment in rural areas grew from under 30 percent to about 40 percent of total enrollment, and urban female preparatory school enrollments doubled

- The gap in male-female primary school enrollment rates has decreased The gender gap in enrollments decreased steadily and substantially for more than a decade Progress toward higher female-to-male ratios has been greater in rural primary and preparatory schools than in urban schools, primarily because female-to-male ratios (FMRs) in urban areas were relatively high even as early as 1981

- In 1991-92 a slightly higher percentage of girls than boys who entered primary school completed their primary education

- In 1991-92 girls enrolled in primary school had slightly lower repetition rates than boys (gender-disaggregated data were not available for 1985-86)

- Improved girls' education has contributed indirectly to a variety of other social indicators, including lower infant mortality rates, higher age of first marriage, greater demand for family planning services, and higher female contributions to the household

There are still variances by region and district, with the highest gender discrepancies in the rural governorates along the west coast of the Nile just south of Cairo and Giza, and lowest in the urban governorates Although the *percent* of girls who are not in school is decreasing, the *number* of primary school-age girls who are not in school is still increasing This, too, varies by region and governorate Governorates with the highest numbers of out-of-primary-school girls are in both Upper and Lower Egypt Although the female adult illiteracy rate is falling, it is still 61% nationwide, significantly higher than the estimated overall national illiteracy rate of 47 1% This too, varies by region, with illiteracy rates in rural areas reaching as high as 90%

Elements That Contribute to Girls' Participation in School

Through the literature review and in analyses of MOE school census-based data, USAID school construction data, and the national survey datasets, the project team identified the following contributors to higher female-to-male ratios in urban and rural settings and at primary and preparatory levels

- more schools,
- a higher proportion of female teachers,
- higher proportions of female school administrators (especially in urban schools and grade 1 classrooms), and
- greater availability of girls-only or "girl-friendly" schooling

The participation of girls in rural areas is more sensitive to school-based factors than in urban areas In addition to the factors listed above, higher rural female-to-male ratios were related to more equitable promotion rates between girls and boys, the availability of electricity and water, and class size consistently important and positive student background contributors for both boys and girls include father's and mother's education and history of prior grade repetition

Several primary-level school and classroom characteristics also were found to contribute to achievement in all subjects, for both boys and girls Having a female teacher of grade 5 primary Math or Arabic had a positive impact (having a female teacher made no significant contribution to the prediction of Science achievement for either boys or girls) In contrast, students in primary schools directed by female administrators tended to have lower achievement than other students Of particular interest is the finding that grade 5 boys studying in classrooms with a higher proportion of girl classmates tend to have higher achievement in all subjects Grade 5 girls appear to benefit from having more female classmates only with regard to Arabic achievement Larger class size and students' perceptions of their own strength as students and of the difficulty of subject matter were also

highly related to achievement in all subjects for both boys and girls, although the direction of effect varied by subject and student gender

Even though the presence of female administrators correlates with girls' enrollment, their presence did not have a positive impact on student achievement Larger family size is another consistently strong, although negative, predictor of achievement for both boys and girls Although access and distance to school are significant factors in girls' primary school enrollment, they are not as significant factors in girls' primary school achievement and completion

Persistent Constraints

The literature review indicated that constraints to educating girls can be divided into two broad categories community-based and school-based Community-based constraints identified include education level of the parents, family size, opportunity costs, the disjunction between girls' education and her other roles, distance from home, nonregistration of children at birth, limited knowledge about the benefits of girls' education, and early marriage School-based constraints identified include availability of classes and school spaces, the quality of the teaching/learning process, the costs associated with attending school, exposure to males, and curriculum deficiencies

One recent study of Egypt female educational participation conducted by the Third World Forum identified eight distinct categories of responses from unschooled girls and young women, regarding why they never attended school The study reports that in urban situations, "parents who are unconvinced of the value of girls' education" is by far the most significant constraint to girls' enrollment The need for girls' labor and cost of attending school also were identified as significant constraints Exposure to males and distance to schools were mentioned, but by much smaller percentages In rural settings, the need for girls' labor was the most frequently cited constraint, followed by school costs Distance to school, the lack of safety for girls on the route, and coeducational schools were also cited

The study also identified several constraints to girls' continuation in school Seventy-six percent of the urban sample and 60 percent of the rural sample of those who had dropped out of school before completing the primary level cited economic and social considerations of the family or the lack of the family's appreciation of the value of education for girls, as underlying their dropout from school School-based factors included a lack of understanding of their teachers' explanations, a lack of relevance or usefulness in the subjects taught," school difficulties," and mistreatment by teachers

Interviewees in the field interviews for this study emphasized the school-based or supply-side factors as the more limiting ones in rural Egypt at this time In order of their importance, school-based and community-based constraints most frequently mentioned are as follows

School-based Constraints

- lack of schools within safe walking distance for girls,

- school fees and tutoring costs,
- low educational effectiveness and teacher abuse,
- inflexible school schedules that conflict with girls' domestic chores,
- presence of male teachers and/or male students in the classroom,
- poor school conditions, absence of facilities, and inadequate educational resources and instructional materials,
- policies stipulating that students who fail formal education are not allowed back into government schools, thereby forcing them to more financially taxing private schools,
- textbooks that reflect little sensitivity to gender issues and perpetuate stereotypes, thus limiting girls' aspirations,
- dependence on rote learning,
- teachers who are either not properly trained or who do not receive in-service training, and
- irrelevance of the primary school education to future life activities

Community-Based Constraints

- girls' responsibility to help mothers in domestic responsibilities and care for younger siblings,
- poverty,
- need for child labor to supplement family income,
- a low educational level of many parents, which affects of educational attainment for their children,
- lack of knowledge, especially among rural fathers, about the benefits of educating girls,
- a large family and/or a large number of boys in the family, and
- opposition of some fathers to the education of their daughters and their desire to marry them at an early age

Implications for the Future/Recommendations

The overriding recommendation resulting from this study is that efforts in basic education in Egypt continue, focusing on the goal of providing universal primary education through a girls-

friendly approach that does not discriminate against boys Recommended actions for achieving this include the following

- mobilize all basic education stakeholders to help provide the large resources, commitment, and policy changes needed to achieve universal primary education,
- consider more localized efforts for bringing about change,
- continue to create girl-friendly community schools in rural areas,
- link school construction efforts,
- continue to increase the numbers of local female teachers and administrators,
- lower the costs of sending girls to school,
- improve the quality of existing primary education,
- increase parents' perceptions of the value of girls' education, and
- create demand for basic education for women

Improving Girls' Participation in Basic Education in Egypt.
USAID and Other Donor Contributions

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and Literacy Project

LIST OF ACRONYMS

ABEL	Advancing Basic Education and Literacy Project
BEP	Basic Education Project
BRAC	Bangladesh Rural Action Committee
BRIDGES	Basic Research and Implementation in Developing Education Systems
CAII	Creative Associates International, Inc
CAPMAS	Central Agency for Public Mobilization and Statistics
CCIMD	Center for Curriculum and Instructional Materials Development
CDIE	Center for Development Information and Evaluation
CEOSS	Coptic Evangelical Organization for Social Services
CIDA	Canadian International Development Agency
EMIS	Education Management Information System
EPID	Education Planning and Information Division
ERIC	Educational Resource and Information Center
FMR	Female-to-Male Ratios
GAAEEI	General Authority of Adult Education and the Eradication of Illiteracy
GOE	Government of Egypt
GTZ	German Technical Corporation (the German counterpart to USAID)
MOE	Ministry of Education
NCCM	National Council for Childhood and Motherhood

NCEEE	National Center for Educational Examinations and Evaluations
NGO	Nongovernmental Organization
ODA	Overseas Development Administration (the British counterpart to USAID)
PTA	Parents and Teachers Association
SARA	System for Advancing Research in Girls' Education
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Social and Cultural Organization
UNICEF	United Nations International Children's Education Fund
USAID	United States Agency for International Development
WEA	

PREFACE

This report is the outcome of study to review the contributions of the United States Agency for International Development (USAID) and other donors in the area of basic education, particularly girls' education, in the Near East and to make recommendations for future education activities For this study, two countries--Egypt and Yemen--were chosen to represent the kinds of assistance that had been provided to the region Due to the war in Yemen, however, only Egypt was included

The study had several major objectives

- identify programs and projects that have worked and have not worked in improving children's, and particularly girls', enrollment, persistence, and achievement,
- identify elements that contributed to the success of certain programs and projects,
- identify persistent constraints to girls' education, and
- provide suggestions for future activities by USAID, the national government, or other donor agencies (e g , the World Bank, UNICEF) to advance basic education, particularly girls' education

Project Background

Over the past 30 years, USAID has provided assistance and technical support to basic education in several Near Eastern countries One of the main objectives of USAID's assistance has been to reduce gender inequities and enhance girls' access to and persistence in basic education Girls are targeted partially because they have traditionally had significantly lower enrollment, persistence, and completion rates in most of the developing world

In addition, girls' education is increasingly being recognized for its impact on a variety of other social indicators, including population growth, health and nutrition, and economic growth and development For example, educated girls have lower rates of teen pregnancy and marry later than uneducated girls Mothers' education correlates positively with a reduction in morbidity and infant mortality, and increases the chances of child immunization, thereby increasing the chances for child survival Educated women have lower rates of HIV infection and other sexually transmitted diseases (STDs) In addition, increased education results in increased productivity for girls and women, whether they work inside or outside the home, and increases the likelihood that women will participate in the formal work force Finally, educated women are more likely to educate their children, particularly their girls, thereby contributing to further advances in literacy, health, nutrition, and economic productivity

USAID, NGOs, and other donors have worked in cooperation with the Ministry of Education to increase girls' enrollment and persistence in basic education in Near Eastern countries, particularly Egypt, where the female literacy rate is low, girls' educational participation has

not yet reached national and international targets, and health and social conditions indicate a need for the benefits that often result As a part of the USAID-sponsored Advancing Basic Education and Literacy (ABEL) project, the Asia/Near East Bureau requested that a team of researchers look at the contributions of these efforts and make recommendations for the future

Methodology

CAII assembled a team of staff and consultants to conduct several tasks in compiling the information for this report a review of the literature available on girls' education in Egypt, an analysis of several data sets, and field interviews and school visits in Egypt

Literature Review

To identify the relevant literature, CAII searched the following databases

- SARA, a computerized database on girls' education currently being organized by CAII under another ABEL initiative,
- ERIC (the Educational Resource and Information Center), the Department of Education's comprehensive education database,
- CDIE (the Center for Development, Information, and Evaluation), A I D 's repository for all A I D -sponsored project and research reports, and
- The World Bank publications listing

Using key words and descriptors, CAII searched titles and abstracts to identify demographic information about the targeted country and region, basic education programs currently or previously implemented in Egypt, and constraints to girls' education In addition, CAII received documents and names of resources from the A I D project officer, ABEL directors, and technical consultants who have conducted primary or secondary research in Egypt and the Middle East A complete bibliography is included as Appendix A All documents were reviewed, and information was incorporated where appropriate

Data Analysis

CAII hired Research Triangle Institute consultant Dr Jennie Spratt to analyze a variety of data including the Ministry of Education's School Census database, school construction data compiled under USAID's Basic Education Project, and data from the national surveys of students and parents to identify trends in children's, and particularly girls', educational participation The analyses revealed trends in access to and participation in school, promotion rates, changes in overall and girls' participation, changes in female-to-male student ratios, and the relationship of parents' educational expectations and aspirations for their children and the children's gender A summary of her major finding is included in Chapter IV Her research report appears in its entirety as Appendix B

Field Interviews/Observations

CAII consultant Nivine Hamdam and USAID/Washington girls' education specialist Linda Padgett conducted interviews in Cairo from May 16-June 3 In addition, the two interviewers and Mohammed Marzouk of USAID/Cairo visited schools in Sohag and Menya Governorates on June 4-6 These interviews and direct observations revealed several successful strategies for girls and women that have been implemented by a wide variety of donors, government agencies, and NGOs

Interviews were conducted with girls' and women's education project personnel, MOE officials, and education research institute personnel in Cairo, Sohag, and Menya gorvernorates The projects investigated were implemented by the MOE, GOE agencies, bilateral and multilateral donors, and NGOs Interviews, which were conducted in both English and Arabic, typically lasted from 1 5 to two hours During each interview, interviewee were asked a series of questions about basic projects and/or programs that their organization had been engaged in between 1980 and 1993 In addition, each interview included an open-ended, non-structured portion during which time interviewees could make additional comments if they wished List of contacts, interview questions, and interviewee suggestions for improving girls' and women's enrollment, persistence, and achievement are provided in Appendix C

Organization of This Report

The report is organized into five major chapters Chapter I, Background, includes a profile of Egypt and the status of basic education in the country

Chapter II summarizes the major interventions by USAID and other donors to improve girls' participation in basic education in Egypt It also includes progress related to girls' current enrollment, persistence, and completion rates at the primary and preparatory school levels, and in rural and urban districts, changes in female-to-male ratios that have occurred since the programs and projects have been initiated, and other trends

Chapter III reports the major findings of the research activities--the literature review, the data analyses, and the field-based interviews and observations--in two major areas elements that contribute to program success and persistent constraints to girls' education

Chapter IV includes the conclusions drawn from the entire research effort Recommendations are provided in Chapter V

I. EGYPT: THE COUNTRY AND ITS EDUCATIONAL SYSTEM

Country Profile

Egypt, the country situated in the northeastern corner of Africa, has a physical area of approximately 1 million square kilometers (about 386,650 square miles) The country is divided into 26 governorates, which are grouped by geography and level of development into Urban, Lower Egypt, Upper Egypt, and Frontier Governorates (see Exhibit 1) The Lower and Upper Egypt governorates have rural and urban areas within their boundaries

In 1992 the population was almost 56 million, 42 percent of whom were under 15 years of age The ethnic makeup of the population is 90 percent Eastern Hamitic (Egyptian, Bedouin, Arab, Nubian) and ten percent Greek, Italian, and Syro-Lebanese Average life expectancy at birth is 59 years for males and 61 years for females In 1990, the infant mortality rate was 61 per 1,000 live births (UNDP 1992) The annual population growth rate is 2 6 percent

Egypt is one of the most heavily populated countries in the Middle East/North Africa Region Because 96 percent of the land is uninhabitable desert, however, 99 percent of the population lives along the banks of the Nile, which makes up only 3 5 percent of the total area This concentration of people near the only water source creates an average population density of over 1,500 people per square kilometer, one of the highest population densities in the world

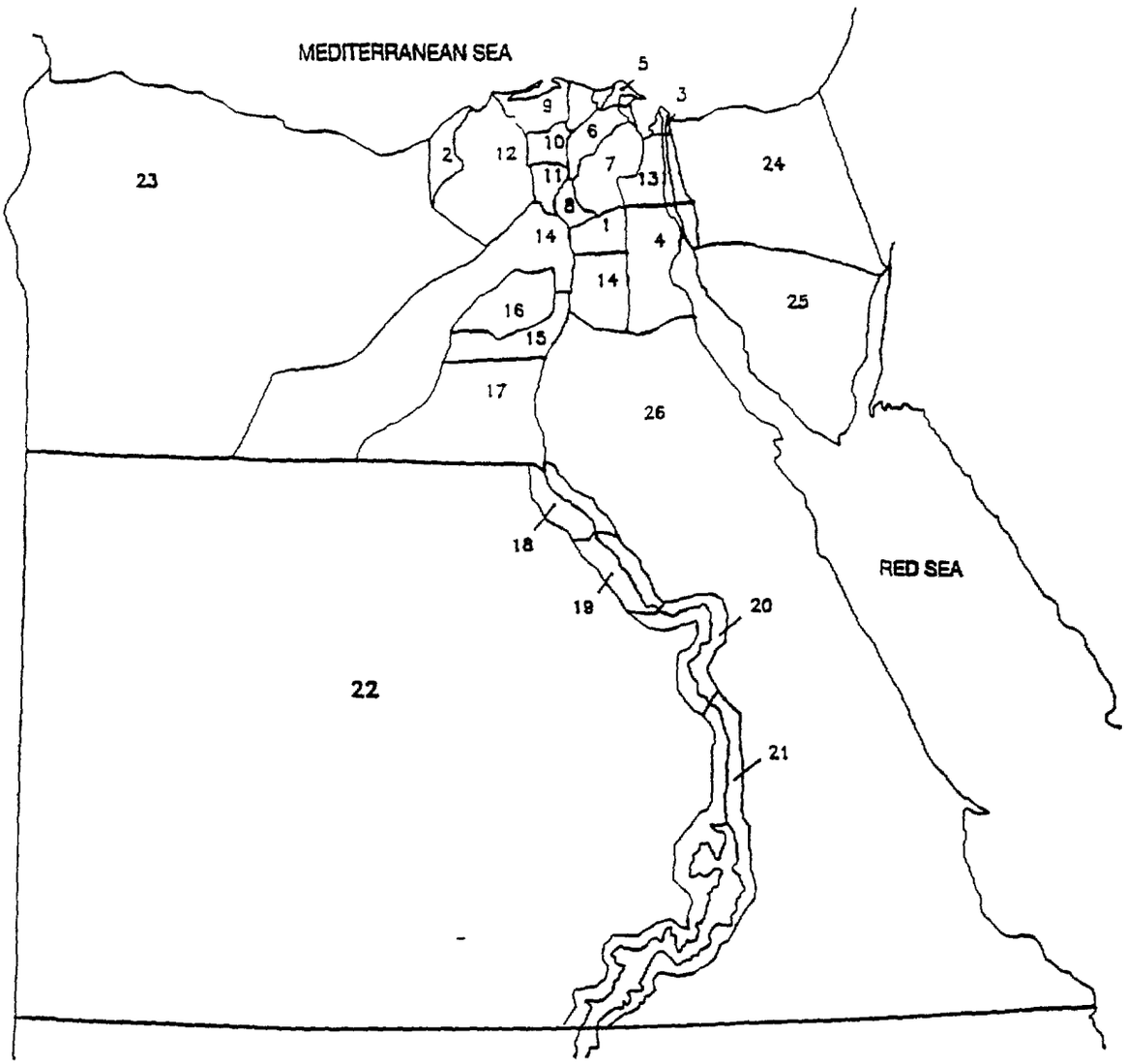
Although less than half of the population (48 2percent) lived in urban areas in 1990 (UNESCO 1991), Egyptian urban populations are growing faster than those in rural areas Since 1947, urban growth rates have averaged one percentage point higher than rural growth rates For over 40 years the urban population has been increasing at the rate of four percent annually Since 1947, Cairo's population has grown from 1 5 million to over 6 million The population of Giza has grown from 18,000 to 1 6 million By 1989, 20 percent of Egypt's population lived in Greater Cairo Within the city's boundaries, the population density averaged 26,000 people per square kilometer, with some areas housing as many as 135,000 people per square kilometer (Metz and Nyrop 1991)

The Gross National Product per capita in 1991 was $620 US dollars, which is lower than most countries in the Middle East Unemployment in 1992 was 20 percent Rapid population growth, limited arable land, and rural-to-urban migration have negatively affected national development Despite the development of some industry in the urban areas (textiles, food processing, chemicals, petroleum, construction, cement, and light manufacturing), agriculture (cotton, rice, onions, beans, citrus fruits, wheat, corn, barley, and sugarcane) is still a major source of income for large segments of the population and accounts for 30 percent of the national income (Spencer 1992)

The official language is Arabic The religion of 94 percent of the population is Islam (mostly Sunni), and the remaining six percent Coptic Christian and others Islam influences all aspects of the culture, including family life, social interactions, business, education, and government

Exhibit 1

Egypt



URBAN GOVERNORATES
1 Cairo
2 Alexandria
3 Port Said
4 Suez

LOWER EGYPT
5 Damietta
6 Dakahlia
7 Sharkia
8 Kalyubia
9 Kafr El-Sheikh
10 Gharbia
11 Menoufia
12 Behera
13 Ismailia

UPPER EGYPT
14 Giza
15 Beni Suef
16 Fayoum
17 Menya
18 Assiut
19 Souhag
20 Qena
21 Aswan

FRONTIER GOVERNORATES
22 New Valley
23 Matrouh
24 North Sinai
25 South Sinai
26 Red Sea

The Status of Basic Education in Egypt

In Egypt it is every citizen's right to obtain an education, and education is technically stipulated by the constitution Primary through secondary education has remained the responsibility of the State since the 1952 Revolution The State is responsible for policy, planning, directing and executing public education and human resources The Ministry of Education supervises primary, preparatory, secondary, and technical schools In addition, the Ministry is in charge of teacher training schools and institutes for technical school teachers

The compulsory education law was issued in 1923, but it was not until the mid-1950's and 60's that the rate of public expenditures on education increased to a point where the schools could accommodate large percentages of school-age children in primary schools (Third World Forum 1994) The starting age of primary school children varies from 6 to 8 years The educational ladder was established in 1957 to provide 12 years of public education in three levels primary (6 years), preparatory (3 years), and secondary (3 years) Law Number 139 of 1981 made the nine-year basic program (primary and preparatory) compulsory This law was changed in 1987 to mandate an eight-year program--five years of primary school and three years of preparatory school Governorate-prepared standard examinations are administered at the end of each level Successful completion of the 12 years of general school qualifies the student to enter higher education or university education As of 1990, the government had not been effectively enforcing laws requiring that primary school-age children attend school

Since the commitment in 1981 to quality basic education for all, Egypt has increased its policy emphasis and government expenditures to achieve this goal The Education Reform Act of 1988 was created with the goal of universal primary school enrollment within five years to be achieved through a National Five Year Plan In addition, donors and outside agencies initiated projects and programs to help reach this goal

Progress has been made in improving basic education, but not as much as anticipated First, the goals of the Ministry of Education have been severely constrained by unequal access, curriculum deficiencies, ineffective teaching, inadequate instructional materials, and a lack of efficiency throughout the system In addition, curricula are poorly integrated and sequenced, texts are inadequate, and teacher guides and materials often do not exist Third, although primary education in Egypt is free by decree, it is not free in practice Each primary school child is expected to annually pay a fee before beginning school In addition, private lessons have become normative practice in many communities

Rapid population growth has made it difficult for school construction initiatives to make more progress in reducing problems of educational access for many Egyptian children Large numbers of primary schools operate double and even triple shifts--with only 29 percent of schools offering students a full day of instruction In addition, classes are generally large, with an average class size of 44 students The demand for primary schooling for both sexes continues to exceed the supply USAID/Cairo's former Basic Education Project played an important role in helping to meet some of this demand (see Chapter II), but the need is still great

In addition, statistics show that efforts to expand and improve educational opportunities have not benefitted all groups equally There are significant differences in the urban and rural rates of primary school enrollment In 1990, close to 90 percent of school-age children attended school in the urban areas However, in some rural areas of Upper Egypt, only 50 percent attended Metz and Nyrup (1991) reported that overall, only 30 percent of students enrolled in primary education completed all five grades UNESCO Sources reports

> *"Official statistics show 97 5 percent of school age children, about 13 3 million, enrolled Other sources believe the real figure is closer to 80 percent, and even lower in villages and rural areas where poor parents tend to withdraw their children from school as soon as they are old enough to help around the house, or earn money through outside work" (UNESCO 1993)*

Although programs have contributed to decreases in the rate of illiteracy, population growth will result in an increase in the absolute numbers of illiterates over ten years of age by the year 2000

II. USAID AND OTHER DONOR CONTRIBUTIONS: INTERVENTIONS AND RESULTS

Recognizing the need for basic education, national and international organizations initiated programs to provide technical assistance to Egypt's educational system USAID made major contributions towards this effort Other multi-lateral and bilateral donors, such as UNICEF and UNDP, and a variety of international and national NGOs, also initiated projects This chapter describes those interventions, the effectiveness of each, and the status of girls' education as a result

USAID Contributions

From 1981 to 1994, USAID funded the Basic Education Project to assist the GOE in improving access, planning and management, efficiency, effectiveness, and relevance of basic education in the country The Project included three principal components school construction (introduced in 1981), curriculum and instructional materials development, and the development of planning, information and resource management, and research capabilities in the central Ministry and regional offices Each of these components had direct or indirect potential to improve girls' participation and persistence in education

School Construction

The school construction component was specifically designed to address educational participation by siting primary and preparatory schools in areas with relatively low enrollment, particularly among girls About one-quarter (501) of the schools were completed prior to 1988, with others constructed during the last six years of the project

As early as 1987 the project was making "satisfactory progress" in providing schools and classrooms for children grades 1 through 9 (USAID 1987b) As reported in a project evaluation that same year (USAID 1987a), the school construction component resulted in the following

- *the enrollment of new children, particularly girls, into the educational system* Enrollment increases in new school areas greatly exceeded those in control areas For example, grade 1 enrollments increased 29 percent and 15 percent respectively for girls and boys in the first year of new school operation, compared with 8 percent and 3 percent at control sites Second year impacts were smaller but still significant Disadvantaged groups, including girls, showed the greatest enrollment increases

- *a decrease in the dropout rate* Dropout decreased faster in grades 2-6 at new schools than at control sites, with larger decreases in dropout rates for girls than for boys

- *stable academic achievement by students attending the new schools* Grade 6 examination results did not differ significantly for new and control schools

By 1992, enrollments had increased by 1 million students, and schools were available in places where they previously had not existed In addition, the project had distributed about $20 million worth of equipment and materials to about 15,000 primary and preparatory schools and trained 13,500 teachers and inspectors to use the donated equipment (Regional Inspector General for Audit 1992) Construction quality and maintenance of the constructed schools were areas of concern as late as 1992, but actions were taken to rectify the situation

In 1994, this component was responsible for the following

- a total of 1,942 schools (comprising roughly 16,500 new classrooms), with over half a million (at MOE standard of 32 students per classroom) student places created,
- the purchase and distribution of instructional materials and equipment for the participating schools, and
- a database of schools and classrooms completed by year, with maintenance assessments and expenditures, construction costs and structural materials used, furniture, utilities, and student places created by each school (USAID 1988)

The database was the source of information analyzed and presented in Chapter IV in an effort to establish empirically the relationship of the school construction program to improved rates of total and female enrollments

Education Planning, Information Management, and Research

Since 1986, first through the BRIDGES cooperative agreement with the Harvard Institute for International Development and subsequently through the Education Planning Project conducted by the Research Triangle Institute, USAID worked with the MOE to develop its capacity for information management, planning, and applied research in education

This project component made it possible to examine gender issues related to access, equity, efficiency, and quality in Egyptian education in greater depth than was previously possible While basic enrollment figures had been gathered and reported by gender and governorate before 1989, such data were not maintained on computer for historical analysis until they were re-entered with the direction of the Education Planning Project Other useful information for planning and system analysis, such as new entrants in Grade 1 (either total or by gender), promotion and repetition of students by gender, and teaching staff by gender, was either not collected or never reported (or retained) even in hard copy, until these items were integrated into the Ministry's census and data storage system A summary of selected amplifications of the MOE school census database that resulted from USAID funding is provided in Exhibit 2

USAID assistance in this area resulted in three major outcomes First, the MOE gained the expertise, computer power, and even raw data to (a) conduct historical analysis of patterns of educational participation by student gender using the computer rather than through painstaking manual methods, (b) examine patterns of student registration, grade promotion and repetition, and school dropout by student gender, both cross-sectionally and over time, and (c) analyze

Exhibit 2 Development of the MOE School Census Database

AVAILABLE SELECTED DATA	FOR CONSTRUCTION OF INDICATORS OF	YEAR											
		1981 82	1982-83	1983-84	1984 85	1985-86	1986 87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
Enrollment by grade level	Access	###	###	###	###	###	###	###	&	&	&	&	&
New entrants in Grade 1, by gender	Access, equity												&
Enrollment by grade level & gender	Equity, access	###	###	###	###	###	###	###	&	&	&	&	&
Enrollment by grade level, gender, & age	Equity, access												&
Promotion & repetition by grade	Efficiency	#	&	#	#	#	###	###	#	###	###	&	&
Promotion, repetition by grade & gender	Efficiency, equity											&	&
Repetition by grade, gender, & no of times	Efficiency equity											&	&
Number of classes by grade	Efficiency, quality	###	###	###	###	###	###	###	###	&	&	&	&
Students and schools by shift	Quality							###	###	&	&	&	&
Final exam results by last grade in stage	Quality			###	###	###	###	###	###	&	&	&	&
School staff by position	Efficiency	###	###	###	###	###	###	###	###	###	&	&	&
Teaching staff by qualification	Quality, efficiency	###	###	###	###	###	###	###	###	###	&	&	&
Teaching staff by qualification & gender	Equity										&	&	&
UNITS OF ANALYSIS AVAILABLE:	SCHOOL - GRADE LEVEL (where applicable) - MARKAZ - IDARA - GOVERNORATE URBAN/RURAL LOCATION (since 1988)												

Please note symbols as follows

= Information originally available only in hard copy (partial data indicated as #)
& = Information entered directly on computer
= Information entered on computer through Education Planning Project

teacher recruitments, qualifications, or deployment along gender lines, both cross-sectionally and over time

Second, the Ministry's Education Planning and Information Division (EPID) became a more widely recognized source of such information and a producer of statistical yearbooks, analyses, topical reports, and conference presentations The number of requests received (and responded to) by EPID for database information and analyses from high Ministry offices, other Egyptian government and private agencies, and donor agencies such as UNICEF and GTZ, noticeably increased between 1989 and 1994 Girls' education received high-profile government attention recently, when EPID staff presented data and analyses on the issue at the donor-sponsored Mid-Decade Goals Conference and the USAID/World Bank Project Launch Workshop, both held in Spring 1994 The census database developed with USAID assistance, furthermore, serves as one of the principal sources of the quantitative information analyzed and presented in this report

Third, large-scale research efforts were conducted Efforts with Ministry staff and other Egyptian counterparts included a Sector Assessment (1989) and National Surveys of Teaching Practices and Student Achievement (1991-93) and Private Lessons (1991-94) The Sector Assessment, among other things, called attention to a need to address gender equity issues in education The National Surveys, data from which were used in several of the quantitative analyses presented below, produced rich datasets for analysis of the school experience and family characteristics of primary and preparatory students by gender The results of the Teaching Practices study in particular have begun to spark lively debate regarding education policy and practice on a number of issues Implementation of the National Surveys also provided a rich training ground for EPID staff from Research & Analysis and Information Directorates in survey methods, statistical analysis, and report writing, with training provided by short- and long-term advisors to the Education Planning Project

Curriculum and Instructional Materials Development

USAID assisted the GOE in the development of curriculum and instructional materials reflecting objectives of the Educational Reform and the institutional and staff development of the Center for Curriculum and Instructional Materials Development (CCIMD) established in 1990

The objectives of this component of the Basic Education Project responded directly to curriculum and instructional factors identified by many to be a cause of low educational participation and dropout, especially of girls These include an impatience with lessons perceived to be irrelevant to students' (or potential students') lives, a tendency toward teacher-centered and passive-student instruction, and little attention to the development of students' critical thinking or problem-solving skills in the instructional methods used The curriculum and instructional materials developed with USAID assistance included new curriculum guides and textbooks in traditional subjects for all primary grades, an innovative "environmental studies" course (which integrated science, social studies, home economics, and health subjects) for grades 1-3, and teachers' guides for all student texts Teachers also received training in the use of the new curricula and materials in their classes

The environmental studies materials which have been distributed to all Egyptian primary schools set a new standard for stimulating pupils' critical thinking and problem-solving skills and seems to be making an impact on teaching practices Current classroom conditions and a long-established reliance on teacher centered instruction, however, suggest that the new curriculum and approach will not easily be adopted by teachers (CAII 1991) Were they more relevant to girls or women's lives?

Ministry of Education One-Room Schools for Girls

Recognizing the importance of literacy and girls' education, Egypt's President Mubarak declared the nineties a decade for eradicating illiteracy in Egypt and initiated a program to build 3,000 one-room, multi-grade schools to provide primary education without school fees for girls ages 8-15 The schools, which are constructed in remote villages or hamlets with no access to schools and are only 160 square meters, including space for supplies, equipment, bathrooms, and physical education, allow communities to build schools close to home quickly and inexpensively

The program includes a number of "girl-friendly" elements (e g , elements that have been shown to attract and improve the retention of girls at the primary level) female teachers, preferably from the same community, who are given a small stipend each month in addition to their regular salary as an incentive, flexibility with the daily schedule, to allow the school day to start and end according to the students' schedules, flexibility in recognizing student progress, to allow teachers to condense the five primary grades into three depending on students' abilities, and an avenue for continuing into preparatory (grades 6-8) or secondary technical schools upon completion of primary education [Although, when questioned, the local teachers and administrators said continuation would not be possible because the girls would be too old] A department was created within the local ministry to manage these schools, with supervisors, preferably from the same community or hamlet

According to A H El-Nisr, First Undersecretary of General Education, between 400-500 of the planned 3,000 schools have been completed, with 5-10 new schools constructed daily Interviews with local MOE officials in Sohag and Menya revealed that none of these schools have been built in the Sohag Governorate, and only four existed in all of the Menya Governorate The schools are constructed on land donated by the community, and the location of the schools is chosen by the governor in coordination with the local community The MOE accepted donations from the business community to help pay for school construction

Although the field visit to two of these schools in the Menya governorate revealed that the enrolment and attendance was high (after 3 weeks to 2 months of instruction) and the teachers were engaging, the rules of the ministerial decree do not allow enough flexibility and local authority for adaptation of the schools to local situations Also, it was observed that the school structures themselves were formidable and expensive--by far the most expensive buildings in the community One question to be considered is whether the money spent to build one school could have had a greater impact if it had been used to create a greater number of more modest structures and to provide in-service, multi-level training for teachers

Other Donor Assistance

Basic Education Programs for Primary School-age Girls

UNICEF In 1992, UNICEF signed an agreement with the MOE to establish multi-grade community schools in rural Egypt, particularly in Assiut, Souhag, and Qena The objective is to work together with the community to develop an effective, sustainable basic education program for both girls and boys and to serve rural communities previously lacking primary schools Communities provide space for schools, which are established in hamlets where the nearest school was four to five kilometers away The MOE provides textbooks and salaries for community teachers/facilitators who are selected from the community and paid by the MOE during the school year UNICEF works through local NGOs to provide the program design, supervision, staff training, school furniture and materials, and facilitator salaries in the summer Students are selected from the local community, with older girls (11 to 12 years old) given higher priority The project is designed to expand from the initial four community schools to 100 community schools by 1996 As of July 1994, 25 schools were operating

Community involvement is a critical element of this program In addition to providing space for the schools, local communities manage the school, ensure that children attend, and infuse the school curricula with subjects that are relevant to their community For each school there is a committee made up of community elders responsible for running the school, i e , making repairs, maintaining or renovating the facility, and making decisions about such issues as holidays and school uniforms The committee meets every two weeks to decide matters concerning the school

Facilators, who are recruited from the local community, are supported and trained by a team, which includes professors from the region's universities and local consultants Their role is not only to teach children but also to build awareness among parents of the importance of encouraging their children, especially the girls, to continue their education Facilitators meet weekly to evaluate themselves and exchange ideas Technical supervision is provided by local NGOs and community development agencies

The preliminary success of the UNICEF community schools is attributed to several factors

- proximity of the school to the households to be served,
- minimal cost,
- female facilitators who are selected from within the community,
- community participation in running the school,
- regular supervision and training by local NGO staff and resource personnel,
- "student-centered" and active learning methods, which disallow physical and psychological punishment and enhance children's creativity, planning, and problem solving abilities,

- a multi-grade school system, and
- flexible school scheduling according to students' family circumstances, and
- class furniture designed to enhance group work, creativity, and initiative, and
- consciousness-raising workshops on the importance of girls' education

Access and participation rates are very high The proximity of the schools has opened up new avenues for the children in these communities, particularly for girls Daily attendance is consistently above 95 percent, a rate attributed to the fact that the facilitators and supervisors adjust the school schedule to fit that of the community

The learning achievements of the children are measured by two sources evaluations completed by the program facilitators, and test results prepared by the National Center for Educational Examinations and Evaluations (NCEEE) who work with both the Ministry of Education (MOE) and the facilitators Both of these sources agree that the children are doing well Students in the Grade 1 classes that were observed met or exceeded the Grade 1 requirements and were targeted for promotion to Grade 2

Recent visits to UNICEF schools also revealed several other promising outcomes Facilitators seemed enthusiastic and highly motivated, and displayed the skills needed to manage class a class with children of varying ages and abilities The student-centered method of instruction used was executed well by the facilitators Older children who tend to learn faster are helping the younger children master some concepts Community participation was particularly strong, with parents, teachers, and children all working together to make the schools a success The schools were characterized by high attendance rates and excellent student work

In addition to providing quality basic education to the rural areas of Upper Egypt, the program also contributes positively to the rural communities in other ways Evaluators observed that leadership and the capacity to organize community activities are expanding and that communities are taking pride in these schools as is evidenced by their contributions of land, labor, and time The parents are participating in the learning process, thereby increasing the likelihood of program success and sustainability Policy makers are taking notice of the program, and the GOE-sponsored school construction program incorporates some of these features The media are playing a role in raising the awareness level nationwide Newspapers have featured accounts of the success of the schools, and a video of the program was aired on television

Caritas Caritas, an international organization that is active in over 130 countries, was founded in Egypt in 1967 In 1993, a total of 7,745 girls and women ages 8 and older as well as 1,388 boys and men participated in Caritas' literacy program in 10 different governorates in Egypt The Caritas curriculum is based on the Paulo Freire theory of liberation through education, which teaches the student not only how to read and write, but also how to understand personal problems and solve them Reading is taught phonetically

rather than alphabetically Health, hygiene, child care, and nutrition are incorporated into the curriculum, and students receive a periodic health check-up

Teachers are local community women with primary teacher education diplomas (i e , five years of education after preparatory school, or 13 years in total) but have no specialized teacher training Caritas trains and tests teachers before hiring them and pays their salary of 32 5 LE per month (about $10 00) Typically, families donate the room(s) where classes are held Regular in-service training is held for the teachers, and supervisors visit classes weekly Supplies are sometimes borrowed from the MOE

Incentives to maintain attendance include field trips, monthly parties, and assistance in obtaining birth certificates and/or identification cards One project manager in the Sohag governorate, when asked how attendance was maintained, said that the girls came to classes so that they could go on the field trips, because they otherwise had no opportunities to leave the village

Caritas also works with children in six Caritas kindergartens, and 27 other kindergartens are assisted with supplies from Caritas In-service training is provided for kindergarten monitors, partly in cooperation with the Association of Upper Egypt for Education and Development

Association of Upper Egypt for Education and Development The Association of Upper Egypt for Education and Development is an indigenous NGO that was founded by an Egyptian Jesuit priest and sociologist in 1941 to provide basic education for children in the poorest areas of Egypt The Association claims that their experience of more than 40 years has demonstrated that a properly delivered education will inevitably lead to development Today, the Association provides free education for nearly 2,000 students in its primary schools in Cairo, Menya, Assuit, Souhag, and Luxor Two-thirds of the schools include kindergarten classes where students can enroll at age 4 The Association also conducts a literacy program benefitting over 2000 women

The Association takes a comprehensive, intersectoral approach to education that includes selecting, training, monitoring, and evaluating teachers, designing and developing relevant, child-centered curricula and extra-curricular activities, and conducting PTA meetings Classroom children receive a regular medical check-up, are weighed routinely, and are given tonsillitis operations and eyeglasses when needed Also, teachers are trained to detect trachoma, parasites, lice, fleas, and signs of malnutrition A program of personal hygiene is administered in school and with each family

The Association has maintained good sex-disaggregated data on students and teachers The proportion of female teachers in their schools has grown over the last 20 years to 80 percent of the teaching staff The proportion of female students has also grown and now averages 44 percent, whereas the overall percentage of girls in primary schools in rural Upper Egypt is about 37 percent

UNDP The UNDP, through the Inter-Agency Collaborative Program for Basic Education and Female Literacy, has provided funding to the Third World Forum to conduct an extensive study in selected urban and rural areas on the constraints to girls' and women's participation

in education as well as possible strategies for increasing female participation (See "Findings from Other Data Sets ") The UNDP also works with and supports the National Council for Childhood and Motherhood and coordinates donors who have or support female literacy projects through its Subdonors' Group on Women These collaborating donors include CIDA, the World Bank, the GTZ, the British Council, and USAID The UNDP would like to expand this group into a broad donor consortium with linkages among all female literacy programs

GTZ GTZ, the German bilateral donor agency, is planning a 30 million DM project to build primary and one- to two-classroom schools in rural areas with a goal of increasing girls' enrollments Like the USAID Basic Education Project, the GTZ project will use local building materials and Egyptian technology and expertise The building sites will be chosen based on proximity of the schools to the community in order to increase girls' enrollment

The World Bank The World Bank started a $55 million project to last from March 1994 to 2002 that also primarily will focus on school construction In addition to construction, activities will include teacher and management training and institutional development Again, like USAID, the World Bank will include in its program the development and maintenance of Education Management Information Systems at the national and governorate levels Although schools will be constructed in communities in order to increase girls' access to school, the program has no other gender component per se

National Council for Childhood and Motherhood (NCCM) NCCM is sponsoring the Inter-Agency Collaborative Program for Basic Education and Female Literacy This project, which was started in September 1992 by Presidential Decree, is divided into two major components basic education and female literacy The basic education component targets both boys and girls under 12 years of age The total budget is $9,351,000, of which more than 50percent is contributed by NGOs A joint project with donors such as UNDP, UNICEF, and the World Bank, this project is designed to help various interested parties work cooperatively in providing basic education and vocational and income-generating projects, enabling children to continue their education or work their way back into formal education

The project is divided into two stages a preparatory stage and an operational stage Preparatory stage project activities are being conducted in two governorates--Cairo and Al-Sharkia, which were chosen because of their high percentages of illiteracy and underdevelopment To identify the most appropriate modes of cooperation, an evaluative survey was conducted of all NGOs involved in literacy work, which covered their objectives and operation In addition, four teams of community activators/teachers were trained to campaign for literacy and community development work with the purpose of mobilizing four pilot communities To create an atmosphere of support, mosques and local clubs as well as decision makers and executives at intermediate and junior local and national levels were targeted

Fifty-five pilot literacy classes were opened linking literacy with income generation and community development projects Thirty-eight community activators from local communities have been hired and trained by NCCM, with salaries of LE 120/month paid by NCCM Activators are observed and screened for 5-6 months Work-centered literacy is the approach by which students learn reading and writing through industry, ex , spinning and weaving

Community activators are trained to raise problems and encourage women to solve the problems together and encourage them to participate in development of their community

The operational stage, which has not yet been funded, has six objectives eradicate illiteracy of 10,000 women 25-35 years of age through NCCM-established centers and 100,000 women through NGOs in 12 provinces, design special literacy programs for 5,000 drop-out boys and girls, 8-14 years of age, and encourage them to continue their formal education or to earn a living, prepare and test literacy and post-literacy instructional and audio-visual materials, to be produced for use by NGOs and other local and national agencies, explore ways and means to motivate women and children by assessing their needs through lengthy questionnaires in order to acquire life skills and engage in income-generating activities, train 2,750 individuals involved in literacy planning, curriculum design, writers of educational materials, supervisors, educational administrators, and teachers, and evaluate literacy organizations, materials, and training of teachers/community activators

Unfortunately, a variety of social factors has constrained maximum participation These include humiliation, sarcasm, and criticism that women are subjected to on their way to classes, poor economic conditions, poor learning methods and conditions, early marriage, child labor, untrained teachers, inappropriate curriculum, distance to school, lack of latrines, and teachers' mistreatment of students

Basic Education Projects for Older Girls and Women

Several of the education programs described above include educational opportunities for older girls and women over the age of 14 In addition, there are a wide range of NGOs that work only in the field of adult education The most prominent of these are the Islamic and Christian associations Interviews with representatives from two large organizations that serve only older girls and women--the government agency General Authority for Adult Education and the Eradication of Illiteracy (GAAEEI) and the Coptic Evangelical Organization for Social Services (CEOSS)--were particularly revealing

General Authority for Adult Education & Eradication of Illiteracy (GAAEEI) GAAEEI is a semi-independent organization that began as a department within the Ministry of Education (MOE) The organization maintains some link with the MOE--its chairman is the prime minister who may authorize the MOE to chair if he is unavailable

GAAEEI's adult literacy project was started in 7 governorates in 1992 in an effort to reach the 13 million female illiterates in the country at that time The objective was to ensure achievement of the national goal of eradication of illiteracy by the year 2000 The Social Fund for Development provides GAAEEI with LE 20 million per year, specifically to decrease unemployment This fund goes to pay 10,000 literacy teachers' and other employees' salaries GAAEEI uses university professors to provide training for the teachers, administrators, and supervisors Training costs total LE 500 per teacher The GOE contributes LE 44 million to buy sewing machines, tools, etc GAAEEI is in the process of negotiating with the Social Fund to increase its fund to LE 62-70 million

Literacy classes for students aged 14 and above are free of charge According to the law, ages 14-35 are eligible, but the program accepts learners above 35 GAAEEI combines general knowledge from the MOE curriculum with a curriculum that addresses environmental awareness, agriculture, and health topics and includes some vocational skills and income generation The classes are held "everywhere"--in mosques, churches, clubs, and formal schools--with a minimum of 10 students per class

The literacy classes are divided into two levels, each nine months in duration After the completion of Level 1, the learner can legally enter 2nd grade in the formal education system After the completion of Level 2, the learner can enter the 5th grade The classes are held five times a week for 2 hours each day Classes start at 7 00 The class schedule is fixed and is not adjusted according to harvest seasons and other occasions

The minimum literacy requirement for teachers' level of education is the General Secondary (Ar "Thannaawiya Amma") certificate Teachers, who are recruited from the local community, are carefully chosen according to their teaching abilities, handwriting skills, and physical health Although female teachers are necessary in certain topics concerning health, personal hygiene, and anatomy, the community decides whether gender will be a factor in the hiring decision There are supervision committees in each governorate There is one supervisor per 5 classes and one senior supervisor per 30 classes

Total enrollment is 25,000 Two-thirds of the rural participants are women, and one-third of the urban participants are women Between 70-90 percent of the participants complete Level 1, and most of these are women, but only 10 percent of those enroll in formal education Advancement into Level 2 has not yet been assessed due to the relatively recent start date

Reported constraints to further participation include the ease in which illiterates can find employment, husbands who order their wives to stay home, overly bureaucratic directors who hold too much responsibility, lack of an effective information system, which results in students registering in many classes and in different areas, and weak law enforcement Better coordination between the NGOs and GAAEEI, a more relevant curriculum, and more community awareness of the importance of female literacy were suggested as strategies for improving the program

CEOSS CEOSS, the first Egyptian NGO to be registered with USAID, is a social services private volunteer agency that receives up to 75 percent of its funding from foreign donors such as USAID, Umbrella, Danida, and other European agencies It works in the governorates of Menya and Assiut in Middle and Upper Egypt and in the governorates of Cairo, Giza, Alexandria, and Kalyubia in Lower Egypt

CEOSS's literacy program aims to teach illiterate men and women to read to a level of proficiency that permits them to read newspapers and magazines and write well enough to attend to literacy tasks in their daily lives The 158 literacy classes for both men and women aged 17 and above in all of the CEOSS communities are taught by 287 volunteer teachers Total enrollment in all classes in currently 7,164, of which 50 percent are women Classes, which are eight months in duration, are divided into three stages Ninety-minute classes are held four times per week for eight months The dropout rate is 50 percent of those enrolled in

literacy classes due to conflicts with the harvest seasons and economic problems The program also promotes the education of school-children age by encouraging parents to send children to school and keep them there

CEOSS's curriculum links literacy with the environment and incorporates issues on health, hygiene, and family planning The literacy program encourages community women to confront certain traditions that hinder their advancement and to raise the level of consciousness in the community concerning the current views of religion, medicine, sociology, and psychology about these traditions The main issues addressed are educating girls, early marriage, female circumcision, harmful wedding-night rituals, and superstitions concerning childbirth, the evil eye, and tomb-visiting Also included are field trips and monthly parties After teachers are trained for two months, they receive ongoing in-service training All teachers have diplomas, and some have graduated from literacy classes They are not paid but receive a stipend of no more than LE 7

Upon completion of the first stage, students may take a MOE exam to enter the fifth grade of formal education if they intend to continue Only 25 percent of those enrolled in literacy classes choose to take the MOE exam to return to formal education, however

Exhibit 3 summarizes the major donor programs and the focus areas of each one

Results

As a result of these and other programs, the current status of girls' basic education is as follows

Girls' enrollment in basic education has increased dramatically

As evidenced by the MOE school census database, in 1981-82, 1,936,635 females were enrolled in primary school and 634,747 were enrolled at the preparatory level In 1993-94, 3,205,705 females were enrolled in primary school, and 1 5 million were enrolled in secondary school, representing 60 percent and 100 increases respectively during that 12-year period The numbers of females enrolled increased most dramatically in the rural areas, growing from about 894,600 females in primary school from 1981-82 to 1,734,500 in 1993-94

Current (1993) female-to-male ratios (FMRs) are higher in urban areas than in rural areas, and primary FMRs are on the whole higher than preparatory FMRs

In urban areas (Exhibit 4a), the 1993 overall FMR in primary schools reached 93 2 girls to 100 boys, although urban areas in Assiut, North Sinai, Beni Suef, Souhag, Menya, Fayoum, South Sinai, and Matrouh governorates still show ratios of less than 90 100 In rural areas (Exhibit 4b), the total FMR is much lower, at 76 6 100, with the FMRs in rural areas of five governorates, including Fayoum, Beni Suef, and Menya, as well as South Sinai and Matrouh, falling below 60 100

Exhibit 3

Summary of Girls' Education Programs in Egypt

Organization	Programs/ Ages < = 14	Programs/ Ages > 14	School Construction	Curriculum	Teacher Training	Educational Materials	Institution Building		Provide Funding
MOE	x	x	x	x	x	x	CDA	MOE	x
USAID	x		x	x				x	x
Other Donors									
UNICEF	x		x		x	x	x		x
CARITAS	x	x		x		x	x		
Association of Upper Egypt	x	x	x	x	x				
UNDP									x
GTZ (planned)	x	x	x		x	x			x
WORLD BANK (planned)	x		x	x	x	x		x	x
NCCM	x	x		x	x	x			
GAAEEI		x			x				
CEOSS		x		x	x	x			

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Exhibit 4a

URBAN PRIMARY FMR STATISTICS
BY GOVERNORATE, 1981-82 AND 1993-94

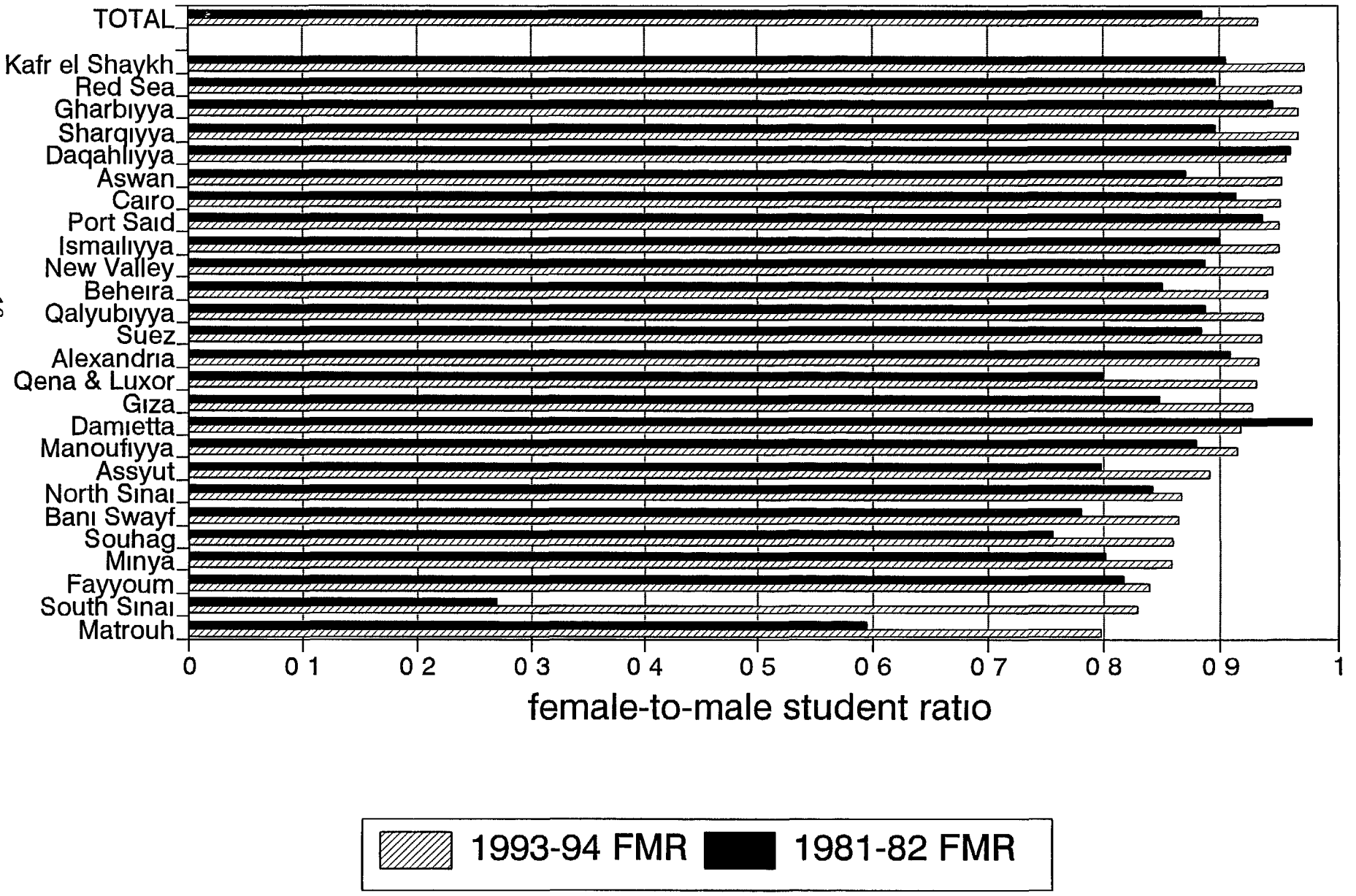
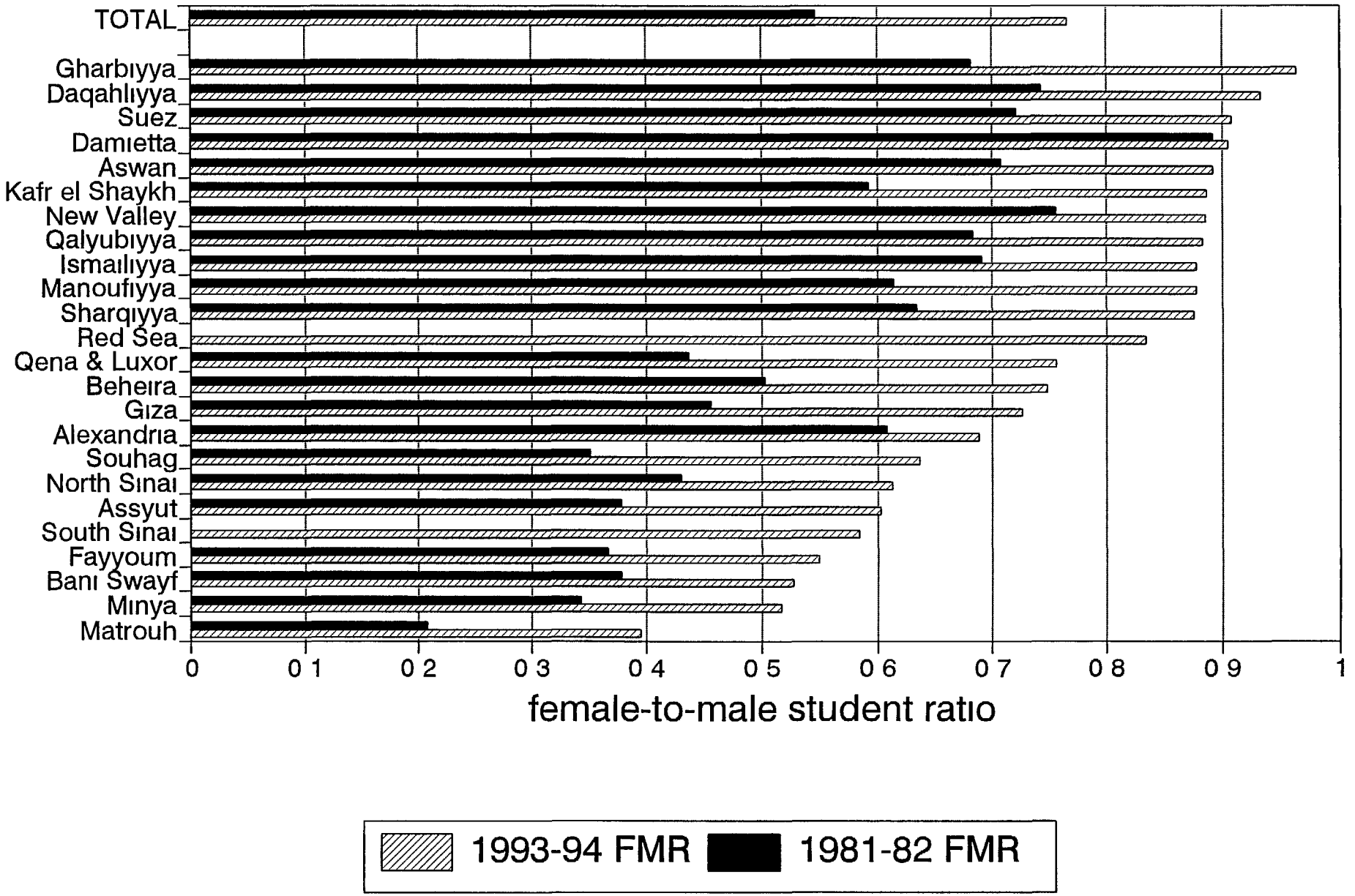


Exhibit 4b

RURAL PRIMARY FMR STATISTICS
BY GOVERNORATE, 1981-82 AND 1993-94



At the preparatory level, the current urban ratio is 92 8 girls for every 100 boys, with the urban areas of Assiut, Beni Suef, Menoufia, South Sinai, and Matrouh, however, still falling below 80 100 (Exhibit 4c) Rural preparatory FMR is just barely 71 girls to 100 boys, with Souhag, Fayoum, Beni Suef, North and South Sinai, Matrouh, and Menya falling at or below 50 girls to 100 boys (Exhibit 4d)

Upper Egypt, Sinai, and Matrouh governorates lag behind the rest of the country in closing the gender gap

For Upper Egypt, these lags coincide with substantially higher infant and child mortality, and lower life expectancy, adult literacy, and per capita income than any other region The Frontier governorates of North Sinai, South Sinai, and Matrouh, in addition to being relatively young in terms of overall economic development, also show lower life expectancy and adult literacy rates than other regions of the country (Egypt Human Development Report 1994 Cairo Institute of National Planning) Upper Egypt, Sinai, and Matrouh regions are also relatively more traditional in their customs than other parts of Egypt

Progress in improving female-to-male student ratios (FMR) in basic education vary by region and governorate

In general, there has been considerable variability in improvement of the FMR across governorates, and markedly greater progress toward higher FMR in rural primary and preparatory schools than in urban schools (although rural areas also had much greater room for improvement, and still do)

FMR improvement since 1981 in urban areas has been moderate, in part because of reasonably high FMRs even at that time

Urban areas in 22 governorates had total primary FMRs of roughly 80/100 or better in 1981, with only Beni Suef, Souhag, Matrouh, and South Sinai falling considerably below this level By 1993, urban areas in all but eight governorates displayed primary FMRs of 90 girls to 100 boys or better, with levels in the remaining eight governorates (Fayoum, Beni Suef, Menya, Assiut, Souhag, Matrouh, North Sinai, and South Sinai) reaching 80 girls to 100 boys or better The greatest relative improvements over time are observed in South Sinai, Qena/Luxor, Souhag, Assiout, Behera, and Beni Suef, with over 10 percent improvement in urban primary FMRs since 1981

In rural areas, dramatic progress in increasing primary FMRs by 1993 was evident

Gains of roughly 50 percent or better over 1981 primary FMR levels were achieved in eight governorates (Matrouh, Souhag, Qena/Luxor, Assiut, Giza, Menya, Fayoum, and Kafr El-Sheikh) Rural areas in the remaining governorates display improvements of 25 percent or better, with the exception of Damietta, Alexandria, and New Valley which showed slower improvement The slow rate of progress in rural Alexandria is particularly disturbing, as its 1993 FMR remains under 70 girls to 100 boys Preparatory schools have had greater relative improvement in FMRs than primary schools, again due largely to a much greater margin for improvement

Exhibit 4c

URBAN PREPARATORY FMR STATISTICS
BY GOVERNORATE, 1981-82 AND 1993-94

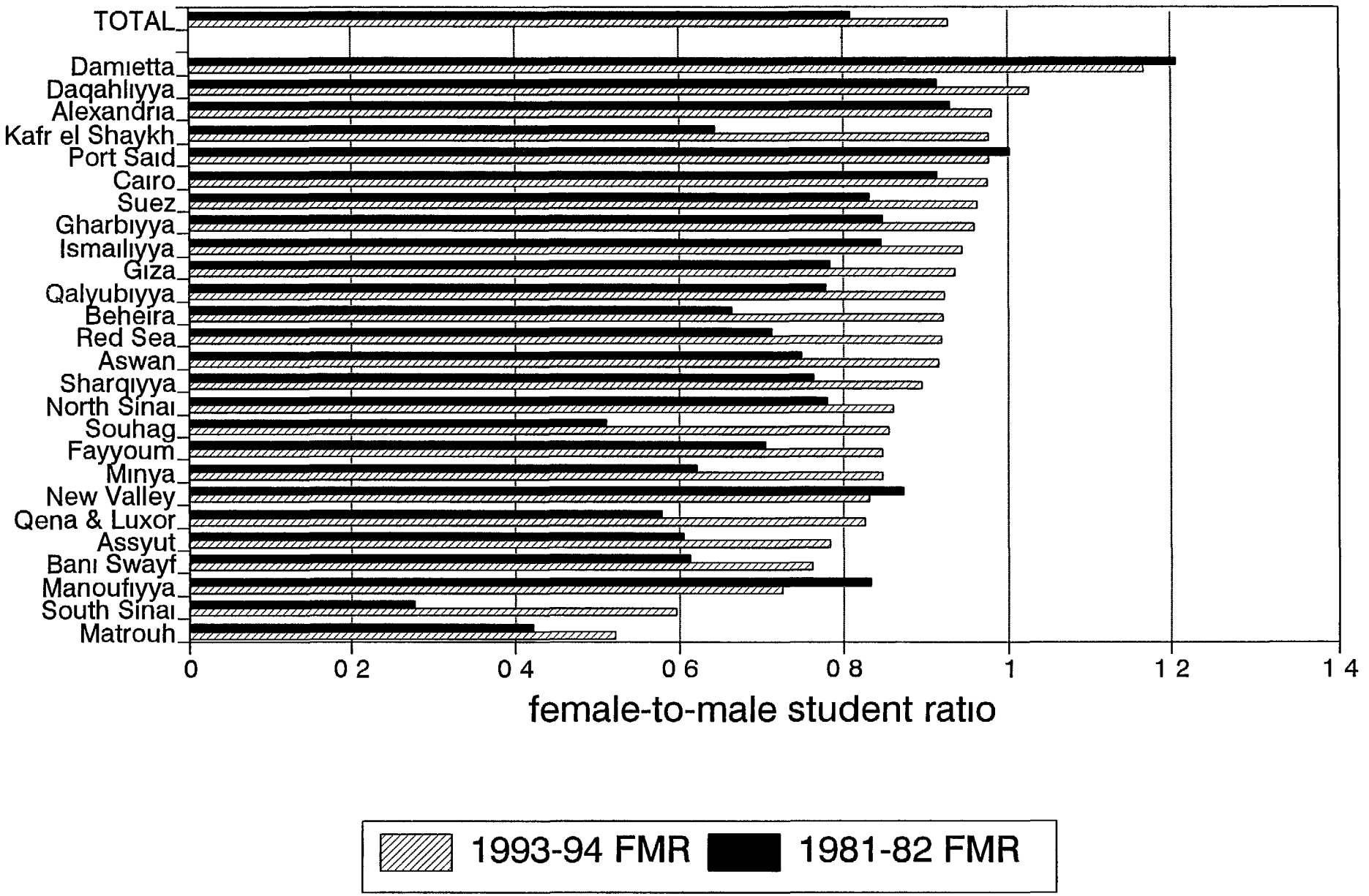
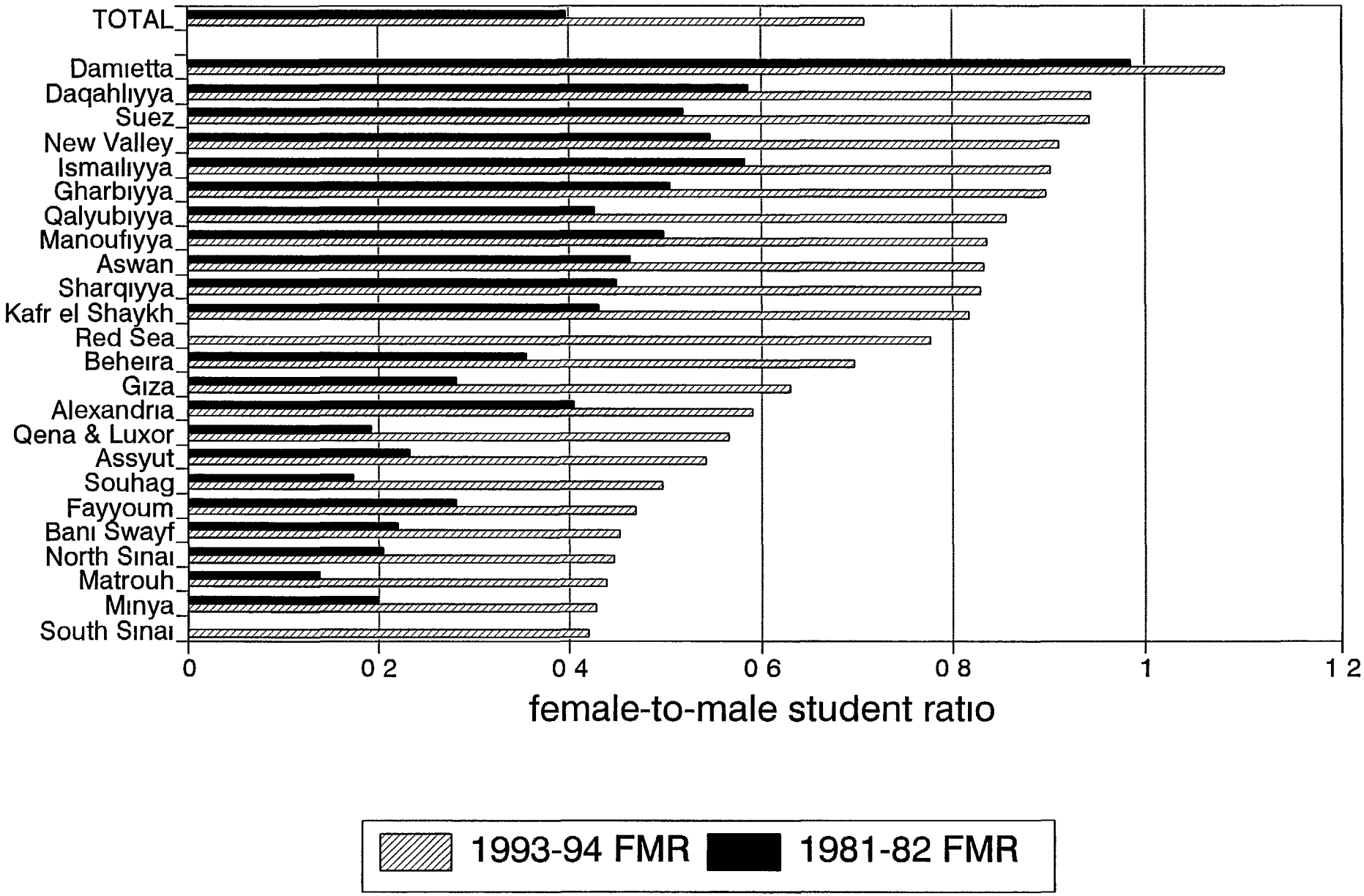


Exhibit 4d

RURAL PREPARATORY FMR STATISTICS
BY GOVERNORATE, 1981-82 AND 1993-94



Nearly all governorates show improvements in urban preparatory FMR of over 10 percent since 1981 Six of these (South Sinai, Souhag, Kafr El-Sheikh, Qena/Luxor, Behera, and Menya) improved by 36 percent or more over 1981 levels Governorates that improved relatively little include Cairo, Alexandria, Menoufia, Damietta, Port Said, and New Valley

In rural areas, preparatory school FMR improvements are the most dramatic of all

All but two governorates show gains of at least 50 percent over 1981 levels, and no fewer than nine governorates have more than doubled their rural FMRs since 1981 These are Matrouh, Qena/Luxor, Souhag, Assiut, Giza, North Sinai, Menya, Beni Suef, and Kalyubia -- six of which, nonetheless, still had FMRs below 50 girls to 100 boys in 1993 Again rural Alexandria, though a relatively small portion of students, shows particularly poor performance Its preparatory FMR growth rate falls well below that of most other rural areas, while its absolute FMR level in 1993 remained at under 60 girls to 100 boys

Girls' dropout and repetition rates look promising

Egypt's basic education system as a whole is inefficient, with high drop-out and repetition rates for boys and girls While some sources claim that the ratio of girl drop-outs to boys is 2 1, a recent analysis of data from the MOE estimates that drop-out and repetition rates are nearly the same for boys and girls (MOE in collaboration with A R Themme 1993) In addition, the MOE estimates indicate that girls had slightly higher primary completion rates and slightly lower repetition rates than boys in 1991-92 These data also indicated that girls who drop out do so earlier in the primary school cycle than boys Sample- and self-report-based research by the Third World Forum (1994), on the other hand, suggests that girls' highest primary dropout rates occurred in the last three years of primary school The difference between the two sources may be due to a real generational shift toearlier dropout, as overall girls' participation has enlarged to include more marginal elements of the population It may also be a function of "selective memory" by respondents in the Third World Forum sample Other project documents state that in 1991-92 a slightly higher percentage of girls than boys who entered primary school completed their primary education and that girls enrolled in primary school had slightly lower repetition rates than boys (gender-disaggregated data were not available for 1985-86)

Female illiteracy rates are falling but are still unacceptably high, particularly in some rural areas

Consistent with low girls' enrollments in primary school and with a low quality standard that frequently does not produce students with lasting literacy skills after 4 years of schooling is the high rate of adult female illiteracy--about 61 percent nationwide in 1990, or about 11 0 million illiterate women (Central Agency for Public Mobilization and Statistics, n d) This number represents a significantly higher illiteracy rate than the estimated overall 1990 illiteracy rate of 47 1 percent (CAPMAS) In some rural areas, female illiteracy may be as high as 90 percent Women's literacy classes meet only a small fraction of this need, and drop-out rates are high This lack of women's schooling affects not only women themselves, but also children who suffer from their mother's lack of understanding of the benefits of education Likewise, early childhood development programs are rare in Egypt and fail to

fulfill their potential to prepare girls for primary school while freeing mothers and older sisters of child care responsibilities so that they can attend classes

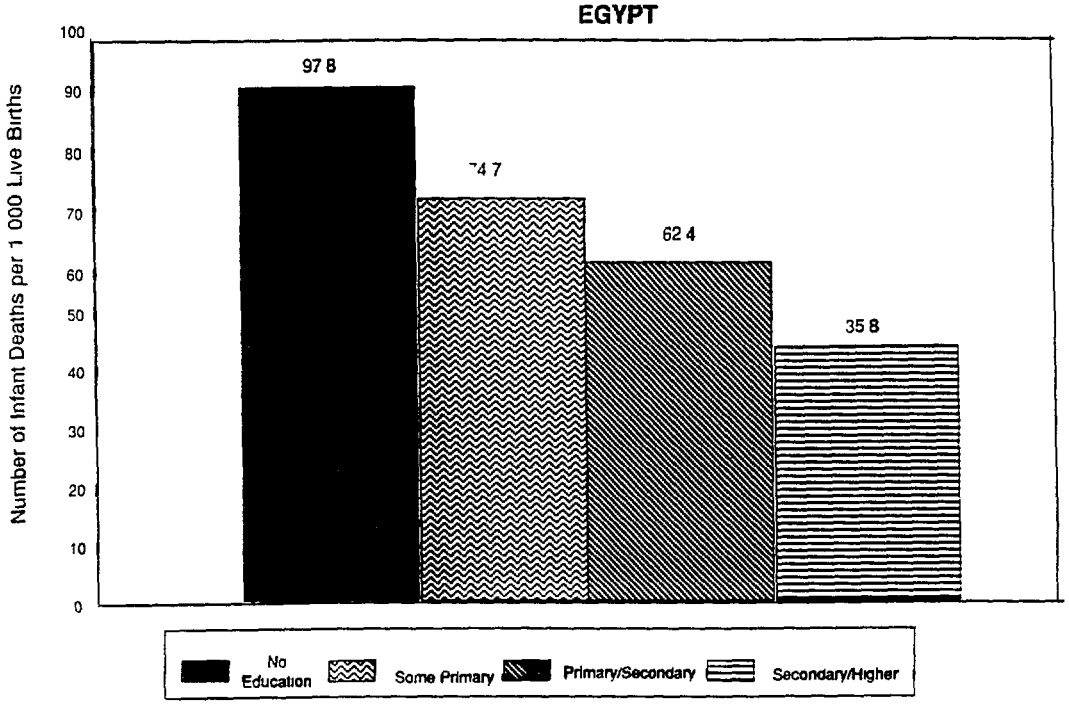
Female education is having a direct effect on a variety of Egypt's other social indicators

Recent data show that female education is affecting infant mortality, age of first marriage, demand for family planning services, and women's contribution to the household in Egypt For example, in 1992 the infant mortality rate was 97 8 deaths per 1,000 births for women with no education but 35 8 deaths per 1,000 births for mothers with a secondary level education (see Exhibit 5) Median age of first marriage was higher for women with more education (see Exhibit 6) Educated wives also contributed more to the household budget than wives with no education (see Exhibits 7 and 8)

Exhibit 5

INFANT MORTALITY
by Education of the Mother

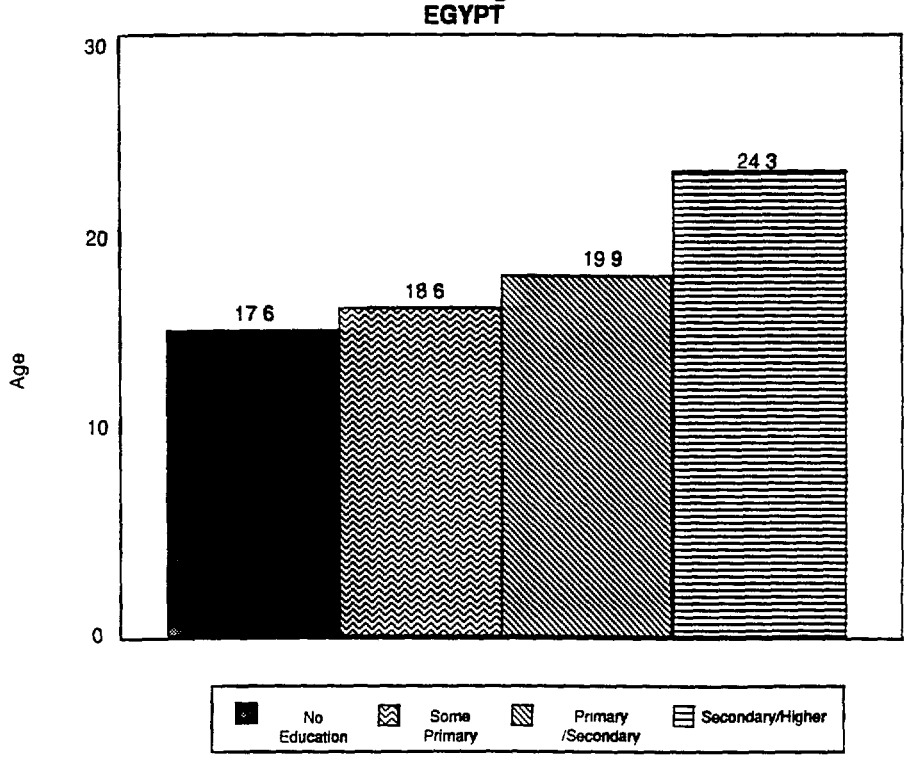
EGYPT



Source El-Zanaty et al 1993

Exhibit 6

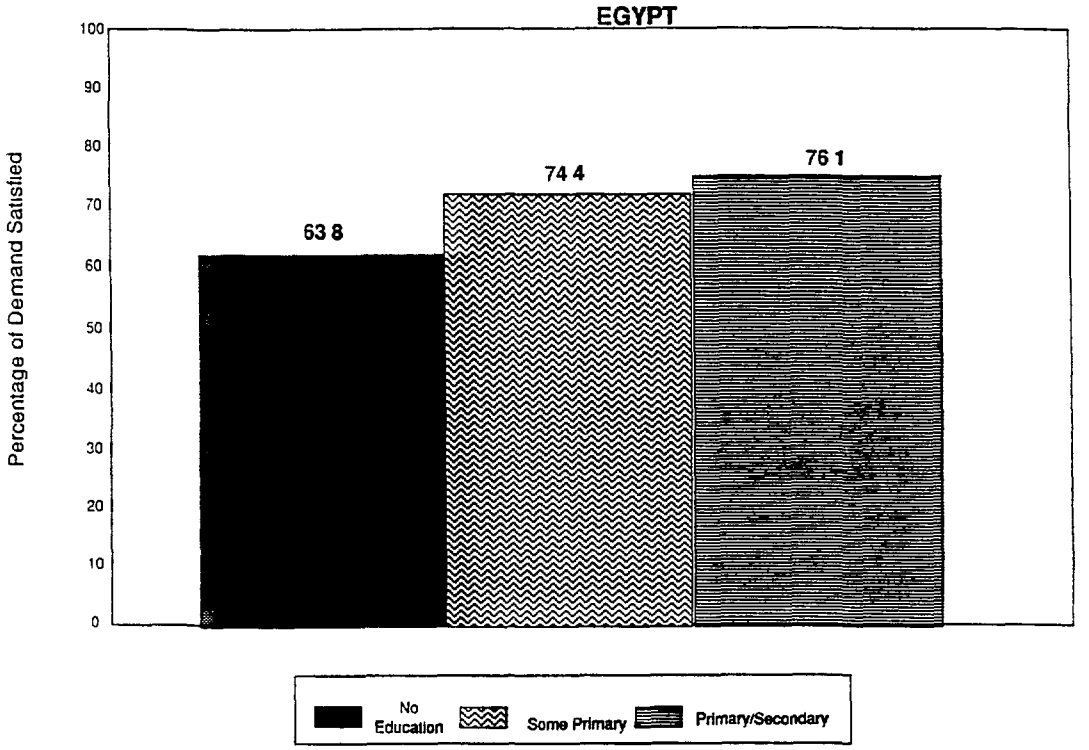
Median Age at First Marriage
EGYPT



Source El Zanaty et al 1993

Exhibit 7

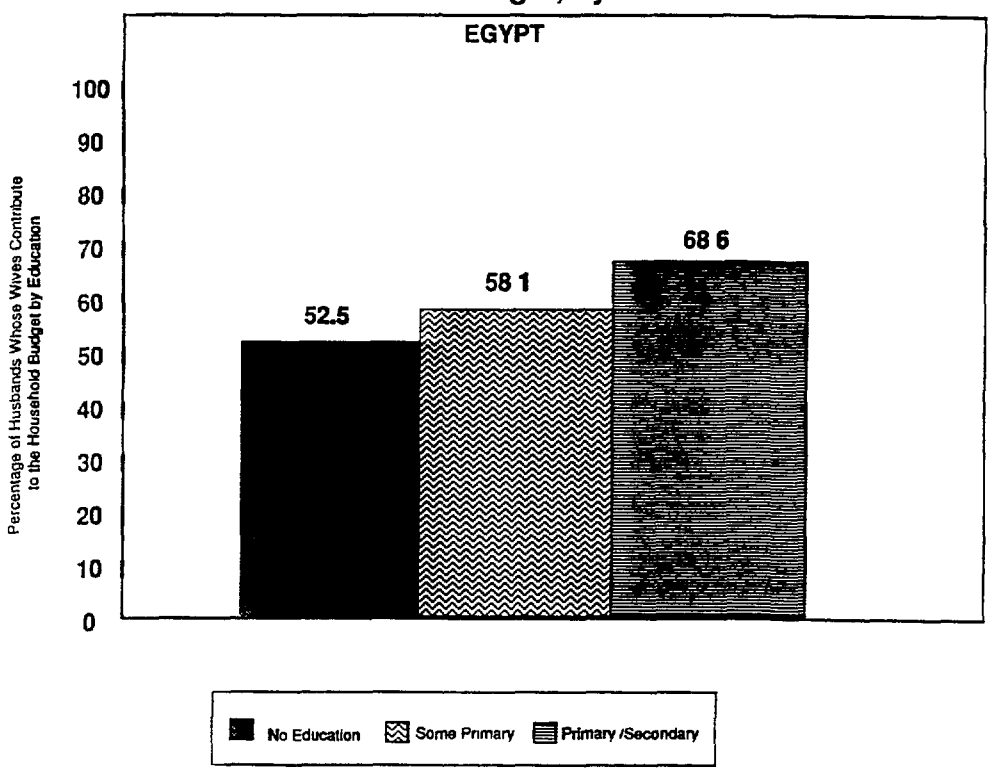
Demand for Family Planning Services by Education



Source El Zanaty et al 1993

Exhibit 8

Wives' Contribution to the Household Budget, by Education



Source El Zanaty et al 1993

IV. CONTRIBUTING FACTORS TO GIRLS' EDUCATION IN EGYPT

This chapter reports on findings from this study--the literature review, the data analyses, and the site visits---concerning the factors that contribute to greater girls' participation Identified factors affect two major areas enrollment and achievement

In performing the data analyses for this portion of the study, the researcher made use of four existing datasets to analyse the available statistical evidence on girls' educational participation in Egypt USAID's School Construction Program dataset (available at USAID), the MOE School Census Database (available at the Education Planning and Information Division, MOE), the National Survey on Teaching Practices dataset (Education Planning and Information Division, MOE), and the National Survey on Private Lessons dataset (Education Planning and Information Division, MOE) It should be noted that none of these datasets contain information on children who are NOT in school Nonetheless, complemented by information from local community-based education programs and research, analyses of these data sets can be extremely valuable in suggesting directions for additional field-based study and possible Project intervention

Contributing Factors to Girls' Enrollment

School-based Correlates

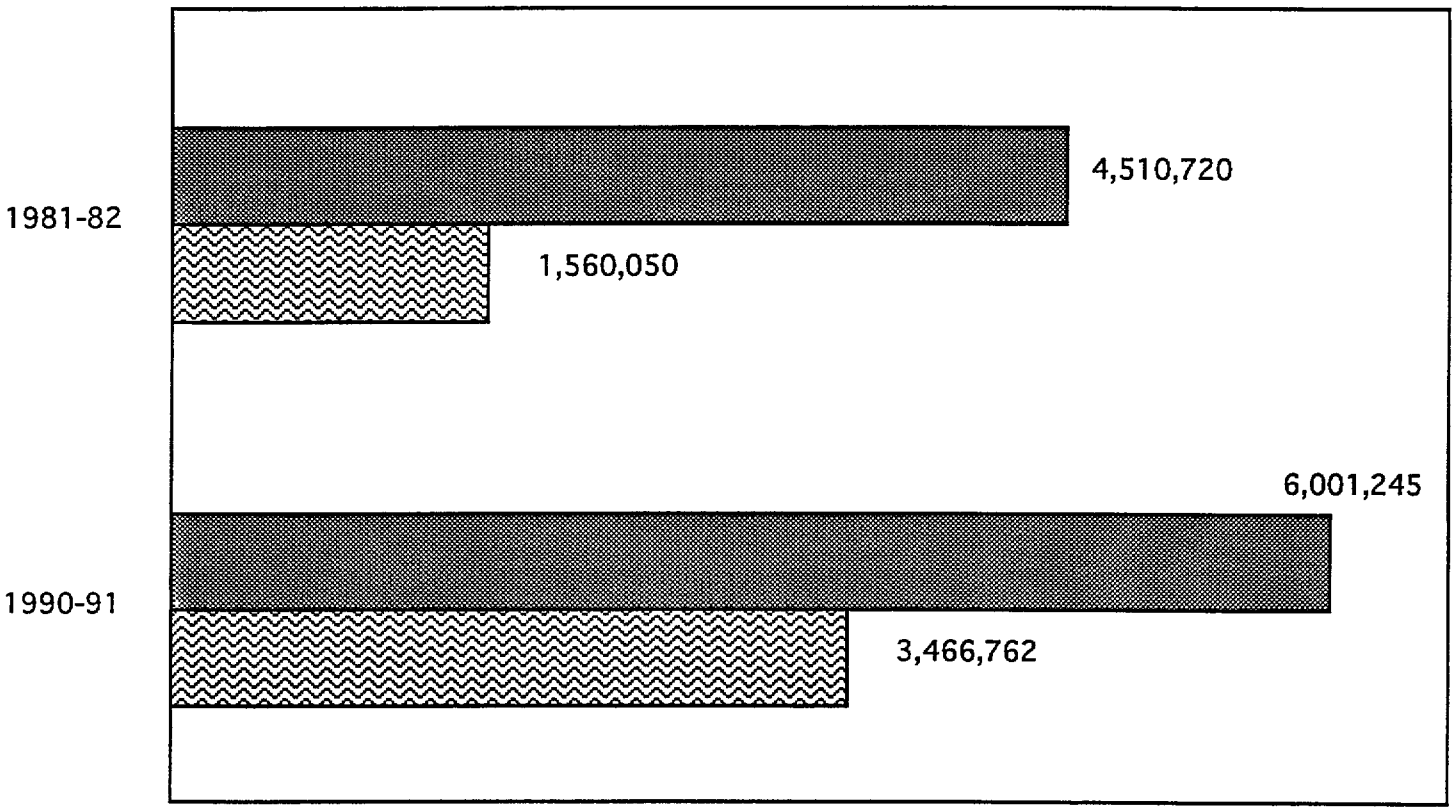
More Schools The literature, data analysis, and on-site interviews all support the contribution of school construction, particularly the USAID-sponsored school construction, to increased girls' educational participation in Egypt

The final evaluation of the Basic Education Project (CAII 1991) documents that increasing girls' access to schools through school construction makes a "marked impact on access and enrollment figures for primary and preparatory schools, particularly in rural areas " As stated earlier, the Basic Education Project resulted in dramatic increases in enrollment at the primary and preparatory levels during the 1980s (see Exhibit 9), with enrollment increases particularly evident in rural areas for boys and girls Female rural primary school enrollment, which comprised 35 percent of total enrollment in 1981-82 (897,000 female students) rose to 42 percent of enrollment by 1990-91 (1,400,000 female students) (see Exhibit 10) This was an increase of over 500,000 female students in about 10 years During this period, urban female enrollments grew by 26 percent

The final evaluation also reported that during the same time period, female enrollment in rural preparatory schools grew from 28 percent to about 40 percent of total enrollment (180,000 to over 700,000 students), and urban female preparatory school enrollments doubled Interpretation of these percentage growths, however, reflect the 1989-90 change in primary school length from six to five years, which allowed two groups to move into preparatory school in one year

Exhibit 9

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



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

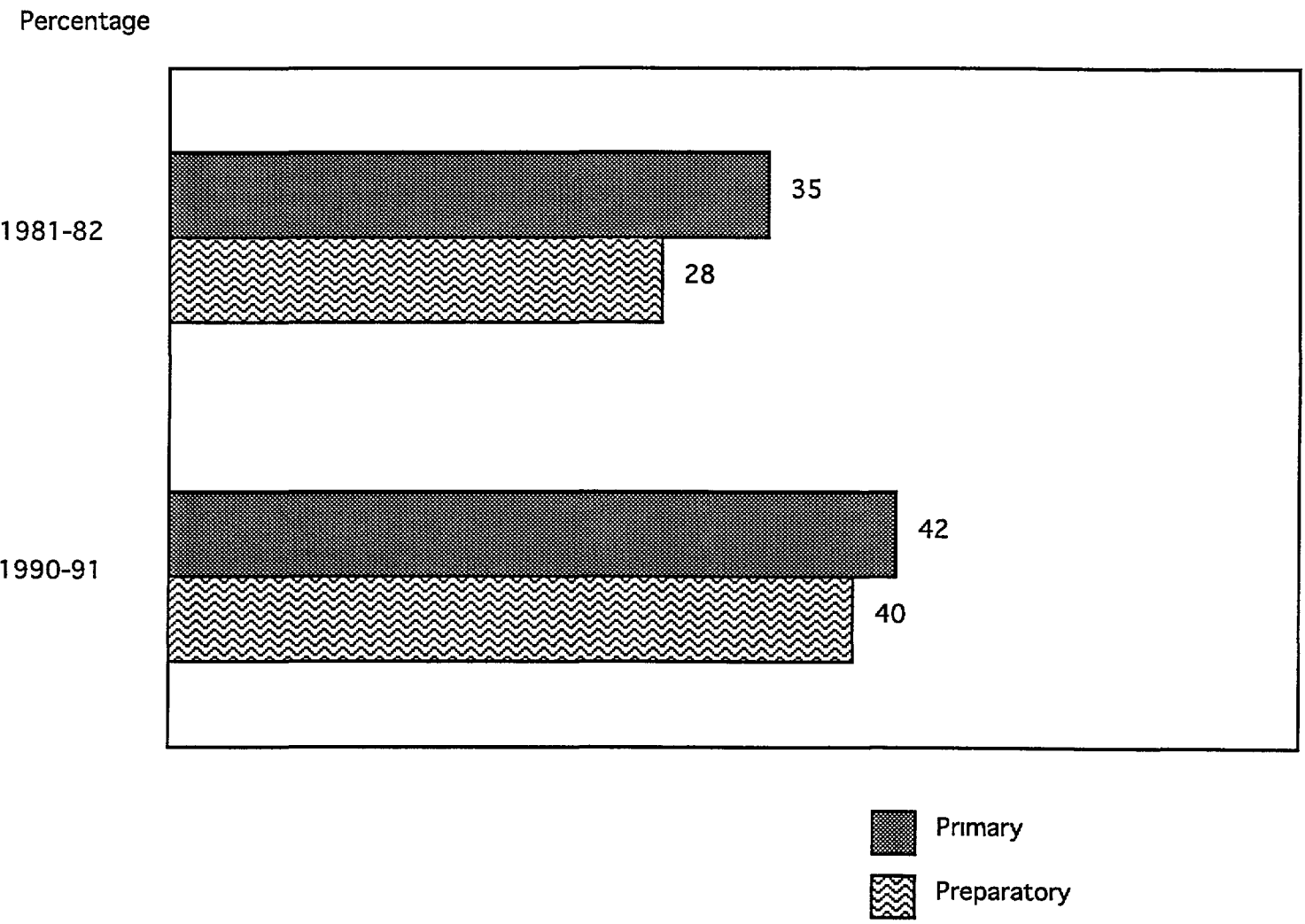
Primary

Preparatory

Creative Associates International
December, 1991
Source EPID (EMIS)

Exhibit 10

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



Creative Associates International
December, 1991
Source EPID (EMIS)

In addition, an analysis of the USAID School Construction Program dataset provided total numbers of schools built by the Basic Education Program since its inception through the current school year and the number of students currently attending these schools (though not by gender), by educational district Using the available data, a series of simple correlational analyses was conducted to establish whether rates of growth in FMR and total enrollments since 1981 have tended to be greater in governorates in which USAID-built schools--which did not exist in 1981--serve a relatively large proportion of all students

The analysis showed that more rapid growth in enrollments and improvement in FMR has tended to occur in governorates where USAID school construction efforts have been greater, especially at the primary level Analysis of the data, weighted by governorate enrollment size to correct for the undue influence of extremely small governorates, indicates moderate to strong relationships between the USAID school construction program and improvements in both FMR and total enrollment growth, at both primary and preparatory levels overall Total weighted governorate-level correlations with relative size of the USAID program ranged from a low of r=0 204 for relative growth in grade 1 primary FMR, to r=0 523 for relative growth in total primary enrollments

During on-site visits for the CAII study, the 1,942 schools funded by USAID appeared to be contributing significantly to girls' enrollments The field visit included an examination of one of the USAID schools located near the city of Souhag in Upper Egypt, and a similar MOE-built school located outside of Menya The striking difference between the two schools was that the USAID school, even though several years older than the MOE school, appeared to be considerably newer and much better maintained In addition, interviews with USAID personnel revealed that, because the results of soil testing were included in the decisions about where to build the USAID schools, none of these schools had collapsed in the major Egyptian earthquake in 1992 In contrast, hundreds of MOE schools of the same design and age collapsed because they were built on less solid ground

Girl-friendly Schooling A recent review of the UNICEF community school project (UNICEF 1994) documents that certain types of schools can be cost effective, provide quality basic education to girls as well as boys, and yet be "friendly" or attractive to girls in rural areas During the first years of the program, when schools were operating in 25 rural sites, schools generally experienced 95 to 100 percent attendance rates, and student dropout was minimal (less than 1 percent) All students performed well in Arabic and arithmetic

More important for girls' education, the study results show that the schools are effective in attracting girls In the study sample, over half of the boys in the hamlet were enrolled in government schools and about 12 percent were enrolled in community schools For the girls, less than 20 percent were enrolled in government schools, but about 35 percent were enrolled in community schools More than twice as many girls were enrolled in community schools than government schools As summarized in the report, community schools "make access to primary schooling more equitable for girls since the ratio of girls to boys in the community schools begins to reverse the gender bias evident in government schools "

The UNICEF community schools visited by the CAII team clearly were providing girls not only with access to primary schooling, but also with a high-quality, child-centered learning

experience The researchers observed many of the school's components community participation in the management and other aspects of the school, locally situated classes, women teachers, child-centered learning, using games, songs, and stories related to the child's environment, quality instructional materials reflecting girls' daily lives, with textbooks supplemented with local materials, classes being held at convenient times and schedules determined by the community and sensitive to the community/family need for child labor, supervision of the school by a local NGO, minimal physical and psychological punishment, and appropriate class furniture for enhancing group work, creativity, and initiative In addition, students were provided with a mid-day snack and basic health services UNICEF also assists with female literacy classes and other projects, such as the installation of water and sanitation facilities, if the community education committee requests such assistance

Although community education committees are encouraged to preferentially enroll girls, in two of the four UNICEF community schools visited, boy students outnumbered the girls Perhaps a flexible quota for girls needs to be established (For example, the Bangladesh Rural Advancement Committees Non-Formal Education Program has a quota of 70 percent for girls that is loosely followed)

The 3,000 MOE one-room schools for girls appeared to have many of these same "girl-friendly" components--classes situated locally, girls-only classes, women teachers from the community, no fees, convenient scheduling of classes, teacher salary supplements, appropriate class furniture for group work, and adequate sanitation facilities for girls This program is clearly laudable and is enrolling and educating girls who would not otherwise have had a chance to go to school Additional features would make the schools even more responsive to girls' needs These include community involvement, special training and supervision of teachers, a child-centered pedagogy, more flexibility and local authority to allow for adaptions of the schools to local situations, adequate supplies of basic learning materials, provision of basic health services, and involvement of NGOs in providing technical support and supervision, especially in complementary skills training and income-producing activities

In addition to the one-room schools for girls, the MOE is also constructing new co-education primary and preparatory schools, 1,200 of which were completed in 1993 The field trip also included a visit to one of these new schools Perhaps in reaction to the destruction of so many schools in the 1992 earthquake, these buildings are fortress-like masonry structures that cost several times as much as the older-style schools Since money for school construction is limited, the result will be fewer, but more substantial school structures and, unfortunately, more crowded classrooms and less access--especially for girls--than if the money were spent for the older-style, less expensive schools to be built on solid ground Likewise, the two MOE one-room schools for girls visited were masonry extravagant structures that stood out by far as the best buildings in their communities Again, the outcome of this policy will be fewer schools for girls when a large number of economically built schools are desperately needed

Presence of Female Teachers and Administrators The analysis of the School Census database, which was used to establish progress in girls' education in Egypt over the last decade and to test for possible school-based correlates of lower female-to-male student ratios, revealed that in both urban and rural environments and primary and preparatory levels, higher

female-to-male student ratios tend to occur in educational districts with higher proportions of female teachers and administrators Overwhelmingly, the percentage of teachers who are female made the greatest contribution to FMR in all regression models, with the single exception of the urban grade 1 primary model, where it is overshadowed by the percent of girls in girls' schools and the percent of administrators who are female The percentage of administrators who are female, along with lower student-teacher ratios, also contributes significantly to the prediction of total and grade 1 primary FMR in the rural areas

These findings support results of other research that indicate that the presence of women on the school staff is an important feature of "girl-friendly" schools Schools with a high proportion of female staff in leadership positions may be sending a message to families and students that school is an appropriate and safe place for girls

Girls-only Schools The analysis of the School Census database also indicated that districts where girls-only schooling is available are also more likely to have higher proportions of girl students The percent of girls in girls' schools shows positive, although weak, associations with higher FMR in preparatory schools and in urban primary schools (girls-only schools are virtually nonexistent at the primary level in rural areas) Because primary schools are mostly co-educational and preparatory schools are mostly single-sex, the importance of girls' only schools needs further study Regression analyses indicate that this association is sensitive to other features of the school environment, girls-only schooling remains a significant contributor to FMR for urban primary only when these other factors are controlled

Supportive Political and Policy Environment During site visits, CAII researchers determined that the political climate at the highest levels in Egypt at the present time is strongly favorable for investments in education In fact, in 1993, President Mubarak won a UN medal for linking education with national security Under his leadership, several policies have been initiated that have benefitted primary school children, including girls

- raising the pay scale of primary education teachers to match that of preparatory and secondary teachers,
- creating extra classrooms in school spaces originally intended for school activities,
- creating a specialization for primary education teaching in universities,
- training teachers to teach slow and gifted students, and
- exempting orphans from paying school fees

At the same time, however, there are several policies that have directly hindered girls' and women's participation in basic education or have impeded projects for females

- the lack of specific action plans for achieving universal primary education at national and local levels,
- the lack of planning and decision-making power at the local level,

- the decision to build fewer, more expensive, coeducational schools, and one-room schools for girls,

- the restrictive nature of Law 32 (1964) that governs NGO formationand limits their independence,

- the permission of corporal punishment in schools,

- the lack of enforcement of the law mandating at least a primary and preparatory education for every child and the law against private lessons,

- the increase in school fees from 3-30 LE/year for primary school in 1989, and

- the low level of teachers' pay

Use of Technologies for Learning. The MOE is discussing plans to put expensive high technology multi-media computer equipment in primary schools This decision seems grossly inappropriate in light of the statistics on the number of children--especially girls--who have no access to even the most humble of learning opportunities On the other hand, the potential of the more appropriate technologies of radio and television for effective education and education promotion has not been fully tapped No hard data on the effectiveness of the use of media on girls' enrollment were collected

Other School-based Correlates As identified in the data analyses, school participation of girls appears to be more sensitive to school-based factors in rural areas than in urban areas In rural areas only, the ratio of girls' to boys' repetition rates was correlated with FMR, suggesting that girls may be discouraged from attending school in areas where they tend to fail more often than boys The availability of electricity and water at the school facility were associated with higher rural FMR, as was class size (though this factor may in fact be functioning more powerfully as a proxy for relatively denser, more urbanized rural areas rather than as an inverted indicator of educational quality) At the preparatory level, rural districts with lower student-teacher ratios also tended to have higher FMRs

In addition, multiple regression analyses to predict FMR on the basis of school characteristics were more successful in rural areas, with 37 percent and 53 percent of FMR variance explained at primary and preparatory levels, respectively Comparable figures in urban areas were only 10 percent and just under 6 percent of FMR variance that could be explained by school characteristics

Other successful strategies revealed by the field interviews and observations include

- providing good incentives for the teachers, including marriage-related and other bonuses, transportation allowance, health benefits, and promotions for excellent performance based on evaluations,

- incorporating regular student home visits by teachers to encourage continuous interpersonal communication with parents (Some parents need to be convinced that their

children's education is of value and that supporting their children's right to education is a positive act),

- holding regular PTA meetings to enhancing communication between the parents and teachers,

- incorporating health care elements (integrating issues of health, hygiene, nutrition, and child care into the curriculum, training teachers to detect parasites, lice, fleas, and trachoma,

- collaborating with several donors and local NGOs in technical supervision and followup, and

- basing more decisions on data, using the MOE database and other datasets that provide date disaggregated by sex

Student-level Correlates to Female Primary Enrollment

Two national surveys conducted by the Ministry of Education with the assistance of the USAID-funded Education Planning Project also provided relevant data on students by gender that are analysed in the present report Unlike the school-level Census database, the National Survey of Teaching Practices dataset permitted an investigation of student-level variables and their relationship to school participation and achievement by gender The Teaching Practices 2dataset, collected during the 1990-91 school year, includes questionnaire-based information related to access, family support for education, and attitudes toward schooling, and achievement test results from over 16000 Grade 5 and Grade 8 students from 600 public schools in 10 governorates of Egypt

Additional data on school and staff characteristics were collected from the teachers and school directors of the student sample Using this dataset, we examined the academic performance, background characteristics, classroom and school characteristics, and academic perceptions of boys and girls currently in school

The National Survey of Private Lessons, also conducted during the 1990-91 school year, included a parent interview administered to roughly 1500 parents of Grade 5 and Grade 8 students in school at the time of the study, in 10 governorates of Egypt Data from the interview were used in the present study to investigate the relationship of parents' educational expectations and aspirations for their child (already in school) to the child's gender

At the primary level, girls performed significantly better than boys in Arabic and modestly better in Math, while boys outperformed girls in Science Primary Math and Arabic differences by gender disappear, however, when parents' education and family size are controlled via multiple regression techniques, the superior performance of primary boys in Science remains substantial even when controlling for family background

At the preparatory level, boys outperformed girls in both Math and Arabic, girls outperformed boys in English, and the gender difference in Science performance was negligible Multiple

regressions on the achievement scores produced equivalent results, even when controlling for family background Removing the effects of family background also revealed somewhat higher relative performance of boys in Science

Contributing Factors to Girls' School Achievement

School-based Correlates

Grade Repetition Across all subjects, and for both genders and grade levels, children with prior grade repetitions tend to have lower achievement The single exception to this finding was in grade 5 Math achievement among girls, for which prior grade repetition shows no significant association This exception suggests that grade repetition may actually permit slower-learning girls to catch up with peers in Math studies at the primary level It offers an intriguing avenue for further exploration by researchers of the special, typically antagonistic relationship of "girls and Math", found so often in studies of gender differences in primary school achievement

Female Teachers On the whole, female teachers are at least as effective as male teachers in supporting students' academic achievement, and in some cases contribute to even higher achievement, among both boys and girls Having a female teacher of grade 5 primary Math or Arabic contributed to higher performance in those subjects by both boys and girls, while teacher gender was not a factor in grade 5 Science achievement At the preparatory level, having a female teacher made a positive contribution to achievement for boys in Science classes and for girls in Arabic Grade 8 English was the only subject for which having a female teacher would appear to impede achievement, and among girls only (who otherwise tend to outperform boys in this subject)

There are few differences in student achievement between schools directed by women and those directed by men At the primary level, students in schools directed by female administrators tended to have lower achievement than other students, but the statistical significance of this predictor is relatively weak At the preparatory level, students' Math achievement is not affected by the gender of the school director, neither is Arabic achievement among girls nor English achievement among boys Grade 8 girls' Science and English achievement are higher to some degree in schools directed by women, whereas boys' achievement in Science and Arabic subjects tends to be slightly lower in woman-headed schools

Female Classmates Of particular interest is the finding that grade 5 boys studying in classrooms with a higher proportion of girl classmates tend to have higher achievement in all subjects While the process underlying this phenomenon cannot be determined from the data at hand (an investigation would be worthwhile), the finding alone suggests that raising FMR can have direct benefits for boys as well as girls

Grade 5 girls appear to benefit from having more female classmates only with regard to Arabic achievement Studying in a classroom with a higher proportion of female classmates,

contrary to findings at the primary level, would appear to have a weak but significant negative effect on boys' preparatory achievement in Science, Arabic, and English subjects, and no effect on their Math achievement For girls, a higher proportion of female classmates contributes to somewhat higher English achievement, but has no apparent effect on girls' achievement in other subjects

Class Size Larger class size contributes positively to higher achievement in grade 5, contrary to the expectations of most education quality proponents To understand these findings, it should be noted that in the Egyptian context larger classes are more likely to be found in longer-established, urban schools, which are themselves more likely to attract higher-quality teachers and administrators, and more resources generally In other words, the variable may well represent a number of other quality-relevant factors, as well as class size

The range of class sizes represented in the sample should also be considered in an interpretation of these findings This range ran from 16 to 88 students, with the large majority of classes (nearly 80 percent) having 50 or fewer students (9 2 percent had 16-30 students, 23 8 percent had 31-40 students, 44 3 percent had 41-50 students) The results should be applied only within this range

In grade 8, girls' achievement in all subjects tends to benefit somewhat from larger classes (and, presumably, from concurrent factors discussed above), whereas boys' achievement in Science, Math, and English subjects would appear to be unaffected by this variable, and achievement in Arabic to be seriously undermined by larger classes

Participation in School Tutoring or Private Lessons At the primary level, chi-square analyses revealed no significant differences in the proportions of girls and boys participating in school tutoring or private lessons after school Just under half of the grade 5 primary sample took no supplemental lessons in any subject, while about 30 percent of both boys and girls participated in private lessons in all three subjects, and 20 percent took extra lessons offered by the school A small portion of students reported participation in both private lessons and school tutoring At the preparatory level, a substantial difference in the pattern of grade 8 boys' and girls' participation in supplemental lessons emerges A higher proportion of girls than boys participate in (generally more costly) private lessons, most strikingly in Math (56 5 percent of girls, versus 49 1 percent of boys) and English (48 3 percent of girls, versus 40 8 percent of boys) On the other hand, relatively more boys than girls tend to take no lessons at all in either Math (38 6 percent of boys, versus 31 8 percent of girls) or English (47 5 percent of boys, versus 40 7 percent of girls) For Arabic and Science subjects, the differences are less pronounced, and are located primarily in the relatively greater participation of boys in school tutoring, and of girls in private lessons

Given the finding already discussed, that girls in school tend on average to have more highly educated parents than do boys at the same grade level, discriminant analyses of participation in supplemental lessons that controlled for parents' education and family size (number of siblings) were also conducted by gender Overall, these results indicate that the different proportions of participation by boys and girls found in the chi-square analyses can be better explained by family background differences rather than by gender, with higher levels of parental education and lower family size associated with participation in private lessons

Family/Community-based Factors That Contribute to Girls' School Achievement

Highly Educated Parents Girls in school are likely to have more highly educated parents than their male classmates Fathers of primary girls tend to have an average of nearly 0 5 years more of education than those of primary boys, while this difference approaches 0 9 years at the preparatory level Mothers of primary girls had nearly 0 7 years more education than mothers of primary boys, and mothers of preparatory girls had on average just over 0 6 years more schooling than mothers of preparatory boys Regarding family size (another indicator commonly interpreted to reflect relative socioeconomic status), however, the data suggest that on average, boys and girls in school do not differ significantly

Fewer girls tend to repeat grades than boys at both primary and preparatory levels This finding confirms the results of census-based efficiency estimations, indicating that once in school, and for those who stay in school, the present generation of girl students progress through basic education more efficiently than do boys In any case, repeaters overall represented no more than 20 percent of students in the sample by the end of preparatory

Distance from Home to School School-going girls report taking equivalent or even greater time to reach the school facility, when compared to male classmates Analysis of the National Survey dataset reveals that at the primary level, Egyptian girls and boys in school both tend to reach school on foot, and spend an equivalent amount of time getting there At the preparatory level, significantly more girls than boys in school reported taking over 40 minutes to reach school, while more boys than girls reported taking fewer than 20 minutes Assuming that girls and boys walk at roughly the same rate, these findings suggest that *distance to school does not impede girls' attendance more than boys', once initial access to school has been established* Indeed, the preparatory school results suggest that girls who reach that level may be even more willing to "go the extra mile" (literally!) to stay in school than boys Based on school-going samples, however, these findings do not necessarily diminish evidence that girls' initial access to school may be seriously constrained by the distance of the school facility

Parents' Education Parents' education is a consistently important and positive contributor for achievement of both boys and girls This finding appears in all subjects and in both grade 5 and grade 8 levels The single exception is Arabic achievement among boys, for whom the contribution of father's education is weak, though still positive and statistically significant

Family Size Children from larger families display lower average achievement than those from smaller families This finding appeared for all grade 5 subjects and for grade 8 Math and English among both boys and girls, and for grade 8 Science among girls

Student Age The influence of student age on achievement differs by gender, grade level, and subject Among primary boys, older students tended to have higher achievement in Math and Arabic subjects, whereas age was not a factor for grade 5 boys in Science, or for grade 5 girls in any subject At the preparatory level, older students, both boys and girls, tended to have lower achievement in Science and Arabic, although they were at no disadvantage (or advantage) with regard to Math or English achievement

Students' Perceptions about Themselves Boys and girls differed significantly on self-perceptions of their strength as students, and on their perceptions of subject difficulty Girls were more likely to characterize themselves as "average" students than boys, while boys were more likely to characterize themselves as "strong" students, at both primary and preparatory levels At the primary level, girls were more likely than boys to characterize Math, Science, and Arabic subjects as "easy" or "very easy", while at the preparatory level, the proportion of girls who consider Math to be "very easy" slips below that of boys, and girls who consider it "very difficult" are marginally more numerous than boys Grade 3 preparatory girls are much more likely than boys to describe Arabic, Science, and English in particular as "easy" or "very easy" Higher proportions of both boys and girls characterized English as "very difficult" than they did any other subject

These students' perceptions of their own academic strength and of the difficulty of subject matter were highly related to achievement in all subjects for both boys and girls At both grade levels sampled, students who described themselves as "strong" rather than "average" or "weak" students were more likely to achieve higher scores in all subjects, to a high degree of statistical significance Conversely, students who described a given subject as difficult rather than easy tended to achieve lower scores in that subject Grade 8 Arabic achievement was the single exception to this pattern, students' perceptions of its difficulty as a subject matter displayed no relationship to their achievement in it

While attributional research has demonstrated that such perceptions, whether accurate or not, can have important effects on subsequent achievement, the data at hand may also simply reflect a high degree of accuracy, and honesty, in Egyptian students' self-appraisals Notwithstanding, the present results do not permit us to reject the attributionists' argument that efforts to enhance children's self-image as students (which, as we have seen, tends to be a greater problem for girls) and to encourage greater optimism about the difficulty of a subject (a greater problem among boys) can enhance children's learning and academic achievement

Parental Expectations and Support for Education We also examined indicators of parents' support for their child's education in terms of both psychological support and material support With regard to "psychological" support, we used the Parent Interview dataset of the National Survey of School Tutoring and Private Lessons (MOE, 1993) to examine whether parents' perception of their child's performance in school and their expectations regarding the child's academic future varied depending on the gender of the child For evidence of material support, problems in the earnings and expenditures data of the Parent Interview forced us to turn instead to information on students' participation in supplemental lessons (either school tutoring or private lessons, from the National Survey of Teaching Practices) as an imperfect but reasonable proxy

The data provide little evidence that girls in school are viewed differently from boys by their parents To the question, "Do you expect that your child will one day go to university?", parents of boys in primary school were slightly more inclined to say "yes" (91 5 percent) than were parents of primary girls (85 6 percent) Among parents of grade 3 preparatory students, there was no significant difference in the responses of parents of boys and parents of girls, suggesting that for girls who reach the end of the preparatory level, the family's academic

investment in their children is undifferentiated by gender No differences between the responses of fathers and mothers were found

At both primary and preparatory levels, parents of boys and parents of girls also responded similarly to the question, "How well is your child doing in school?" It is interesting to note, however, that fewer parents of children in grade 3 preparatory were inclined to characterize their child as doing "very well" in school than were parents of grade 5 primary children (38 6 percent of preparatory parents, versus 48 6 percent of primary parents) The remainder preferred a more modest statement of their child's performance, perhaps reflecting a perception of relatively greater academic challenge posed by preparatory education

Parents were also asked, "Do you expect that your child will receive (his/her) diploma without any (further) grade failure?" Again, the results show no differences by gender of the child, at either primary or preparatory level, nor any significant differences in responses between fathers and mothers

Parents' responses to all of the above questions also were found to be highly conditioned on the respondent's years of education, with positive responses invariably associated with more years of education This pattern held for both parents of boys and parents of girls In summary, these results suggest that parents of girls and parents of boys in school hold similar academic expectations and perceptions of their children The single exception was the expectation of the parents of grade 5 primary students with regard to their child's eventual university entrance a higher proportion of parents of boys saw this as a likely eventuality Overall, however, we must treat the apparent "non-findings" in these analyses with particular caution, given the low power of the available dataset to reveal potentially important differences

During the CAII interviews, approaching men and religious opinion leaders in the community when starting educational activities in a new community was recommended as a possible contributor to school success

V. PERSISTENT CONSTRAINTS TO GIRLS' EDUCATION IN EGYPT

As identified in CAII's literature review, the constraints to educating girls stem from specific values and social norms These constraints can be divided into two broad categories community-based and school-based These two broad categories can be further divided into rural and urban area differences Community-based constraints include such factors as education level of the parents, family size, opportunity costs, the disjunction between girls' education and her other roles, distance from home, nonregistration of children at birth, limited knowledge about the benefits of girls' education, and early marriage School-based constraints include such factors as availability of classes and spaces, the quality of the teaching/learning process, the costs associated with attending school, exposure to males, and curriculum deficiencies

For this study, the persistent constraints to girls' education in Egypt were identified primarily through the literature review and the field interviews and observations Community-based and school-based constraints are summarized below

Community-based Constraints to Girls' Enrollment and Persistence

The Third World Forum (1993) recently sponsored a community-based field study on basic education and female literacy in Egypt, in an effort to identify factors impeding the relevance and effectiveness of formal and non-formal educational programs for girls and women This report is important because of its comprehensiveness and its comparison of data from urban and rural areas During in-depth interviews with girls and young women age 8-35 who had never attended school, girls and women who had dropped out of school before completing primary education, and heads of households, the researchers explored reasons for non-attendance or dropout, and attitudes toward schooling and literacy for girls and women Direct observations of formal primary school classes and adult literacy classes, as well as interviews with school teachers, administrators, MOE officials, and community leaders were also conducted Samples were selected from rural and urban areas

The Third World Forum study reports on eight distinct categories of responses from unschooled girls and young women, regarding why they never attended school Of these, five categories of responses were clearly attitudinal or economic explanations that emanated from the family or community context These include the family being unconvinced of the value of education for girls, the need for girls' labor, either inside or outside the home, perceptions of schooling for girls as "shameful", community pressures that prevented their fathers from sending them to school, and their parents' view (not necessarily their own) that they did not have the mind or inclination for schooling Of these, the family being unconvinced of the value of education was by far the most frequently identified constraint by urban or rural girls Need for girls' labor was the most frequently identified community-based constraint by the rural population

Community-based constraints by rural and urban responses are summarized in Exhibit 11

Exhibit 11

Community-based Constraints to Girls' Enrollment·
Results of 1992 Third World Forum Study

Constraints	Percent of Rural Who Responded	Percent of Urban Who Responded
Family unconvinced of the value of education	34	67
Need for girls' labor (most relevant for eldest daughter)	44	38
Perception of girls' education as shameful	7	21
Community pressures that discouraged fathers	6	12
Parents' view that girls did not have "mind" for schooling	4	4

Of the entire unschooled sample, roughly one-quarter stated that they had not wanted to attend school when they were young But as the authors point out, "Most of the reasons given [by the girls] reflect the attitude of the family towards female education, which, unfortunately, was adopted by the girls themselves" (p 33) Parents and spouses, especially non-literates in the rural sample, also cited the need for girls' and women's labor at home as a cause of female non-attendance

The Third World Forum study also examined the reported causes of school dropout Of the sample of 263 girls and young women who had dropped out of school before completing the primary level, roughly 70 percent in both urban and rural areas left school at the 4th, 5th, or 6th grade level The large majority of the sample (76 percent of the urban sample, and 60 percent of the rural sample) cited economic and social considerations of the family or the lack of the family's appreciation of the value of education for girls, as underlying their dropout from school

A sense of loss or regret is evident in the responses of the dropout sample While over half of this group claimed it had been their own decision to leave school originally, more than half

also indicated that they now wished they had continued in school [1] In addition, only 35 percent (urban) and 41 percent (rural) of the dropout sample claimed that they could currently read and write, although 55 percent (urban) and 64 percent (rural) recalled having been able to do so at the time they left school, suggesting a disturbing and self-perceived "relapse into illiteracy" on the part of many

The people interviewed for the CAII study considered school-based constraints more limiting at this time Nevertheless, interviewees mentioned several community-based constraints as powerful forces preventing girls' full participation in primary school In order of most to least frequently mentioned, these constraints are listed below

- girls' responsibility to help mothers in domestic responsibilities and care for younger siblings,
- poverty,
- need for child labor to supplement family income,
- the education level of parents, which is directly correlated with their desired level of educational attainment for their children,
- an overall lack of common knowledge, especially among rural fathers, about the benefits of educating girls Emphasis is not placed on educating girls based on the belief that education is not a means to equip a girl to undertake the role of mother and wife, and
- a large family and for a large number of boys in the family

The Third World Study also collected responses from female adult illiterates While most of the women interviewed in the Third World Forum study had never attended adult literacy classes, they were asked to comment on reasons for non-attendance or dropout from such programs Community-based reasons posited included the responsibilities of marriage, household chores, or the need to work, distance to the facility, possible ridicule by the local community, and a perception of few benefits In contrast to the constraints for girls, adults interviewed for the CAII study most frequently mentioned community-based rather than school-based constraints as the reasons why more women do not attend literacy and other basic education classes The reasons mentioned were

- lack of mobility of married women, who are not allowed to leave the house or the community,
- early marriage for girls, which is a top priority for many Egyptian families,

[1] The summary report does not present data in sufficient detail to examine the relationship of personal (versus family or parental) decision to leave school and the underlying factors leading to that decision It is expected that the appendices to the report, unavailable to us at the time of this writing, would permit us to determine whether personal and family decisions were reached on the basis of similar or different considerations

- early marriage for girls, which is a top priority for many Egyptian families,
- husband's objections to wife's education and threat of divorce if she attends classes,
- women's low self esteem, resulting from his socialization to perceive herself as less worthy, and
- women's subjection to humiliation, sarcasm, and criticism when they attempt to attend literacy classes

A list of recommended strategies offered by the interviewees to overcome these barriers is provided in Appendix D

School-based Constraints to Girls' Enrollment and Persistence

The Third World Forum study identified three school-based constraints to girls' enrollment school expenses, distance to school/lack of safety to school, and co-educational schools Of the community-based and school-based constraints identified in that study, school expenses was the second most frequently mentioned constraint by rural girls and the third most frequently mentioned constraint by rural girls School-based constraints to female enrollment in urban and rural areas identified in the Third World Forum study are summarized in Exhibit 12

Exhibit 12

School-based Constraints to Girls' Enrollment
Results of 1992 Third World Forum Study

Factor	Percent of Rural Who Responded	Percent of Urban Who Responded
School expenses (clothing, books, transportation, supplemental lessons, etc)	42	36
Distance to school/lack of safety	9 3	3
Co-educational schools	7 5	12

Potential school-based factors in school dropout included large class sizes (38 to 69 students per class, with a mean of 50), uncertified teachers, a majority (over 60 percent) of classrooms "ill-equipped", and relatively little display by students of initiative or active participation in the lesson -- concur with other descriptions of typical classrooms across Egypt While clearly conditions of education in Egypt are far from ideal, the fact remains that most students who

enter schools of this kind do not drop out In other words, these data do not in and of themselves "explain" dropout

The observations also indicated, however, that most teachers observed did not appear to attend to individual learning differences in their pupils, or to address the special needs of slow learners in particular The researchers concluded that these teachers did not actively motivate or encourage children to learn Thus, children "at risk" for dropout--those with special learning difficulties or were not motivated to learn at home--were unlikely to find any particular help or encouragement to overcome these problems from their school or classroom experience

On the basis of the interview data, "school difficulties" (cited by 24 percent of the rural sample and 15 6 percent of the urban sample) and mistreatment by teachers (cited by 8 percent of both samples) were the two school-based factors reported as directly leading to school dropout Mistreatment by teachers was also reported as contributing to a dislike of schooling (though not necessarily to dropout) by 58 percent of the urban sample and 50 percent of the rural sample, suggesting that this problem -- whether actual or perceived -- is serious enough to warrant special scrutiny Substantial portions of the sample also affirmed a lack of understanding of their teachers' explanations (47 percent of the urban sample, and 31 percent of the rural sample), and a lack of relevance or usefulness in the subjects taught (41 5 percent of the urban sample, and 26 percent of the rural sample) as being among the features they encountered in the classroom

People interviewed in Egypt for the CAII study emphasized the school-based or supply-side factors as the more limiting ones for primary education in rural Egypt at this time Three constraints were mentioned most frequently

- *Lack of schools within safe walking distance for girls* A simple lack of schools within a distance considered safe for girls to walk is a clear constraint in the areas visited For example, in Menya governorate, a local MOE official claimed that there are no less than 400 primary and preparatory schools that currently operate complete double shifts due to a lack of schools Also, one of two new MOE one-room girls' schools visited had a waiting list of girls who wanted to attend the school, and the other was overenrolled beyond the limit set by the ministerial decree that governs the schools

- *School fees and tutoring costs* Direct (fees, uniforms, supplies, textbooks, transportation) and indirect (loss of income earned by child labor) costs associated with schooling affect girls' access more than boys' Also, teachers often require students to pay for private lessons in order to pass, a practice that is more common in urban areas

- *Low educational effectiveness and teacher abuse stemming from teacher frustration and low morale* Teachers are rarely dismissed, and salaries, mostly lower in real terms than ten years ago, increase by no more than five percent per year Salary increases and promotions are based on seniority rather than performance With minimal financial incentives, teachers often become frustrated and instructional quality suffers

Other school-based constraints identified in the interviews included the following

- inflexible school schedules that conflict with girls' domestic chores,
- presence of male teachers and/or male students in the classroom,
- poor school conditions, absence of facilities, and inadequate educational resources and instructional materials,
- policies stipulating that students that fail formal education are not allowed back into government schools, thereby forcing them to more financially taxing private schools,
- textbooks that reflect little sensitivity to gender issues and perpetuate stereotypes, thus limiting girls' aspirations,
- dependence on rote learning,
- teachers who are either not properly trained or who do not receive in-service training, and
- irrelevance of the primary school education to future life activities

School-based Constraints for Older Girls and Women

Regarding program-based reasons for non-attendance or dropout from adult literacy programs, women interviewed by the Third World Forum cited inconvenient scheduling of classes, inappropriate curriculum, materials, and methods of teaching (often unchanged from approaches used with primary children), unclear instruction, poor treatment by teachers, and insufficient training of teachers Most current literacy programs employ volunteers or college graduates with no special training in adult or literacy education

The main school-based constraints for older girls and women mentioned during the CAII interviews were as follows

- curricula that are irrelevant to women's lives,
- teachers who are poorly trained or completely untrained, unmotivated, ineffective and poorly paid or not paid at all,
- lack of classes available in the women's immediate neighborhood, and
- lack of materials and supplies in the classrooms

V. CONCLUSIONS

The following conclusions have been drawn based on the study results Conclusions are organized according to the first three study objectives

What contributions have USAID-sponsored and other programs made to reducing the gender gap?

USAID's Basic Education Project (BEP) provided assistance from 1981 to 1994 in an effort to improve access, planning, management, efficiency, effectiveness, and relevance of basic education in the country The project is responsible for the construction of 1,942 schools, comprising 16,500 new classrooms and places for over 5 million students USAID also worked with the Ministry of Education in developing its capacity to collect, manage, analyze, and report educational data, thereby making it possible for the Ministry of Education (MOE) to conduct historical analysis of patterns of educational participation by gender, examine patterns of student registration, promotion, repetition, and dropout, and analyze teacher recruitments, qualifications, and deployment along gender lines Finally, under BEP, USAID assisted the Government of Egypt (GOE) in developing a student-centered curriculum and instructional materials that are more relevant to girls and that place more emphasis on critical thinking and problem-solving skills Materials included new curriculum guides and textbooks in the traditional subjects for all primary grades, an innovative "environmental studies" course for grades 1-3, and teachers' guides for all student texts

Other donors include UNICEF, whose multi-grade community schools project served as the model for the MOE's current construction of 3,000 one-room schools for girls, the World Bank, who is sponsoring a $55 million school construction effort, and GTZ, who also is planning to build schools Three other organizations--Caritas, the Association of Upper Egypt for Education and Development, and the National Council for Childhood and Motherhood, have provided interdisciplinary approaches to instruction of girls and women outside of the formal school setting Other groups such as the General Authority for Adult Education and the Eradication of Illiteracy, CEOSS, and WEA, provide literacy training for women

As a result of these and other programs, the rate of female enrollment has increased significantly at both the primary and preparatory school levels, although the number of primary-school age girls who are out of school continues to increase Although there is conflicting evidence concerning whether girls drop out or repeat grades at higher rates than boys, the data indicate that the girls who do drop out tend to do so in earlier grades than the boys

The present analyses also have shown that primary and preparatory female-to-male ratios (FMRs) have improved substantially since 1981, with more rapid improvement in rural areas Rural FMRs still lag behind urban FMRs, however, by an average of over 15 points in primary school and over 20 points in preparatory education Rural areas of some governorates still fall below 60 girls per 100 boys

Attempts to predict Female-to-male ratios (FMR) on the basis of prevailing school characteristics in a given educational district and urban or rural area were relatively more successful in rural areas *This finding suggests that girls' school participation in rural areas is more sensitive to characteristics of the school--and thus more readily changed via school-based interventions -- than it is in urban areas*

What elements have contributed to the success of certain programs and projects?

Regarding possible interventions, the results support the strategy of programs that attempt to increase proportions of female teachers and school administrators as a means to attract more girls to school in rural areas The increased availability of girls-only primary schools is another potentially "girl-friendly" school factor Interviews and observational data confirm the importance of a similar, although slightly expanded list of "girl-friendly" factors to include classes that are close to home, locally recruited female teachers, flexible scheduling, cost-free schooling, and gender-sensitive materials

There is also tentative evidence that intensive school construction programs can have a tangible, positive effect on FMR as well as overall enrollment growth Specifically, the findings show that relative enrollment growth tended to be somewhat greater, and FMR improvement stronger, in those governorates where USAID school construction activity was relatively high These findings suggest that the supply of school places for children is indeed a factor that affects female enrollments in particular

The student-level achievement results provide evidence that at least one of these interventions --increasing the proportion of female teachers--can also have positive effects on academic achievement at the primary level In addition, the results suggest that increasing the student FMR in primary classrooms generally may have direct benefits for boys as well as girls, in the form of higher academic achievement in classrooms with a higher proportion of girls A reverse pattern at the preparatory level, nonetheless, signals the need for closer examination of the classroom-level processes that may be at work to produce both sets of findings

What are the persistent constraints to further progress in girls' primary school access and completion?

The data from the Third World Forum identify parents that are unconvinced of the value of education, expenses associated with school attendance, and the need for the girls' labor as the constraints most often identified by urban and rural students and parents for not enrolling their daughters in school Distance from school and lack of safety along the route, co-educational schools, parents perception of schooling for girls as shameful, and parents' view that the girls did not want to attend were identified as lesser important reasons for not enrolling them Higher percentages of rural parents responded to each of these constraints with two exceptions perception of schooling for girls as shameful and co-educational schools Apparently, urban parents are more concerned about exposure to male teachers and students, and the perception of girls' schooling as shameful than rural parents This study also identified economic and social considerations of the family and lack of appreciation in the family of the value of education as the primary reasons why girls dropped out Mistreatment by teachers was also identified as a reason for drop out

The interviewing process identified three school-based constraints--schools not within safe walking distance, fees and other school-related expenses, and low educational effectiveness and teacher abuse--as the most important constraints Also identified were the presence of male teachers and students, inflexible schedules, irrelevant curriculum, the parents' lack of knowledge of the benefits of education, and materials' that did not incorporate of gender issues Other less commonly identified community-based constraints identified through the interviews include the education level of the parents, the size of the family, the number of boys in the family, and the strong patriarchal society

The analyses of the national survey data revealed information about correlations between students' background characteristics and female participation in school The analyses showed that on the whole, girls who remain in school through grade 5 primary or grade 3 preparatory are likely to come from families with more highly educated parents than their male classmates, they are also less likely to have repeated one or more grade levels The flip-side of these findings points to relatively lower educational participation by girls in less-favored circumstances than by boys of similar background, either through lack of entrance to school to begin with or a higher proportion of mid-cycle drop-out These characteristics (greater parental education, less grade repetition), individually and in combination, were also associated with higher achievement in all major subjects at both primary and preparatory levels, among both boys and girls, smaller family size also tended to be associated with higher achievement in most analyses These results corroborate the conclusion from the interview study that educated parents are less likely to give high priority to their daughters' education

Even when controlling for such differences in background, girls performed less well than boys on grade 5 primary Science, and grade 3 preparatory Math, Science and Arabic achievement tests, and outperformed boys in grade 3 preparatory English Gender differences in grade 5 primary Math and Arabic achievement disappeared, however, when differences in parents' education were taken into account

The findings also indicated that girls tend to be more modest than boys in their self-characterizations as students, while at the same time they are more likely to be optimistic about the difficulty of fundamental school subjects (with the exception of preparatory-level Math) Understanding, and possibly intervening to change, negative perceptions becomes especially important when we consider that high self-esteem (a greater problem for girls) and relative optimism about the difficulty of a subject (a greater problem for boys) may contribute to higher academic achievement, as the findings suggest

The analyses produced little evidence that parental support of their child's education, whether moral or material, differed by the gender of the child, for samples of children who had remained in school through grade 5 primary or grade 3 preparatory Analyses of parents' academic expectations and perceptions regarding their male or female child revealed only one significant difference in these views by child gender parents of grade 5 primary boys were more likely to state that they expected their child would go to university Apparently strong differences by gender at the preparatory level in family material support to education (in the form of enabling the child to participate in supplemental lessons) all but disappeared when family background differences were taken into account In other words, girls who remain in

school were for the most part just as likely (and no more likely) as boys of similar background to participate in supplemental lessons overall

We cannot overlook the fact, however, that the sample survey data analyzed in this report inevitably reflect characteristics only of children who have remained in school They provide no direct information on children who have never been to school or who have left it in mid-cycle For such children--the majority of them girls, patterns of gender bias in family support for education may well be a central factor, if not a direct cause, of their current out-of-school status

VI. RECOMMENDATIONS

The overriding recommendation resulting from this study is that efforts in basic education in Egypt in the near future continue, focusing on the goal of providing universal primary education through a girl-friendly approach that does not discriminate against boys

Recommended actions for achieving this goal include the following

- mobilize all basic education stakeholders to help provide the substantial resources, commitment and policy changes needed to achieve universal primary education,
- consider more localized efforts to bring about change,
- continue to create girl-friendly community schools in rural areas,
- link school construction efforts,
- increase the number of female teachers and administrators,
- lower the costs of sending girls to school,
- improve the quality of existing primary education,
- increase parents' perceptions of the value of girls' education, and
- create demand for basic education for women and support ongoing efforts

Each recommendation is discussed in turn below
+
Mobilize all basic education stakeholders through national dialogue

MOE support for universal primary education is not enough Donors should collaborate to launch a national campaign that creates a dialogue on female education All education stakeholders--the private sector, trade unions, political parties, the armed forces, professional associations, other ministries, women's nongovernmental and local organizations, religious groups, teachers' associations, and parents associations--need to be aware that female education is a matter of critical national and religious importance that deserves their support Respected religious leaders should recite quotations from the Koran and the Hadith such as, "Education is the responsibility of each Moslem man and each Moslem woman," and "Every Moslem, male and female, is requested to seek knowledge " This effort could take the form of mass media messages, one-on-one meetings, policy dialogue, conferences, and workshops Also, a computer model and presentation of the future impact of girls' education on development, and particularly on population growth (a critical topic for Egypt), that have been developed by USAID for other countries, could be adapted with available Egyptian data for use with policy makers in Egypt

Such a campaign would have the following intended outcomes 1) mobilize resources for the development of country, governorate, and local plans of action for universal primary education and eradication of illiteracy and the implementation of these plans by a wide variety of local groups and committees, 2) encourage changes in policies that affect girls' access (e g , the rigid rules in the decree concerning the numbers of girls allowed per level and requirements for female teachers for the 3,000 girls' schools, the decision to build fewer, more expensive coed schools, the restrictive nature of Law 32 that governs NGO formation (1964), allowing corporal punishment in schools, the lack of enforcement of the law against private lessons, the raise in school fees (from 3-30 LE/year in 1989), and the low level of teachers' pay), and 3) raise general levels of awareness of the benefits and importance of female education

Consider more localized efforts for bringing about change

It is becoming increasingly clear that one approach will not work for an entire country, or a region of the world Within Egypt alone, parents and children who have not attended school or later drop out of school have differing reasons for doing so, depending on a variety of factors, including but not limited to where they live, level of education, income, and perceptions of the importance of girls' education Some strategies appear to work better in rural areas, urban areas sometimes have other needs Increasing primary school enrollment may call for one strategy, increasing completion rates may require another With more sophisticated gender-disaggregated data available by governorate and population, planners can now tailor strategies according to what is most needed

Continue to create sustainable, girl-friendly community schools in rural areas

In collaboration with the MOE, more schools should be created that build on the participatory community schools model established in Egypt by UNICEF Elements of girl-friendly schooling include free schooling, classes situated locally, motivated teachers--usually women--recruited and trained locally, quality instructional materials reflecting girls' daily lives, with textbooks supplemented with local materials, child-centered learning activities, classes at convenient times and schedules determined by the community and sensitive to the community/family need for child labor, community participation in the management and other aspects of the school, regular teacher training and monitoring, and the opportunity to move on to further schooling

The GOE and donors are urged to focus efforts in districts where the female-to-male ratio is low and the number or percentage of out-of-school girls is high A flexible but relatively high female-to-male ratio target of at least 1-to-1 in all new classrooms might be established along the lines of the BRAC example Collaboration with other sectors should be expedited to provide basic health services for students and assistance with projects such as improved water access, should the community request such help A nutritious mid-day snack should be provided by the school Vitamin and mineral supplements could also be provided where needed Teachers should be trained to recognize common health problems such as trachoma, schistosomiasis, parasites, lice, fleas, and malnutrition The school could serve as a community center and assistance could be provided for adult literacy classes or early childhood development programs if requested by the community Following the NGO

Caritas' example, the school could also assist girls in obtaining birth certificates and ID cards, when necessary

Link school construction efforts

In addition to working to make existing schools more girl friendly, new school construction efforts should be continued The current rate of population growth alone requires continued construction in order to accommodate the growing numbers of school-age children who will be eligible to attend and avoid the overcrowding problems that were previously experienced In addition, the data analysis for this study indicates that USAID's school construction efforts did correlate with higher female-to-male ratios (FMRs) and with relative growth in total enrollments at the primary and preparatory levels in urban areas To achieve maximum effectiveness, however, school construction efforts must be linked--linked with school mappers to reach the communities not already served and provide facilities near enough so that girls can travel more safely to and from school, linked with site planners to identify places where schools will not easily be destroyed by earthquakes or other natural disasters, and linked with designers and maintenance personnel so that constructed buildings will not require extensive repairs or rebuilding soon after construction is complete By positioning schools, female enrollments rates in rural areas increased, but significant numbers of girls are still out of school so that they reduce home distance between school and home, and thereby increase the girls' safety to and from school, is likely to have even greater impact on FMR rates Constructing sturdy, cost-effective schools in locations less prone to earthquakes will help ensure that constructed schools will not need extensive repairs or rebuilding Construction should be accompanied by active teacher recruitment and training to help ensure that quality as well as quantity are provided By coordinating construction efforts across organizations, efficiency and quality can be gained, through reduced duplication of effort and healthy exchange of building techniques

Increase the numbers of female teachers and administrators

The importance of female teachers was documented in every aspect of the research for this project The data analysis, in particular, found that of all of the factors considered, "percent of female teachers" and "to a lesser extent, percent of female administrators" correlated the strongest with higher FMRs Community-based recruitment and flexible scheduling can improve the numbers of women who apply for the teaching positions Teacher placement in communities close to home and community-based pre-service and in-service training can help improve female teacher retention

Lower the costs of sending girls to school

Even though basic education is officially "free," in 1989, the MOE raised public primary school fees from 3 to 30 LE per year, resulting in a substantial decline in girls' enrollments Orphans are exempted from this fee Girls from poor families should be exempted also

Substantial additional costs are incurred by families because of a widespread practice in which teachers teach ineffectively during the day and then threaten to fail students if they do

not pay for private lessons Teachers need incentives--financial as well as nonfinancial--to inspire them to teach effectively during the school day

Improve the quality of existing primary education

As stated above, the current quality of formal primary education is low Teachers' status needs to be raised by, for example, giving teachers recognition such as awards for good performance, diplomas for in-service training completed, and/or higher salaries Teachers also need more participatory pre- and in-service teacher training that includes critical thinking and problem-solving, gender sensitivity, a student-centered approach, a belief in the capacity and potential of each individual and community, and multi-grade classroom techniques, where needed

As previously mentioned, teacher training should be provided in locations close to the communities in which teachers are needed, to enhance the participation of women The use of interactive radio should be tested to enhance teacher in-service training in rural areas, especially for female teachers Lessons learned from other countries that have used distance education for in-service training such as Pakistan, Sri Lanka, and Nigeria should be utilized In-service training and teacher supervision should be frequent

Improve parents' perceptions about the value of girls' education

Parents' perceptions about the value of girls' education are based on a complex set of variables, including but not limited to culture, the traditional roles of girls and women, and the quality of education that is currently being provided Yet because these perceptions are such a significant barrier to girls' access and persistence, efforts need to be made to address them

Improving the quality and relevance of basic education instruction through better teacher training, upgraded, more gender-sensitive instructional materials, and a modified curriculum that addresses girls' needs can contribute to improving parents' perceived value of school In addition, community mobilization campaigns can be used to increase parent and community awareness of the importance of girls' education and to increase support Campaigns can involve print materials as well as more oral communication media such as community drama and peer training

Media can also be used creatively to alter parents' perceptions about girls' education Nearly one in ten Egyptians own a television set, and many more have access to them because of the extremely high density of the population along the Nile River This access, along with almost universal access to radio, needs to be exploited for educational purposes with creative and entertaining educational programming (The truly impressive success of the National Control of Diarrhea Project attests to the potential power of television in Egypt) Most current attempts to use radio and television for education in Egypt fall far short of their potential and are ineffective due to their poor design and production and outmoded equipment The television program "Secrets of the Earth" is a current exception and should be emulated Since adaptations of Sesame Street have been successful in other Arab countries, as well as a number of Latin American countries, a first-rate Egyptian Sesame Street needs to be

developed Female characters need to be equally represented and shown in a variety of active roles Care needs to be taken to produce segments of sufficient length so as to have a positive effect on children's attention span Also, research on creative possibilities for educational television programs for older children and adult women and educational radio for all ages needs to be conducted Programs for women that combine entertainment with educational messages, aired at convenient times (such as after the main meal), and presenting useful skills for daily life (e g , hygiene, responsible parenting, and marketplace numeracy) have had success in several countries

Create demand for basic education for women and support ongoing efforts

Demand for female literacy classes should be enhanced by linking them with credit opportunities, income-generating projects, field trips, assistance with birth certificates and identification cards, or other services or opportunities that women value NGOs that are working effectively in this area should receive support Certificates of completion should be given, and the curricula should be clearly applicable to students' everyday lives The mass media should also be used, as described above, to increase awareness of the importance of female basic education and its social and educational benefits, and the linkages between literacy and health issues Messages should focus on how education can help women perform better in the family and community Also, information about traditions harmful to women (such as early marriage) that affect their schooling could be conveyed through the media by a trustworthy source Messages should be targeted to rural husbands and fathers, where appropriate

A list of specific recommendations for USAID is provided in Appendix E

APPENDIX A

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APPENDIX B

"PROGRESS AND CURRENT STATUS OF GIRLS' PARTICIPATION IN BASIC EDUCATION IN EGYPT FINDINGS ROM THE ANALYSIS FO THE SCHOOL CENSUS DATABASE AND SURVEY DATASETS."

by

Dr Jennıe Spratt

1994

APPENDIX B Technical annex on Census and Survey Analyses

I Methodology

It should be noted that none of the datasets used in this part of the study contain information on children who are NOT in school Nonetheless, complemented by information from local community-based education programs and research, analysis of these data sets can be extremely valuable in suggesting directions for additional field-based study and possible Project intervention

Analyses of the School Census database The School Census database was used to establish progress in girls' education in Egypt over the last decade, and to test for possible school-based correlates of lower female-to-male student ratios We calculated female-to-male student ratios by governorate and urban or rural environment for 1981-82 and 1993-94 school years at both primary and preparatory levels, to identify regions of relatively strong, and weak, progress toward gender equity in educational participation

In our efforts to identify school factors that contribute to gender equity in education, we used simple correlations and multiple regression techniques to predict female-to-male student ratios in 1993-94 on the basis of school characteristics two years earlier Analyses were conducted separately for urban and rural areas and primary and preparatory levels, with individual educational districts (Ar idara) serving as the unit of analysis

These Census analyses concentrated on indicators of educational quality, academic equity, positive modeling and/or socially acceptable environments, and physical facilities available at the school While the analyses were constrained by the data available in the Census, specific indicators of each type, or reasonable proxies, could be identified or constructed from Census data Regarding educational quality, these included the average number of students per class, average number of students per teacher, and the percent of girls repeating a grade For academic equity, the ratio of girls' repetition rate to that of boys was computed as a rough proxy Percent of teachers and school administrators who are female, and percent of girls attending girls-only schools were used as indicators of positive modeling and/or socially acceptable environments Indicators of available facilities included percent of schools in each idara with electricity, water, and WC

Analyses of the impact of USAID's school construction program The USAID School Construction Program dataset provided total numbers of schools built by the Program since its inception through the current school year, and the number of students currently attending these schools (though not by gender), by educational district A thorough investigation of the impact of USAID's School Construction Program on school enrollment and FMR would require in-depth and preferably longitudinal fieldwork that is beyond the scope of the present effort Using the available data, however, it was possible to conduct a series of simple correlational analyses to establish whether rates of growth in FMR and total

enrollments since 1981 have tended to be greater in governorates in which USAID-built schools -- which did not exist in 1981 -- serve a relatively large proportion of all students

Two sets of correlation coefficients were calculated (1) between the proportion of students accommodated by USAID schools as of 1993-94 and the change in total enrollments since 1981-82, and (2) between the proportion of students accommodated by USAID schools and the change in female-to-male student ratios since 1981-82 Positive coefficients in the first set (comprising separate calculations on total primary, first-grade primary, and total preparatory figures) would suggest that the School Construction Project has improved the overall access of children to schooling, regardless of gender Positive coefficients in the second set would suggest that the program specifically enhanced girls' access and participation in school

Analyses with National Survey datasets The National Surveys of Teaching Practices and Private Lessons also provide relevant information on students by gender, though by no means can these datasets, designed for other purposes, fully respond to the topic under consideration

The Teaching Practices dataset, collected during the 1990-91 school year, includes questionnaire and achievement test information from over 16000 Grade 5 and Grade 8 students from 600 public schools in 10 governorates of Egypt The dataset contains items related to access, attitudes toward schooling, and skill attainment Additional data on school and staff characteristics were collected from the teachers and school directors of the student sample

Unlike the school-level Census database, the National Survey of Teaching Practices dataset permitted an investigation of student-level variables and their relationship to school participation and achievement by gender In bivariate analyses, levels of parents' education, family size, and subject matter achievement scores were compared by student gender Possible gender differences in students' repetition history, self-perceptions of strength as a student and of difficulty of subject matter, and participation in extra tutoring or private lessons were also investigated Using these same variables as predictors, multiple regressions were then conducted separately for boys and girls to predict achievement levels in Math, Science, Arabic (primary and preparatory levels), and English (preparatory level only) subjects

We also used Teaching Practices dataset variables on participation in private lessons and school tutoring as reasonable proxy indicators of the family's material support to the child's education, to investigate whether such support is differentially given to boys and girls Both forms of supplemental lessons involve extra fees above and beyond basic school fees and expenses "School tutoring" is essentially a school-organized and -sanctioned form of group tutoring, generally less expensive than private lessons (which may be conducted in groups or individually)

A parent interview, conducted during the National Survey of Private Lessons during the 1990-91 school year, was administered to roughly 1500 parents of Grade 5 and Grade 8 students in school at the time of the study, in 10 governorates of Egypt As part of the interview, parents were asked to answer a number of relevant questions on one target child in their family Data from these interviews were used to investigate the relationship of parents' educational expectations and aspirations for their child (already in school) to the child's gender [1]

II Results

1 School-based correlates of FMR

Table B 1 presents correlations of current FMR levels for total primary, grade 1 primary, and total preparatory levels with MOE school census-based indicators representing educational quality, academic equity, female teaching and administrative staff and availability of girls-only schools, and physical facilities lagged 2 years (see Table B 2a-d for underlying 1991-92 statistics by governorate and urban and rural environment) [2]

In both environments and levels, the strongest correlations with 1993 female-to-male student ratios are percent of female teachers (r's ranging from 185 for urban grade 1 classrooms to 719 for rural preparatory classrooms) and percent of female administrators (from r= 188 for urban preparatory schools to r= 456 for rural grade 1 classrooms The percentage of female teachers reached 68 percent in urban primary schools, 43 percent in rural primary schools, 55 percent in urban preparatory schools, and 34 percent in rural preparatory schools in the 1991-92 school year As for female administrators, these figures were 32 percent, 17 percent, 33 percent, and only 5 percent, respectively, in that year

The relative availability of girls-only schooling (represented by the percent of girls in girls' schools) also has a positive, although weak, association with higher FMR in urban areas at both primary and preparatory levels, and in rural preparatory schooling Four percent of girls in urban primary schools attended girls-only schools in 1991-92, the proportion leaps to 84 percent of all girls in urban preparatory schools Girls-only schools are much less common in rural areas, with only 1 percent of rural primary-level girls attending such schools in 1991-92, and 10 percent of rural preparatory-level girls

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[1] Additional analyses to examine the relationship of expenditures made for various schooling expenses and child gender were abandoned when it was determined that the financial data from this dataset were plagued with severe data quality problems

[2] All correlation and regression analyses involving the School Census database were conducted with data weighted in proportion to the size of enrollment (primary or preparatory, depending on the analysis) in urban and rural areas within each educational district, our unit of analysis

In rural areas, additional factors found to have small but non-negligible correlations with FMR include the ratio of girls' to boys' repetition rates (a negative correlation, suggesting that girls may be discouraged from attending school in areas where they tend to fail more often than boys), the availability of electricity and water (positive correlations), class size (again a positive correlation, this indicator may in fact function more powerfully as a proxy for relatively denser, more urbanized rural areas rather than as an inverted indicator of educational quality), and, at the preparatory level, the student-teacher ratio, with fewer students per teacher correlating with higher FMR

Because of considerable interrelationships among these school characteristics themselves, multivariate regressions were also conducted in an attempt to identify the most important of these characteristics in predicting FMR two years later, while controlling for other variables Tables B 3a-c present the results of these analyses

On the whole, predicting FMR on the basis of school characteristics was more successful in rural areas, with 37% and 53% of FMR variance explained by the regression model at primary and preparatory levels, respectively, comparable figures in urban areas were only 10% and just under 6% This finding suggest that the participation of girls in rural areas is more sensitive to school-based factors than in urban areas, although we must also bear in mind that the variability of FMR across school districts is also greater in rural areas

Overwhelmingly, the percentage of teachers who are female made the greatest contribution to FMR in all regression models, with the single exception of the urban grade 1 primary model, where it is overshadowed by the percent of girls in girls' schools and the percent of administrators who are female The percentage of administrators who are female, along with lower student-teacher ratios, also figures substantially in the prediction of total and grade 1 primary FMR in the rural areas The relative availability of girls' schooling (percent of girls in girls' schools) appears as an additional positive contributor to higher FMR in urban primary schooling overall, while larger class size makes some contribution to urban preparatory FMR [3]

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[3] The analysis plan originally called for including information on student age and on the availability of preschooling in correlation and regression analyses of primary FMR As Table B 2 shows, however, the (documented) number of children in preschools in Egypt is negligible, with preschool attendance reaching only 7% of Grade 1 attendance in urban areas, and with reported preschooling participation being virtually nonexistent in rural areas Interestingly, FMR in preschools that do exist tends to be high, in several cases higher than 1 1 Census data on preschools has only recently begun to be collected regularly by the MOE's Statistics office, it is possible that there is considerable underreporting from the field Similarly, the collection of data on student age is relatively new, and available only at the primary level On close inspection these data exhibit unlikely distribution patterns (e g , extreme "bunching" at ages 6 and 11) Thus, rather than attempt to accommodate possibly serious data quality problems on these data points (of which the MOE is aware, and working to resolve in subsequent censuses), the analyst has omitted them from the analysis

In summary, the results support the strategy of programs that attempt to increase proportions of female teachers and school administrators as a means to attract more girls to school in rural areas Other potentially "girl-friendly" school factors include lower student-teacher ratios in rural primary schools and, in urban areas, increased availability of girls-only primary schools

2 The contribution of USAID's School Construction Program

Table B 4 presents correlation coefficients between the proportion of students accommodated by USAID schools as of 1993-94 (USAID enrollments/total enrollments in 1993-94), and the relative change in FMR and total enrollment levels from 1981-82 to 1993-94 (1993 level/1981 level, see also Appendices 2a-c and 3a-d for underlying data by governorate) [4] The results are presented both unweighted (in which governorates with small enrollments have as much influence on the results as those with large enrollments) and weighted (whereby a governorate's influence on the overall correlation is proportional to the size of its enrollment) [5]

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[4] It was possible to analyse the data at governorate level only, as 1981 school census data are available only by governorate and urban or rural environment In addition, the USAID school construction database did not contain readily available information regarding urban or rural location Thus in the absence of hard data, the distribution of USAID schools and students accommodated in them across the urban and rural environments is estimated, following the proportional distribution of each governorate's total enrollments across environments Finally, students in USAID-funded schools identified only as "basic education" schools (rather than specifically primary or preparatory schools, see Table B 5c) are assumed to be distributed across primary and preparatory levels at a ratio of 2 to 1 (see "Estimated additional students within Basic Education schools" columns in Table B 5a-b) They are thereby integrated into the primary and preparatory datasets and analyses presented here All variables used in the analyses are in the form of proportions (USAID-school students / total students) or ratios (1993 FMR / 1981 FMR, 1993 enrollment / 1981 enrollment) This approach removes the problem of inflated correlations posed by absolute numbers, which would overwhelmingly reflect associations due simply to governorate size

[5] Both unweighted and weighted approaches may be valid Use of the unweighted results would be appropriate, for example, if program efforts could be said to be roughly equal across governorates due to logistical/political factors or the operation of economies of scale If not, the weighted analyses are generally preferred Nonetheless, the vast range of enrollment size between the smallest governorate which received USAID school construction funding (South Sinai, with 4555 primary and 1689 preparatory students in 1993-94) and the largest (Giza, with 594974 primary and 264353 preparatory students in the same year), raises a special concern regarding data quality Specifically, inaccuracies that may be present in the data on larger governorates are magnified by weighting in the same proportion

Unweighted, the results present apparently negligible relationships between the USAID school construction effort and improvements in FMR overall, and a small but positive correlation with improvements in the relative growth in total enrollments at both primary (r= 371) and preparatory (r= 222) levels Within urban and rural environments, assuming our estimated apportionment of USAID efforts across them (see Footnote 4) is reasonably accurate, there are somewhat higher correlations with total primary FMR (urban and rural), grade 1 primary FMR (urban only), and total preparatory enrollment growth (urban and rural)

Analysis of the weighted data, which corrects for the undue influence of extremely small governorates on the preceding analyses, indicates considerably stronger relationships between the USAID school construction program and improvements in both FMR and total enrollment growth, at both primary and preparatory levels overall Total weighted governorate-level correlations with relative size of the USAID program ranged from a low of r=0 204 for relative growth in grade 1 primary FMR, to r=0 523 for relative growth in total primary enrollments

The weighted urban results are also stronger, for the most part, with the notable exception of total preparatory enrollment growth, which slips from r= 373 (unweighted) to r= 218 (weighted) In the rural environment, the weighted results are in nearly all cases weaker (most strikingly the correlation between the school construction program and total preparatory enrollments, which drops from r= 439 to r= 001) These differences in the unweighted and weighted results suggest that governorate size (in terms of the school-going population) does somehow influence the potential effectiveness of school construction efforts in raising enrollments and girls' participation in particular While a more in-depth analysis of this hypothesis is not possible with the available data, it calls for further investigation

In summary, the weighted analyses offer moderately strong governorate-level evidence that more rapid growth in enrollments and improvement in FMR have indeed occurred where USAID school construction efforts have been greater, especially at the primary level Specific conclusions within urban and rural environments are more difficult to draw, and would be more tenuous, given the estimated apportioning of schools built in each environment that was applied in the absence of data

3 Findings from the National Survey datasets

Characteristics of students by gender Using the Teaching Practices survey dataset (MOE, 1993) described above, we also examined the academic performance, background characteristics, classroom and school characteristics, and academic perceptions of boys and girls currently in school

Table B 7 and Figure B 1 present overall scores by gender on achievement tests administered to grade 5 primary students in Math, Science, and Arabic subjects, and to grade 8

preparatory students in Math, Science, Arabic, and English subjects [6] At the primary level, girls performed significantly better in Arabic (t=5 19, p< 001) and modestly better in Math, while boys outperformed girls in Science (t=3 24, p< 001) Primary Math and Arabic differences by gender disappear, however, when parents' education and family size are controlled via multiple regression techniques, the superior performance of primary boys in Science remains substantial even when controlling for family background (not shown)

At the preparatory level, boys outperformed girls in both Math (t=4 02, p< 001) and Arabic (t=3 99, p< 001), girls outperformed boys in English (t=5 82, p< 001), and the difference in Science was negligible Multiple regressions on the achievement scores produced equivalent results, even when controlling for family background Removing the effects of family background also revealed somewhat higher relative performance of boys in Science

To identify other noteworthy differences across male and female students in grades 5 and 8, analyses were also made on students' background characteristics Figure B 2 presents three indicators commonly found to have an impact on student achievement family size as represented by number of siblings, father's education, and mother's education (see Table B 8 for underlying data)

The data suggest that boys and girls in school differ little, if at all, in terms of number of siblings (primary t=1 98, p< 05, preparatory t=1 51, n s)

On the other hand, girls in school are considerably more likely to have more highly educated parents Fathers of primary girls tend to have an average of nearly 0 5 years more of education than those of primary boys (t=4 31, p< 001), while this difference approaches 0 9 years at the preparatory level (t=8 26, p< 001) The mothers of our sample of children attained an average of over 2 fewer years of education overall than the fathers Mothers of primary girls, however, had nearly 0 7 years more education than mothers of primary boys (t=6 24, p< 001), and mothers of preparatory girls had on average just over 0 6 years more schooling than mothers of preparatory boys (t=6 03, p< 001)

Information on additional student-level characteristics are presented in Table B 9 Among other things, these results show that fewer girls tend to repeat grades than boys, both in primary (chi-square=24 75, p< 001) and through preparatory (chi-square=20 60, p< 001) levels, although repeaters overall represent no more than 20% of students by the end of preparatory (see Table B 9a)

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[6] The group-administered achievement tests were designed expressly for the National Survey of Teaching Practices to reflect the appropriate grade level curriculum, by testing experts from the National Center for Educational Evaluation and Examination, Cairo

Distance to school has often been cited as an issue that differentially affects girls' school attendance more than boys' Analysis of the National Survey dataset reveals that at the primary level, Egyptian girls and boys in school both tend to reach school on foot, and spend an equivalent amount of time getting there (chi-square=1 46, n s , see Table B 9b) At the preparatory level, however, more girls than boys in school reported taking over 40 minutes to reach school (18 9% of girls vs 14 7 of boys), while more boys than girls reported taking fewer than 20 minutes (57 2% of boys vs 51 7% of girls, overall chi-square=35 18, p< 001) These data, running counter to expectations, suggest that girls who reach the preparatory level are more willing to "go the extra mile" (literally!) to stay in school than boys This point calls for further investigation

Boys and girls also differed significantly on self-perceptions of their strength as students, and on their perceptions of subject difficulty As Figure B 3 displays, girls are more likely to characterize themselves as "average" students than boys, while boys are more likely to characterize themselves as "strong" students, at both primary (chi-square=21 69, p< 001) and preparatory (chi-square=46 31, p< 001, see also Table B 9c) levels

Turning to perceptions of the difficulty of school subjects, Figure B 4 shows that primary-level girls are more likely than boys to characterize Math, Science, and Arabic subjects as "easy" or "very easy" (chi-squares all significant at p< 01 or better, see Table B 9d-f for underlying data) At grade 3 preparatory level (Figure B 5), the proportion of girls who consider Math to be "very easy" slips below that of boys, and girls who consider it "very difficult" are marginally more numerous than boys (chi-square=13 36, p< 01, see Table B 9d) Grade 3 preparatory girls are much more likely than boys to describe Arabic, Science, and English in particular as "easy" or "very easy" (see Table B 9e-g) It is also worth noting that higher proportions of both boys and girls characterized English as "very difficult" (14 7% of boys and 11 5% of girls) than they did any other subject

Predicting grade 5 primary achievement by gender. Tables B 10a-c present results of multiple regression analyses of the Teaching Practices dataset to predict primary students' achievement in individual subject areas on the basis of student background, gender-relevant school and class characteristics, and student perceptions Analyses were run separately for boys and girls, to permit the identification of substantial gender differences in the range of factors that contribute to achievement

Overall, the regression models for primary achievement are strikingly similar across subjects, and for both boys and girls The prediction of boys' achievement was somewhat more successful The proportion (adj) of variance explained by the model of grade 5 boys's achievement ranged from 17% (Math and Science) to 23% (Arabic) among boys, versus 11 5% (Science) to 18 2% (Arabic) for girls' achievement

Consistently important and positive student background contributors for both boys and girls include father's and mother's education Among boys, older students also tended to have higher achievement in Math and Arabic subjects Larger family size is another consistently

strong, although negative, predictor of achievement for both boys and girls, as is a history of prior grade repetition [7]

The single exception to this last finding is in Math achievement among girls, for which prior grade repetition shows no significant association This exception suggests that grade repetition may actually permit slower-learning girls to catch up with peers in Math studies at the primary level It offers an intriguing avenue for further exploration by researchers of the special, typically antagonistic relationship of "girls and Math", found so often in studies of gender differences in primary school achievement

Primary-level school and classroom characteristics also contribute to achievement in all subjects, for both boys and girls (see Table B 11 for means, standard, deviations, and ranges of the variables considered) Variables selected for analysis included school-level variables found to contribute to greater FMR in the census analyses discussed above, namely female school teachers, female school directors, classes with a higher proportion of girls (proxy for "girls-only" schools), and to some extent class size

Having a female teacher of grade 5 primary Math or Arabic contributed to higher performance in those subjects by both boys and girls, although teacher gender made no significant contribution to the prediction of Science achievement for either boys or girls In contrast, students in primary schools directed by female administrators tended to have lower achievement than other students, although the statistical significance of this predictor is relatively weak Of particular interest is the finding that grade 5 boys studying in classrooms with a higher proportion of girl classmates tend to have higher achievement in all subjects While the process underlying this phenomenon cannot be determined from the data at hand (an investigation would be worthwhile), the finding alone suggests that raising FMR can have direct benefits for boys as well as girls Grade 5 girls appear to benefit from having more female classmates only with regard to Arabic achievement

Larger class size contributes positively to higher achievement in all cases, contrary to the expectations of most education quality proponents To understand this finding, it should be noted that in the Egyptian context larger classes are more likely to be found in longer-established, urban schools, which are themselves more likely to attract higher-quality

[7] Possibility of collinearity between father's and mother's education, and between the student's repetition history and age, was investigated and ruled out on the basis of correlation coefficients These were moderately high, but did not indicate collinearity For primary students, father's and mother's education correlated at r=0 624, age and repetition correlated at r=0 462

teachers and administrators, and more resources generally [8] In other words, the variable may well represent a number of other quality-relevant factors, as well as class size

The range of class sizes represented in the sample should also be considered in an interpretation of this finding This range ran from 16 to 88 students, with the large majority of classes (nearly 80 percent) having 50 or fewer students (9 2% had 16-30 students, 23 8% had 31-40 students, 44 3% had 41-50 students) The results should be applied only within this range [9]

Students' perceptions of their own strength as students and of the difficulty of subject matter were also highly related to achievement in all subjects for both boys and girls, although the direction of effect must be seriously considered Boys and girls who described themselves as "strong" rather than "average" or "weak" students were more likely to achieve higher scores in all subjects, to a high degree of statistical significance ($p < 001$) Conversely, students who described a given subject as difficult rather than easy tended to achieve lower scores in that subject While attributional research has demonstrated that such perceptions, whether accurate or not, can have important effects on subsequent achievement, the data at hand may simply reflect a high degree of accuracy, and honesty, in Egyptian students' self-appraisals Notwithstanding, the present results do not permit us to reject the attributionists' argument that efforts to enhance children's self-image as students (which, as we have seen, tends to be a greater problem for girls) and to encourage greater optimism about the difficulty of a subject (a greater problem among boys) can enhance children's learning and academic achievement

Predicting grade 3 preparatory achievement by gender Turning to the results on grade 3 preparatory achievement (Tables B 10d-g), again the prediction of boys' achievement is more successful than it is for girls, with the exception of English achievement, for which the proportions of variance explained by the models (25 7% for boys and 26 7% for girls) are roughly equal The prediction of English achievement was also considerably more successful than that of any other subject (with proportions of variance explained ranging from only 12 1% to 15 1%), a result that may in part reflect better test construction [10]

With regard to grade 3 preparatory students' background characteristics, father's education and mother's education continue to be strong, positive predictors for both boys and girls in

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[8] The Teaching Practices survey did not record information on urban or rural location of the schools in the sample (despite foreign advisors' recommendations that it do so) If it had, school location could have been controlled in these analyses, and it is reasonable to expect that the findings on class size in particular would be attenuated, if not reversed

[9] Further analysis to establish whether an "optimal" class size may exist is currently underway

[10] This observation is supported by a review of the content of the achievement tests, and by the results of internal reliability analyses conducted on them (available at the Ministry of Education)

all subjects The single exception is Arabic achievement among boys, for whom the contribution of father's education is weak, though still positive and statistically significant The number of prior grade repetitions is a consistently negative predictor across all subjects for both genders Older students, both boys and girls, tend to have lower achievement in Science and Arabic, although they are at no disadvantage (or advantage) with regard to Math or English achievement Boys and girls from larger families tend to attain lower achievement in Math and English, as do girls in Science, achievement in Arabic is not affected by family size (number of siblings) for either gender, nor is Science achievement among boys [11]

As for the influence on achievement of school and classroom characteristics at the preparatory level, the results are largely weak or inconsistent Girls' achievement in all subjects tends to benefit somewhat from larger classes (and, presumably, from concurrent factors, see above), whereas boys' achievement in Science, Math, and English subjects would appear to be unaffected by this variable, and achievement in Arabic to be seriously undermined by larger classes

Having a female teacher makes a positive contribution to achievement only for boys in Science classes (to a small extent) and for girls in Arabic, and would appear to have a strong, but negative effect on girls' achievement in English (even though girls on the whole outperform boys in English) For the most part, we may conclude that female teachers are at least as effective as male teachers at the preparatory level in most subjects, for both boys and girls

Students in schools directed by women also display mixed achievement results vis-a-vis students in male-headed schools The prediction of students' math achievement is not affected by the gender of the school director, neither is Arabic achievement among girls nor English achievement among boys However, girls' Science and English achievement are higher to some degree in schools directed by women, whereas boys' achievement in Science and Arabic subjects tends to be slightly lower in woman-headed schools

Studying in a classroom with a higher proportion of female classmates, contrary to findings at the primary level, would appear to have a weak but significant negative effect on boys' preparatory achievement in Science, Arabic, and English subjects, and no effect on their Math achievement For girls, a higher proportion of female classmates contributes to somewhat higher English achievement, but has no apparent effect on girls' achievement in other subjects

Results on the relationship of preparatory students' academic perceptions to their achievement were equivalent, for the most part, to those found at the primary level Students who

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[11] For the preparatory student sample, the correlation between father's and mother's education was r=0 660, student's age and repetition history correlated at r=0 582 As found for the primary student sample, these coefficients indicate considerable association between the variables, but do not pose problems of collinearity for the regression analysis

described themselves as academically strong tended to have higher achievement in all subjects, students who perceived a subject to be difficult tended to have lower achievement in that subject The prediction of preparatory Arabic achievement was the single exception to this pattern, for Arabic, students' perceptions of its difficulty as a subject matter display no relationship to their achievement in it

Parental expectations and perceptions. We also examined indicators of parents' support for their child's education in terms of both psychological support and material support With regard to "psychological" support, we used the Parent Interview dataset of the National Survey of School Tutoring and Private Lessons (MOE, 1993) to examine whether parents' perception of their child's performance in school and their expectations regarding the child's academic future varied depending on the gender of the child [12]

The data provide little evidence that girls in school are viewed differently from boys by their parents (Table B 12a-c) To the question, "Do you expect that your child will one day go to university?", parents of boys in primary school were slightly more inclined to say "yes" (91 5%) than were parents of primary girls (85 6%, chi-square=5 72, p< 05) Among parents of grade 3 preparatory students, there was no significant difference in the responses of parents of boys and parents of girls, suggesting that for girls who reach the end of the preparatory level, the family's academic investment in their children is undifferentiated by gender No differences between the responses of fathers and mothers were found (Details of these analyses may be found in Table B 12a)

At both primary and preparatory levels, parents of boys and parents of girls also responded similarly to the question, "How well is your child doing in school?" (see Table B 12b) It is interesting to note, however, that fewer parents of children in grade 3 preparatory were inclined to characterize their child as doing "very well" in school than were parents of grade 5 primary children (38 6 percent of preparatory parents, vs 48 6 percent of primary parents) The remainder preferred a more modest statement of their child's performance, perhaps reflecting a perception of relatively greater academic challenge posed by preparatory education

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[12] The data available on these points are drawn from the Parent interview of the National Survey on Private Lessons Of the respondents, 85 2 percent were fathers, 12 3 percent were mothers, and the remainder (2 5 percent) were other caretakers of the child It should be understood that the sample is cross-sectional, in that only one parent was interviewed in each household (resulting post hoc in the proportions stated above), and the questions relevant to the present analyses were asked about a single child in the household Thus the responses of parents of boys are compared to the responses of parents of girls The dataset did not offer the possibility of comparing the responses of fathers and mothers from the same household, nor of comparing the same parents' responses about their male children and their female children A dataset of that type would have provided a more powerful and rigorous test of differential perceptions and expectations on the part of parents for male and female children

Parents were also asked, "Do you expect that your child will receive (his/her) diploma without any (further) grade failure?" (see Table B 12c) Again, the results show no differences by gender of the child, at either primary or preparatory level, nor any significant differences in responses between fathers and mothers

Parents' responses to all of the above questions were also found to be highly conditioned on the respondent's years of education, with positive responses invariably associated with more years of education (t's ranging from 3 41 to 4 96, all p< 001, on the university question, from 3 54 to 6 35, all p< 001, on the academic performance question, and from 2 18, p< 05 to 3 15, p< 01, on the diploma question) This pattern held for both parents of boys and parents of girls

In summary, these results suggest that parents of girls and parents of boys in school hold similar academic expectations and perceptions of their children The single exception was the expectation of the parents of grade 5 primary students with regard to their child's eventual university entrance a higher proportion of parents of boys saw this as a likely eventuality Overall, however, we must treat the apparent "non-findings" in these analyses with particular caution, given the low power of the available dataset to reveal potentially important differences (see Footnote 12)

Students' participation in supplemental lessons. As for evidence of material support, problems in the earnings and expenditures data of the Parent Interview forced us to turn instead to information on students' participation in supplemental lessons (either school tutoring or private lessons) from the Student Questionnaire dataset of the National Survey of Teaching Practices (MOE 1993) as an imperfect but reasonable proxy

Table B 13 presents the results of analyses to identify differences by gender in the pattern of students' participation in after-school lessons, as an indicator of families' material support for education At the primary level, chi-square analyses reveal no significant differences in the proportions of girls and boys participating in school tutoring or private lessons after school (see also Figure B 6) Just under half of the grade 5 primary sample take no supplemental lessons in any subject, while about 30 percent of both boys and girls participate in private lessons in all three subjects, and 20 percent take extra lessons offered by the school A small portion of students reported participation in both private lessons and school tutoring

At the preparatory level (Figure B 7), a substantial difference in the pattern of grade 8 boys' and girls' participation emerges A <u>higher</u> proportion of girls than boys participate in (generally more costly) private lessons, most strikingly in Math (56 5 percent of girls, vs 49 1 percent of boys) and English (48 3 percent of girls, vs 40 8 percent of boys) On the other hand, relatively more boys than girls tend to take no lessons at all in either Math (38 6 percent of boys, vs 31 8 percent of girls) or English (47 5 percent of boys, vs 40 7 percent of girls) For Arabic and Science subjects, the differences are less pronounced, and are located primarily in the relatively greater participation of boys in school tutoring, and of girls in private lessons

Given the finding, already discussed, that girls in school tend on average to have more highly educated parents than do boys at the same grade level, discriminant analyses of participation in supplemental lessons which controlled for parents' education and family size (number of siblings) were also conducted by gender (not shown) At the primary level, the family background variables overwhelmingly made up the first, most highly significant function predicting participation, while child gender contributed little even to the second function, confirming the initial chi-square results

Grade 3 preparatory results were similar to the primary results in that the first function for all subjects was again composed of the family background variables, and explained by far the largest proportion of variance in participation For Math and English subjects, the second function, furthermore, was not significant For Arabic and Science, the second function (in both cases indicating greatest preference for no extra lessons, then private lessons, then school tutoring) was also significant but much weaker in explanatory power than the first function, and was positively related to female gender Overall, these results indicate that the different proportions of participation by boys and girls found in the chi-square analyses can be better explained by family background differences rather than by gender, with higher levels of parental education and lower family size associated with participation in private lessons

TABLES

Table B 1	Correlations of female-to-male student ratios, 1993-94 with 1991-92 levels of selected statistics
Table B 2a	Basic statistics on primary education in urban areas by governorate, 1991-92 school year
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Table B 2c	Basic statistics on preparatory education in urban areas by governorate, 1991-92 school year
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Table B 10	Results of multiple regression analyses on achievement scores by gender
Table B 11	Means, standard deviations, and ranges of school sample characteristics considered in the prediction of achievement
Table B 12a	Parents' expectation that child will reach university, by child's gender
Table B 12b	Parents' perception of child's performance in school, by child's gender
Table B 12c	Parents' expectation that child will receive diploma without (further) grade failure, by child's gender
Table B 13	Student participation in supplemental lessons, by subject and gender

PLEASE NOTE Stastical significance levels in all sample-based tables are indicated using the following notation * $p < 05$ ** $p < 01$, *** $p < 001$
Sample Ns that are lower than total expected sample sizes are due to missing data

FIGURES

Figure B 1 Comparison of achievement test scores by gender (Grade 5 primary and Grade 3 preparatory)

Figure B 2 Comparison of family background factors by gender (Grade 5 primary and Grade 3 preparatory)

Figure B 3 Self-perception as a student, by gender (Grade 5 primary and Grade 3 preparatory)

Figure B 4 Perceptions of subject difficulty, by student gender (Grade 5 primary)

Figure B 5 Perceptions of subject difficulty, by student gender (Grade 3 preparatory)

Figure B 6 Participation in supplemental lessons (Grade 5 primary)

Figure B 7 Participation in supplemental lessons (Grade 3 preparatory)

TABLE B 1 CORRELATIONS OF FEMALE-TO-MALE STUDENT RATIOS, 1993-94 WITH 1991-92 LEVELS OF SELECTED STATISTICS

	URBAN AREAS, 1993-94			RURAL AREAS, 1993-94		
1991-92 STATISTIC	TOTAL PRIMARY FMR	GRADE 1 PRIMARY FMR	TOTAL PREPARATORY FMR	TOTAL PRIMARY FMR	GRADE 1 PRIMARY FMR	TOTAL PREPARATORY FMR
Total primary FMR	0 795	0 610	- - -	0 992	0 970	- - -
Total preparatory FMR	- - -	- - -	0 531	- - -	- - -	0 973
Average class size	-0 020	-0 034	0 104	0 199	0 173	0 170
Average student-teacher ratio	0 001	-0 040	-0 047	-0 093	-0 093	-0 282
Repetition rate - girls	-0 113	-0 036	-0 100	-0 031	-0 073	0 004
Ratio of girls/boys repetition rates	-0 032	-0 054	-0 018	-0 204	-0 256	-0 130
Percent of girls in girls' schools	0 169	0 181	0 108	-0 093	-0 084	0 213
Proportion of teachers female	0 313	0 185	0 259	0 509	0 501	0 719
Proportion of administrators female	0 254	0 232	0 188	0 446	0 456	0 389
Percent of schools with electricity	0 018	0 010	0 065	0 221	0 179	0 103
Percent of schools with water	-0 035	-0 073	-0 066	0 106	0 084	-0 104
Percent of schools with WC	-0 096	-0 053	-0 025	0 074	0 044	-0 012
Listwise N	146	146	165	212	212	186

Data sources School Census Database, MOE, 1991-92 and 1993-94

TABLE B 2a BASIC STATISTICS ON PRIMARY EDUCATION IN URBAN AREAS BY GOVERNORATE 1991 92 SCHOOL YEAR

GOVERNORATE	ENROL91	FMRTOT	FMR1	SCRATIO	STRATIO	PCTGREP	PCTBREP	GAGERAT	BAGERAT	PCTGGS	PCTFEM	PCTFEMA	PREC1RA	FMRPRES	GIRLSCH	BOYSCH	MIXSCH	PCTELE	PCTWATE	PCTWC
1 Cairo	788614	0 94	0 96	45 87	27 14	0 06	0 08	0 93	0 92	0 05	0 74	0 36	0 11	1 02	49	27	1124	0 98	1 00	0 95
2 Alexandria	387731	0 93	0 94	49 86	29 53	0 07	0 09	0 76	0 75	0 03	0 77	0 34	0 08	1 04	15	10	543	0 99	0 99	0 91
3 Beheira	103739	0 94	0 95	45 96	25 11	0 04	0 06	0 93	0 92	0 05	0 61	0 28	0 04	1 11	4	5	203	0 91	0 94	0 89
4 Gharbiyya	122885	0 96	0 98	44 20	25 40	0 04	0 06	0 95	0 94	0 04	0 67	0 32	0 04	0 98	5	5	221	1 00	1 00	0 91
5 Kafr el Shaykh	49943	0 98	0 96	42 32	20 94	0 04	0 06	0 94	0 93	0 00	0 58	0 24	0 03	1 11	0	0	121	0 88	0 99	0 89
6 Manoufiyya	65050	0 92	0 93	44 43	23 93	0 06	0 09	0 87	0 86	0 11	0 66	0 33	0 00		6	5	126	0 98	1 00	0 98
7 Qalyubiyya	119258	0 94	0 94	48 74	24 36	0 05	0 07	0 94	0 93	0 02	0 61	0 29	0 05	1 10	2	2	160	0 96	0 99	0 95
8 Daqahliyya	128780	0 95	0 97	43 14	19 85	0 06	0 09	0 90	0 89	0 04	0 69	0 34	0 04	0 97	3	2	277	0 92	0 98	0 88
9 Damietta	41104	0 92	0 99	42 68	18 07	0 06	0 12	0 90	0 88	0 28	0 66	0 37	0 11	1 13	11	7	75	0 99	0 99	0 93
10 Sharqiyya	112467	0 95	0 94	45 61	24 14	0 05	0 06	0 93	0 92	0 02	0 68	0 32	0 02	1 09	3	2	219	0 92	0 99	0 91
11 Port Said	51467	0 94	0 95	42 71	15 77	0 06	0 09	0 93	0 92	0 03	0 66	0 37	0 07	1 03	1	0	99	0 92	1 00	0 92
12 Ismailiyya	39449	0 94	0 91	41 79	22 05	0 03	0 05	0 92	0 91	0 02	0 74	0 36	0 09	1 08	1	0	85	0 95	1 00	0 94
13 Suez	48727	0 94	0 94	43 78	19 24	0 05	0 07	0 88	0 87	0 00	0 77	0 35	0 05	1 10	0	0	84	0 91	1 00	0 98
14 Giza	334028	0 92	0 94	48 47	31 48	0 06	0 07	0 93	0 92	0 00	0 70	0 34	0 10	1 10	2	1	441	0 99	1 00	0 97
15 Fayyoum	46010	0 85	0 87	48 03	20 36	0 06	0 08	0 94	0 92	0 00	0 64	0 32	0 04	1 07	0	0	79	0 98	0 98	0 93
16 Bani Swayf	48220	0 84	0 87	41 64	22 40	0 05	0 07	0 91	0 90	0 16	0 65	0 28	0 03	1 04	9	10	95	0 97	0 99	0 95
17 Minya	77586	0 85	0 86	44 18	17 93	0 05	0 07	0 90	0 89	0 00	0 57	0 25	0 08	1 16	0	0	171	0 95	0 98	0 88
18 Assyut	78957	0 87	0 89	43 96	21 59	0 05	0 07	0 90	0 89	0 14	0 61	0 24	0 07	1 13	13	15	132	0 98	1 00	0 98
19 Souhag	74426	0 84	0 85	42 63	18 87	0 05	0 07	0 91	0 89	0 07	0 55	0 21	0 04	1 35	6	4	154	0 98	1 00	0 92
20 Qena	58300	0 91	0 96	41 38	16 20	0 03	0 04	0 94	0 93	0 07	0 46	0 23	0 02	1 28	4	4	121	0 97	0 98	0 89
21 Luxor	17816	0 91	0 95	44 88	21 21	0 03	0 04	0 95	0 94	0 05	0 49	0 27	0 05	1 32	1	1	41	0 92	1 00	0 86
22 Aswan	41229	0 93	0 99	42 81	17 79	0 03	0 05	0 95	0 94	0 02	0 69	0 30	0 02	1 08	1	0	82	0 95	1 00	0 86
23 Matrouh	14648	0 82	0 93	34 22	19 61	0 06	0 09	0 88	0 89	0 27	0 54	0 23	0 03	1 06	6	5	44	0 76	1 00	0 88
24 New Valley	6978	0 96	0 94	28 95	7 63	0 02	0 04	0 94	0 93	0 00	0 75	0 14	0 02	0 91	0	0	22	1 00	1 00	0 95
25 Red Sea	13580	0 96	0 97	32 57	15 81	0 07	0 10	0 91	0 89	0 12	0 53	0 16	0 03	1 01	3	3	38	0 83	0 98	1 00
26 North Sinai	14585	0 87	0 91	33 15	13 79	0 06	0 09	0 84	0 83	0 00	0 52	0 20	0 05	1 31	0	0	43	0 94	1 00	0 97
27 South Sinai	1561	0 80	0 80	25 59	13 57	0 03	0 06	0 85	0 84	0 00	0 49	0 08	0 00		0	0	10	0 89	0 90	0 90
TOTAL URBAN	2887138	0 93	0 94	45 51	24 15	0 05	0 08	0 9	0 89	0 04	0 68	0 32	0 07	1 06	145	108	4810	0 96	0 99	0 93

NOTE ABBREVIATIONS AS FOLLOWS

ENROL91	Total enrollments for cycle
FMRTOT	Total female-to-male student ratio for cycle
FMR1	Grade 1 female-to-male student ratio for cycle
SCRATIO	Students per class ratio for cycle
STRATIO	Students per teacher ratio for cycle
PCTGREP	Percent of girls who are repeaters
PCTBREP	Percent of boys who are repeaters
PCTGAGE	Percent of girls who are of correct age for cycle
PCTBAGE	Percent of boys who are of correct age for cycle
PCTGGSCH	Percent of girls in girls schools
PCTFEMT	Percent of teachers who are female
PCTFEMAD	Percent of senior school administrators who are female
PREC1RAT	Ratio of preschool enrollments to grade 1 primary enrollments
FMRPRESC	Female-to-male student ratio in preschools
GIRLSCH	Number of girls schools
BOYSCH	Number of boys schools
MIXSCH	Number of mixed gender schools
PCTELEC	Percent of schools with electricity
PCTWATER	Percent of schools with water
PCTWC	Percent of schools with WC

Data source School Census Database MOE 1992

TABLE B 2b BASIC STATISTICS ON PRIMARY EDUCATION IN RURAL AREAS BY GOVERNORATE 1991 92 SCHOOL YEAR

GOVERNORATE	ENROL91	FMRTOT	FMR1	SCRATIO	STRATIO	GREPRAT	BREPRAT	GAGERAT	BAGERAT	PCTGGS	PCTFEM	PCTFEMA	PREC1RA	FMRPRES	GIRLSC	BOYSC	MIXSCH	PCTELE	PCTWAT	PCTWC
2 Alexandria	23536	0 67	0 71	50 94	56 17	0 09	0 12	0 93	0 91	0 00	0 40	0 16	0 02	3 03	0	0	59	0 58	0 91	0 74
3 Beheira	359357	0 72	0 78	43 78	27 82	0 06	0 09	0 92	0 91	0 00	0 37	0 18	0 00		1	2	944	0 62	0 92	0 84
4 Gharbiyya	263044	0 94	1 01	43 77	28 44	0 07	0 09	0 92	0 91	0 00	0 43	0 25	0 00	1 12	1	0	668	0 84	0 95	0 87
5 Kafr el Shaykh	181550	0 85	0 90	38 81	23 23	0 06	0 08	0 92	0 91	0 00	0 47	0 16	0 00	1 33	1	1	619	0 58	0 82	0 77
6 Manoufiyya	259118	0 86	0 88	43 02	24 75	0 08	0 09	0 89	0 88	0 06	0 52	0 18	0 00		25	41	627	0 83	0 99	0 92
7 Qalyubiyya	257366	0 88	0 90	48 46	23 04	0 08	0 09	0 94	0 93	0 00	0 53	0 15	0 00	1 34	2	2	507	0 84	0 99	0 92
8 Daqahliyya	374365	0 91	0 94	42 68	21 69	0 08	0 10	0 90	0 89	0 00	0 57	0 19	0 00	0 98	0	0	1040	0 64	0 90	0 75
9 Damietta	80707	0 90	0 95	41 22	16 70	0 10	0 16	0 90	0 87	0 04	0 61	0 24	0 01	0 97	3	5	205	0 93	0 99	0 85
10 Sharqiyya	351547	0 84	0 89	44 11	25 74	0 06	0 08	0 93	0 92	0 01	0 46	0 22	0 00	1 56	5	5	1019	0 67	0 94	0 86
12 Ismailiyya	48515	0 86	0 88	37 43	20 40	0 06	0 09	0 89	0 87	0 00	0 63	0 27	0 00		0	0	194	0 79	0 86	0 77
13 Suez	6950	0 91	0 94	44 84	24 22	0 09	0 11	0 85	0 83	0 00	0 78	0 28	0 00		0	0	17	0 93	1 00	0 86
14 Giza	219238	0 68	0 74	45 19	36 39	0 05	0 08	0 94	0 93	0 00	0 54	0 22	0 01	1 22	0	0	401	0 80	0 97	0 83
15 Fayyoum	142628	0 51	0 55	42 36	21 49	0 07	0 08	0 92	0 91	0 00	0 37	0 17	0 00		0	0	376	0 70	0 92	0 89
16 Bani Swayf	128970	0 50	0 55	39 32	26 65	0 08	0 08	0 91	0 90	0 11	0 35	0 18	0 00		17	29	350	0 65	0 88	0 65
17 Minya	242846	0 49	0 50	42 35	25 41	0 08	0 08	0 90	0 90	0 00	0 29	0 05	0 00	1 39	0	0	724	0 76	0 94	0 84
18 Assyut	194276	0 58	0 62	41 72	26 41	0 08	0 10	0 91	0 89	0 06	0 34	0 07	0 00	1 20	14	16	483	0 78	0 98	0 93
19 Souhag	206630	0 59	0 64	40 26	20 24	0 07	0 08	0 90	0 89	0 01	0 30	0 07	0 00		2	6	639	0 69	0 97	0 84
20 Qena	209698	0 69	0 77	39 39	19 44	0 04	0 05	0 93	0 92	0 00	0 23	0 06	0 00	1 41	1	2	574	0 76	0 96	0 76
22 Aswan	73351	0 89	0 93	35 06	17 48	0 04	0 06	0 93	0 93	0 00	0 37	0 06	0 00	1 28	0	0	286	0 79	0 97	0 68
23 Matrouh	7535	0 31	0 46	19 37	17 56	0 05	0 08	0 85	0 84	0 06	0 24	0 05	0 00		1	11	97	0 19	0 79	0 59
24 New Valley	10340	0 90	0 90	20 56	6 42	0 05	0 07	0 93	0 94	0 00	0 39	0 00	0 00		0	0	89	0 80	0 94	0 90
25 Red Sea	1526	0 90	0 91	22 12	13 63	0 10	0 11	0 88	0 88	0 00	0 21	0 11	0 00		0	0	12	0 67	1 00	1 00
26 North Sinai	9770	0 56	0 64	17 11	11 74	0 05	0 08	0 86	0 86	0 00	0 14	0 06	0 00	2 00	0	7	115	0 40	0 98	0 78
27 South Sinai	2208	0 47	0 54	9 90	9 28	0 04	0 06	0 85	0 85	0 00	0 11	0 00	0 00		0	3	45	0 29	0 78	0 83
TOTAL RURAL	3655071	0 74	0 78	42	23 85	0 07	0 09	0 92	0 91	0 01	0 43	0 17	0 00	1 28	73	130	10090	0 71	0 93	0 82

NOTE ABBREVIATIONS AS FOLLOWS

ENROL91	Total enrollments for cycle	PCTFEMT	Percent of teachers who are female
FMRTOT	Total female-to-male student ratio for cycle	PCTFEMAD	Percent of senior school administrators who are female
FMR1	Grade 1 female-to-male student ratio for cycle	PREC1RAT	Ratio of preschool enrollments to grade 1 primary enrollments
SCRATIO	Students per class ratio for cycle	FMRPRESC	Female-to-male student ratio in preschools
STRATIO	Students per teacher ratio for cycle	GIRLSCH	Number of girls schools
PCTGREP	Percent of girls who are repeaters	BOYSCH	Number of boys schools
PCTBREP	Percent of boys who are repeaters	MIXSCH	Number of mixed gender schools
PCTGAGE	Percent of girls who are of correct age for cycle	PCTELEC	Percent of schools with electricity
PCTBAGE	Percent of boys who are of correct age for cycle	PCTWATER	Percent of schools with water
PCTGGSCH	Percent of girls in girls schools	PCTWC	Percent of schools with WC

Data source School Census Database MOE 1992

TABLE B 2c BASIC STATISTICS ON PREPARATORY EDUCATION IN URBAN AREAS 1991 92 SCHOOL YEAR

GOVERNORATE	ENROL91	FMRTOT	SCRATIO	STRATIO	GREPRAT	BREPRAT	PCTGGSC	PCTFEMT	PCTFEMA	GIRLSCH	BOYSCH	MIXSCH	PCTELEC	PCTWATE	PCTWC
1 Cairo	470227	1 00	45 11	22 30	0 10	0 10	0 87	0 56	0 38	255	225	196	0 97	0 99	0 96
2 Alexandria	197605	1 01	42 83	20 15	0 12	0 15	0 92	0 58	0 48	119	103	32	0 99	0 98	0 90
3 Beheira	67523	0 97	46 25	28 79	0 11	0 14	0 87	0 49	0 25	27	34	10	0 97	0 99	0 94
4 Gharbiyya	78917	1 01	46 02	20 88	0 07	0 08	0 98	0 61	0 31	37	49	6	0 96	0 96	0 91
5 Kafr el Shaykh	37176	0 97	39 51	22 25	0 08	0 09	0 88	0 51	0 25	21	22	7	1 00	1 00	0 94
6 Manoufiyya	39670	0 92	45 49	19 88	0 07	0 10	0 63	0 60	0 23	13	8	25	1 00	1 00	0 93
7 Qalyubiyya	96639	1 04	51 10	31 02	0 11	0 12	0 93	0 51	0 26	36	40	10	0 96	1 00	0 96
8 Daqahliyya	80067	1 10	41 42	21 67	0 10	0 09	0 84	0 54	0 36	36	32	18	0 93	0 97	0 95
9 Damietta	25309	1 18	41 83	14 75	0 07	0 13	0 88	0 60	0 25	11	11	10	0 92	1 00	0 92
10 Sharqiyya	66623	1 04	40 30	15 38	0 11	0 12	0 81	0 57	0 30	37	41	21	0 94	0 99	0 90
11 Port Said	29536	1 03	36 97	18 04	0 04	0 07	0 96	0 52	0 20	15	14	10	0 96	1 00	0 91
12 Ismailiyya	25311	1 04	42 33	23 18	0 10	0 09	0 94	0 58	0 41	14	14	8	0 94	0 97	1 00
13 Suez	27893	1 02	34 39	18 65	0 13	0 15	0 78	0 67	0 33	11	11	15	0 96	0 96	0 83
14 Giza	186641	0 95	49 18	27 99	0 09	0 09	0 68	0 51	0 46	54	48	149	0 96	0 99	0 97
15 Fayyoum	28427	0 86	41 99	22 26	0 10	0 10	0 86	0 54	0 22	13	13	4	0 96	1 00	1 00
16 Bani Swayf	33019	0 82	37 10	24 01	0 08	0 10	0 90	0 44	0 24	18	24	6	0 91	1 00	0 89
17 Minya	45531	0 91	41 09	16 61	0 08	0 09	0 90	0 55	0 18	19	26	10	0 96	1 00	0 96
18 Assyut	53758	0 85	40 42	19 34	0 12	0 14	0 82	0 51	0 28	30	32	16	1 00	1 00	1 00
19 Souhag	51380	0 90	40 46	18 48	0 15	0 16	0 86	0 54	0 11	21	26	12	0 88	0 98	0 96
20 Qena	39537	0 93	45 19	21 28	0 09	0 08	0 69	0 42	0 14	15	17	20	0 98	1 00	0 96
21 Luxor	9838	0 94	37 98	18 53	0 13	0 16	0 73	0 44	0 25	5	5	5	0 90	1 00	1 00
22 Aswan	29953	0 94	42 79	21 77	0 08	0 08	0 55	0 51	0 31	8	10	23	0 90	1 00	0 97
23 Matrouh	8661	0 59	43 09	27 32	0 10	0 21	0 63	0 36	0 23	4	5	9	0 67	0 94	0 89
24 New Valley	5471	0 94	26 56	9 77	0 07	0 09	0 00	0 54	0 06	0	0	17	1 00	1 00	1 00
25 Red Sea	7351	0 97	29 88	12 57	0 11	0 13	0 21	0 47	0 07	3	3	18	0 87	1 00	1 00
26 North Sinai	9221	0 90	28 64	11 76	0 10	0 10	0 67	0 52	0 17	6	6	8	1 00	0 94	1 00
27 South Sinai	852	0 61	25 06	9 26	0 09	0 16	0 00	0 50	0 00	0	0	8	1 00	0 80	1 00
TOTAL URBAN	1752136	0 98	43 56	21 50	10	0 11	0 84	0 55	33	828	819	673	96	0 99	0 95

NOTE ABBREVIATIONS AS FOLLOWS

ENROL91	Total enrollments for cycle
FMRTOT	Total female to male student ratio for cycle
FMR1	Grade 1 female to male student ratio for cycle
SCRATIO	Students per class ratio for cycle
STRATIO	Students per teacher ratio for cycle
PCTGREP	Percent of girls who are repeaters
PCTBREP	Percent of boys who are repeaters
PCTGAGE	Percent of girls who are of correct age for cycle
PCTBAGE	Percent of boys who are of correct age for cycle
PCTGGSCH	Percent of girls in girls schools
PCTFEMT	Percent of teachers who are female
PCTFEMAD	Percent of senior school administrators who are female
PREC1RAT	Ratio of preschool enrollments to grade 1 primary enrollments
FMRPRESC	Female to male student ratio in preschools
GIRLSCH	Number of girls schools
BOYSCH	Number of boys schools
MIXSCH	Number of mixed gender schools
PCTELEC	Percent of schools with electricity
PCTWATER	Percent of schools with water
PCTWC	Percent of schools with WC

Data source School Census database MOE 1992

TABLE B 2d BASIC STATISTICS ON PREPARATORY EDUCATION IN RURAL AREAS 1991 92 SCHOOL YEAR

GOVERNORATE	ENROL91	FMRTOT	SCRATIO	STRATIO	GREPRAT	BREPRAT	PCTGGSC	PCTFEMT	PCTFEMA	GIRLSCH	BOYSCH	MIXSCH	PCTELEC	PCTWATE	PCTWC
2 Alexandria	7271	0 58	44 88	26 83	0 22	0 29	0 23	0 17	0 00	1	1	15	0 73	0 82	0 64
3 Beheira	176752	0 68	43 73	34 89	0 12	0 15	0 01	0 30	0 05	3	3	367	0 77	0 95	0 84
4 Gharbiyya	143110	0 90	43 45	22 80	0 09	0 11	0 17	0 46	0 10	23	25	180	0 86	0 96	0 89
5 Kafr el Shaykh	86970	0 85	39 64	26 75	0 08	0 10	0 04	0 36	0 01	3	2	155	0 82	0 90	0 88
6 Manoufiyya	140523	0 86	44 26	22 57	0 11	0 13	0 04	0 44	0 04	8	8	180	0 89	0 99	0 91
7 Qalyubiyya	110351	0 82	44 21	30 34	0 15	0 18	0 19	0 37	0 06	19	24	141	0 84	0 99	0 96
8 Daqahliyya	194033	0 97	40 75	24 94	0 10	0 12	0 15	0 41	0 10	20	26	298	0 76	0 95	0 87
9 Damietta	33087	1 18	37 47	16 86	0 11	0 15	0 21	0 47	0 09	6	6	65	0 89	0 97	0 91
10 Sharqiyya	159281	0 81	39 45	19 69	0 13	0 16	0 09	0 36	0 05	13	13	284	0 81	0 95	0 89
12 Ismailiyya	25315	0 86	37 28	27 37	0 19	0 23	0 25	0 30	0 08	3	6	60	0 81	0 93	0 86
13 Suez	3006	0 91	31 98	20 45	0 21	0 26	0 00	0 37	0 00	0	0	9	0 80	1 00	0 60
14 Giza	87899	0 59	46 66	44 85	0 07	0 09	0 19	0 29	0 04	5	9	121	0 81	0 97	0 89
15 Fayyoum	56672	0 44	40 89	27 69	0 08	0 10	0 03	0 30	0 00	1	1	84	0 88	0 99	0 93
16 Bani Swayf	57660	0 44	33 98	30 70	0 09	0 12	0 10	0 21	0 01	10	13	77	0 84	0 95	0 89
17 Minya	119917	0 40	40 83	22 83	0 09	0 10	0 08	0 26	0 02	5	8	233	0 83	0 99	0 92
18 Assyut	98287	0 52	39 62	26 00	0 14	0 17	0 14	0 28	0 02	12	15	155	0 88	0 98	0 97
19 Souhag	97556	0 46	40 40	22 69	0 18	0 18	0 15	0 30	0 03	7	9	145	0 86	0 99	0 94
20 Qena	100783	0 54	42 15	27 31	0 10	0 09	0 01	0 20	0 01	2	6	191	0 77	0 95	0 73
22 Aswan	42685	0 85	37 94	31 93	0 07	0 09	0 02	0 27	0 02	1	1	99	0 81	0 95	0 70
23 Matrouh	1860	0 09	22 68	19 58	0 07	0 14	0 05	0 07	0 00	0	6	19	0 21	0 86	0 71
24 New Valley	7033	0 83	26 24	13 50	0 11	0 14	0 00	0 17	0 00	0	0	50	0 67	0 96	0 81
25 Red Sea	437	0 70	19 00	11 50	0 29	0 33	0 00	0 05	0 00	0	0	4	1 00	1 00	1 00
26 North Sinai	5103	0 41	23 20	11 79	0 10	0 19	0 14	0 13	0 00	2	1	46	0 61	0 94	0 85
27 South Sinai	787	0 31	17 11	8 20	0 09	0 15	0 00	0 21	0 00	0	1	14	0 40	0 70	0 30
TOTAL RURAL	1756378	0 70	41 06	25 43	11	0 13	0 10	0 34	05	144	184	2992	81	0 96	0 88

NOTE ABBREVIATIONS AS FOLLOWS

ENROL91	Total enrollments for cycle
FMRTOT	Total female to male student ratio for cycle
FMR1	Grade 1 female to male student ratio for cycle
SCRATIO	Students per class ratio for cycle
STRATIO	Students per teacher ratio for cycle
PCTGREP	Percent of girls who are repeaters
PCTBREP	Percent of boys who are repeaters
PCTGAGE	Percent of girls who are of correct age for cycle
PCTBAGE	Percent of boys who are of correct age for cycle
PCTGGSCH	Percent of girls in girls schools
PCTFEMT	Percent of teachers who are female
PCTFEMAD	Percent of senior school administrators who are female
PREC1RAT	Ratio of preschool enrollments to grade 1 primary enrollments
FMRPRESC	Female to male student ratio in preschools
GIRLSCH	Number of girls schools
BOYSCH	Number of boys schools
MIXSCH	Number of mixed gender schools
PCTELEC	Percent of schools with electricity
PCTWATER	Percent of schools with water
PCTWC	Percent of schools with WC

Data source School Census database MOE 1992

TABLE B 3 RESULTS OF MULTIPLE REGRESSION ANALYSES ON TOTAL PRIMARY FEMALE-TO-MALE STUDENT RATIOS, 1993-94

	Urban schools		Rural schools	
PREDICTOR	B	Beta	B	Beta
Average class size	0 0009	0 078	0 0052	0 161
Average student-teacher ratio	0 0001	-0 013	-0 0062	-0 295
Repetition rate - girls	-0 3114	-0 097	-0 5403	-0 081
Ratio of girls/boys repetition rates	-0 0087	-0 016	-0 0084	-0 008
Percent of girls in girls' schools	0 1057	0 188	-0 3558	-0 103
Proportion of teachers female	0 1804	0 307	0 3853	0 321
Proportion of administrators female	0 0277	0 041	0 5391	0 291
Percent of schools with electricity	0 0495	0 070	0 1350	0 119
Percent of schools with water	-0 1575	0 077	0 3014	0 136
Percent of schools with WC	-0 0773	-0 139	-0 1602	-0 094
Constant	0 9656		0 2724	
Adj R-square	0 104		0 370	
F	2 67		13 39	
df	10,135		10,201	

Data source School Census database, MOE, 1991-92 and 1993-94

TABLE B 3 RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 1 PRIMARY FEMALE-TO-MALE STUDENT RATIOS, 1993-94

	Urban schools		Rural schools	
PREDICTOR	B	Beta	B	Beta
Average class size	0 0007	0 055	0 0046	0 147
Average student-teacher ratio	0 0005	-0 049	-0 0056	-0 278
Repetition rate - girls	0 0423	0 012	-0 5927	-0 093
Ratio of girls/boys repetition rates	-0 0320	-0 055	-0 0538	-0 054
Percent of girls in girls' schools	0 1053	0 174	-0 2840	-0 086
Proportion of teachers female	0 0700	0 110	0 3522	0 307
Proportion of administrators female	0 1226	0 168	0 5385	0 303
Percent of schools with electricity	0 0271	0 035	0 0878	0 081
Percent of schools with water	-0 2432	-0 110	0 3042	0 143
Percent of schools with WC	-0 0378	-0 063	-0 1732	-0 106
Constant	1 1182		0 4291	
Adj R-square	0 039		0 363	
F	1 583		12 99	
df	10,135		10,201	

Data source School Census database, MOE, 1991-92 and 1993-94

TABLE B3 RESULTS OF MULTIPLE REGRESSION ANALYSES ON TOTAL PREPARATORY FEMALE-TO-MALE STUDENT RATIOS, 1993-94

	Urban schools		Rural schools	
PREDICTOR	B	Beta	B	Beta
Average class size	0 0040	0 176	0 0022	0 046
Average student-teacher ratio	-0 0018	-0 088	-0 0022	-0 094
Repetition rate - girls	-0 2296	-0 064	0 2069	0 044
Ratio of girls/boys repetition rates	-0 0062	-0 016	-0 1682	-0 109
Percent of girls in girls' schools	0 0707	0 100	0 0889	0 054
Proportion of teachers female	0 3129	0 185	1 2780	0 646
Proportion of administrators female	0 0845	0 095	0 2776	0 080
Percent of schools with electricity	0 1190	0 055	-0 0786	-0 046
Percent of schools with water	-0 2489	-0 085	-0 2117	-0 062
Percent of schools with WC	-0 0710	-0 039	-0 2786	-0 136
Constant	0 7866		0 8949	
Adj R-square	0 058		0 534	
F	2 02		22 21	
df	10,154		10,175	

Data source School Census database, MOE, 1991-92 and 1993-94

TABLE B 4 CORRELATIONS OF STUDENTS IN USAID-BUILT SCHOOLS AS A PROPORTION OF ALL STUDENTS IN 1993-94, WITH RATES OF GROWTH IN FEMALE-TO-MALE STUDENT RATIOS AND IN OVERALL ENROLLMENTS FROM 1981-82 TO 1993-94

1981 - 1993 GROWTH RATE STATISTICS	PRIMARY SCHOOLS			PREPARATORY SCHOOLS		
	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL
A UNWEIGHTED STATISTICS (each governorate has equal weight)						
Growth in grade 1 primary FMR from 1981-82 (index year) to 1993-94	0 079	0 270	0 097	- - -	- - -	- - -
Growth in total FMR from 1981-82 (index year) to 1993-94	0 146	0 333	0 266	-0 062	0 246	0 070
Growth in total enrollments from 1981-82 (index year) to 1993-94	0 371	0 134	0 113	0 222	0 373	0 439
B WEIGHTED STATISTICS (governorates weighted according to proportion of total 1993 student enrollments)						
Growth in grade 1 primary FMR from 1981-82 (index year) to 1993-94	0 204	0 259	-0 117	- - -	- - -	- - -
Growth in total FMR from 1981-82 (index year) to 1993-94	0 474	0 339	0 220	0 395	0 375	0 009
Growth in total enrollments from 1981-82 (index year) to 1993-94	0 523	0 307	0 217	0 399	0 218	0 001
LISTWISE N	26	26	22	26	26	22

Data sources School Census Database, MOE, 1991-92 and 1993-94, USAID School Construction Program Database, 1994

TABLE B 5 SCHOOLS CONSTRUCTED BY USAID BASIC EDUCATION PROJECT AS OF MAY 1994

A PRIMARY SCHOOLS

GOVERNORATE	SCHOOLS	SHIFTS	SHIFTS/ SCHOOL	CLASSES	CLASSES* SHIFTS/ SCHOOL	STUDENTS	ESTIMATED ADDITIONAL CLASSES WITHIN BASIC EDUCATION SCHOOLS	ESTIMATED ADDITIONAL STUDENTS WITHIN BASIC EDUCATION SCHOOLS	TOTAL CLASSES	TOTAL STUDENTS	AVERAGE NUMBER OF STUDENTS PER CLASS
Alexandria	2	2	1	36	36	951	0	0	36	951	26 4
Asyut	56	56	1	418	418	15444	0	0	418	15444	36 9
Aswan	18	18	1	129	129	2803	6	0	135	2803	20 8
Beheira	192	193	1 005	1400	1407	47744	42	1389	1449	49133	33 9
Bani Swayf	39	39	1	269	269	5520	36	2660	305	8180	26 8
Damietta	14	14	1	123	123	4007	108	3797	231	7804	33 8
Daqahliyya	61	61	1	472	472	13196	6	457	478	13653	28 6
Fayyoum	79	79	1	690	690	11701	0	0	690	11701	17 0
Gharbiyya	36	36	1	228	228	8678	16	1077	244	9755	40 0
Giza	27	30	1 111	252	280	11620	85	5418	365	17038	46 7
Ismailiyya	40	40	1	338	338	3001	89	1321	427	4322	10 1
Kafr el Shaykh	41	41	1	252	252	6627	4	136	256	6763	26 4
Matruh	62	62	1	211	211	3261	8	351	219	3612	16 5
Manoufiyya	25	25	1	254	254	4662	33	797	287	5459	19 0
Minya	84	84	1	783	783	12500	64	1549	847	14049	16 6
North Sinai	33	33	1	192	192	2899	0	0	192	2899	15 1
New Valley	26	26	1	258	258	2972	236	2985	494	5957	12 1
Port Said	10	10	1	100	100	4110	0	0	100	4110	41 1
Qalyubiyya	74	74	1	681	681	30394	0	0	681	30394	44 6
Qena	108	108	1	780	780	22696	33	377	813	23073	28 4
Red Sea	22	22	1	177	177	3408	6	57	183	3465	18 9
South Sinai	4	4	1	26	26	479	11	94	37	573	15 6
Sharqiyya	51	50	0 980	471	462	11554	0	0	462	11554	25 0
Souhag	78	78	1	623	623	14270	0	0	623	14270	22 9
Suez	14	14	1	158	158	4293	0	0	158	4293	27 2

Data source USAID School Construction database 1994

TABLE B 5 SCHOOLS CONSTRUCTED BY USAID BASIC EDUCATION PROJECT AS OF MAY 1994

B PREPARATORY SCHOOLS

GOVERNORATE	SCHOOLS	SHIFTS	SHIFTS/ SCHOOL	CLASSES	CLASSES* SHIFTS/ SCHOOL	STUDENTS	ESTIMATED ADDITIONAL CLASSES WITHIN BASIC EDUCATION SCHOOLS	ESTIMATED ADDITIONAL STUDENTS WITHIN BASIC EDUCATION SCHOOLS	TOTAL CLASSES	TOTAL STUDENTS	AVERAGE NUMBER OF STUDENTS PER CLASS
Alexandria							0	0	0	0	
Asyut	25	25	1	232	232	12994	0	0	232	12994	56 0
Aswan	19	19	1	162	162	5320	3	0	165	5320	32 2
Beheira	16	16	1	147	147	9317	21	694	168	10011	59 6
Bani Swayf	46	46	1	456	456	13518	18	1330	474	14848	31 3
Damietta	14	14	1	133	133	4893	54	1899	187	6792	36 3
Daqahliyya	52	52	1	572	572	23339	3	229	575	23568	41 0
Fayyoum	36	36	1	411	411	12339	0	0	411	12339	30 0
Gharbiyya	50	50	1	543	543	28818	8	539	551	29357	53 3
Giza	10	10	1	106	106	5434	42	2709	148	8143	54 9
Ismailiyya	8	8	1	78	78	2121	45	660	123	2781	22 7
Kafr el Shaykh	21	21	1	190	190	8856	2	68	192	8924	46 5
Matruh	5	5	1	24	24	626	4	175	28	801	28 6
Manoufiyya	25	25	1	270	270	7536	16	398	286	7934	27 7
Minya	63	63	1	659	659	23209	32	774	691	23983	34 7
North Sinai	21	21	1	157	157	3499	0	0	157	3499	22 3
New Valley	19	19	1	211	211	2853	118	1492	329	4345	13 2
Port Said	5	5	1	54	54	2907	0	0	54	2907	53 8
Qalyubiyya	62	62	1	484	484	25663	0	0	484	25663	53 0
Qena	21	21	1	194	194	8595	16	189	210	8784	41 8
Red Sea	14	14	1	138	138	2723	3	28	141	2751	19 5
South Sinai	2	2	1	11	11	272	5	47	16	319	19 5
Sharqiyya	46	46	1	476	476	15648	0	0	476	15648	32 9
Souhag	36	36	1	432	432	16628	0	0	432	16628	38 5
Suez	4	5	1 25	49	61	2669	0	0	61	2669	43 6

Data source USAID School Construction database 1994

TABLE B 5 SCHOOLS CONSTRUCTED BY USAID BASIC EDUCATION PROJECT AS OF MAY 1994

C BASIC EDUCATION SCHOOLS

GOVERNORATE	SCHOOLS	SHIFTS	SHIFTS/ SCHOOL	CLASSES	CLASSES* SHIFTS/ SCHOOL	STUDENTS	AVERAGE NUMBER OF STUDENTS PER CLASS
Alexandria							
Asyut							
Aswan	1	1	1	9	9	0	0 0
Beheira	9	9	1	63	63	2083	33 1
Bani Swayf	13	13	1	54	54	3990	73 9
Damietta	23	23	1	162	162	5696	35 2
Daqahliyya	1	1	1	9	9	686	76 2
Fayyoum							
Gharbiyya	2	2	1	24	24	1616	67 3
Giza	13	14	1 08	118	127	8127	68 9
Ismailiyya	10	10	1	134	134	1981	14 8
Kafr el Shaykh	1	1	1	6	6	204	34 0
Matruh	2	2	1	12	12	526	43 8
Manoufiyya	5	5	1	49	49	1195	24 4
Minya	10	10	1	96	96	2323	24 2
North Sinai							
New Valley	33	32	0 97	365	354	4477	12 3
Port Said							
Qalyubiyya							
Qena	5	5	1	49	49	566	11 6
Red Sea	2	2	1	9	9	85	9 4
South Sinai	3	3	1	16	16	141	8 8
Sharqiyya							
Souhag							
Suez							

Data source USAID School Construction database 1994

TABLE B 6 BASIC STATISTICS ON CHANGE IN ENROLLMENTS AND FMR FROM 1981-82 TO 1993-94

a URBAN PRIMARY SCHOOLS

	TOTAL PRIMARY FMR STATISTICS				TOTAL PRIMARY ENROLLMENT STATISTICS			
GOVERNORATE	FMRT81	FMRT93	FMRTCHG	FMRTCHGR	TOTENR81	TOTENR93	ENRCHG	ENRCHGR
Cairo	0 912	0 950	0 038	1 041	675946	811048	135102	1 200
Alexandria	0 907	0 932	0 025	1 027	315197	403642	88445	1 281
Beheira	0 850	0 939	0 089	1 105	77273	109430	32157	1 416
Gharbiyya	0 943	0 965	0 022	1 023	99195	128911	29716	1 300
Kafr el Shaykh	0 905	0 971	0 066	1 073	39509	56265	16756	1 424
Manoufiyya	0 879	0 913	0 034	1 038	48905	68811	19906	1 407
Qalyubiyya	0 887	0 936	0 049	1 055	75949	148891	72942	1 960
Daqahliyya	0 959	0 955	-0 004	0 996	93553	135787	42234	1 451
Damietta	0 977	0 916	-0 061	0 938	25589	46125	20536	1 803
Sharqiyya	0 895	0 965	0 070	1 078	77066	117679	40613	1 527
Port Said	0 936	0 949	0 013	1 014	39388	56075	16687	1 424
Ismailiyya	0 899	0 949	0 050	1 056	28882	42419	13537	1 469
Suez	0 883	0 935	0 052	1 059	33761	51640	17879	1 530
Giza	0 848	0 926	0 078	1 091	213540	343113	129573	1 607
Fayyoum	0 817	0 839	0 022	1 027	35735	49294	13559	1 379
Bani Swayf	0 781	0 864	0 083	1 107	38238	51466	13228	1 346
Minya	0 802	0 858	0 056	1 070	56866	85394	28528	1 502
Assyut	0 798	0 890	0 092	1 115	63326	82771	19445	1 307
Souhag	0 757	0 859	0 102	1 134	55692	81303	25611	1 460
Qena & Luxor	0 799	0 930	0 131	1 164	53432	78151	24719	1 463
Aswan	0 871	0 951	0 080	1 092	37373	43890	6517	1 174
Matrouh	0 596	0 798	0 202	1 339	9759	16308	6549	1 671
New Valley	0 887	0 944	0 057	1 065	6507	6665	158	1 024
Red Sea	0 896	0 968	0 072	1 080	9154	15922	6768	1 739
North Sinai	0 842	0 867	0 025	1 030	9530	16448	6918	1 726
South Sinai	0 270	0 829	0 559	3 070	1449	2361	912	1 629
TOTAL	0 884	0 932	0 048	1 055	2220814	3049809	828995	1 373

Note abbreviations as follows

FMRT81	Total FMR 1981 82	TOTENR81	Total enrollments in cycle 1981 82
FMRT93	Total FMR 1993-94	TOTENR93	Total enrollments in cycle 1993 94
FMRTCHG	Absolute change in FMR (FMRT93 - FMRT81)	ENRCHG	Absolute change in enrollments (TOTENR93 - TOTENR81)
FMRTCHGR	Relative change in FMR (FMRT93 / FMRT81)	ENRCHGR	Relative change in enrollments (TOTENR93 / TOTENR81)

Data sources School Census database MOE 1981 82 and 1993-94

TABLE B 6 BASIC STATISTICS ON CHANGE IN ENROLLMENTS AND FMR FROM 1981-82 TO 1993-94

b RURAL PRIMARY SCHOOLS

	TOTAL PRIMARY FMR STATISTICS				TOTAL PRIMARY ENROLLMENT STATISTICS			
GOVERNORATE	FMRT81	FMRT93	FMRTCHG	FMRTCHGR	TOTENR81	TOTENR93	ENRCHG	ENRCHGR
Alexandria	0 608	0 689	0 081	1 133	14501	31735	17234	2 188
Beheira	0 503	0 749	0 246	1 488	226215	379787	153572	1 679
Gharbiyya	0 682	0 963	0 281	1 412	198621	275531	76910	1 387
Kafr el Shaykh	0 593	0 887	0 294	1 495	127264	203257	75993	1 597
Manoufiyya	0 615	0 877	0 262	1 426	198049	281937	83888	1 424
Qalyubiyya	0 684	0 882	0 198	1 289	181634	257454	75820	1 417
Daqahliyya	0 743	0 932	0 189	1 255	277636	398792	121156	1 436
Damietta	0 891	0 904	0 013	1 014	65886	88804	22918	1 348
Sharqiyya	0 635	0 875	0 240	1 378	257912	383110	125198	1 485
Ismailiyya	0 692	0 877	0 185	1 268	32552	52924	20372	1 626
Suez	0 722	0 907	0 185	1 256	3295	7916	4621	2 402
Giza	0 457	0 727	0 270	1 590	123064	251861	128797	2 047
Fayyoum	0 367	0 550	0 183	1 498	84468	163095	78627	1 931
Bani Swayf	0 379	0 528	0 149	1 392	87311	141814	54503	1 624
Minya	0 343	0 517	0 174	1 508	151241	273613	122372	1 809
Assyut	0 379	0 603	0 224	1 591	131683	214428	82745	1 628
Souhag	0 351	0 637	0 286	1 816	149476	230470	80994	1 542
Qena & Luxor	0 437	0 756	0 319	1 731	137508	242891	105383	1 766
Aswan	0 708	0 892	0 184	1 260	60514	84275	23761	1 393
Matrouh	0 209	0 396	0 187	1 894	5786	9208	3422	1 591
New Valley	0 757	0 885	0 128	1 170	9297	11716	2419	1 260
Red Sea		0 834			0	1680	1680	
North Sinai	0 430	0 614	0 184	1 429	3159	10310	7151	3 264
South Sinai		0 585			0	2194	2194	
TOTAL	0 548	0 766	0 219	1 399	2527072	3998802	1471730	1 582

Data sources School Census database MOE 1981 82 and 1993 94

TABLE B 6 BASIC STATISTICS ON CHANGE IN ENROLLMENTS AND FMR FROM 1981-82 TO 1993-94

c URBAN PREPARATORY SCHOOLS

	TOTAL PREPARATORY FMR STATISTICS				TOTAL PREPARATORY ENROLLMENT STATISTICS			
GOVERNORATE	FMRT81	FMRT93	FMRTCHG	FMRTCHGR	TOTENR81	TOTENR93	ENRCHG	ENRCHGR
Cairo	0 913	0 976	0 063	1 069	287787	423009	135222	1 470
Alexandria	0 930	0 981	0 051	1 055	128574	194608	66034	1 514
Beheira	0 665	0 920	0 255	1 384	45667	67228	21561	1 472
Gharbiyya	0 848	0 960	0 112	1 132	50293	73521	23228	1 462
Kafr el Shaykh	0 645	0 978	0 333	1 516	22595	33676	11081	1 490
Manoufiyya	0 833	0 727	-0 106	0 873	21849	52982	31133	2 425
Qalyubiyya	0 779	0 922	0 143	1 184	46262	97213	50951	2 101
Daqahliyya	0 914	1 027	0 113	1 124	48200	75628	27428	1 569
Damietta	1 207	1 167	-0 040	0 967	12439	23681	11242	1 904
Sharqiyya	0 764	0 895	0 131	1 172	42118	69063	26945	1 640
Port Said	1 003	0 977	-0 026	0 974	15807	29011	13204	1 835
Ismailiyya	0 847	0 944	0 097	1 115	12426	22948	10522	1 847
Suez	0 832	0 962	0 130	1 156	12773	30636	17863	2 398
Giza	0 784	0 935	0 151	1 192	84701	170625	85924	2 014
Fayyoum	0 707	0 849	0 142	1 201	15632	27618	11986	1 767
Bani Swayf	0 613	0 762	0 149	1 242	19316	31379	12063	1 625
Minya	0 623	0 848	0 225	1 362	29670	40845	11175	1 377
Assyut	0 606	0 784	0 178	1 293	30174	50020	19846	1 658
Souhag	0 511	0 855	0 344	1 673	32051	57413	25362	1 791
Qena & Luxor	0 580	0 827	0 247	1 426	25292	52205	26913	2 064
Aswan	0 750	0 915	0 165	1 220	16940	24310	7370	1 435
Matrouh	0 422	0 523	0 101	1 239	2849	6820	3971	2 394
New Valley	0 874	0 832	-0 042	0 952	2968	5740	2772	1 934
Red Sea	0 713	0 919	0 206	1 289	3156	8028	4872	2 544
North Sinai	0 780	0 860	0 080	1 103	3617	8214	4597	2 271
South Sinai	0 278	0 597	0 319	2 148	138	1043	905	7 558
TOTAL	0 810	0 928	0 118	1 146	1013294	1677464	664170	1 655

Data sources School Census database MOE 1981 82 and 1993 94

TABLE B 6 BASIC STATISTICS ON CHANGE IN ENROLLMENTS AND FMR FROM 1981-82 TO 1993-94

d RURAL PREPARATORY SCHOOLS

	TOTAL PREPARATORY FMR STATISTICS				TOTAL PREPARATORY ENROLLMENT STATISTICS			
GOVERNORATE	FMRT81	FMRT93	FMRTCHG	FMRTCHGR	TOTENR81	TOTENR93	ENRCHG	ENRCHGR
Alexandria	0 404	0 592	0 188	1 466	1892	7551	5659	3 991
Beheira	0 354	0 697	0 343	1 968	50602	159631	109029	3 155
Gharbiyya	0 505	0 899	0 394	1 780	55547	131768	76221	2 372
Kafr el Shaykh	0 431	0 818	0 387	1 897	29726	85940	56214	2 891
Manoufiyya	0 500	0 836	0 336	1 671	63482	140072	76590	2 206
Qalyubiyya	0 427	0 856	0 429	2 006	44295	94300	50005	2 129
Daqahliyya	0 587	0 945	0 358	1 610	83489	183656	100167	2 200
Damietta	0 985	1 080	0 095	1 096	16051	32234	16183	2 008
Sharqiyya	0 450	0 830	0 380	1 844	71231	157573	86342	2 212
Ismailiyya	0 583	0 903	0 320	1 549	8925	22199	13274	2 487
Suez	0 520	0 944	0 424	1 814	1181	2890	1709	2 447
Giza	0 282	0 631	0 349	2 238	24216	93728	69512	3 870
Fayyoum	0 282	0 470	0 188	1 667	18571	54672	36101	2 944
Bani Swayf	0 220	0 452	0 232	2 054	16638	55638	39000	3 344
Minya	0 198	0 428	0 230	2 162	35618	108043	72425	3 033
Assyut	0 233	0 543	0 310	2 332	28861	88655	59794	3 072
Souhag	0 174	0 498	0 324	2 860	31519	97188	65669	3 083
Qena & Luxor	0 193	0 567	0 374	2 938	33188	105627	72439	3 183
Aswan	0 464	0 833	0 369	1 796	18308	40360	22052	2 205
Matrouh	0 138	0 439	0 301	3 178	668	2027	1359	3 034
New Valley	0 548	0 912	0 364	1 665	3481	5913	2432	1 699
Red Sea		0 777			0	375	375	
North Sinai	0 205	0 447	0 242	2 182	429	4634	4205	10 802
South Sinai		0 420			0	646	646	
TOTAL	0 397	0 709	0 311	1 783	637918	1675320	1037402	2 626

Data sources School Census database MOE 1981-82 and 1993 94

TABLE B 7 MEANS, STANDARD DEVIATIONS, AND T-TEST RESULTS ON ACHIEVEMENT TEST SCORES BY GENDER

	RANGE	Mean	s d	N	T-test
GRADE 5 PRIMARY TESTS					
Math test	0 - 100				1 96 *
boys		39 6	22 3	4674	
girls		40 5	21 8	3914	
Science test	0 - 100				
boys		58 5	17 5	4654	3 24 **
girls		57 2	17 8	3899	
Arabic test	0 - 100				
boys		56 6	21 2	4639	5 19 ***
girls		59 0	20 4	3909	
GRADE 3 PREPARATORY TESTS					
Math test	0 - 1				
boys		0 402	0 173	3983	4 02 ***
girls		0 388	0 150	4166	
Science test	0 - 1				1 43 n s
boys		0 564	0 172	4243	
girls		0 559	0 165	4276	
Arabic test	0 - 1				3 99 ***
boys		0 438	0 136	4170	
girls		0 426	0 132	4241	
English test	0 - 1				5 82 ***
boys		0 547	0 225	4228	
girls		0 575	0 217	4278	

Data source National Survey on Teaching Practices, MOE (1993)

TABLE B 8 MEANS, STANDARD DEVIATIONS, AND T-TEST RESULTS ON SELECTED STUDENT BACKGROUND VARIABLES BY GENDER

	RANGE	Mean	s d	N	T-test
GRADE 5 PRIMARY STUDENT SAMPLE					
Student age (years)	8 - 19				3 70 ***
boys		10 7	0 57	3750	
girls		10 65	0 58	3025	
Number of siblings	0 - 16				1 98 *
boys		4 21	1 98	4659	
girls		4 13	1 86	3918	
Father's education (years)	0 - 18				4 31 ***
boys		5 86	5 52	4548	
girls		6 38	5 53	3827	
Mother's education (years)	0 - 18				6 24 ***
boys		3 28	4 81	4485	
girls		3 95	4 96	3777	
GRADE 3 PREPARATORY STUDENT SAMPLE					
Student age	12 - 19				4 44 ***
boys		14 74	0 73	3972	
girls		14 67	0 67	3953	
Number of siblings	0 - 18				1 51 n s
boys		4 61	2 12	4240	
girls		4 54	2 10	4287	
Father's education (years)	0 - 18				8 26 ***
boys		5 67	5 16	4228	
girls		6 59	5 13	4279	
Mother's education (years)	0 - 18				6 03 ***
boys		3 21	4 66	4186	
girls		3 82	4 70	4237	

Data source National Survey on Teaching Practices, MOE (1993)

TABLE B 9 CHI-SQUARE RESULTS ON SELECTED STUDENT BACKGROUND VARIABLES AND ON ACADEMIC PERCEPTIONS, BY STUDENT GENDER

A GRADE REPETITION HISTORY BY STUDENT GENDER

	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS (%)	GIRLS (%)	BOYS (%)	GIRLS (%)
No grade repetition	88 1	91 4	79 5	82 9
1 grade repetition *	11 9	8 6	16 9	14 8
2 or more grade repetitions	- - -	- - -	3 6	2 4
TOTAL N	4620	3900	4278	4318
Chi-square	24 75 ***		20 60 ***	

* NOTE At the primary level, "1 grade repetition" is believed to include a small numbe multiple repeaters, but disaggregated data on this point are not available

B TIME REQUIRED TO GET TO SCHOOL, BY STUDENT GENDER

	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS (%)	GIRLS (%)	BOYS (%)	GIRLS (%)
less than 20 minutes	72 2	71 1	57 2	51 7
20 to < 40 minutes	19 1	20 1	28 0	29 5
40 minutes or more	8 7	8 8	14 7	18 9
TOTAL N	4624	3903	4198	4274
Chi-square	1 46 n s		35 18 ***	

* NOTE In all cases, the large majority of students reach school on foot
For both boys and girls, this proportion reached 95 percent at the primary le and 89 percent at the preparatory level

Data source National Survey of Teaching Practices, MOE, 1993

TABLE B 9 CHI-SQUARE RESULTS ON SELECTED STUDENT BACKGROUND VARIABLES AND ON ACADEMIC PERCEPTIONS, BY STUDENT GENDER

C SELF-PERCEPTION AS STUDENT, BY STUDENT GENDER

	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS (%)	GIRLS (%)	BOYS (%)	GIRLS (%)
"weak student"	4 3	4 7	4 6	3 6
"average student"	47 6	52 2	74 5	80 7
"strong student"	48 1	43 1	20 8	15 7
TOTAL N	4662	3936	4250	4295
Chi-square	21 69 ***		46 31 ***	

D PERCEPTION OF DIFFICULTY OF MATH SUBJECT, BY STUDENT GENDER

	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS (%)	GIRLS (%)	BOYS (%)	GIRLS (%)
"very easy"	60 9	63 3	24 1	20 8
"somewhat easy"	23 7	24 0	44 2	46 4
"somewhat difficult	11 5	9 0	25 1	25 6
"very difficult"	4 0	3 7	6 6	7 1
TOTAL N	4627	3904	4241	4283
Chi-square	14 75 **		13 36 **	

Data source National Survey of Teaching Practices, MOE, 1993

TABLE B 9 CHI-SQUARE RESULTS ON SELECTED STUDENT BACKGROUND VARIABLES AND ON ACADEMIC PERCEPTIONS, BY STUDENT GENDER

E PERCEPTION OF DIFFICULTY OF SCIENCE SUBJECT, BY STUDENT GENDER

	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS (%)	GIRLS (%)	BOYS (%)	GIRLS (%)
"very easy"	63 2	65 2	43 3	51 7
"somewhat easy"	25 0	25 0	43 9	36 9
"somewhat difficult	9 0	7 8	11 1	10 2
"very difficult"	2 9	2 0	1 7	1 1
TOTAL N	4625	3908	4238	4270
Chi-square	11 32 **		64 16 ***	

F PERCEPTION OF DIFFICULTY OF ARABIC SUBJECT, BY STUDENT GENDER

	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS (%)	GIRLS (%)	BOYS (%)	GIRLS (%)
"very easy"	72 4	77 5	42 2	49 6
"somewhat easy"	17 0	14 7	41 5	36 7
"somewhat difficult	8 1	5 6	14 3	11 6
"very difficult"	2 6	2 2	2 0	2 1
TOTAL N	4619	3898	4237	4268
Chi-square	33 98 ***		50 77 ***	

Data source National Survey of Teaching Practices, MOE, 1993

TABLE B 9 CHI-SQUARE RESULTS ON SELECTED STUDENT BACKGROUND VARIABLES AND ON ACADEMIC PERCEPTIONS, BY STUDENT GENDER

G PERCEPTION OF DIFFICULTY OF ENGLISH SUBJECT, BY STUDENT GENDER

	BOYS (%)	GIRLS (%)
"very easy"	22 9	28 6
"somewhat easy"	34 2	35 7
"somewhat difficult	28 3	24 3
"very difficult"	14 7	11 5
TOTAL N	4216	4251
Chi-square	57 54 ***	

Data source National Survey of Teaching Practices, MOE, 1993

TABLE B 10a RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 5 PRIMARY MATHEMATICS SCORES BY GENDER

PREDICTOR	BOYS B	BOYS Beta		GIRLS B	GIRLS Beta	
Constant	-24 522			8 327		
STUDENT BACKGROUND VARIABLES						
Student's age (years)	3 268	0 081	***	0 132	0 030	n s
Father's education (years)	0 562	0 137	***	0 394	0 099	***
Mother's education (years)	0 566	0 120	***	0 471	0 107	***
Number of siblings	-0 689	-0 062	***	-1 113	-0 093	***
Number of grade repetitions	-4 838	-0 067	***	-2 466	-0 030	n s
SCHOOL AND CLASS VARIABLES						
Class size	0 268	0 121	***	0 313	0 149	***
Female teacher of subject	3 783	0 066	***	2 608	0 049	**
Female school director	-1 930	-0 041	*	-1 949	-0 043	*
Percent of class female	0 196	0 123	***	0 059	0 031	n s
STUDENT'S PERCEPTIONS						
Self-perception as "strong" student	4 548	0 100	***	5 202	0 116	***
Perception of subject difficulty	-2 398	-0 090	***	-2 239	-0 082	***
Adj R-square	0 172			0 135		
F	59 21 ***			36 42 ***		
df	11, 3062			11, 2486		

Data source National Survey on Teaching Practices dataset, MOE, 1993

TABLE B 10b RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 5 PRIMARY SCIENCE SCORES BY GENDER

PREDICTOR	BOYS B	BOYS Beta		GIRLS B	GIRLS Beta	
Constant	36 525			45 317		
STUDENT BACKGROUND VARIABLES						
Student's age (years)	-0 113	-0 004	n s	-0 363	-0 012	n s
Father's education (years)	0 417	0 129	***	0 323	0 098	***
Mother's education (years)	0 372	0 100	***	0 397	0 109	***
Number of siblings	-0 539	-0 061	***	-0 719	-0 072	***
Number of grade repetitions	-4 001	-0 071	***	-3 735	-0 055	**
SCHOOL AND CLASS VARIABLES						
Class size	0 213	0 124	***	0 206	0 119	***
Female teacher of subject	0 432	0 011	n s	0 740	0 018	n s
Female school director	-1 995	-0 054	**	-1 449	-0 039	*
Percent of class female	0 179	0 142	***	0 039	0 025	n s
STUDENT'S PERCEPTIONS						
Self-perception as "strong" student	5 181	0 145	***	4 378	0 118	***
Perception of subject difficulty	-0 969	-0 043	*	-1 332	-0 054	**
Adj R-square	0 173			0 115		
F	60 11 ***			30 94 ***		
df	11, 3097			11, 2515		

Data source National Survey on Teaching Practices dataset, MOE, 1993

TABLE B 10c RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 5 PRIMARY ARABIC SCORES BY GENDER

PREDICTOR	BOYS B	BOYS Beta		GIRLS B	GIRLS Beta	
Constant	6 143			16 755		
STUDENT BACKGROUND VARIABLES						
Student's age (years)	1 858	0 048	*	0 841	0 024	n s
Father's education (years)	0 433	0 110	***	0 475	0 129	***
Mother's education (years)	0 477	0 105	***	0 340	0 083	***
Number of siblings	-0 976	-0 090	***	-0 682	-0 062	**
Number of grade repetitions	-10 260	-0 147	***	-9 820	-0 128	***
SCHOOL AND CLASS VARIABLES						
Class size	0 205	0 099	***	0 143	0 074	***
Female teacher of subject	2 418	0 052	**	3 896	0 091	***
Female school director	-2 292	-0 051	**	-2 167	-0 052	**
Percent of class female	0 269	0 174	***	0 231	0 116	***
STUDENT'S PERCEPTIONS						
Self-perception as "strong" student	6 512	0 149	***	6 513	0 156	***
Perception of subject difficulty	-3 600	-0 124	***	-2 041	-0 067	***
Adj R-square	0 239			0 182		
F	85 79 ***			48 96 ***		
df	11, 2965			11, 2364		

Data source National Survey on Teaching Practices dataset, MOE, 1993

TABLE B 10d RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 3 PREPARATORY MATHEMATICS SCORES BY GENDER

PREDICTOR	BOYS B	BOYS Beta		GIRLS B	GIRLS Beta	
Constant	0 3870			0 4913		
STUDENT BACKGROUND VARIABLES						
Student's age (years)	0 0030	0 011	n s	-0 0054	-0 025	n s
Father's education (years)	0 0039	0 115	***	0 0022	0 076	***
Mother's education (years)	0 0057	0 156	***	0 0039	0 122	***
Number of siblings	-0 0060	-0 072	***	-0 0046	-0 065	***
Number of grade repetitions	-0 0324	-0 103	***	-0 0165	-0 055	**
SCHOOL AND CLASS VARIABLES						
Class size	0 0002	0 010	n s	0 0009	0 042	**
Female teacher of subject	-0 0066	-0 011	n s	-0 0077	-0 020	n s
Female school director	0 0134	0 016	n s	-0 0096	-0 031	n s
Percent of class female	-0 0001	-0 013	n s	-0 0002	-0 028	n s
STUDENT'S PERCEPTIONS						
Self-perception as "strong" student	0 0491	0 115	***	0 0589	0 145	***
Perception of subject difficulty	-0 0190	-0 092	***	-0 0219	-0 122	***
Adj R-square	0 148			0 114		
F	53 00 ***			41 85 ***		
df	11, 3280			11, 3490		

Data source National Survey on Teaching Practices dataset, MOE, 1993

TABLE B 10e RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 3 PREPARATORY SCIENCE SCORES BY GENDER

PREDICTOR	BOYS B	BOYS Beta		GIRLS B	GIRLS Beta	
Constant	0 8029			0 6885		
STUDENT BACKGROUND VARIABLES						
Student's age (years)	-0 0154	-0 065	**	-0 0111	-0 046	*
Father's education (years)	0 0030	0 092	***	0 0033	0 104	***
Mother's education (years)	0 0048	0 131	***	0 0037	0 105	***
Number of siblings	-0 0025	-0 030	n s	-0 0033	-0 043	*
Number of grade repetitions	-0 0294	-0 093	***	-0 0240	-0 073	***
SCHOOL AND CLASS VARIABLES						
Class size	-0 0004	-0 019	n s	0 0010	0 044	**
Female teacher of subject	0 0122	0 035	*	0 0086	0 026	n s
Female school director	-0 0252	-0 034	*	0 0143	0 042	*
Percent of class female	-0 0002	-0 032	*	-0 0001	-0 010	n s
STUDENT'S PERCEPTIONS						
Self-perception as "strong" student	0 0707	0 168	***	0 0625	0 141	***
Perception of subject difficulty	-0 0180	-0 078	***	-0 0258	-0 112	***
Adj R-square	0 151			0 127		
F	58 03 ***			47 97 ***		
df	11, 3525			11, 3529		

Data source National Survey on Teaching Practices dataset, MOE, 1993

TABLE B 10f RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 3 PREPARATORY ARABIC SCORES BY GENDER

PREDICTOR	BOYS B	BOYS Beta		GIRLS B	GIRLS Beta	
Constant	0 6754			0 6359		
STUDENT BACKGROUND VARIABLES						
Student's age (years)	-0 0141	-0 075	***	-0 0195	-0 101	***
Father's education (years)	0 0013	0 050	*	0 0022	0 087	***
Mother's education (years)	0 0035	0 121	***	0 0021	0 074	***
Number of siblings	-0 0005	-0 008	n s	0 0010	0 017	n s
Number of grade repetitions	-0 0320	-0 129	***	-0 0172	-0 065	***
SCHOOL AND CLASS VARIABLES						
Class size	-0 0012	-0 072	***	0 0006	0 036	*
Female teacher of subject	0 0015	0 005	n s	0 0175	0 067	***
Female school director	-0 0307	-0 050	**	-0 0031	-0 011	n s
Percent of class female	-0 0003	-0 048	**	-0 0000	-0 004	n s
STUDENT'S PERCEPTIONS						
Self-perception as "strong" student	0 0673	0 202	***	0 0704	0 199	***
Perception of subject difficulty	0 0005	0 003	n s	-0 0029	-0 017	n s
Adj R-square	0 148			0 121		
F	54 95 ***			45 58 ***		
df	11, 3395			11, 3546		

Data source National Survey on Teaching Practices dataset, MOE, 1993

TABLE B 10g RESULTS OF MULTIPLE REGRESSION ANALYSES ON GRADE 3 PREPARATORY ENGLISH SCORES BY GENDER

PREDICTOR	BOYS B	BOYS Beta		GIRLS B	GIRLS Beta	
Constant	0 6968			0 6992		
STUDENT BACKGROUND VARIABLES						
Student's age (years)	-0 0003	-0 001	n s	-0 0029	-0 009	n s
Father's education (years)	0 0040	0 092	***	0 0049	0 116	***
Mother's education (years)	0 0067	0 139	***	0 0050	0 109	***
Number of siblings	-0 0083	-0 076	***	-0 0060	-0 059	***
Number of grade repetitions	-0 0576	-0 138	***	-0 0370	-0 085	***
SCHOOL AND CLASS VARIABLES						
Class size	-0 0003	-0 012	n s	0 0010	0 035	*
Female teacher of subject	-0 0038	-0 007	n s	-0 0313	-0 072	***
Female school director	-0 0007	-0 001	n s	0 0183	0 041	*
Proportion of class female	-0 0003	-0 035	*	0 0004	0 042	*
STUDENT'S PERCEPTIONS						
Self-perception as "strong" student	0 0864	0 156	***	0 0871	0 149	***
Perception of subject difficulty	-0 0538	-0 234	***	-0 0659	-0 300	***
Adj R-square	0 257			0 267		
F	108 97 ***			117 99 ***		
df	11, 3426			11, 3529		

Data source National Survey on Teaching Practices dataset, MOE, 1993

TABLE B 11 MEANS, STANDARD DEVIATIONS, AND RANGES OF SCHOOL SAMPLE CHARACTERISTICS CONSIDERED IN THE PREDICTION OF ACHIEVEMENT

CHARACTERISTIC	MEAN	s d	MIN	MAX	N of schools reporting
A PRIMARY SCHOOL SAMPLE					
Class size	44 2	10 7	16	88	273
% of teachers female					
Math teachers	22	41	0	100	290
Science teachers	30	46	0	100	293
Arabic teachers	36	48	0	100	280
% of school directors female	39	49	0	100	287
Girls as % of class	45 7	13 2	0	100	296
B PREPARATORY SCHOOL SAMPLE					
Class size	40 7	7 9	19	103	276
% of teachers female					
Math teachers	14	35	0	100	290
Science teachers	47	50	0	100	289
Arabic teachers	34	47	0	100	289
English teachers	31	47	0	100	286
% of school directors female	21	41	0	100	283
Girls as % of class	50 4	38 2	0	100	292

Data source National Survey of Teaching Practices, MOE, 1993

TABLE B 12a PARENTS' EXPECTATION THAT CHILD WILL REACH UNIVERSITY, BY CHILD'S GENDER

	PERCENT OF PARENTS RESPONDING, BY CHILD'S GENDE			
	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS	GIRLS	BOYS	GIRLS
ALL PARENTS (n)	(342)	(320)	(279)	(369)
"Yes, child will reach university"	91 5	85 6	86 4	89 2
"No, child will not reach university"	8 5	14 4	13 6	10 8
Chi-square	5 72 *		1 16 n s	
FATHERS RESPONDING (n)	(297)	(274)	(237)	(299)
"Yes, child will reach university"	90 9	85 8	86 1	89 6
"No, child will not reach university"	9 1	14 2	13 9	10 4
MOTHERS RESPONDING (n)	(34)	(39)	(34)	(53)
"Yes, child will reach university"	94 1	87 2	94 1	92 5
"No, child will not reach university"	5 9	12 8	5 9	7 5
Chi-square	4 87 n s		3 64 n s	

Data source National Survey of Private Lessons, MOE, 1993

TABLE B 12b PARENTS' PERCEPTION OF CHILD'S PERFORMANCE IN SCHOOL, BY CHILD GENDER

	PERCENT OF PARENTS RESPONDING, BY CHILD'S GENDE			
	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS	GIRLS	BOYS	GIRLS
ALL PARENTS (n)	(348)	(337)	(306)	(377)
"child is doing very well in school"	47 1	50 1	38 2	39 0
"child is doing all right in school"	52 9	49 9	61 8	61 0
Chi-square	0 63 n s		0 04 n s	
FATHERS RESPONDING (n)	(302)	(287)	(263)	(308)
"child is doing very well in school"	46 7	49 5	36 1	41 2
"child is doing all right in school"	53 3	50 5	63 9	58 8
MOTHERS RESPONDING (n)	(35)	(43)	(35)	(53)
"child is doing very well in school"	54 3	60 5	54 3	35 8
"child is doing all right in school"	45 7	39 5	45 7	64 2
Chi-square	3 32 n s		5 14 n s	

Data source National Survey of Private Lessons, MOE, 1993

TABLE B 12c PARENTS' EXPECTATION THAT CHILD WILL RECEIVE DIPLOMA WITHOUT (FURTHER) GRADE FAILURE, BY CHILD'S GENDER

	PERCENT OF PARENTS RESPONDING, BY CHILD'S GENDE			
	GRADE 5 PRIMARY		GRADE 3 PREPARATORY	
	BOYS	GIRLS	BOYS	GIRLS
ALL PARENTS (n)	(359)	(342)	(314)	(377)
"Yes, child will finish w/o failure"	89 1	85 4	84 4	87 3
"No, child will not finish w/o failure"	10 9	14 6	15 6	12 7
Chi-square	2 23 n s		1 17 n s	
FATHERS RESPONDING (n)	(311)	(291)	(270)	(307)
"Yes, child will finish w/o failure"	88 1	85 2	84 4	87 6
"No, child will not finish w/o failure"	11 9	14 8	15 6	12 4
MOTHERS RESPONDING (n)	(37)	(44)	(35)	(54)
"Yes, child will finish w/o failure"	97 3	90 9	88 6	87 0
"No, child will not finish w/o failure"	2 7	9 1	11 4	13 0
Chi-square	5 21 n s		1 42 n s	

Data source National Survey of Private Lessons, MOE, 1993

TABLE B 13 STUDENT PARTICIPATION IN SUPPLEMENTAL LESSONS, BY SUBJECT AND GENDER

a GRADE 5 PRIMARY LEVEL

GROUP	MATH Boys (%)	MATH Girls (%)	SCIENCE Boys (%)	SCIENCE Girls (%)	ARABIC Boys (%)	ARABIC Girls (%)
No supplemental lessons	47 5	46 3	49 6	48 6	47 3	46 6
School Tutoring only	20 2	21 0	18 9	19 3	20 4	20 9
Private Lessons only	30 0	29 7	29 9	30 4	30 0	29 7
Both ST and PL	2 4	3 0	1 7	1 7	2 3	2 8
TOTAL N	4551	3816	4539	3804	4537	3810
Chi-square	4 191 n s		0 808 n s		2 637 n s	

b GRADE 3 PREPARATORY LEVEL

GROUP	MATH Boys (%)	MATH Girls (%)	SCIENCE Boys (%)	SCIENCE Girls (%)	ARABIC Boys (%)	ARABIC Girls (%)	ENGLISH Boys (%)	ENGLISH Girls (%)
No supplemental lessons	38 6	31 8	79 3	78 7	77 2	77 6	47 5	40 7
School Tutoring only	9 3	7 4	8 5	5 8	10 7	6 5	9 3	8 2
Private Lessons only	49 1	56 5	11 3	14 3	11 3	14 8	40 8	48 3
Both ST and PL	3 0	4 3	0 9	1 2	0 8	1 1	2 3	2 8
TOTAL N	3946	4117	3796	3935	3800	3932	3891	4052
Chi square	65 71 ***		33 76 ***		59 49 ***		50 58 ***	

Data source National Survey of Teaching Practices dataset, MOE, 1993

FIGURE B 1

COMPARISON OF ACHIEVEMENT TEST SCORES

BY GENDER (Grade 5 prim & Grade 3 prep)

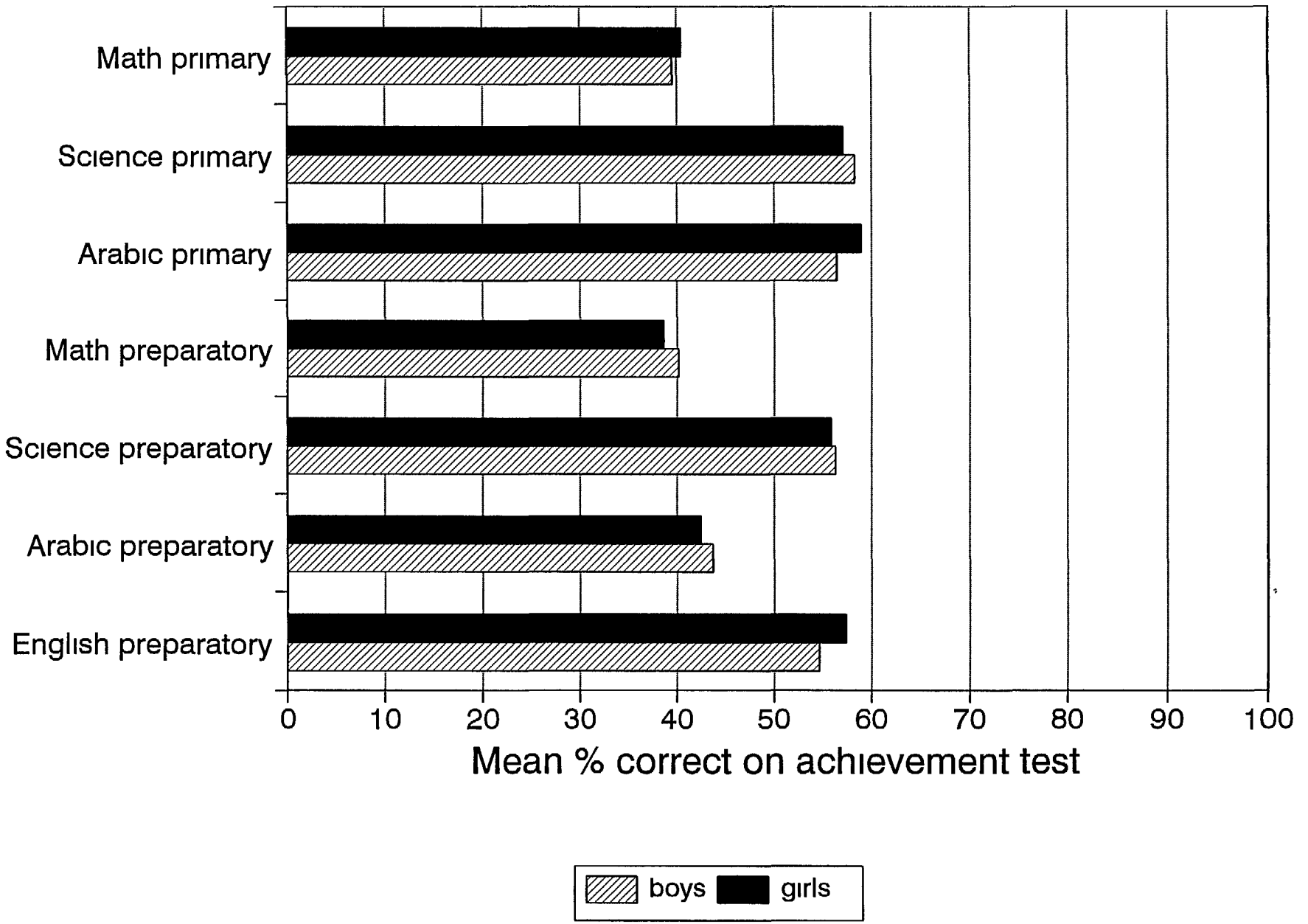


FIGURE B 2

FAMILY BACKGROUND CHARACTERISTICS

BY GENDER (Grade 5 prim & Grade 3 prep)

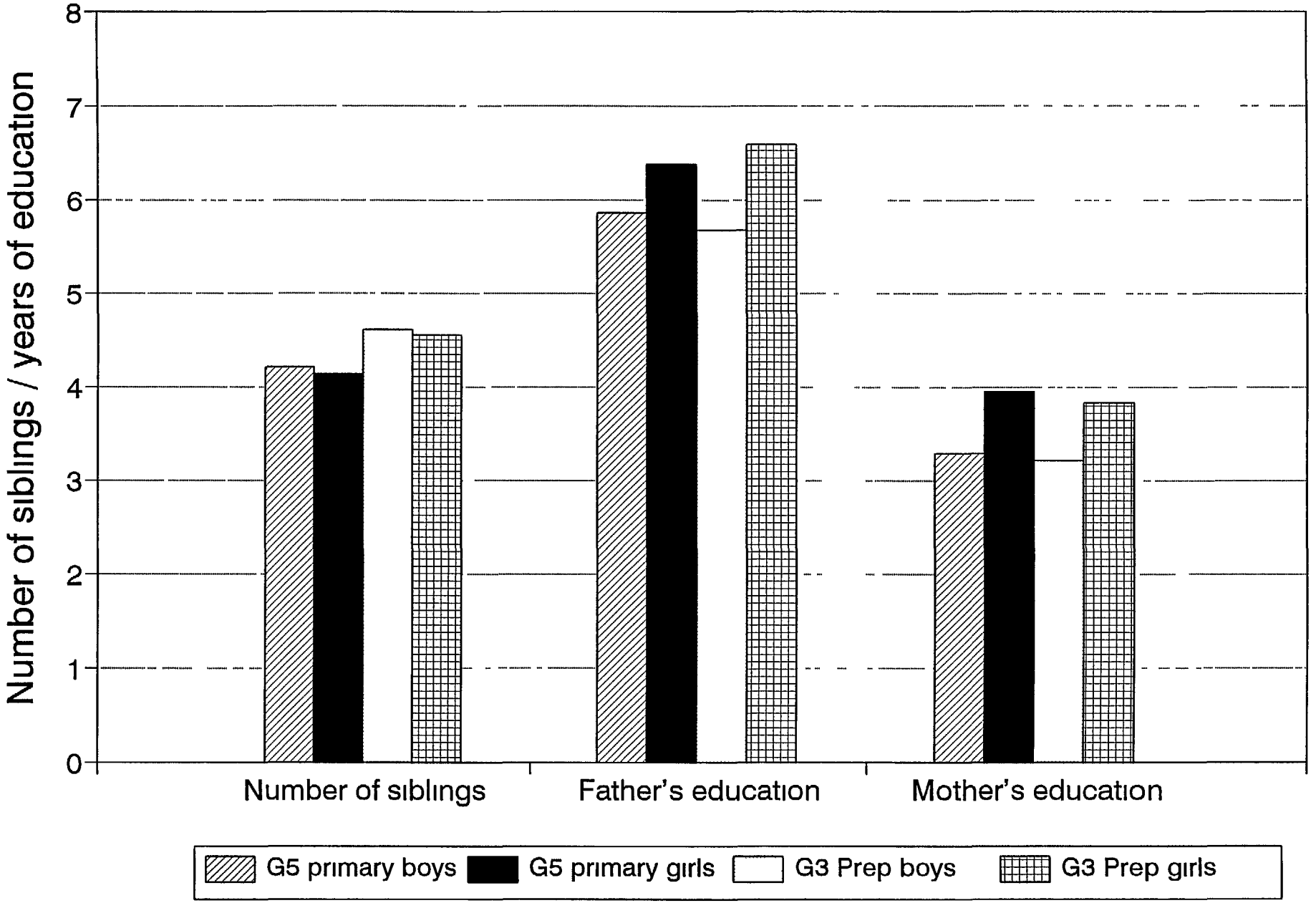


FIGURE B 3

Self-perception as a student, by gender
(Grade 5 prim & Grade 3 prep students)

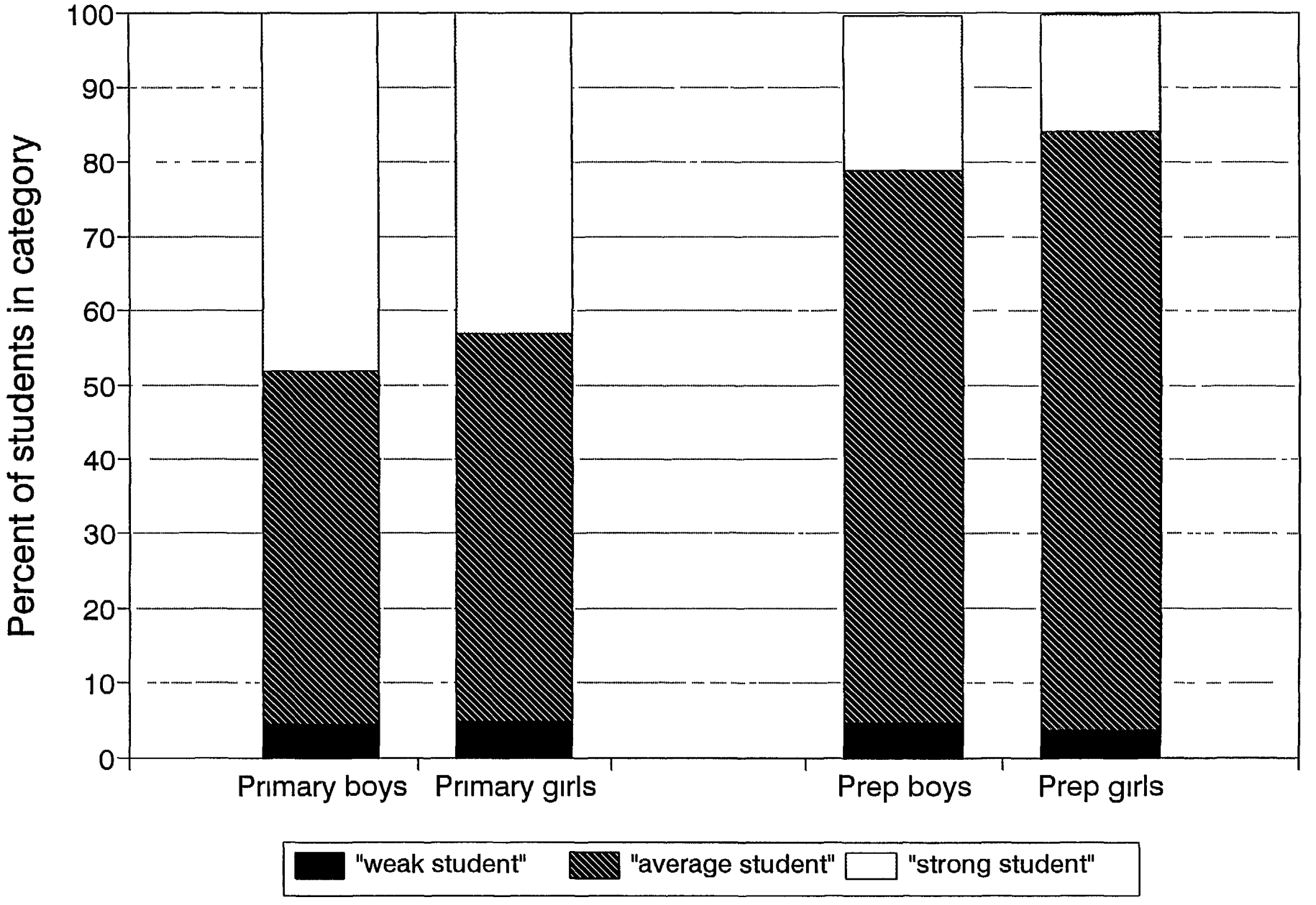


FIGURE B 4

Perceptions of subject difficulty, by student gender (Grade 5 primary)

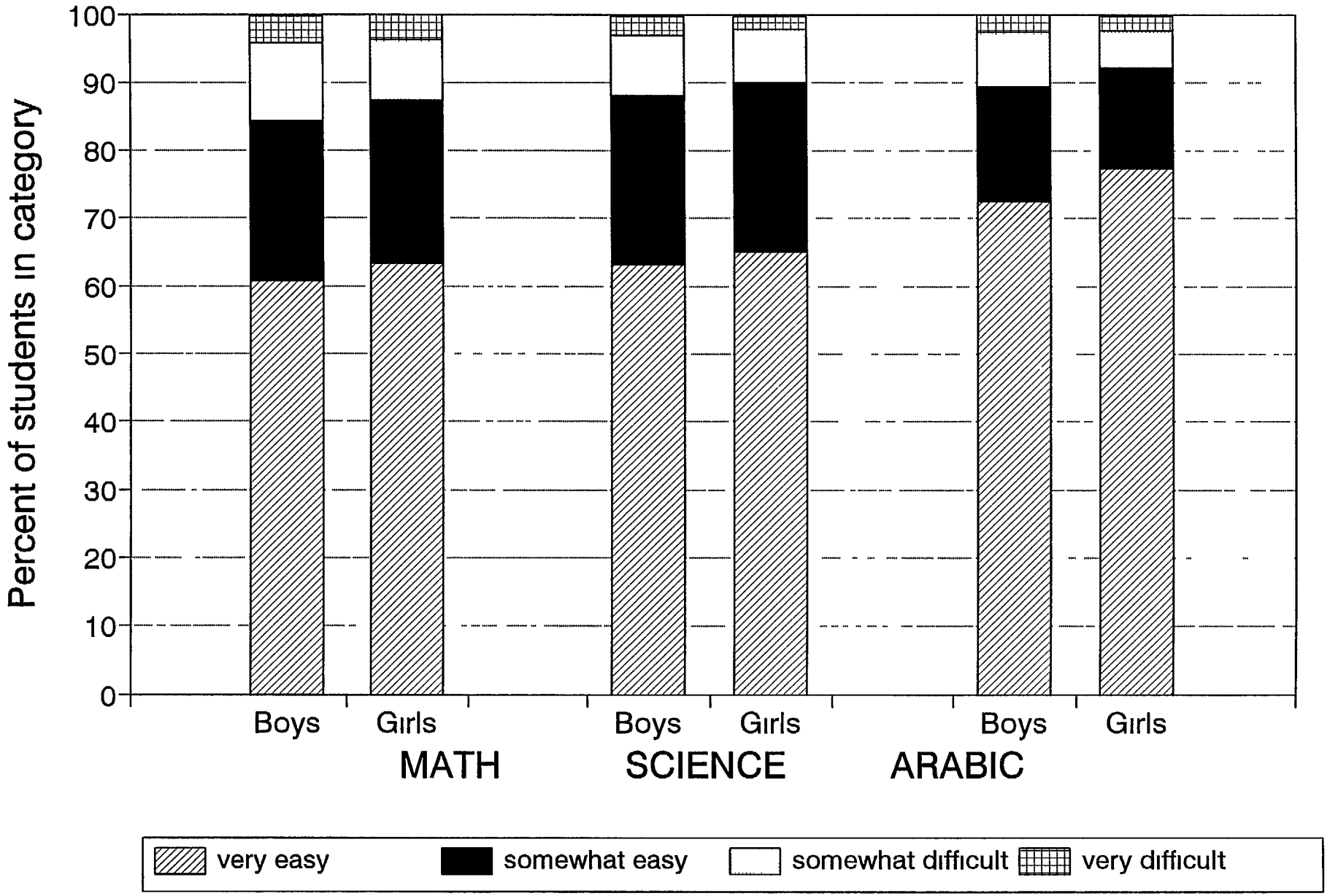


FIGURE B 5

Perceptions of subject difficulty, by student gender (Grade 3 preparatory)

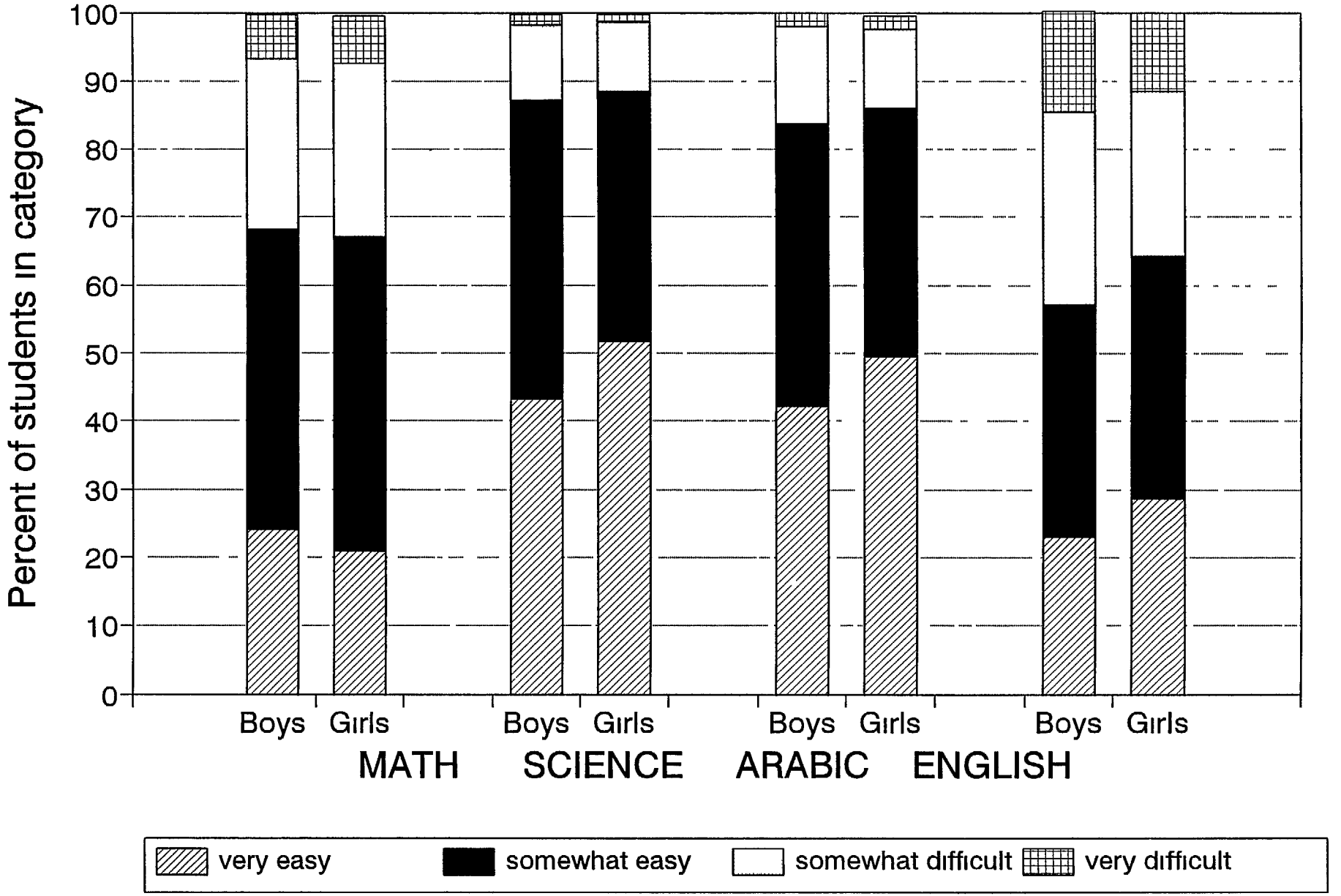


FIGURE B 6

PARTICIPATION IN SUPPLEMENTAL LESSONS

Grade 5 primary sample

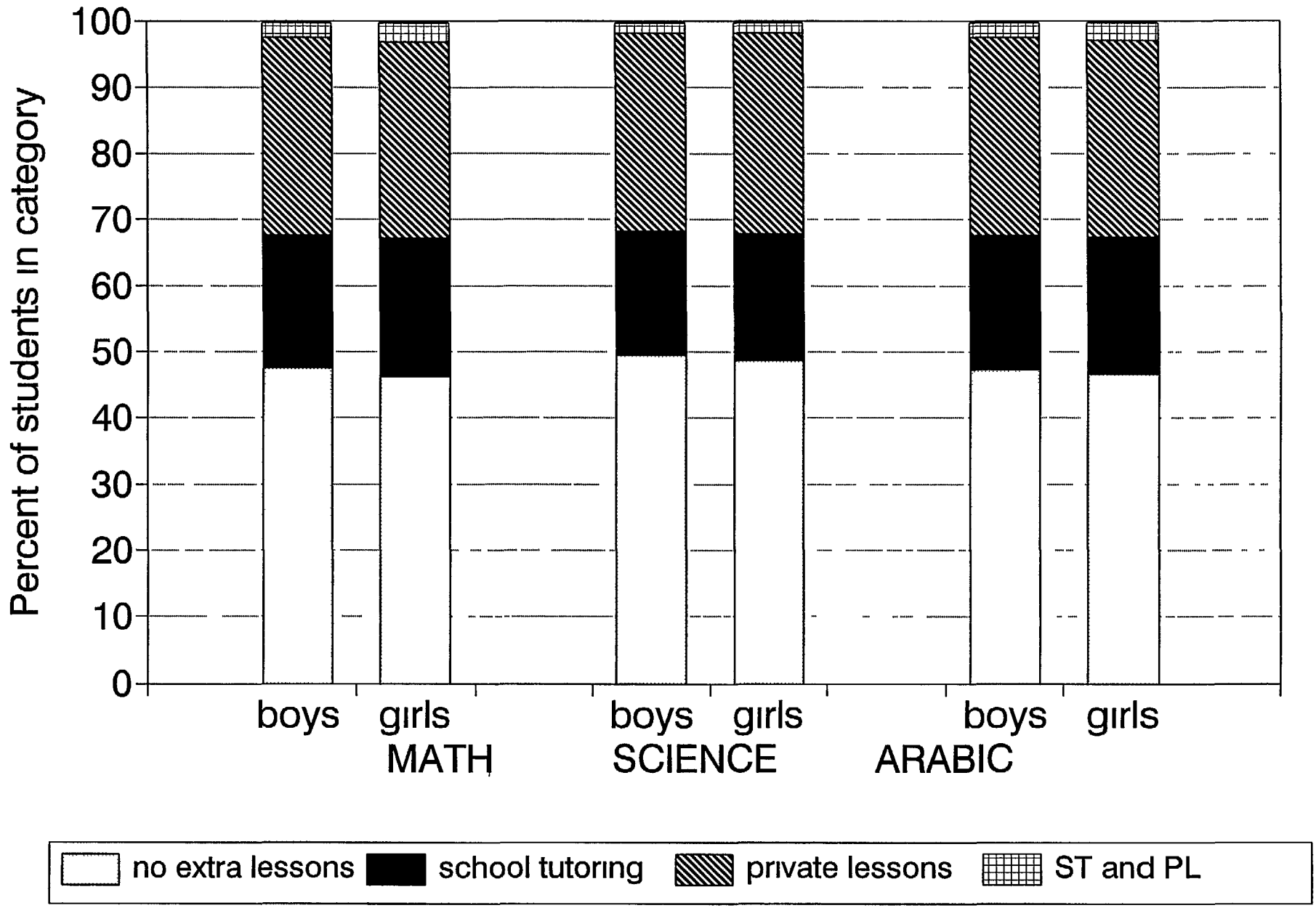
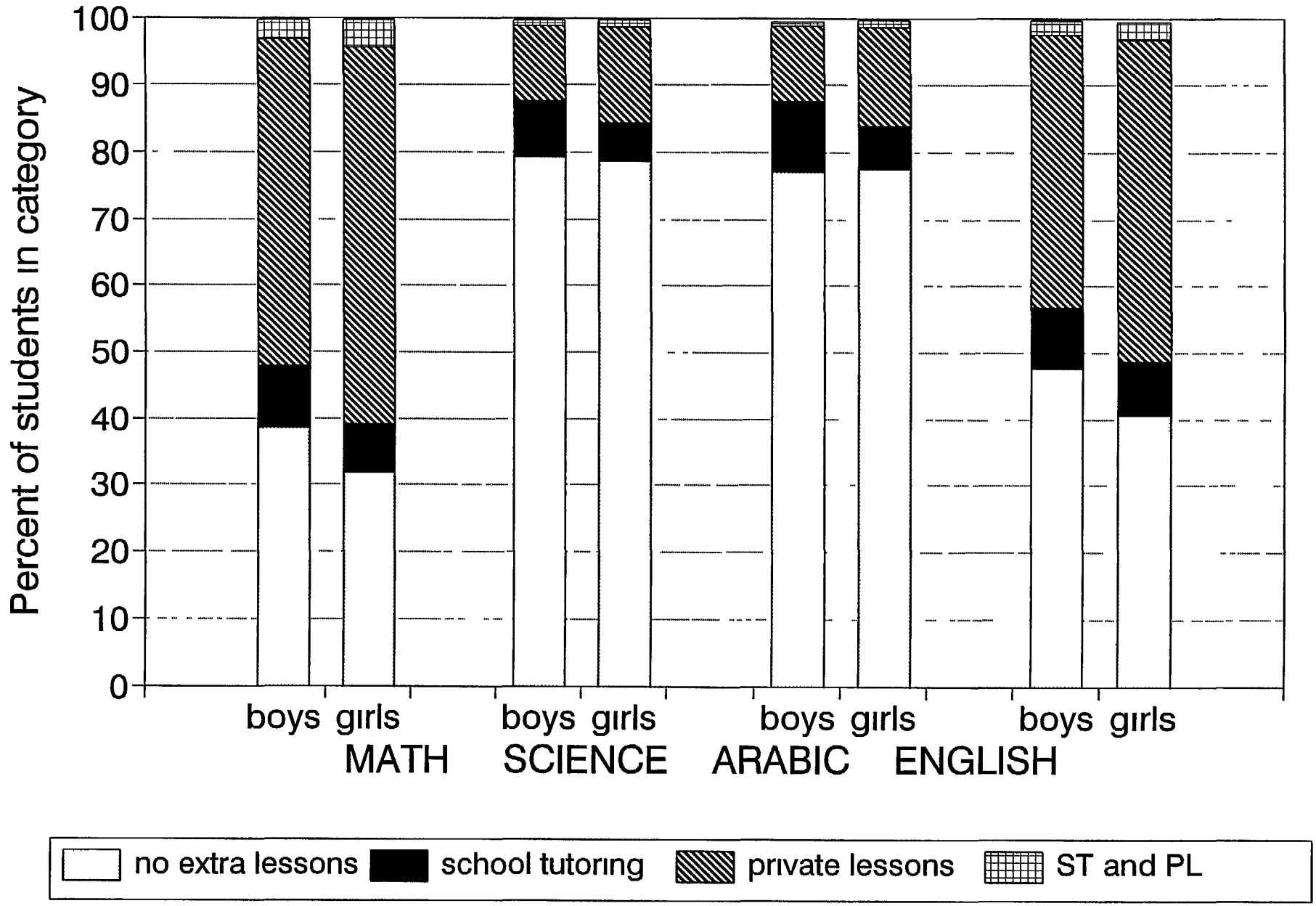


FIGURE B 7

PARTICIPATION IN SUPPLEMENTAL LESSONS

Grade 3 preparatory sample



APPENDIX C

SITE VISIT DOCUMENTATION

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Site Visit Interview Questions

- What projects or programs in basic education has your organization been engaged in between 1980-1993?

- Which of these programs, projects, or activities had an intended or unintended specific effect on girls' or women's basic education?

- For each of these projects or activities, what were the start and ending dates, objectives, type and level (MOE, school, community, household) of intervention, level of community or parent participation, cooperating groups (GOE, NGOs or donors), and total cost?

- What were the program outputs?

- What activities or interventions were successful in increasing girls' or women's participation in basic education, and which were not successful or detrimental?

- What constraints (both community- and school-based in priority order) do you believe are persistent regarding girls' access and retention?

- What are your suggestions for improving girls' and women's enrolment, persistence, and achievement in basic education in Egypt?

In addition, each interview included an open-ended, non-structured portion during which time interviewees could make additional comments if they wished

List of Contacts for Interview Study

Ministry of Education

Mohamed Abdel Hamid Al-Nisr	First Undersecretary of General Education
Dr Kawthar Kochak	Director, National Center for Curriculum and Instructional Materials Development
Sameh Said	Consultant to the Minister of Education
Ahmed Hassan	Director of Primary Education, Menya
Ahmed Saad	Undersecretary of Education, Sohag
Fergani A Latif	Director of One Classroom Schools, Menya
Saleh A Fattah A Zeid	Undersecretary of MOE, Menya
Iatidal Fam	Head of Department of Statistics and Computer, Menya

National Center for Childhood and Motherhood (NCCM)

Dr Amina El Guindi	General Secretary
Dr Alfonse Aziz	National Project Director
Ema Siam	Deputy Project Director
Luis Meleka	Senior Consultant

USAID - Cairo

Aziza Helmy	WID Program Specialist, USAID/Cairo
Mohamed Marzouk Abdallah	Project Officer
Shane MacCarthy	Education Officer, HRDC, Education and Training Office
Peter Kresge	Former Director, Education and Training Office

UNICEF

Dr Malak Zaalouk	Education Officer
Dalia Shafei	Assistant Malak Zaalouk
Manzour Ahmed	Focal Point, Sohag
Amira Malatawi	Focal Point, Sohag
Sami Gadoun	Assistant Education Officer

UNDP

Soheir Habib	Assistant Resident Representative

GTZ

Dr Burghard Claus	Head of Project Administration Service
Yasmine Hamdan	Advisor on the Adult Education Project
Ebb Augustin WID	

Canadian International Development Agency (CIDA)

Naela Refaat	National Program Coordinator

Save the Children

Dr Atallah Khattab	Director

Caritas

Magdy Garas	Coordinator
Paulette Sarkis	General Secretary
Mr Essam Francis	Caritas Focal Point, Souhag

Society for Upper Egypt

Camilla Rizkalla	Project Officer, Fundraising
Henry Khattar	Deputy Director General

Social Fund for Development

Ashraf Hassouna	Director General for Community Development
Mana El Mahdy	Assistant Officer

Care International

Samir Sabagh	Project Manager
Mr Daniel Coster	Project Manager

World Bank

Mahmoud Gamal Ed-Din

Hans Seidel Foundation

Dr Helmut Danner	Director

Third World Forum

Dr Ismail Abdallah	Director

Al-Mishkat

Dr Nader Fergany	Director

General Authority for Adult Education & Eradication of Illiteracy

Saleh Abdel Aati	Director

National Center for Education Research

Dr Abdel Fattah Galal	Director

May Shehab	Deputy Director

CEOSS

Nabil Samuel Abadir	Deputy to General Director, Development Program
Wafaa William	Head of Education Unit
Medhat Ayad	Head of Administration
Bahaa Adly	Head of Illiteracy Program
Yahia Sherif	Chairman of the City Council
Sabry Abu Hussein	Deputy Head of Local People's Assembly and Inspector General of English in Souhag
Fathy Radwan	National Democratic Party
Dr Fayez A Hamid	Menya Society

Interviewee Suggestions for Improving Girls' and Women's Persistence Enrollment, and Achievement in Primary School

1 Television in Egypt has its strong impact on public opinion and the family's attitudes and beliefs in general Television should be utilized more effectively in mobilization for literacy campaigns The mass media, to which Egyptian women have widespread access, could be used to increase awareness of the importance of female literacy and its social and educational benefits, and the linkages between literacy and health issues

2 Donors should work together, share information and create coherent packages of interventions for girls'

3 Donors should encourage the educational system, the mass media, influential officials, and natural leaders in the community, to consolidate efforts to build a new generation of women with a new outlook on themselves and their role in life and society

4 Teachers should be trained to recognize common health problems such as trachoma schistosomiasis, parasistes, live, fleas and malnutrition

5 Teachers need to be given incentives so that they are motivated to teach effectively during the school day instead of requiring students to pay for private lessons

6 Teachers need more participatory pre-service and in-service training that includes critical thinking and problem solving, gender sensitivity, and a belief in the capacity and potential of each individual and community Teachers of multi-grade classrooms should receive special training Teacher training should be provided in locations close to the communities, to enhance women's participation

7 Literacy classes should be linked with services or opportunities that women value, such as credit opportunities, field trips, etc

8 The teacher should be trained not only to be an efficient teacher, but also to be a community leader and change agent She should act as a social worker establishing interpersonal communication with the students and their families

9 Students should be given the opportunity to follow their interests and hobbies as part of the basic education curricula Emphasis should be placed on developing a child's abilities to observe, compare, analyze, and predict

10 Manual skills and handicrafts need to be incorporated into the curriculum

11 Basic education should develop the whole youngster--body, mind, and spirit--in addition to developing cognitive skills--which include learning to take intitiative and express creativity

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12 Schools should provide adequate space for students to exercise and participate in extra-curricular activities

13 Community resources should be pooled in the promotion of increased neighborhood support for adult literacy activities through community development initiatives, including community participation in the selection of literacy training centers, the establishment of 'literacy clubs' for women (and men), and the establishment of a newsletter targeted at newly literate women

14 Gender awareness training should be conducted for managers, teachers, instructors and inspectors

15 University students should be required to teach literacy to a number of illiterates as one of the requirements for graduation

16 An Egyptian-Arabic version of "Sesame Street," a television program that is highly successful in Kuwait, should be produced

17 A literacy program for women should be broadcast on television

18 Topics such as population studies, environmental protection, and tourism should be integrated into the school curriculum

19 Greater freedom and incentives should be created the private sector to increase its involvement in providing basic education to segments of the population that are able to pay for schooling

20 Rural communities should be involved in the construction and maintenance of school buildings

21 Donors should collaborate with NGOs and draw on their experience working with women and disadvantaged groups NGOs should also coordinate with each other

22 Local NGOs should be supported in their efforts to break traditional barriers and mobilize structural change in the family, e g , increasing women's status in the family

23 A computerized network of information should be created to allow for easy access to information between all participants in education, e g , all universities, schools, the MOE, etc

24 Post-literacy programs need to be created

25 Literacy programs for women should have flexible scheduling, adequate classroom space and be located within the immediate community

26 Socially sensitive curricula that cater to the specific needs of different communities need to be developed

27 Basic education should include information about men's and women's rights in Islam

28 The MOE should be provided assistance with managing its resources, and utilizing available funds to achieve goals

29 Primary and Preparatory school should not exceed 45 students

30 Parents should be involved in identifying community problems and potential solutions

31 Income-generating projects should be offered to low-income families to allow for sufficient funds to pay for the education of children Lending programs to women should be linked with opportunities for financial independence

32 The U S Commodity Import Program is one in which funds are allocated to Egyptians to procure commodities from the United States that are then purchased in LE The MOE should use this fund for education provided that the MOE will be able to monitor

33 Communities should have representation on school boards and city councils Teachers and parents should be able to affect school policies

34 Laws requiring literacy for certain jobs should be enforced more rigidly

35 Poor girls should be exempted from fees for educational services

APPENDIX D

THIRD WORLD FORUM STUDY STUDENT/PARENT RECOMMENDED STRATEGIES FOR OVERCOMING BARRIERS TO GIRLS' EDUCATION

In interviews with young illiterate women, their parents, teachers, and educational administrators, the Third World Forum study elicited recommendations to strengthen the participation of girls in schooling from those interviewed These recommendations included

- utilizing mass-media campaigns to develop attitudes and values favoring girls' education,
- minimizing the private costs of schooling,
- improving the condition of school facilities,
- improving teachers' working conditions to enhance their motivation and enthusiasm,
- improving teacher training, with special focus on instructional methods for slow learners, and making instruction more attractive to students,
- revising curriculum and instructional materials to be more attractive and relevant,
- improving communication between parents and schools, especially with regard to problems of absenteeism, and
- making schools safer environments

The young women in the Third World Forum sample were also asked if they would be willing to attend literacy classes, the "great majority" responded affirmatively Features of such programs that would be most attractive included

- afternoon (3-5 pm, urban and rural) or early evening (5-7 pm, urban only) scheduling of classes,
- single-sex classes (cited by 81 percent of urban and 44 percent of rural sample),
- female teachers (cited by 32 percent of urban, and 26 percent of rural women),
- lessons related to daily life,
- vocational training or income-generating activities,
- option to return to formal education (cited most often by younger women),

- trained teachers,
- post-training employment opportunities,
- provision for child care during classes, and
- Additional training in other subjects (such as math, religion, child rearing, first aid)

APPENDIX E

SPECIFIC RECOMMENDATIONS FOR USAID

The following specific options for female education activities are recommended for USAID/Cairo

- Collaborate with Dr Soheir Habib of UNDP, (who is coordinating female education programs conducted by donors and other agencies) to launch a campaign that leads to national dialogue on female education (see Chapter VI Recommendations) and results in national, governorate, and local action plans for universal primary education and the eradication of illiteracy and, ultimately, to effective actions by a variety of local groups

- Fund pilot projects on the creative use of television and radio to 1) educate girls and women, 2) provide in-service training for teachers (especially women teachers) in remote areas, including multi-grade classroom training where needed, and 3) create demand for basic education for females Since Sesame Street adaptations have been highly successful in others Arab countries, USAID should also fund the development of a first-rate Egyptian Sesame Street, which would have a greater impact on girls than boys, because of their socialization to be receptive and docile at an early age, allowing them to gain more from early educational interventions Also, many girls without access to school do have access to television

- Promote and support girl-friendly schools in the following ways

  --Fund NGOs that have been successfully educating girls and women in Egypt for decades--CEOSS, Association of Upper Egypt, and Caritas

  -- Support the female education program of the National Council for Childhood and Motherhood in collaboration with the UNDP, and/or the General Authority for Adult Education and Eradication of Iliteracy in collaboration with British ODA

  -- In collaboration with UNICEF, provide resources to the NGOs that work with the Community Schools Project in Sohag and Assuit to establish new schools

  -- Fund the development of new UNICEF Community Schools in a specific geographical region and receive credit for USAID--e g the "USAID-UNICEF Alexandria Community Schools "

  -- Fund Save the Children to set up schools adapted for Egypt from their successful participatory "Ecole du Village" community schools in Mali

-- Hire contractors (including project management personnel) to Create USAID community schools adapted from the UNICEF, Save the Children, and BRAC models

- Address important constraints related to female education

  -- Support the Cairo Family Planning Association's and CEOSS' education about the detrimental effects of female genital mutilation

  -- Promote comprehensive Egyptian civil service reform through policy dialogue

- Measure realistic indicators of short-term program success System-level impacts such as policy changes, reallocation of resources, better teacher training, greater number of classrooms, and the implementation of equity programs are frequently attainable within 1-10 years after the reforms are begun However, the student-level impacts of increased enrollment rates, decreased gender gap, increased completion, and reduced repetition and dropouts are longer-term program outcomes that may not be measurable for over a decade after reforms are implemented Likewise, people-level impacts of increased literacy, numeracy, household income, and reduced fertility and infant mortality may only be realized in 10-35 years

- Start with and maintain a high-level of program flexibility that allows for continual and/or substantial adjustments in response to lessons learned

Unfortunately, non-project assistance (NPA) in education is not appropriate for Egypt at this time The MOE lacks the institutional capacity to manage educational reform NPA in education may be appropriate after a comprehensive reform of the civil service promotion policy

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  -- Support the Cairo Family Planning Association's and CEOSS' education about the detrimental effects of female genital mutilation

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