REVIEW OF PPC/WID DOCUMENTS:

LESSONS LEARNED IN EDUCATION

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GENESYS

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LESSONS LEARNED IN EDUCATION

In reviewing PPC/WID's eight documents on education, some interesting findings, lessons, and statistics have emerged. Bear in mind that this is by no means a scientific survey nor an exhaustive search of all the literature that exists on the topic. There are, however, some conclusions and recommendations that can be drawn from this sample, as well as indicators of where further research is needed.

LCONSTRAINTS TO EDUCATION AND STRATEGIES FOR INCREASING ACCESS

KEY FINDINGS AND CONCLUSIONS:

(1) A complex interaction of political, school and household factors determine girls' access to education. Both supply and demand variables are important as determinants of access to education.

This finding appears in three of the documents reviewed.[1]

(2) Attending to educational development in general will not be enough to achieve "education for all". Specific attention must be paid to female education.

This finding appears in two of the documents.[2]

(3) Demand factors are important to understanding gender gaps in education. Demand factors include expected rates of return in labor markets and the opportunity costs of gender specialized tasks such as child care.

This was noted in three of the documents.[3]

(4) Studies suggest that expected gender gaps in paid employment options probably are a significant factor in inducing a gender gap in formal schooling and other forms of education, the payoff to which is largely in the labor market. Expectations of better access of women to labor market options will induce increased demand for their education. To the extent that this is the case, policy changes that lessen gender differences in labor market conditions that are unfavorable to females are likely to induce more female education. Training women for growth occupations and eliminating wage and employment discrimination can spur education investment for girls.

This finding appears in two of the documents.[4]

(5) The school environment has a stronger influence on girls' than boys' school attendance. Girls are sometimes kept away from school by their parents when the parents do not feel that the facilities -- such as bathrooms, dormitories, and eating facilities -- are appropriate for girls.

This was noted in two of the documents.[5]

(6) Regarding locations for schools, project experience shows that the mobility of girls and women is often more restricted than that of boys or men. One study shows that girls often have to carry younger siblings with them as they go to school so that, simply because of the carrying weight of

these children, girls cannot go so far to school as boys might be able to.[6]

(7) Convincing parents of the value and benefits of their daughters' education with social marketing campaigns and other types of demand-enhancement programs aimed at parents is critical to increasing girls' access to and completion of schooling.

This finding appears in three of the documents.[7]

(8) The female students themselves need to be convinced that they can improve their academic performance and expand their occupational aspirations. They need female role models in order to see that other career choices exist and are attainable by women. Teachers play an important role in students' perceptions about their potential. Encouraging women to become teachers, and especially at higher levels of teaching, may provide important role models for girls in school and increase their and their parents' perceptions of the relevance of education for future, acceptable employment.

This conclusion was reached in two of the documents.[8]

(9) Parents will send their children to school, and children will continue in school, only if they perceive the education to be relevant to their lives. The content of the curriculum must reflect explicitly the usefulness of the education for both girls and boys.[9]

(10) The opportunity cost of time of older daughters in household production activities (including care of younger sick siblings) has a substantial negative effect on their school attendance. When girls with younger siblings are required to take care of these younger children, the provision of day care at a school can increase the attendance rates among girls.

This was noted in three of the documents, across regions.[10]

(11) Experimental programs are underway in the developing world that suggest that access to females can be improved effectively with satellite feeder schools for the initial grades in remote rural areas, flexible hours, hours that do not conflict with other activities of girls, and perhaps greater flexibility in seasonal patterns. Flexible hours and arrangements can attract girls to school. In Maharashtra, India, for example, classes were offered from 7 to 9 p.m., and girls constituted over 70 percent of the students.

This was noted in two of the documents.[11]

(12) Both the quality of education for girls vis a vis boys, and the retention rates for girls can be affected by the provision of equipment and supplies.[12]

(13) Younger women are more likely to have attended school than older women, indicating the significant gains in women's education that have occurred over the past 40 years.[13]

(14) The availability of schools with female teachers can also determine the effective supply of schools. One strategy that has proved effective in boosting the female teacher supply in rural areas has been to place teacher training institutes in rural areas, actively recruit females from the area, and after training them place them in schools near home.[14]

(15) Scholarship programs providing direct assistance to parents have proved to be a strong incentive to educate daughters.[15]

VALUABLE STATISTICS:

- In the lowest income countries, the primary school enrollment rate of boys was 20 percentage points higher, on the average, than that of girls from 1965 to 1985.[16]
- In 1985, there were 145 million school-age children who did not have access to primary education.[17]
- Rough estimates suggest that only one out of two women in Asia is literate, and only one out of three in Sub-Saharan Africa.[18]
- From 1965-1985, in the lowest income countries, the primary school enrollment rate of boys was 20 percentage points higher, on average, than that of girls.[19]
- In low-income countries, only 1/3 of primary, less than 1/4 of secondary, and just over 1/10 of tertiary education teachers are women.[20]

II. ECONOMIC AND SOCIAL IMPACTS OF FEMALE EDUCATION

KEY FINDINGS AND CONCLUSIONS:

(1) The education that a woman receives is one of the major determinants of the well-being of the woman and her children. Education makes women better mothers. The effects of female education on infant mortality are among the most persuasive arguments for attention to girls' schooling. Women who attain higher levels of education are more likely to utilize health services for themselves and their children. As a result, their children are both more likely to survive through infancy and early childhood and to grow normally.

This finding appears in four of the documents.[21]

(2) Education, in most cases, leads to a desire to have fewer children and to educate those children. Women who attain higher levels of education have fewer children and are more likely to use family planning to space the births they have. Fertility rates generally decrease as the proportion of women with some education increases.

This was noted in two of the documents reviewed.[22]

(3) The positive outcomes of girls' primary education are conditioned by the prevailing economic, social, and cultural environments.

This finding appears in two of the documents.[23]

(4) Girls' primary education results in more active participation by women in the labor force, whether in rural or urban areas. Thus, countries are likely to gain in terms of productivity and

growth from female education.

This was noted in three of the documents.[24]

(5) Girls' primary education results in better skills and thus enables women to learn new methods of operation that make them more productive members of the labor force. But such potential is only realized if the employment opportunities exist for women.

This was noted in two of the documents.[25]

(6) In addition to the socioeconomic benefits for women and their families, education empowers women to exercise their rights and responsibilities as citizens of their society, and enables them to make more efficient choices.[26]

VALUABLE STATISTICS:

- Infant and child mortality levels tend to decrease as the proportion of women 15-49 with some education increases.[27]
- A 1 percentage point increase in girls' enrollment rates is associated with a 0.9 per-thousand decrease in infant mortality 15 years later.[28]
- In a UN study using data from 115 countries, maternal literacy had a higher correlation with life expectancy at birth than any other factor.[29]
- A 1% increase in the proportion of girls going to school today is associated with a 0.75% increase in the female labor force participation rate when those girls enter the labor force.[30]

III. VOCATIONAL TRAINING

KEY FINDINGS AND CONCLUSIONS:

(1) Vocational training for women can prepare them to perform new, higher-productivity roles if and only if there are no other major barriers to female employment in those areas for which they are trained.[31]

(2) Girls and women often do not hear about training opportunities because these are announced in places or through media to which they do not typically have access or familiarity.[32]

(3) Locations and timing of training opportunities will either encourage or discourage female involvement.[33]

(4) There seems to be a growing consensus on the lesser effectiveness of vocational versus general education in schools. Training carried out in industrial institutes and vocational secondary schools tends to appear less cost-effective than informal, firm-based training and short courses

tend to appear more cost effective than long courses.[34]

(5) Because of limits to female mobility, it is essential that training be provided in places where females can actually attend, and that facilities meet the special needs of females. Provision of child care is also important.[35]

(6) Recruitment of females for vocational training projects may be helped by establishment of prerequisites for training that accurately reflect the available pool of female trainees.[36]

(7) Due to admission restrictions and student choice, women tend to be concentrated in narrow areas of study within vocational and post-secondary education.[37]

IV. AREAS FOR FURTHER RESEARCH

(1) Research is needed on the role of Koranic schooling in imparting literacy and numeracy skills to girls.

(2) Research should be undertaken on the impact of primary education on women's participation and performance in the self-employment and informal sector activities.

(3) Further research is needed to understand how education alters women's self-confidence, self-esteem, and notions about their role in society. Does this occur, and under what circumstances?

(4) More research should be done on increases in women's decision-making power due to education.

(5) There is a need for systematic analysis of educational impacts on women's access to formal and informal credit sources.

(6) Researchers should investigate the relative returns to forms of female education other than schooling.

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DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN ✓	Multi	Other
Region	AFR ✓	LAC ✓	APRE ✓	ENE ✓			
Audience	TR ✓	POL ✓	TECH ✓	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: Anderson, Mary B., Ph.D. GENDER ISSUES IN BASIC EDUCATION AND VOCATIONAL TRAINING. The Gender Manual Series. Washington, DC: PPC/WID, February 1986.

COUNTRY:NA

ABSTRACT:
This manual is for planners, designers, implementors and evaluators of basic education and vocational training projects to provide ideas about when and how to integrate girls and women into projects so that the likelihood of achieving project objectives and purposes is improved. The first section focuses on the five areas in which AID support to education projects has most frequently been given; the second section deals with vocational training. In both sections, the author identifies where there are implications for gender and what to do to act on these implications to make a better project. Additional sections examine gender issues in project evaluations and data collection. [31 pp]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

BASIC EDUCATION PROJECTS

The manual presents three rationale for the inclusion of girls and women in basic education projects: economic, equity, and health/demographic. First, because women and girls are active producers in the economies of all countries, and because they are often engaged in low-productivity activities, an investment in their education may result in significant returns in areas otherwise exerting a negative effect on overall economic growth. Because education is a resource for future development, failure of a society to provide basic education to one-half of the labor force will result in a failure of these workers to be able to take advantage of investments in higher levels of training and skills development later.

Second, if education is a benefit of development, then it must be made equally available to all citizens regardless of sex, etc. Because basic education is often a requirement for access to additional training or other

resources, those who are denied access at the basic levels tend to fall farther and farther behind, thus increasing inequity over time.

Third, investments in education for women will both improve infant and family health and reduce fertility. The economic implications of these demographic effects are also important.

Project experience verifies the above statements. This was borne out in an extensive review of A.I.D. projects in education in 1985, carried out as a part of a more comprehensive evaluation of projects from many sectors for their impact on and involvement of women.

Construction/Renovation

Schools can be built so that access to education is extended to new groups or so that existing patterns of privilege and access are reinforced. It is important to find out who wants schools and how this desire was translated into the decision to undertake school construction and/or renovation.

Project experience shows that women are frequently not represented in traditional community forums and that project priorities set in these forums have, in some cases, not reflected general community desires. While women may be physically present, they may not be free to speak out.

Regarding choice of locations for schools, project experience shows that the mobility of girls and women is often more restricted than that of boys or men. One study shows that girls often have to carry younger siblings with them as they go to school so that, simply because of the carrying weight of these children, they cannot go so far to school as boys might be able to.

Regarding choice of facilities to be provided in the schools, where societies provide education in sex-segregated facilities, project planners must be alert to which schools or classrooms are being constructed and renovated and who uses them. Some studies of the availability of rural school, for example, have shown that sufficient schools exist for all school age children in a rural area, but when one examines whether the schools are for boys or for girls, one finds inadequate places for girls and an oversupply of places for boys.

Where boys and girls go to school together, project experience has shown that girls are sometimes kept away from school by their parents when the parents do not feel that the facilities are appropriate for girls. For example, in most societies girls are not allowed to use the same toilet facilities as boys. Boarding schools clearly require dormitory facilities for both girls and boys if both are to attend (and, at the level of vocational training, this simple fact has often been overlooked).

When girls with younger siblings are required to take care of these younger children, the provision of day care at a school can increase the attendance rates among girls.

Even though classes may be provided on a coed basis, it is possible that eating facilities need to be segregated for girls and boys.

When there is any tracking of girls to certain classes (such as homemaking) and boys to others (such as shop), the provision of equal and adequate facilities for each subject area has ramifications for gender inclusion.

Regarding the choice of levels of schools to be constructed, there are also gender issues to be considered. Attendance, retention and completion rates in primary school are often lower for girls than for boys. Therefore, if a project focuses on building classrooms and facilities at the secondary level rather than at the primary level, it may inadvertently be favoring education for boys over girls.

If, however, girls' attendance rates in secondary schools are low as a result of inadequate spaces and/or facilities for them at this level, then a concentration on provision of classrooms at the higher level may both encourage girls to finish primary school (since they can see opportunities for continuing on) and increase female attendance rates at secondary level.

Regarding the phasing of the construction and renovation, project experience shows that priority is often given to construction of special facilities needed for boys (such as boys' dormitories before girls') and when this is coupled with unpredicted inflation or other cost problems, follow-through on construction of facilities for girls sometimes fails.

In addition, when schools for boys are built before those for girls, or when facilities targeted for use by boys are provided before those for girls, a message is sent to parents, community people, and students that the

former are more important than the latter.

Equipment and Supplies

Regarding the identification of the need for equipment and supplies, project experience shows educational quality is affected by equipment and supplies available in the classroom, and that quality of education has a direct impact on retention rates in school. More often, rural schools receive fewer and lower quality supplies than urban schools; girls' schools receive fewer and lower quality supplies than boys' schools. Thus, both the quality of education for girls vis a vis boys, and the retention rates for girls (and for rural students) can be affected by the provision of equipment and supplies.

In terms of the choice of equipment and supplies, gender must be taken into consideration as well. Project experience shows that, because of differences in their social and economic roles as women and men, boys and girls perceive the relevance of education differently. Parents of children also perceive relevance differently for their girls and boys. Insofar as equipment is related to particular future roles of one gender or the other, the way in which it is provided can make a difference as to whose education encouraged and whose is not. (e.g. provision of fancy equipment for science laboratories as compared with equipment for sewing or homemaking classes.)

In addition, decisions about what equipment to provide to whom can affect girls' future possibilities (as when science equipment is provided to girls' schools or when girls are provided with and taught to use farm equipment not traditionally used by women).

Teacher Training

In some situations where teaching is primarily a female occupation, project experience has shown that providing in-service training can result in increases in both the prestige and incomes of teachers.

Where teaching is a male occupation or shared by both genders, project experience shows that the way in which training is provided may either treat women equally with men or disadvantage women relative to men.

Encouraging women to become teachers, and especially at higher levels of teaching, may provide important role models for girls in school and increase their and their parents' perceptions of the relevance of education for future, acceptable employment.

Experience also shows that methods for transmitting information regarding training opportunities often exclude the possibility that women will hear of these. Recruitment must be designed in such a way as to reach potential female as well as male candidates.

Some projects have designated numbers or percentages of women to be targeted in training but have, at the same time, specified prerequisites for training, such as levels of educational attainment or numbers of years in teaching, that simply cannot be met by the given population of women. These projects fail to achieve their objectives.

Curriculum Development and Design

Parents will send their children to school, and children will continue in school, only if they perceive the education to be relevant to their lives. Because every society has a gender-based division of labor and division of roles, children and their parents assess the relevance of education as it relates to the probable future roles and work of men and women. In their view, girls must be prepared to do what women do; boys to do what men do.

Curriculum can address gender roles either by being designed to fit with existing roles and to educate children to be productive in them or by attempting to alter traditional roles and provide new opportunities for girls and boys to meet the challenges and needs of a modernizing society.

In some societies, parents will not invest in education for their girls because they see that whatever gains will come from the education will accrue to the family of the girl's husband once she is married.

In terms of the content of curriculum, whether educating students for traditional or nontraditional roles, the content of the curriculum must reflect explicitly the usefulness of the education for both girls and boys. For example, books which introduce technologies for agriculture in areas where women do the farming must include pictures of women using the new technologies.

When reading is taught using materials that relate to the daily lives of girls and their roles as women, and boys as men, relevance is increased for both rather than all reading relating to male activities alone.

Administration and Management

The issues that relate to gender in this area are of two types: those that deal with providing equal opportunity to women to become administrators and managers; and those that deal with setting up administrative and management systems that take account of gender differences and with training administrators and managers to be aware of the importance of considering gender as they perform their jobs.

VOCATIONAL TRAINING PROJECTS

The manual offers the following rationale for vocational training for girls and women: girls and women are frequently employed in low-income, low-productivity occupations. Hence, skills training in these areas may improve their productivity in these areas, or enable them to switch out of these occupations and into other employment, thus adding to overall development.

The growing number of female-headed households around the world means that more women are sole supporters of their families. Vocational training may provide them with the additional skills they need in order to provide adequately for themselves and their children.

Areas which suffer shortages of male labor due, for example, to out-migration, can fill these shortages by training women to take up labor roles formerly filled by men.

Project experience shows that vocational training for women can prepare them to perform new, higher-productivity roles if and only if there are no other major barriers to female employment in those areas for which they are trained.

In every society in the world there is a gender-based division of labor, though these divisions vary both from place to place and over time. In some countries the division of labor is rigid and based in religion or belief systems; in others, it is less rigidly held. In many areas, traditional labor assignments by gender are changing.

Recruitment

Girls and women often do not hear about training opportunities because these are announced in places or through media to which they do not typically have access or familiarity.

Locations and timing of training opportunities will either encourage or discourage female involvement.

Because recruits to training are often more mature girls or women, they often have other major household responsibilities. Even low-paying employment may be difficult to give up. Therefore, some payment may be necessary during training to free them for participation.

Even training programs which intend to recruit females often establish prerequisites for entry to the training program that cannot be met by most otherwise interested and available trainees.

Girls and women may be reluctant to undertake time consuming and difficult training for jobs for which they fear they will never be employed, because of tradition or because they lack knowledge about opportunities.

Employment

Employers may refuse to hire even well-trained females because of prejudice, tradition or worry that they will not actually be able to do the job.

Experience has shown that, in some cases, employers hire females in order to get labor at lower wages and that they consistently pass over their female employees for promotions.

Location of and Facilities Provided in Training and Employment

Because of limits to female mobility, it is essential that training be provided in places where female can actually attend, and that facilities meet the special needs of females. The issue of location is even more important in Vocational Training projects, however, because not only must the training be provided in suitable locations, but also employment that follows training must be suitably located for women.

Facilities must also be suitable in both training and employment locations, and because trainees are apt to be older and to have children, provision of child care becomes particularly important. This is of course even

more true when female heads of households are being trained.

PROJECT EVALUATION

Gender is often left out of project evaluations because it is assumed that benefits, if realized through the project successfully, will flow to everyone equally. Given the gender issues discussed above, this is clearly not the case. Girls and women have not had equal access to entry nor equal retention rates in schools and training programs. To assess real project effectiveness, A.I.D. should always insist that project evaluations disaggregate results and outcomes by gender.

DATA COLLECTION

Project planners and managers are often appalled at the introduction of the gender factor into projects, seeing this as another area in which information has to be gathered and another set of special interests addressed. When project planners become convinced that there are "real" issues of gender that affect project objectives, they still feel that the costs of gathering all the relevant information needed to integrate females projects are extraordinarily high and that A.I.D. will simply not allocate the resources necessary to collect this information.

Much information is, however, already available and much can be easily and inexpensively gathered during normal PID and design of projects. It is not necessary to hire female anthropologists to gather all the data on gender role divisions in all villages in order to integrate gender into A.I.D. projects.

VALUABLE STATISTICS:

POLICY FINDINGS AND RECOMMENDATIONS:

The manual provides clear, precise questions for A.I.D. planners to ask and ideas of what to do at different points in the project cycle to address the gender issues stated above. For example, recruitment of females for vocational training projects may be helped by:

- Incentive payments that help cover opportunity costs
- Location of training where it is possible for trainees to travel
- Timing of training to fit girls'/women's schedules given their other household obligations
- Assurance that employment will exist after training is completed
- Establishment of prerequisites for training that accurately reflect the available pool of female trainees.

See "A.I.D. Questions" and "What to Do" sections of manual.

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN ✓	Multi	Other
Region	AFR	LAC	APRE ✓	ENE ✓			
Audience	TR	POL ✓	TECH	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: Behrman, Jere R. INVESTING IN FEMALE EDUCATION FOR DEVELOPMENT: WOMEN IN DEVELOPMENT STRATEGY FOR THE 1990s IN ASIA AND THE NEAR EAST. Washington, DC: GENESYS, January 1991.

COUNTRY:

ABSTRACT:
This paper surveys the current state of knowledge regarding female education and development, with particular reference to countries in the Asia and Near East region. The major objective is to provide perspective for Women in Development (WID) and educational strategies in the 1990s in this region. Such a survey points to what we do -- and what we do not -- know about this topic, with implications both for immediate policies and for research to provide a better foundation for future policy formulation. [136 pp + References]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

Gaps in school enrollment rates have diminished over the past two decades throughout the Asia and Near East regions and may have been eliminated in Sri Lanka and in some East Asian countries. Nevertheless, they remain considerable in many countries. Even though the gap between female and male educational investment (at least in enrollments) has been declining in the Asia and Near East regions in recent decades, gender gaps in the stock of educated adults are likely to remain for decades in most countries in the regions.

Enrollment rates refer to levels of investment in formal schooling. Evidence of gender gaps in other forms of educational investment (e.g. informal, vocational) is very sketchy, but seems to suggest similar patterns.

One has to be careful about not misinterpreting associations between female schooling and various outcomes in areas such as wage rates and child health. It is important to consider the fact that educated females are not selected randomly. These women and girls are likely to come from family or social backgrounds which are more supportive of female education and may have greater intellectual ability or motivation. Therefore, if

one wishes to identify the effect of increases in female schooling on various outcomes, all of these other characteristics -- some of which are difficult to measure -- must be controlled.

As a result, interpretations of many of the existing empirical studies of female education in the Asia and Near East regions and elsewhere in the developing world are ambiguous. But there are recent studies which attempt to control better for such empirical problems. These studies suggest that demand factors are important to understanding gender gaps in education. Demand factors include expected rates of return in labor markets and the opportunity costs of gender specialized tasks such as child care.

Available studies suggest that expected gender gaps in paid employment options probably are a significant factor in inducing a gender gap in formal schooling and other forms of education, the payoff to which is largely in the labor market. To the extent that this is the case, policy changes that lessen gender differences in labor market conditions that are unfavorable to females are likely to induce more female education. But with regard to formal schooling, this is a long process given the gestation for such education. A study in Indonesia also suggests that improvements in health of young children and infants may have a substantial positive effect on secondary schooling of girls by reducing their time spent home with sick younger siblings.

It should be noted, however, that the gender gap in wage rates does not necessarily imply a gender gap in rates of return to educational investments (in terms of economic productivity). To the contrary, the rates of return on investments in post-primary schooling are higher for females than for males according to recent estimates for Southeast Asia.

Also, in addition to demand factors, supply is important in some contexts. One study on Pakistan, for example, reports that elimination of the gender gap in primary schools would eliminate from half to all of the gender gap in cognitive achievement. The study in Pakistan suggests that in rural areas of that country, the largest factor underlying a large gender gap in cognitive achievement is a gender gap in the public provision of schools, though a gender gap in the determinants of indicators of pre-school ability -- presumably reflecting primarily differential treatment of and role models for small children in the household -- also plays a substantial role.

While studies have been done on the impact of female education on paid labor market outcomes and on nonmarket outcomes in the ANE region, the author finds these studies to be misleading. "Failure to control for factors such as individual ability and motivation, household encouragement, the quality of schooling, and community learning and employment opportunities, seems to result in substantial overestimates of the impact of female schooling in standard studies. Estimates that control for such factors imply that the true impact of female schooling on both paid labor market and other outcomes is substantially less than often claimed." This review of studies to date suggests that probably the conventional wisdom based on standard estimates exaggerates the impact of women's schooling on various outcomes, though there is some counter evidence and a need for further research.

Although recent systematic studies suggest that the impact of female schooling on paid labor force participation and other outcomes is substantially less than often claimed, the effects of female schooling appear to be far-reaching and important. These recent studies also examine certain effects that are not usually included in most studies of female education. An example would be the effect of substituting women's and men's schooling in household production, keeping in mind important gender and generational relationships.

Countries in the ANE region and elsewhere are likely to gain in terms of productivity and growth from female education. This is not to say, however, that the available estimates suggest a strong reason for policies that induce more investment in female education considered in isolation on efficiency grounds. That the productivity effects in a range of activities of female education probably are considerable does not imply that there is an efficiency reason to have policies that subsidize directly or indirectly female education. In the available studies, the estimate effects are basically private effects, not social effects.

Despite the fact that average wages are higher for males than for females in the ANE countries, it is possible that the rates of return to education are higher for females than for males -- and in fact, several studies of ANE countries find that result. Behrman and Deolakiar consider the gender gap in estimated returns to

formal schooling in paid labor markets in Indonesia.[1] They observe that in these markets, as elsewhere in the region, there tends to be a substantial gender wage differential favoring men. However, differences in wage rates are not the same as differences in rates of return to investing in education. Their estimates of the rates of return to primary schooling indicate no significant difference between men and women. However, for most types of post-primary schooling, the estimated rates of return are significantly higher for women than for men.

This paper considers policy implications of female education. One major motivation for policy implications is the possibility of reducing market distortions, thereby allocating resources efficiently and benefitting a greater number of individuals. Market distortions reflect differences in private and social perceptions of costs and benefits of education. For example, if greater numbers of well educated women effect a reduction in the spread of contagious diseases, then private incentives to invest in female education are likely to be inadequate to support this larger social good; private incentives are unlikely to incorporate the benefit to others of a reduction in contagious diseases.

Although it is often claimed that there are major efficiency reasons for investing in female education because of such externalities, there is very little evidence on the existence or importance of such externalities and their relationship to female education. Efficiency justifications for policy interventions that favor female education seem to be based primarily on speculation. Nevertheless, there does not appear to be an efficiency justification for the present gender gap in education and, therefore, transferring resources from male to female education would probably increase efficiency. The estimates tend to indicate that the rates of return in economic terms are equal or higher for investments in female than in male schooling. In addition, evidence on the nonmarket impact of female education reinforces somewhat the argument for shifting resources from male to female education. To the extent that the present gender gap in school enrollments in most ANE countries arises from policy-related supply considerations, then efficiency considerations argue for elimination of the gender gap in schooling supplies that currently favors male enrollments. Effectively there are policy-based distortions, the removal of which would increase efficiency. To the extent that the enrollment gaps are due to demand factors, then the implications are less clear, depending upon the nature of such factors.

A second major motivation for policy interventions in education is the issue of equity which argues strongly for the elimination of gender gaps in education. There seems much less ambiguity regarding equity than regarding efficiency in considering female education in isolation. If society were to weigh all persons equally, the present gender gap in formal schooling enrollments in most ANE countries is inequitable.

VALUABLE STATISTICS:

- Between 1965 and 1987 in all of the ANE countries for which data are available for both males and females at every level of schooling, enrollment rates increased.

- Enrollment rates generally, but not in all cases, expanded more rapidly for females than for males between 1965 or 1970 and 1987 in the ANE countries.

- Relative to countries in the same income groups, in 1987 female primary and secondary enrollment rates tended to be low. At the primary school level, only for Sri Lanka in South Asia, Tunisia in the Middle

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[1] Behrman, Jere R. and Anil B. Deolalikar. "Are There Differential Returns to Schooling by Gender? The Case of Indonesian Labor Markets," Philadelphia: University of Pennsylvania, mimeo, 1990.

East/North Africa, and for Indonesia, Philippines and Malaysia in East Asia are values above the relevant country means reported. At the secondary school level, only for Sri Lanka in South Asia, Philippines and Thailand in East Asia, and Egypt are the values above the respective means.

- Female illiteracy rates exceed the overall illiteracy rates in every country in the ANE region, in many cases by more than ten percent. For example, in Bangladesh in 1985, the female illiteracy rate was 78% as compared to a total illiteracy rate of 67%. In Egypt, the female illiteracy rate was 70% as compared to a total rate of 56%.

POLICY FINDINGS AND RECOMMENDATIONS:

Policies Related to the Demand for Female Education:

The analytical framework suggests than an important determinant of female education is various components of household demand for such education. This demand, in turn, is related to current or expected conditions in various markets and regarding public services, as well as to current and expected nonmarket activities and gender specializations.

Common sense and the analytical framework suggest that one important component of the demands for education is the expected impact on subsequent outcomes. Therefore it appears that expectations of better access of women to labor market options would induce increased demand for their education of various forms. Such expectations might be formed in part by policies that serve to eliminate any discrimination against women in those markets, which would have efficiency gains as well in terms of the use of women currently in the labor force or who would be encouraged to join the labor force with such changes.

Demands for education are household demands that reflect the overall allocation of resources that occur within the household and the various constraints under which the household operates. This means that there is a great range of policy induced changes that might affect investments in female education. The opportunity cost of time in household production is greater for girls than for boys, given gender specialization in tasks. Some of the studies summarized in this review, for example, suggest that the opportunity cost of time of older daughters in household production activities (explicitly in one case, care of younger sick siblings) has a substantial negative effect on their school attendance.

One study in Indonesia finds that the burden of care of sick younger siblings falls almost exclusively on the teenage daughters.[2] One possibly important implication of this result is that a positive effect of improved health care for infants and small children is likely to be greater schooling investment for their older sisters. In such a case, policies that led to improved health of younger children and infants would induce more schooling attendance for older girls and also might induce more training and stronger job attachments for older females. Such possibilities mean that the efficiency and equity arguments for policies that improve child health may be stronger than it would appear from considering only the direct effects on child health, and should be incorporated into the analysis of such policies.

A related issue is the nature of child-care arrangements. If household structure in the ANE region continues to change so that nuclear households become more common, the nature of child-care arrangements

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[2] Pitt, Mark M. and Mark R. Rosenzweig. "Estimating the Behavioral Consequences of Health in a Family Context: The Intrafamily Incidence of Infant Illness in Indonesia," International Economic Review, 1990.

may be of increasing importance for female education directly (both for schooling for older daughters and for training for women) and indirectly (by affecting expectations regarding labor market and own-enterprise options and the possibilities of more extensive job attachments). Though there are not systematic efforts to explore the impact of alternative child-care arrangements in the ANE region that were uncovered in this survey, this is likely to be a topic of increasing interest. Some pilot projects well might be warranted. There are examples from other developing countries that are suggestive. A Colombian community day care program, for instance, is said to have freed about 200,000 girls and an equal number of women to attend school or work, with an estimated coverage to expand to 1.5 million by 1992. In Ghansu province in China, for another example, some schools allow girls to bring their siblings to school.

Policies Related to Supply Side for Female Education:

If educational institutions become more available, at least in some contexts in the ANE region, the impact is likely to be substantial. A study of 800 families in rural Pakistan concludes that the gender gap in (single-sex) school availabilities accounts for the majority of the rather large gender gaps in schooling attendance, completion of various schooling levels, and cognitive achievement.[3] The study found that approximately three-fifths of the gender gap in cognitive achievement was attributed to a gender gap in schooling availability, which implies a substantial potential role for policy in reducing the gender gap. In such a case there is a policy-induced distortion that probably causes both inefficiency and inequity. The policy remedy would be to at least equalize access to schools for females and males. In a number of countries in the ANE region, of course, single-sex schools are not so common as in rural Pakistan, so that there is not such a strong and transparent difference in policy-related availability of schooling. But there may be similar differences in the availability of other forms of education, such as training programs, that could be addressed with policy changes.

Experimental programs are underway in the region and elsewhere in the developing world that suggest that access to females can be improved effectively with satellite feeder schools for the initial grades in remote rural areas, flexible hours, hours that do not conflict with other activities of girls, and perhaps greater flexibility in seasonal patterns. King (1990) cites some experimental programs for widening female access to school. Bangladesh, Bhutan, and Liberia have experimented with feeder schools for the first two or three years of primary schooling with multigrade teaching and learning for remote rural areas. Preliminary data indicate high enrollments and retention of girls. King (and others such as Khan 1989 and Long 1990) emphasize the advantages of flexible hours and arrangements in attracting girls to school. She cites examples in Colombia and El Salvador in which the primary school curricula have been subdivided into small units so that students can progress at their own pace. In Maharashtra, India, classes were offered from 7 to 9 p.m., and girls constituted over 70 percent of the students.

On a priori grounds, increased quality of educational institutions is likely to increase the rates of return for any given period of time spent by an individual in that institution (unless there is associated with the quality improvement an even greater upward shift in the cost of education). Some studies in other developing countries suggest a substantial impact of various dimensions of schooling on test scores and on post-school labor market outcomes. The studies reviewed in this survey for the ANE countries report significant but not very substantial effects of schooling quality. There is also little systematic empirical evidence related to the efficiency of the use of inputs in educational institutions in the ANE countries, though one study for Thailand does suggest that private schools are more efficient and more cost-effective in that context. Based in part on studies from other developing countries, the author speculates that schooling quality improvements are likely to be important. Therefore experimenting with a variety of institutional forms, public and private, with careful control for

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[3] Alderman, Harold, Jere R. Behrman, David Ross, and Richard Sabot. "The Gender Gap in Human Capital Accumulation i a Poor Rural Economy," Williamstown, MA: Williams College, 1990.

selectivity of students in the analysis, may prove quite valuable in improving the policy basis for recommendations regarding these issues.

The one topic on which there is a fair amount of evidence pertains to the relative rates of return to various levels of formal schooling. Many claim that such returns are much higher for primary than for higher levels of formal schooling. The studies reviewed in this survey suggest, however, that the standard estimates on which the conventional wisdom on this topic is based overstate substantially the returns to primary as opposed to higher levels of schooling by failing to control for estimation problems such as selectivity and for grade repetition and school dropout rates. The efficiency arguments in favor of policies that favor lower over higher levels of schooling often appear to be overstated. Nevertheless, the current large discrepancy in public resources per student (strongly positively associated with the schooling level) probably means that the appropriate resources shift from the point of view of efficiency alone would be toward lower schooling levels. The stronger is the concern for equity, the stronger is the argument for policies that induce such a shift.

There also seems to be a growing consensus on the lesser effectiveness of vocation versus general education in schools. Training carried out in industrial institutes and vocational secondary schools tends to appear less cost-effective than informal, firm-based training and short courses tend to appear more cost-effective than long courses. If this consensus is correct, it may imply a selective strategy is desirable, with emphasis on generic pre-employment training in low-income countries (where firms usually have very little training capacities) and focus on training related to new technologies in in-firm and firm-connected or industry-connected contexts in middle-income countries.

There are a number of proposed policy changes to the effect that rather than charging low and uniform prices for different levels and types of public education, selective user fees should be charged for higher and specialized forms of education for which the private benefits are substantial and tend to go to the better off (given enrollment patterns by income and socioeconomic class), with the extra proceeds targeted to assure greater access of the poorer to education. The claim that successfully carrying out this program would lead to greater equity and greater efficiency seems likely to be valid, though there remains considerable gaps in our knowledge of the technical and administrative capacities needed to target successfully subsidies to the poor to assure their access to the types of schools for which user charges are introduced or increased.

Research Needs:

- The considerable importance of supply policies in creating a large gender gap in the case of rural Pakistan raises the question of whether supply sources of such gaps are not more important than often claimed, so that it would be useful in thinking about policies to know more about similar components of gender gaps in education in other contexts.

- There are a number of technical issues that need to be explored more regarding the estimated impact of female schooling on various outcomes. But perhaps most important in this area is that very little is known about the magnitudes of tbe various market failures such as externalities that are at the heart, often implicitly, of efficiency arguments for policies that favor female education (as well as male education).

- The more systematic available evidence that has been uncovered and reviewed in this survey focuses almost exclusively on schooling, which means that there may be considerable returns to undertaking careful pilot projects and related research to investigate the relative returns to other forms of female education.

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

Behrman, Jere R. and Nancy Birdsall. "The Quality of Schooling: Quantity Alone is Misleading," American Economic Review 73, 1983.

El-Sanabary, Nagat. "Determinants of Women's Education in the Middle East and North Africa: Illustrations from Seven Countries," Washington, DC: World Bank, PHREE Background Paper Series, mimeo.

Jiminez, Emmanuel, Marlaine Lockheed, and Nongnuch Wattanawaha. "The Relative Efficiency of Private and Public Schools: The Case of Thailand," The World Bank Economic Review 2:2 (May, 1988), 139-164.

King, Elizabeth M. Educating Girls and Women: Investing in Development. Washington, DC: World Bank, 1990.

Knight, J.B. and R.M. Sabot. "The Returns to Education: Increasing with Experience or Decreasing with Expansion," Oxford Bulletin of Economics and Statistics 43, 1981.

Long, Lynellyn D. "Access and Completion in the ANE Region," Washington, DC: USAID, 1990.

DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN ✓	Multi	Other
Region	AFR ✓	LAC ✓	APRE ✓	ENE ✓			
Audience	TR	POL	TECH	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: Demographic and Health Surveys Program. WOMEN'S EDUCATION: FINDINGS FROM THE DEMOGRAPHIC AND HEALTH SURVEYS. Columbia, MD: Demographic and Health Surveys, March 1990.

COUNTRY:

ABSTRACT:
These findings from population and health surveys were prepared by the Demographics and Health Surveys (DHS) Program for the World Conference on Education for All held in Bangkok, Thailand in March of 1990. The printing of this document was funded by PPC/WID. The document examines educational attainment of women in the DHS samples, women's education as it relates to fertility and family planning, and the relationship between women's education and maternal and child health. [17 pp. which includes 12 graphs]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

The education that a woman receives is one of the major determinants of the well-being of the woman and her children. Results from 28 national-level surveys carried out to date in the DHS program show that the educational level of a woman is consistently associated with key demographic and health indicators. Women who attain higher levels of education have fewer children and are more likely to use family planning to space the births they have. They are more likely to utilize health services for themselves and their children. As a result, their children are both more likely to survive through infancy and early childhood and to grow normally.

Women's educational attainment varies widely in the countries participating in the DHS program. Overall, the proportion of women who have had some education exceeds 80 percent in most of the countries in the Asian and Latin American/Caribbean regions (except Indonesia and Guatemala). In the Near East, women in Tunisia and Egypt are twice as likely as women in Morocco to have some education. In sub-Saharan African countries, there also is considerable variation in the proportion of women with some education, with the level

ranging from less than 20 percent in Mali and Burundi to over 70 percent in Botswana, Kenya, and Zimbabwe.

Younger women are much more likely to have attended school than older women, indicating the significant gains in women's education that have occurred over the past 40 years.

Women's education is among the best predictors of fertility levels and family planning use. Although the relationship is not uniform, fertility rates generally decrease as the proportion of women with some education increases. For example, in Guatemala, where less than 60 percent of women have attended school, women are having an average of six births; in contrast, in Trinidad and Tobago, where nearly all women have attended school, women are having an average of three births. The relationship between women's education and family planning use is especially apparent in sub-Saharan Africa, where contraceptive use is highest in Botswana, Kenya and Zimbabwe, countries where the proportion of women with some education exceeds 70 percent.

Within individual countries, there are also strong associations between women's education and fertility levels and family planning use. In Togo, for example, at current fertility rates, women with no formal education will have an average of nearly seven births during their reproductive lives while women with primary education will have fewer than six births and women with at least secondary education will have fewer than five births. In Morocco, women with secondary or higher education will have slightly more than two births compared with more than five births among women with no education. Surveys conducted in Ghana, Kenya, Tunisia, Indonesia, Guatemala and the Dominican Republic all showed that family planning use increases with the level of women's education. The educational differentials are particularly striking in Guatemala, where the use rate is five times greater among women with secondary or higher education than among women with no education.

Women's education is closely related to their health status and that of their children. Across countries which carried out DHS survey, infant and child mortality levels tend to decrease as the proportion of women 15-49 with some education increases. In Mali, for example, where fewer than 20 percent of women have attended school, the under five mortality rate exceeds 200 deaths per thousand. In contrast, in Kenya, where more than 70 percent of women have some education, the under five mortality level is around 90 per thousand. Across countries for which the data are available, the level of undernutrition(as indicated by the percent of children 3-35 months who are stunted) also declines as the proportion of women who have attended school increases. In DHS countries in Latin America and the Caribbean, for example, the percent stunted among children 3-35 months is more than 50 percent in Guatemala, where only 65 percent of women have attended school compared with less than 10 percent in Trinidad and Tobago, where almost all women have some education.

DHS results for individual countries also illustrate the close association between women's education and basic maternal and child health indicators. In all countries, the likelihood that a mother will have prenatal care during pregnancy and that births will be attended by trained medical personnel increases with the mother's level of education. The mother's level of education has a strong bearing on whether her child receives treatment for diarrhea, one of the major killers of young children. The use of oral rehydration therapy to treat diarrhea also generally increases with the mother's education.

VALUABLE STATISTICS:

- In Tunisia, 65% of the women 15-19 have some education compared with only 10% of women 45-49.
- Even more striking is the increased educational attainment of women in Kenya; 95 percent of Kenyan women 15-19 have attended school compared with 35 percent of women 45-49.
- In Guatemala, family planning use is five times greater among women with secondary education or higher than among women with no education

POLICY FINDINGS AND RECOMMENDATIONS:

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

Additional information about the DHS program can be obtained by writing to:

Demographic and Health Surveys, IRD/Macro Systems, Inc., 8850 Stanford Blvd., Suite 4000, Columbia, MD. 21045

DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN	Multi	Other
Region	AFR ✓	LAC ✓	APRE ✓	ENE ✓			
Audience	TR	POL ✓	TECH	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: Floro, Maria, Ph.D. and Joyce M. Wolf, Ph.D. THE ECONOMIC AND SOCIAL IMPACTS OF GIRLS' PRIMARY EDUCATION IN DEVELOPING COUNTRIES. Washington, DC: Creative Associates International for the Advancing Basic Education and Literacy (ABEL) Project, December 1990.

COUNTRY:

ABSTRACT:
This worldwide literature review was prepared as part of Creative Associates International, Inc.'s work under the ABEL Project. The paper was sponsored jointly by A.I.D.'s Office of Education and the WID Office. This review grew out of a specific request from USAID/Guatemala for a summary of world literature on the relationship between the primary education of girls and social and economic development. The review has two purposes: to explore the evidence that exists worldwide on the impact of girls' education, particularly primary education; and,to indicate areas in which impact probably is occurring, especially those areas that have received little or no attention in the literature or that have been studied with methodologies that limit what can be learned. The literature review incorporates research conducted throughout the world to gain a broad perspective on the impact of girls' eeducation. [78 pp + appendix]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

Economic Impact of Girls' Primary Education

Girls' primary education results in more active participation by women in the labor force, whether in rural or urban areas. The level of participation, however, is influenced by a variety of factors including age, culture, type of industrialization, gender discrimination, and women's access to complementary resources such as land,

capital, and technical training. The degree to which primary education enhances development largely depends on its interaction with the prevailing economic and social conditions. For instance, while education favorably affects both the willingness of women to enter the labor force as well as the shift from marginally productive to more productive activities, intervening variables such as age, cultural restrictions on women's activities, extent, type and dispersal of industrialization, gender discrimination, and women's limited or lack of access to complementary resources such as land, technical training, capital equipment or machines, etc. may limit the alternative options and job opportunities available to educated women.

Girls' primary education results in better skills and thus enables women to learn new methods of operation that make them more productive members of the labor force. But such potential is only realized if the employment opportunities exist for women. Although education has an unequivocal positive impact on female labor force participation, the question remains as to whether this has translated into higher employment rates and higher real earnings for women in both the rural and urban areas. The productive potential of educated rural women is realized and their contribution to agricultural development is maximized if broad-based rural development strategies such as food crop promotion, increased women's access to land, credit, and technology resources, industry dispersal, and increase in rural wages are pursued; and if gender discrimination in hiring women and in training programs are addressed. Moreover, the type of industry promotion -- whether labor-intensive or not, sex-stratified or not, sustainable or not -- and the type of working conditions i.e. sex discrimination in promotions, health, and safety environment under which women workers operate -- determine whether employment leads to higher wage earnings and to longer productive life.

Studies have shown that among those employed, education has shown significantly positive private returns in the form of higher wage earnings. A few studies however, went further to explore how education has affected the wage differential between men and women. There is some evidence that the wage discrimination between educated men and women is less than the discrimination between uneducated women and men. This may be explained by the fact that literacy and communication skills make women aware of their rights to equal pay and to just remuneration for their productivity.

The impact of primary education on women's performance in the self-employment and informal sector activities is the least straightforward of the channels. This is partly due to the lack of studies on the impact of education on women's participation and performance. Girls' primary education can lead to increased access to credit and to vocational and training programs among those women who are engaged in informal sector activities. But, there is little direct evidence of educational impact on women's access to credit sources given the absence of any sex-disaggregated data. What the limited evidence seems to suggest is that in industries which require relatively more capital and asset base and that are more demanding in literacy, numeracy, and problem solving skills, returns to primary education in the form of enhanced output and greater entrepreneurial earnings may be significant. In this case, human capital becomes a critical requirement for women undertaking new methods of production or techniques such as in dressmaking, cottage industries, etc. But education may not make as much of a positive impact when women are engaged in traditional economic activities that rely primarily on hands-on experience and public relations rather than on education-based skills such as street trading and microvending.

In assessing the economic impact of education, it is important to consider that some effects occur through channels that are not included in markets or that cannot be measured or quantified. For example, one significant dimension of gross domestic product and national income that is never accounted for in national statistics is women's production of home consumption and nonmarketed goods and services. There is a lack of economic studies that examines the educational impact on the production of these goods and services. If these "spillover" benefits of education are accounted for, the direct and indirect economic benefits of education are far higher than what is reported. In the context of poverty, for example, lack of education often leads to persistence of unequal power relations. It puts the illiterate at the mercy of the powerful. Literacy and numeracy are critical in having informed members of the labor force. Successful mobilization against economic injustices and social inequalities require a literate population. Moreover, education leads to access to information and may have threshold effects in unlocking innovative skills in women. This would largely contribute to technological

progress.

Social Changes: The Effects of Girls' Schooling

Education does alter girls' skills, such as literacy and numeracy, and does give them specific knowledge, such as information that leads to improved health care. A study on the relationship between child nutrition and factors such as family income and maternal education revealed that literate mothers made better use of scarce resources for their children's welfare than did illiterate mothers with higher incomes (Baiagi 1980). In a UN study using data from 115 countries, maternal literacy had a higher correlation with life expectancy at birth than any other factor.

Education could, should, and probably does alter women's self-confidence, self-esteem, and notions about their role in society, but there has been too little research in this area to confirm whether or not this occurs and under what circumstances. This is unfortunate as this may be the area of learning from which the most social impact is realized, considering the following constraints upon women using the skills they have gained during schooling. Education, in most cases, does lead to a desire to have fewer children and to educate those children. Education also leads to a preference for urban life and opportunities. But the degree to which the girls who acquire these new attitudes act upon them to alter social realties are also influenced by the following social and cultural factors:

- Increases in women's decision-making power due to education may play an important role in how the impact of girls' education is realized. However, the amount of research into this process is still extremely limited and inconclusive.

- The availability of income-producing activities, which enhance women's decision-making power and status, may be a necessary ingredient that interacts with the skills and attitude changes produced by education in order to produce social changes. The accumulation of evidence suggests that decision-making power is generated more frequently by economic power than by education alone. How women's education, independent income, and status interrelate is the most consistent and intriguing of the interconnections running throughout the literature on the social impact of women's education.

- While rural and urban distinctions are the most often reported variation in the literature examined, which is why the report was organized along those lines, there is little indication that they are the most important differences. The availability of an independent income for women appears to be a far more significant difference than rural/urban distinctions.

- The literature suggests a variation in the social impact of education on girls of different socioeconomic backgrounds. While upper- and middle-class girls appeared to demonstrate more beneficial consequences as a result of their education in terms of their ability to use it to secure jobs and increase income, the actual relative power and status changes in their lives as a result of schooling may, in fact, be less than those experienced by working class women.

- The cultural context in which the girls receive their education influences their ability to use what they have learned and the type of education that they receive. When traditional cultural patterns include female control of resources and activities in the public sphere, then only access to education and opportunities to earn an independent income appear to be necessary for women to increase their status and have a social impact. The social impact of women's education is restricted not only if access to education and economic opportunities are limited, but also if traditional and cultural patterns limit women to domestic activities.

The positive outcomes of girls' primary education are therefore conditioned by the prevailing economic, social, and cultural environments. In particular, the degree to which the basic skills and attitude changes produced by education enhance social and economic development largely depend on several factors. Age, type of economic policies, distribution of resources (especially land and credit), gender discrimination, cultural and social norms, and socioeconomic background are key factors that affect the manner and degree to which women use their education-acquired skills.

VALUABLE STATISTICS:

- In 1985, there were 145 million school-age children who did not have access to primary education
- Over 90% of out-of-school children in 1985 lived in the 40 lowest-income countries (as defined by the UN), and about 60% of those children were girls. Nearly 60% lived in four of the most populous countries -- Bangladesh, India, Nigeria, and Pakistan
- In the lowest income countries, the primary school enrollment rate of boys was 20 percentage points higher, on the average, than that of girls from 1965 to 1985.

POLICY FINDINGS AND RECOMMENDATIONS:

In addition to what the literature on girls' education has documented about economic and social impacts, it has also provided a map of areas that need more or a different type of research. Many of these areas have been overlooked because they are not easily quantifiable, which suggests that not only is more research needed, but that different types of research may be needed. A partial list appears below. (For a complete list see pp. 77-78 of the report).

- There is a need to examine in greater detail the differential impact of the structure and content of schooling on women's social role and economic production, and the impact women have on their society.
- There is a need for systematic analysis of educational impacts on women's access to formal and informal credit sources as most of the current evidence is anecdotal.
- There is a need for studies on increases in women's relative decision-making power that are associated with increased education, acquiring an independent income, and the interaction of education and independent income.
- There is a need to incorporate the nonmarket or nonmonetary benefits of women's education into the rate-of-return approach to measuring economic benefits.
- There is a need for research into how education leads to increases in women's status through changes in existing economic and social relationships.

In addition, longitudinal research was seldom found in the literature examined, in spite of the fact that it could

lead to data in areas of impact frequently ignored and data about how the process of impact occurs.

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

[note: bibliography is missing from the document]

DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN	Multi	Other
Region	AFR ✓	LAC	APRE	ENE			
Audience	TR	POL ✓	TECH	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: Hourihan, John. GENDER ANALYSIS: A REVIEW OF GENDER ISSUES IN EDUCATION IN BOTSWANA. Washington,DC: Creative Associates, February 1991.

COUNTRY: Botswana

ABSTRACT:
This document, produced for Creative Associates by John Hourihan, examines gender issues in education in Botswana starting with the historical context up till the present situation. The author explores the impact of the formal and informal school curriculum on male and female students, student aspirations and expectations resulting from the socialization process, the participation of females in higher education and technical and vocational training, and in the final section offers some recommendations for specific action to be taken by Botswana's Ministry of Education (MOE). [60 pp. + annex]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

Botswana has a goal of universal basic education. This is consistent with the country's national philosophy of social justice for all. Botswana has experienced an impressive growth in providing primary and secondary educational opportunities for its children since Independence. For example, in 1966 the total enrollment in primary schools was 71,546 students in 251 schools. In 1990, 300,000 students attended 636 schools. Of the total number of students enrolled in primary schools in 1990, females represented about 52 percent of the school population.

However, 20 percent of primary school-age children do not attend school, a percentage that includes similar numbers of boys and girls. Why? School dropouts contribute, and this dropout is related to poverty, and the correlation between poverty and illiteracy; many impoverished families simply do not place high value on education. Cultural and linguistic differences also contribute. About 20 percent of the population do not speak Setswana as a first language, but this is the language of instruction for the first four years of government-

operated primary schools. Another reason for not attending school is that it is not compulsory. Further, some of the non-enrolled students suffer from learning disabilities, and finally, in some areas, dispersed populations do not have access to schools.

From a gender perspective, the high attrition rates between standard one and form one appear to be gender neutral since the percentage of girl to boy students remains fairly constant during these years. For the most part, poor academic performance -- reflecting the poor quality of the education -- is primarily responsible. Male and female academic performance and achievement is approximately equal at the primary level. Dropout rates are also about equivalent.

Poor academic performance remains a problem at the secondary level, but it is apparently no longer gender neutral. In one recent study of several junior secondary schools it was found that 50 percent of the female cohorts and 38 percent of the male cohorts failed the junior certificate exam and left the education system. Also at the secondary level, girls suffer a disproportionate repeater rate relative to boys, indicating a generally poorer performance record for girls.

Of all the reasons for the high drop out rate for girls in secondary school, teen-age pregnancy is the most serious. Recent statistics indicate that about 75 percent of all female dropout at the junior secondary level and 85 percent at the senior secondary level is now due to pregnancy. According to education policy, female students who become pregnant are required to leave school and remain away from school for one full year after the birth of the child. Re-entry into the school system is very difficult, and less than 25 percent of girls ever return to school.

While definitive research remains to be done, studies over the past decade have implicated at least two sociological factors negatively affecting female, but not male student performance. The first involves the distinction between the formal and informal school curriculum and the second concerns student aspirations and expectations. In Botswana, it has been argued that the informal curriculum -- messages transmitted implicitly through authority structures, staffing patterns and textbook content -- has a negative impact on female students in a variety of ways. For example, at the crucial secondary level, the authority structure is dominated by male education officers and headmasters. Women constitute a majority of all teachers at the primary level, which is the lowest status and lowest paid teaching position in the educational system.

In the informal curriculum, there is gender segregation of teachers according to subject matter, with females dominating in such areas as Setswana, English, art and music, and males in mathematics and the physical and biological sciences. This segregation institutionalizes the adult gender roles that are stereotyped at the primary level. The informal curriculum implicitly teaches or transmits such messages as: men generally have authority over women; women play a subordinate role in the workplace; women should anticipate lower status and lower paying jobs; females should concentrate on certain subjects.

However, the formal curriculum, which refers to the activities undertaken and messages transmitted in the classroom that stem from official policy and that are officially sanctioned, can also reinforce gender disparities, especially in the area of textbooks when females are represented as passive and weak, and are shown primarily in social or domestic nurturing activities, and in actual courses, such as domestic science or typing, which are predominately taken by females. Most importantly, the formal curriculum can have a profound impact on students if boys and girls are perceived, by themselves and their teachers, to have different interests and aptitudes for different courses and subject matter.

In terms of student aspirations and expectations, a 1989 study of Botswana school children[4] suggested profound differences between males and females concerning the intent and purpose of the education process. With gender-based divisions of labor, children begin to learn at an early age what is expected of them in an adult world. Although further research needs to be conducted, it seems clear that by the time a child reaches school-

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[4] Duncan, Wendy A. "Engendering School Learning," Stockholm: Institute of International Education, 1989.

age, the socialization process may have already begun to teach boys and girls attitudes and perceptions concerning their ability to perform effectively in different academic subjects and, ultimately, in different occupations. Moreover, these attitudes and perceptions of parents and others are frequently reinforced by teachers who, of course, had participated in similar socialization processes. The socialization process imparts a system of values that is reflected in both academic performance/choice and in occupational aspirations. Academically, it is clear that a majority of females take courses and training programs geared toward such occupations as nursing, primary school teaching, secretarial, accountancy and parenting.

These attitudes and perceptions are also evident in higher education. While the Government of Botswana has committed itself to ensure the equitable participation of women, the success of this effort is questionable. In 1986, females accounted for nearly 45 percent of the full-time students at the University of Botswana, an increase from about ten percent in 1966. However, their distribution within the University was not even. While females constituted 16 percent of the total enrollment in the natural sciences, their actual numbers in these fields constituted less than four percent of the total female University student population.

The low participation rates in the natural sciences, medical sciences, mathematics, engineering and agricultural sciences by females (and, indeed males) is critical to Botswana since these are the very areas where serious manpower shortages are directly affecting the industrial and rural development of the country.

In technical and vocational training, the increased participation of women is a clearly stated objective. In 1990, there were 1,350 trainees in a variety of technical and skills training programs, of which females comprised 18 percent of those enrolled. Women still dominate training in the health services, secretarial, textile, and accounting areas.

A prime objective of the MOE is to produce the human resources necessary to further the industrial and rural development of Botswana. The MOE further recognizes the need to educate and train both males and females, not only because of equity issues, but also because it is essential in order to meet the human resource requirement.

For a number of reasons, it will not be easy to increase and broaden the participation of females in the economic development of Botswana. First, the labor market is marked presently by a high degree of occupational segregation based on gender, which is a common pattern in developing African countries. Females predominate in teaching, nursing and clerical work; males dominate in a much wider range of jobs, particularly in technical fields. Second, occupational segregation is rooted in powerful socio-economic and political traditions concerning the proper roles and responsibilities of males and females in society. Third, these traditional beliefs are explicitly and/or implicitly reinforced through the home-based and formal education socialization processes.

The author concludes that the task of the MOE as regards its female student population is to convince females that they possess nothing that inherently prevents them from improving their academic performance and achievement, in a broader range of subjects, nor from expanding their occupational expectations and aspirations. The difficuly is getting the message to the targeted population.

VALUABLE STATISTICS:

- Of the total number of students enrolled in primary schools in 1990, females represented about 52% of the school population.
- For vocational education programs, in 1985, females accounted for 35% of all participants, but 65% of these were in health-related occupations (such as nursing and laboratory technician training) and 30% in textiles and handicrafts.
- About 75% of all female dropout at the junior secondary level and 85% at the senior secondary level is

due to pregnancy.

POLICY FINDINGS AND RECOMMENDATIONS:

The author makes the following specific recommendations for the MOE:

1. Ensure that gender sensitivity is included in the full range of pre- and in-service teacher training programs. Clearly, the teachers of Botswana will play a pivotal role in bringing about a change in the perceptions that both male and female students have concerning the ultimate potential of the female students.

2. Expand the access of female students to a wider range of adult female role models. As with the males, the female students need to know that other career choices exist and are attainable by women. A program to accomplish this task needs to be developed by the MOE. Such a program might include school visits by various professionals, posters, brochures, and radio presentations.

3. Ensure that the curriculum is gender sensitive and that it raises gender issues.

4. To the extent feasible, inform the wider public of the intent of the gender-related activities being undertaken in the academic setting.

5. Since it is at the junior secondary and senior secondary levels that large gender disparities occur in subject selection, performance and achievement, it is the higher levels that should be targeted first for dealing with gender issues in such areas as teacher training, curriculum development, continual assessment, and guidance and counseling.

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

Duncan, Wendy A. SCHOOL DROPOUT IN BOTSWANA: GENDER DIFFERENCES AT SECONDARY LEVEL. Report No. 81. 1988.

Crowder, Michael. EDUCATION FOR DEVELOPMENT IN BOTSWANA. Gaborone: The Botswana Society, 1984.

World Bank. EDUCATION IN SUB-SAHARAN AFRICA: POLICIES FOR ADJUSTMENT, REVITALIZATION, AND EXPANSION. Washington, DC: The World Bank, 1988.

DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN ✓	Multi	Other
Region	AFR ✓	LAC ✓	APRE ✓	ENE ✓			
Audience	TR ✓	POL ✓	TECH	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: King, Elizabeth M. EDUCATING GIRLS AND WOMEN: INVESTING IN DEVELOPMENT. Washington, DC: The World Bank, 1990.

COUNTRY: (NA)

ABSTRACT:
This booklet is derived from selected chapters of a forthcoming World Bank study on women's education in developing countries, a key research area in the Bank's Population and Human Resources Department. The study examines the importance of family, school and community factors and of education policy in increasing the education of girls and women in different Third World regions, and points out the gains from female education. It also reviews experiences of government, donor agencies and NGOs in trying out policies and programs to improve girls' and women's education. [17 pp]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

The Gender Gap in Education

School enrollment rates have been rising for both females and males at all levels in the past two decades. Gross enrollment rates in low-income countries averaged about 70 percent in 1985, compared to about 45 percent in 1965. Despite this progress, the gender gap in education has not narrowed greatly.

Regional differences in the gender gap are great. many countries have achieved near universal primary education for males and females. But girls' enrollment continues to lag behind in many others, most dramatically in South Asia, the Middle East, North Africa, and Sub-Saharan Africa.

Even more illuminating than enrollment rates in measuring girls' educational progress are their rates for

staying in school, promotion, and grade repetition. The school entry rate for girls is lower and their dropout rate slightly higher than for boys.

Due to admission restrictions and student choice, women tend to be concentrated in narrow areas of study within vocational and post-secondary education.

The Benefits of Educating Women

A World Bank study of about 200 countries shows that nations that have invested heavily in female primary education in the past benefit through higher economic productivity, lower infant and maternal mortality, longer life expectancy for both men and women, and lower fertility rates than countries that have not achieved as high education levels for women.

The study also found that a country with a large gender gap, measured as the ratio between past male and female enrollment rates, will have lower economic production than another country with the same amount of capital stock and labor force but a smaller gap in education. In addition, between two countries with similar per capita income and patterns of expenditures in the social sectors, the country with the larger gender gap will experience worse indicators of social welfare.

Female education contributes to development through its positive effect on family income. A study of the productivity of men and women farmers in Sub-Saharan Africa, for example, found the gain in productivity from education to be larger for women than men.

Education also makes women better mothers. Better educated mothers are more likely to appreciate the importance of prenatal and neonatal care, and to be better informed about good nutritional practices.

In addition to the socioeconomic benefits for women and their families, education empowers women to exercise their rights and responsibilities as citizens of their society, and enables them to make more efficient choices. The right to vote is meaningless if women cannot inform themselves on political issues.

Why Women's Education Levels Are Low

Underinvestment in girls' education occurs because the private returns to the families are not large enough to offset the costs, and because parents do not consider the external benefits that education generates when making their private cost/benefit calculations. In some societies, parents tend to favor sons, but this may be the most efficient response by parents to the constraints of family resources, technology and labor market conditions, and to a society that rewards and restricts sexes differently.

Past experience shows that simply expanding access (by building more schools, etc) may lead to higher levels of female enrollment at the margin, but these strategies are not enough where the family's demand for girls' education is low. For schools to be fully utilized, the demand for education has to come from families. To be effective, expansion policies must be accompanied by policies that lower costs and raise benefits for families.

Distortions in the labor market due to discriminatory employment practices against women reduce the earnings benefits that women can expect to gain from education. Entry barriers against women in certain occupations serve as obstacles to education. Some of these barriers begin at the primary school level with teachers and textbooks projecting attitudes that discourage school attendance and performance of girls, or promoting stereotypes of girls not being as good as boys in technical subjects or mathematics. Some of the obstacles begin at the post-primary education level with gender-specific admissions policies in certain areas of study.

In some societies, custom dictates that sons take responsibility for their parents, while girls marry out of their own families at an early age and into their husband's families. The earlier the marriage age, the less parents enjoy the benefits of their daughters' education. Some evidence suggests that when girls do not marry so early but spend some time working in the labor force, parents are more willing to educate their daughters.

Parents also may have poor knowledge of the benefits of education to the family's current health and welfare and to the health and prosperity of heir grandchildren. Parents find it hard to understand the benefits of

education when curricula are irrelevant to the mother-wife role or contradict the values they want to teach their children.

Even if they are aware of the potential benefits, parents may be unable to afford the tuition, materials, transportation, boarding fees and other costs of sending girls to school. Location, distance and even clothing requirements can make the cost of school attendance higher for girls than boys. In countries where religion requires seclusion of women, parents allow girls to attend only single-sex schools with female teachers, or withdraw girls at onset of puberty.

The availability of schools with female teachers can also determine the effective supply of schools. The shortage largely reflects the limited pool of potential teachers, a result of low schooling levels of women, and the reluctance of those trained to work in rural areas.

Parents may not be able to afford the opportunity costs of educating children, which vary be sex and from country to country. With few exceptions, girls do more home and marketplace work than boys. Clearly, girls who work more than their brothers will be less likely to attend school, or they will be more overworked if they do -- causing them to perform less well. In making education decisions, parents weigh the relative opportunity costs against expected returns.

Closing the Gap

Experimental projects in single villages or districts provide some insights into what may work in designing programs to promote female education. Bangladesh, Bhutan and Liberia have experimented with two creative low-cost ways of bringing schools within walking distance of home-feeder schools and multigrade teaching and learning. Feeder or satellite schools offer the first two to three years of primary education and are located in remote rural areas some distance from the regular complete primary schools. Preliminary data from these schools show higher enrollment and retention of girls. Bangladesh and Liberia are expanding school places within existing regular schools through multi-grade teaching and learning using programmed materials. So far, however, there is no evidence that these methods raise girls' attendance or achievement.

Culturally appropriate facilities can boost female enrollment. The school environment has a stronger influence on girls' than boys' school attendance. To ease parents' fears about their daughters' physical and moral safety, countries have experimented with building boundary walls around schools and providing closed latrines for girls, establishing single-sex schools, and actively recruiting and training female teachers. Anecdotal evidence shows that these culturally appropriate and safe facilities and the presence of female teachers remove disincentives for parents to enroll daughters.

To boost the female teacher supply in rural areas, some countries have actively recruited girls from rural areas for teacher training, while others have provided incentives in the form of housing subsidies for teachers willing to work in the rural areas. The more successful strategies have been to place teacher training institutes in rural areas, actively recruit females from there, and after training place them in schools near home. This strategy has proved successful in parts of Pakistan and Nepal.

Scholarship programs providing direct assistance to parents have proved to be a strong incentive to educate daughters. Scholarship programs have also been used to discourage very early marriage and teen pregnancy.

Countries have also had success with a variety of approaches to cut the opportunity costs of educating girls otherwise would be caring for siblings, preparing meals, carrying water, and earning income from outside jobs. In Colombia, a community day care program has freed some 200,000 girls and an equal number of women to attend school or work. Labor-saving technologies such as fuel-efficient stoves can also lower the costs of girls going to school. Flexible school schedules also minimize opportunity costs. Classes offered in the evenings provide a learning opportunity for those unable to attend day school. In the Pune district of Maharashtra, India, classes were offered 9 to 14-year olds from 7 to 9 p.m. Girls flocked to the program, comprising 1,040 of the

1,431 enrolled students.

Enhancing the benefits of educating girls will encourage parents to invest in their daughters' education. Educating parents through information campaigns makes them more aware of the overall benefits of education and predisposes them to invest in their daughters' education. A key point stressed in these campaigns is the importance of achieving literacy and numeracy and other skills to finding employment and improving productivity on the job.

Training women for growth occupations and eliminating wage and employment discrimination can spur education investment for girls. In Jordan, a pilot project in a general secondary school is introducing vocational training for girls in nursing, dressmaking, management and finance, areas with high employment potential.

VALUABLE STATISTICS:

- Rough estimates suggest that only one out of two women in Asia is literate, and only one out of three in Sub-Saharan Africa.
- Gross enrollment rates in low-income countries averaged about 70% in 1985, compared to about 45% in 1965.
- From 1965-1985, in the lowest income countries, the primary school enrollment rate of boys was 20 percentage points higher, on average, than that of girls.
- In Afghanistan, Benin, Guinea, Nepal, Pakistan, Somalia, Yemen, and the Yemen Arab Republic, girls accounted for only 1/3 or less of total enrollment in 1985.
- In Pakistan, women are not allowed to enroll in 72% of all secondary vocational institutions because of strict sex segregation.
- In low-income countries, only 1/3 of primary, less than 1/4 of secondary, and just over 1/10 of tertiary education teachers are women.

POLICY FINDINGS AND RECOMMENDATIONS:

In addition to increasing the supply of school places, governments should intercede and provide a system of incentives and subsidies to persuade parents to send their daughters to school, and teachers and heads of schools to pay more attention to the gender gap issue. In poorer countries where the primary school enrollment of girls is lagging far behind that of boys, the government and education officials should develop a broad strategy for addressing both supply and demand factors affecting the problem. In countries that have achieved some success except for segments of the population, targeting becomes a key issue. Studies have shown that the family's socioeconomic status is sometimes the single most important determinant of access to education and learning. Efforts to increase female enrollment thus should be targeted at families living in low income and rural areas, where the social benefits of educating women are greatest.

The large social benefits from educating women and their persistent lower education level dictate that expanding female education be a priority in the allocation of public resources, particularly in the poorest nations. Efforts should be targeted first at expanding basic education rather than secondary or higher education. This is

both more equitable and efficient. In countries where boys' and girls' enrollment in primary school are high and have become more equal (such as parts of Latin America and East Asia), actions to reduce the gender gap should be directed at secondary and tertiary schools.

More research and impact evaluation are needed about which programs are likeliest to work and are more cost-effective.

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN	Multi	Other
Region	AFR ✓	LAC	APRE	ENE			
Audience	TR	POL ✓	TECH	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: Long, Lynellyn D. and Hawah Fofanah. STUDY OF GIRLS' ACCESS TO PRIMARY SCHOOLING IN GUINEA. U.S. Agency for International Development, June 1990.

COUNTRY: Guinea

ABSTRACT:
The purpose of this study, prepared for USAID/Guinea by the AAAS Fellow in AFR/DP/PPE and a Guinean sociologist, was to identify the constraints to girls' access to and completion of primary schooling in Guinea. A related purpose was to provide baseline data to monitor the equity component of the Guinea basic education program. With additional interviewing in the Basse Guinee and Conakry by the Mission WID Officer, the data could provide the basis for a formative evaluation of the program. The research involved the collection of both qualitative and quantitative data. Data was collected from prefectures and schools in three regions of Guinea: Gueckedou and Macenta in Guinee Forestiere, Farana in Haute Guinee, and Pita in Moyenne Guinee. The team also interviewed government officials and administrators and Guinean sociologists. Based on their findings, the team offers recommendations for policy dialogue, programmatic directions and options for the Mission to fund special studies, and recommendations for developing a Mission WID action plan. [28 pp + appendices]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

POSITIVE:

Present Government policies and actions suggest a favorable climate for increasing girls' access to education. In its proposed educational reform program, the Government has also acknowledged the need to improve access of girls and rural children. In its educational reform program, the government has established targets to augment resources for education, expand enrollments, improve quality and efficiency, and strengthen management capacity. These targets, if realized, would improve girls' access to primary education, but their attainment depends on administrative capacity and political will.

A few schools have high girls' enrollment rates, despite such obstacles as lack of textbooks, materials, latrines and basic infrastructure. Schools with high enrollments appeared to be well-organized and managed and had enthusiastic teachers, who believed their students were good. This finding suggests that nonmaterial rather than material inputs may be more relevant measures of school quality. When measured by nonmaterial inputs, school quality may be linked to improved girls' access.

NEGATIVE:

Although girls' primary enrollments have grown slightly with the recent expansion of the primary system, they have decreased as a percentage of total enrollments. This suggests that increasing the supply of schools alone will not suffice. Evidence from other countries shows that a complex interaction of political, school, and household factors determine girls' access to education.

In Guinea the share of recurrent revenues for education are among the lowest in the region. In practice, local communities directly bear the major share of the costs of schooling. The community or Association des Parents et des Eleves (APE) pays for the costs of school construction voluntarily or through the imposition of a local tax, and for the costs of school supplies and materials. The community provides housing for the school director, donations for teachers' sustenance, and in towns and urban areas, fees for tutoring after hours. These costs make primary schooling virtually unaffordable for the poorest parents and forces many parents to prioritize who is sent to school.

Analysis of the data in the three regions showed that constraints to girls' primary schooling varied by region and ethnic group. In Guinee Forestiere -- the most productive region in the country -- direct and opportunity costs of schooling and early marriage were said to be constraints. Early marriage was said to cause many girls to drop out or knowing that they were not likely to complete the cycle, not to enter at all. In addition, households need girls to work in the market selling or for housework. In Gueckedou, teachers reported that parents believe that man is superior, and that boys will do better at school, while girls can be corrupted by school. In the town of Macenta, teachers observed that girls drop out after the fourth year to marry or because of pregnancy. They also said that girls had less time for homework than boys, because girls were expected to do more housework.

Different interventions to address the constraints identified in each region were also proposed. In Guinee Forestiere, teachers advocated pre-school programs and allowing girls to begin school at an earlier age. The teachers spoke of the need for teachers to work with parents and the need to change social relations.

In Haute Guinee, early marriage, bride price, school hours and calendar, and traditional beliefs about girls' maturation were identified. The team visited the town of Faranah -- the second largest town in the region. As in Guinee Forestiere, the town/rural difference was striking. In the school located in the town of Faranah, girls represented 29 percent of enrollments, whereas in the rural school they represented only 14 percent. School officials in Faranah saw the problem of girls' low attendance as being due to early marriage, the high brideprice, the lack of relevancy of education to girls' future roles, pregnancy, and lack of knowledge about sex education. They proposed that teachers be better trained and that sex education be incorporated into the curriculum. Teachers in the town school proposed encouraging parents through the APE. The rural school staff listed early marriage, the belief that girls are inferior, household responsibilities, and the lack of completion. The director of the school said that it was important to teach parents that men and women are equal. Both teachers and parents mentioned Koranic education as an alternative. They said that there were eight Koranic schools in the village which allowed girls to learn to read and write in Arabic.[5]

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[5] Little attention to date has been given to the role of Koranic schools in imparting literacy and numeracy skills. These schools serve many children who do not attend the Government schools. Children also attend the Government schools and Coranic

In Moyenne Guinee, distance, illness, opportunity and direct costs were cited as the key constraints. According to interview responses, parents want to send their daughters to school, but lack the economic means. Sickness was also a factor in low enrollments. After a long illness, many children do not want to return to school. Teachers also observed that repetition and lack of continuation caused many girls to drop out. School children responded that parents do not send their daughters to school because they need them to work at home. The teachers proposed that more schools be constructed in rural areas and that parents be encouraged by the school and government officials. They also spoke of the importance of Koranic schooling as an alternative and/or to reinforce basic schooling.

In both Haute Guinee and Moyenne Guinee, Koranic education was seen as a means to increase girls' literacy and numeracy.

Despite regional differences, there was universal consensus all the way from the Secretary of State for Pre-University Education to teachers in rural schools that convincing parents of the value of their daughters' education -- a social marketing campaign -- is critical to increasing girls' access and completion. The research further revealed that across all regions schools face similar constraints; they lack textbooks, materials, latrines, and other basic infrastructure.

VALUABLE STATISTICS:

- While the illiteracy rate for Guinea is high (64%), female illiteracy is even higher (84%).
- The total primary enrollment rate in 1988/89 was only 28%; girls' enrollment was 17.8%.
- Girls' enrollment as a proportion of total enrollment fell from 36.8% to 30.7% from 1982/83 to 1988/89, although overall enrollment rose during this same time period.
- Girls' repetition rates are higher (24.1% versus 21.3% total) and they are more likely to drop out (34.2% versus 24% total).
- Girls have lower scores on exams (in 1988, 39.4% versus 50.1% total) and more difficulty in making the transition to the next level (53.4% versus 57.2% total).
- Gender disparity in education is to some extent a function of economic development in West Africa and varies widely from 13% in Nigeria to 52% in Guinea (based on gross primary enrollment ratios).
- In Guinea, the share of recurrent revenues for education are among the lowest in the region -- 14%.
- Throughout Guinea women do an estimated 90% or more of the household labor, while contributing more than 50% of agricultural production.

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schools concurrently (studying at the Koranic in the early mornings and late afternoons). Although much of the teaching involves rote memorization of religious texts, Koranic schools teach reading, writing, and numeracy.

POLICY FINDINGS AND RECOMMENDATIONS:

Based on the findings, the team recommends that USAID/Guinea provide encouragement and policy support for Government interventions in the following areas: social marketing campaigns to increase demand for primary schooling; school construction and rehabilitation to increase the supply of schooling in rural areas; specific interventions to promote quality, such as incentive programs, recognition for good schools and inservice training of teachers and directors; redistribution of public resources to increase the share of schools in rural areas; pilot programs at regional levels to address specific regional constraints to girls' schooling (e.g. pre-primary schools, lower age limits, changes in school hours and calendar); and, recognition of Koranic Schools that impart literacy and numeracy skills to girls.

Through projectized components of the program, the team also recommends that USAID/Guinea fund special studies of the role of Koranic schooling in imparting literacy and numeracy skills to girls; local school financing; school mapping in relation to gender; school profiles to identify process indicators for measuring quality; and, ethnographic studies to identify regional and ethnic differences in constraints to girls' access and completion. The special studies would be conducted by the Government to improve its administrative capacity to implement, monitor, and evaluate interventions to improve girls' access and to decrease regional disparities.

Baseline indicators to monitor WID objectives in all sectors should be disaggregated by region. As this study has shown, there is significant regional and ethnic variation. Such information can be obtained with interviews and household surveys of local communities and with interviews of local officials. Experience in the education sector suggests that the Government at all levels may have data disaggregated by gender. These data need to be analyzed to develop a Mission WID strategy and Action Plan.

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

DOCUMENT CHECKLIST

Sector	AGR	PRE	ED ✓	ENR	HPN ✓	Multi	Other
Region	AFR ✓	LAC ✓	APRE ✓	ENE ✓			
Audience	TR	POL ✓	TECH	EXT			

I. ACTIVITY

BIBLIOGRAPHIC INFORMATION: Spratt, Jennifer, Luis Crouch and Luis Cubeddu. THE SOCIO-ECONOMIC IMPACTS OF FEMALE EDUCATION: CROSS-NATIONAL EVIDENCE. North Carolina: Center for Development Policy, Research Triangle Institute, 1989.

COUNTRY: NA

ABSTRACT:
Under the BRIDGES Project, The Educational Impacts Model (EIM) is being developed to demonstrate long-term, interactive, indirect, and gender-specific effects of education on several aspects of national development. At this point, individual equations have been estimated to document the important relationships between education and other sectors. This paper summarizes preliminary findings which will eventually be published and integrated into a simulation model under the auspices of the BRIDGES project. Data used include cross-national time-series data on 80 developing countries over the period 1960-1980, compiled from World Bank and UN sources. The work has been funded by the Basic Research and Implementation for Developing Education Systems (BRIDGES) project, which is sponsored by A.I.D.'s Office of Education. [5 pp. + 4 bar graphs]

II. FINDINGS

KEY FINDINGS AND CONCLUSIONS:

Determinants of access to education:

The findings demonstrate the importance of both supply and demand variables as determinants of access to education. Even when one controls for supply factors, demand factors are still important. That is, even when one controls for the share of the budget dedicated to education, and for the unit cost of education, the study finds that whether the country is Muslim or in Sub-saharan Africa, and the share of the labor force that is in agriculture are still significant determinants of enrollment levels. For example, controlling for all other factors, Muslim and Sub-saharan African countries have female enrollment ratios lower than other countries by 15 percentage points. The implication is that attending to educational development in general will not be enough to

achieve "education for all". Specific attention must be paid to female education, both in budgetary terms and with specific types of demand-enhancement programs aimed at girls and their parents.

Socio-economic impacts of female education:

The paper summarizes results from three areas: fertility, infant mortality, and labor force behavior.

In their research on the determinants of fertility, the authors have found that when one includes female education, availability of family planning, and a female education-family planning interaction term in a regression equation, only the interaction term is significant. In other words, availability of family planning services is not enough. On the other hand, neither education nor other indicators of overall development, such as GNP per capita, are significant predictors of fertility levels, when one controls for the availability of family planning. Neither education nor family planning alone appears to be sufficient: both must be present. The study finds male education to be largely unrelated to fertility, when one controls for female education.

The effects of female education on infant mortality are among the most eloquent arguments for attention to girls' schooling. A 1 percentage point increase in girls' enrollment rates is associated with a 0.9 per-thousand decrease in infant mortality fifteen years later. Furthermore, it appears that significant achievements in lowering infant mortality can be attributed simply to primary education.

Female education has an impact on labor force participation, and hence on the size of the labor force, and the national product. Even controlling for variables such as age of marriage, total fertility, and culture, a 1% increase in the proportion of girls going to school today is associated with a 0.75% increase in the female labor force participation rate when those girls enter the labor force.

In conclusion, the authors' research has found female education to be a key determinant in several principal socio-economic areas: fertility, infant mortality, and labor force participation. These impacts exist even when one controls for other possible correlates, such as the level of overall development, and, in particular, male education.

VALUABLE STATISTICS:

- A 1 percentage point increase in girls' enrollment rates is associated with a 0.9 per-thousand decrease in infant mortality 15 years later.

- A 1% increase in the proportion of girls going to school today is associated with a 0.75% increase in the female labor force participation rate when those girls enter the labor force.

POLICY FINDINGS AND RECOMMENDATIONS:

In this climate of relative doubt about the impact of education on development, it is imperative that policy makers, planners, and researchers consider indirect as well as direct effects of education, long-term as well as short-term outcomes, and the social and economic conditions which enable education to have positive effects or prevent it from doing so. The advantage of a complete simulation model, such as EIM, will be that both the direct and indirect effects can be evaluated and illustrated.

The results of the research presented in this paper argue that, in an era of cutbacks in education, care

must be taken to protect and expand the gains in girls' education made over the last several decades, and that girls' education must continue to be expanded in various areas of the world.

III. FOLLOW UP

LEADS FOR FURTHER INFORMATION AND RELATED MATERIALS:

"Female Education and Life Expectancy: Summary of Research Findings of BRIDGES and ABEL Projects," Research Triangle Institute, February 1990

"Female Education and Fertility: Summary of Research Findings of BRIDGES and ABEL Projects," Research Triangle Institute, February 1990.

"Female Education and Infant Mortality: Summary of Research Findings of BRIDGES and ABEL Projects," RTI, Feb 1990

"Female Education and Labor Force Participation: Summary of Research Findings of BRIDGES and ABEL Projects," RTI, Feb 1990