

THE COMPARATIVE FUNCTIONALITY
OF
FORMAL AND NON-FORMAL EDUCATION
FOR WOMEN:
REPORT ON PHASE II

Report Submitted to AID/WID
Order Number AID/otr-147-78-14

July 17, 1978

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Education, the hope and panacea of development a decade ago, has come into disfavor. Formal education programs are not living up to the expectations held out for it since early in the development experience. Individual post-education economic productivity is often not as great as anticipated. In many developing nations, employment opportunities do not exist to accommodate burgeoning numbers of secondary school graduates. Thousands of school leavers relapse into illiteracy as soon as a year after completion or termination of studies. Increasing school age populations and escalating fixed and recurrent costs require continually higher percentages of national budgets spent on formal education.

Non-formal programs, many of them conceived partly in response to the formal education crisis, are also plagued by problems, including lack of status and lack of specific linkages to available employment opportunities in a given country.

In the midst of the education disarray, a new variable has been added: women in development. Most persons have heard the adage, educate a woman and you educate a nation; however, nearly two thirds of the world's billion illiterates are women.¹ Women in the developing world have been systematically discriminated against in education in terms of access to schooling at all levels, number of years educated, and entry to vocational and technical schools.

Clearly, this pattern of discrimination has to change if any attempt is to be made for integrated development involving the silent half of the population in the developing nations. Over 30 percent of rural families in LDC's are female-headed households.² Evidence indicates

that female literacy is a major factor in controlling population growth; and maternal influence is a critical variable in literacy retention.³

But which kind of education will alter expectations; teach income generating job skills; encourage understanding and utilization of family planning and child spacing services; and enable participation at the community level -- formal or non-formal. Which type of education is comparatively more functional; that is the question that Phase II of this project addresses.

Functionality is the critical concept in this analysis. Functionality is usefulness. For our purpose, it means a structured, organized educational activity, formal or non-formal, that increases the individual's ability to operate in her environment. The definition encompasses learned cognitive and manipulative skills that augment some important component of her life.

This report investigates whether formal or non-formal education programs increase a woman's abilities to function more effectively in her society. This great ability to function may be operationalized socially through role modeling or serving as a catalyst for greater female school and/or non-formal program enrollment; economically through new skills which enable her to generate new and/or augmented income; politically through increased participation in civic organizations, the political party system and/or election to national office; demographically through family-planning and child-spacing decisions. This report will examine functionality through its social, economic and demographic impacts; political factors in education will be discussed in another phase of the larger study.

The functionality of the educational activity will be measured by three indices.

1. Social Impact. The following questions will be asked to determine social impact: 1) does the educational activity have a social multiplier effect; 2) will other women benefit from the program; 3) do non-formal and formal programs encourage the social multiplier effect to the same extent?

2. Economic Impact. Organizing questions include: 1) which type of educational experience, formal or non-formal, increases female per capita income more rapidly; 2) which type of education offers easier access to long-term, market economy employment?

3. Demographic Impact. The following questions help to assess demographic impact: 1) is there a critical variable that encourages female dissatisfaction with the rural community and encourages urban migration; 2) does the demonstrated inverse correlation between formal education and reduced fertility hold true for female participants in non-formal education programs?

Before discussing functionality in female education, a distinction must be made among a variety of types of education. The two major categories with which this study is concerned are formal and non-formal programs.

Formal education is here defined as structured programs of institutional learning through completion of progressively more complex levels. Formal education takes place in school, at regular, specified times, with specified curriculum. It usually involves group interaction with an identifiable leader, the teacher. Upon completion of studies, a student obtains a degree, certifying that he or she has completed the prescribed

courses and acquired certain competencies in a given field of study.

Formal education encompasses a wide scope of learning activities including the traditional primary grades; secondary schools with academic, vocational and technical tracks, as well as commercial and secretarial courses. Formal education also includes higher education: universities, professional schools for studies in law, medicine, engineering, etc. In the developing world, higher education level agricultural schools and teachers colleges are often institutions of special emphasis and concern.

Non-formal education is a structured program of learning in a non-institutional, non-school setting, usually within the participant's environment, in which the content is relevant to the participant's occupation and/or lifestyle.

Non-formal programs have evolved partially in response to the overwhelming problems of formal education, and partly to fill a need, especially in rural areas, to offer occupational and job skills to relieve unemployment and rural poverty. Non-formal programs can be quickly assembled and utilize available community resources. They are directly geared to the learning needs of the student participants, relatively inexpensive (not requiring elaborate infrastructure and costly materials) and flexible. Non-formal programs do not confer degrees, although some more elaborate programs may grant certificates upon completion.

The variety of non-formal programs is as great as that of formal programs. Many human resources development programs have an educational component, especially agriculture, health and nutrition projects. In addition, most integrated rural development programs include a major education project which invariably has an adult education or out-of-

school education component.

The distinctions between formal and non-formal tend to become blurred in actual projects. For instance, a distance learning program highly dependent on radio and followup discussion groups may be viewed as formal because of the curriculum and weekly review/discussion sessions, but the project could also be considered non-formal because it is not teacher dependent, nor heavily routinized; moreover, it confers no degrees, nor is it a part of a progressively more complex system of education.

From the outset, we must also differentiate the varying learning needs of different age groups of females. For this analysis, girls and women will be divided into three age groups: 6 to 14 years old; 14 to 25 years old; and 26-40 years old. Six to 14 years of age are the formative years; 14 to 25 are the years of establishment -- years in which the typical LDC female may get married (usually while still in her teens), have children, enter the labor market or establish another occupational involvement, typically in household or agricultural employment; 25 to 40 are years of consolidation in which the decisions and initial advancements of the 14 to 25 years are consolidated. After 40 years of age, the typical rural LDC woman does not seek participation in a formal or non-formal education program. Personal economic situation, social and, perhaps, health constraints may impede her participation, as well as the fact that given LDC low life expectancies, she may not have 35 years of economic productivity remaining. Consequently, investment of scarce educational resources may be more cost beneficial if invested in her daughter or other, younger women.

Keeping these distinctions and definitions in view, this paper will discuss the two types of education and their relationship to women's education in developing nations. Chapter I has served as a brief introduction to terms and definitions. Chapter II discusses selected current issues in education and development. Chapter III provides an overview of female education. Chapter IV examines the major question, the comparative functionality of formal and non-formal education by exploring the relationships among the indices of social, economic and demographic impact. Chapter V presents observations on structural and systemic functionalities, while Chapter VI is a summary and conclusions.

As many examples as possible are drawn from nine AID-recipient countries in an attempt to coordinate these findings with other projects within the AID/WID office. The nine countries are Bangladesh, Indonesia, Afghanistan, Morocco, Nicaragua, Jamaica, Upper Volta, Liberia and Tanzania. A clear drawback to this report is the fact that no field research augments the library and journal work and interviews on which the hypotheses are based. While AID officers were most gracious in granting me time and access to project papers, evaluation statements and other unclassified materials, an on site visit would add a needed dimension to this assessment.

II.

An Overview

Problems in Formal Education

This section examines the general state of formal and non-formal education in LDC's, then turns to a discussion of literacy which is identified as an important variable in both formal and non-formal programs.

Recent studies by the World Bank and other international institutions have found that formal education is often discriminatory, inefficient and ineffective. John Simmons of the World Bank argues that developers and policy makers must re-examine educational priorities and policies, for analysis of basic assumptions has proved these very assumptions questionable at best, untrue at worst.⁴

For instance, the commonly held belief of the synergistic relationship of education and employment is often disproved. Contrary to assumption, schooling does not guarantee increased individual productivity.⁵ Furthermore, an added grade or level -- more schooling -- does not, by itself, increase the productivity of the individual worker.⁶

Another commonly held assumption is that education is the route to upward mobility and wealth. Every mother strives for education for her children so that they can achieve a quality of life superior to her own. Simmons found that, to the contrary, education does not enhance chances of upward mobility for everyone. In fact, education increases disparities between the rich and the poor. It is the middle and upper class children to whom the benefits of upward mobility accrue; the middle class children

who attain more years of schooling and then have access to high paying, white collar jobs.⁷ In school poor children learn a social hierarchy that mirrors society, and their low status within that hierarchy. Often the poor students, because of economic and environmental pressures, fail. This failure, usually internalized and exacerbated by parental disappointment and/or punishment, often becomes a self-fulfilling prophecy.⁸

It is also commonly thought that education leads to more democratic tenets and a stronger sense of individual political efficacy. Some findings dispute that belief. A Tunisian study revealed that the more years of secondary schooling one has, the more likely that one will be politically apathetic and/or alienated from the ruling party.⁹ Moreover, an Indian study found that the more years of schooling an individual attained, the more conservative he or she became, as measured by her willingness to support military takeovers and undemocratic regimes.¹⁰

Thus many of our assumptions about the synergistic relationship of education and employment, the potency of education as a means of upward mobility, and the importance of education as a democratizing agent have all been severely challenged.

In addition to educational assumptions being challenged, the performance of formal education has also come under close scrutiny and been found wanting. Retention of literacy, numeracy and basic cognitive skills is depressingly low; in a followup study one to two years after completion of a two to three year adult basic education course in Tunisia, 80 percent of the participants were illiterates.¹¹ In a 1968 study in India, formal school leavers with six years of schooling had lost 20 percent of their skills, while participants in six years of literacy class had a literacy lapse rate of 45 percent.¹²

Schools are also commonly believed to be important agents of socialization, instilling appropriate attitudes toward employment and encouraging acceptance of modern attitudes as opposed to traditional ones. However, the evidence is mixed on schools' effectiveness in the attitudinal change arena. Reynolds suggests that attitudes consonant with maintenance of traditional society may be developed simultaneously with or in lieu of modern attitudes.¹³

In short, the formal education system, as currently constituted, is of questionable effectiveness and highly inefficient. In response to the high costs, delayed benefits, and general inability of present systems to expand further without causing severe economic dislocations in other sectors, a new alternative was needed. One answer has been non-formal education programs.

The Literacy Debate

Non-formal programs fulfill an important educational need for LDC populations beyond the reach of formal programs. At their best, they provide cognitive and manipulative skills directly related to the individual in his environment. Non-formal programs, a key element in rural development projects, are attracting more and more attention as a cost effective, relevant alternative with almost immediate results.

Probably the one element in non-formal education programs most debated is literacy education and its necessity or non-necessity to non-formal program success. The arguments between literacy education proponents who advocate universal literacy as a moral right and intellectual facilitator and other developers who maintain that significant development progress is possible without literacy wax and wane.

Pro literacy supporters cite studies that indicate that adult literacy programs lead to expansion of areas of individual concern from the village to the wider universe of national issues; instill attitudes of modernity; increase respect for and appreciation of education; and encourage more active community and political participation.¹⁴ Literacy, in advocates' views, is an important tool for development. Others argue that literacy may be important, but it is not necessary.

Three arguments call for special discussion vis a vis literacy and women in education for development. Shortlidge points out that being illiterate in a society that is predominantly illiterate does not have the same social stigma attached to being illiterate in a preponderantly literate society.¹⁵ What this argument fails to consider is the relatively disadvantaged place of women in terms of educational attainments. One definition of disadvantaged is stunted or minimized options; and women, supposedly the most disadvantaged group within LDC's, the poorest of the poor, need every means possible to maximize their options. Literacy, in a predominantly non-literate society provides status and expands options. Literacy can be a first step in increasing self-esteem, establishing contact with a wider world and assuming control over one's own sources of information.

The second argument often heard is that literacy is not relevant or necessary in the rural subsistence existence. Moreover, rural neo-literates lapse back into illiteracy more quickly than their urban counterparts, apparently due to the absence of newspapers and other reading and printed materials on which to practice their skills.¹⁶ The argument is valid. However, virtually every study on cognitive skills retention, as well as attitudinal studies on schooling and modernization, identifies the critical role that mothers play in success or failure of

a child's education.

In a study of retention rates of Tunisian males, home environment and supervision of homework by mother was cited as a significant variable involved in retention of literacy skills.¹⁷ A study of the impact of secondary school on attitudes of modernity in Ghana found that students with literate mothers were highly over-represented in the total school population,¹⁸ leading one to conclude that education was a high priority for those mothers and families. Research in Liberia revealed that 98 percent of literate mothers had female offspring in school at lower ages, achieving higher grade levels than the national norm.¹⁹

Literate mothers make formal education more cost efficient. However, rural women are not likely to be literate. In Morocco, the illiteracy rate for all women is 86 percent; for rural women it is a staggering 98 percent.²⁰ Morocco is not atypical; the rates of female illiteracy, like those of males, are significantly higher in rural areas, precisely the areas, it would appear, that the most encouragement and role modeling is needed to support female students.

We are caught in a dilemma between the questionable relevance and necessity of rural literacy when balanced against cost, utility, and effectiveness, versus the clear boon to rural students in having literate mothers and the home environment that their literacy helps shape.

The third discussion issue is whether literacy should be a precondition to participation in many non-formal programs. Experience has shown that literates and those with some formal education background achieve and benefit more from non-formal programs than non-literates and those without school experience. In examination of projected female specific and female oriented programs, literacy would appear extremely beneficial,

if not mandatory. The Nicaraguan Rural Women Leadership Project in which women will be trained for leadership and credit management is a case in point. Those identified for training must have pre-existing literacy and numeracy skills to fully benefit from the proposed training, especially in a project with a banking/credit component. The project statement goes on to discuss the training team that "will emerge with experience in assessing training needs, developing a core course and follow-on technical training in specific functional areas. Training manuals will be written, and linkages will be established between the rural women's groups and the National Women's Development Office in the Ministry of Labor."²¹

Another Nicaraguan project, the National Women's Development Project, has planned a large promotion and communications campaign that will reach the populace through radio, bulletins and newspapers. "The Women's Office will serve as the voice of Nicaraguan women through a regular publication, through newspaper articles, and radio, through reporting of research and events involving women."²² It appears that both of the above cited projects plan to make extensive use of written communication; surely literates among the target audience will be able to maximize utility and benefits of the programs in at least one way that is not open to non-literate potential participants and/or beneficiaries -- through the written word.

The Nicaraguan cases come to the heart of the matter: to maximize benefits from the program requires literacy, but literacy as a pre-condition to participation is discriminatory. There are no easy answers.

This chapter has discussed two current issues in education. First, the recent findings on the effectiveness and efficiency of formal educa-

tion systems were reviewed. Formal education has been found cost inefficient and of questionable effectiveness in achieving its social goals of equalization of access and its cognitive goals of mental and manipulative skills learning. Second, the issue of the importance of literacy was examined, especially in its relationship to rural women and women who were potential participants in non-formal education programs. For a variety of reasons, from status to attitudes toward education of children, the report advocates continued and renewed emphasis on female literacy.

Access, Enrollment and Issues of Females in LDC Education

Having discussed current dissatisfaction with the formal education systems of developing countries and the ongoing dialogue among non-formal literacy education specialists, we now examine the role of women in education.

Women do not have equal access to formal education at any level from primary through higher education in the developing world; the same inequality of access appears to be true in non-formal programs as well.

Female enrollments in LDC's do not come close to parity with male enrollment figures. Although the number of females in primary schools has risen significantly in all of the developing areas, girls attend school from one half to one tenth as frequently as males of similar ages.²³ In a rough division into developed and developing nations, in LDC's girls are more likely to be school dropouts than boys. For every 37 boys that dropped out of school in 1960, 49 girls left school; for every 40 male dropouts in 1970, 46 girls left school.²⁴

In access to vocational and technical education, females are, again, underrepresented. A UNESCO report on female education and training commented, "marked by a far-reaching numerical and sectoral imbalance, the opportunities open to girls in technical and vocational education are still far from equal to those enjoyed by boys."²⁵ Moreover, girls are usually enrolled at the skilled worker training level, rather than that of managerial technician; consequently, they are trapped in low skills jobs and are not candidates for advanced training for positions requiring higher levels of education and expertise.²⁶

There are other similar de facto discriminations against women in

education. For instance, the percentage of educational expenditures allocated for higher education is invariably many times higher than that allotted for primary school. In Uganda, for example, in 1971 for every 470 shillings spent for primary education, 57,560 were spent for higher education. In the same year, for every 24 dinars spent on primary education in Tunisia, 986 dinars were spent in higher education.²⁷ Female enrollments are in inverse proportion to the amounts spent. In Indonesia, with an overall 60 percent literacy rate, 50 percent of females over ten years of age are illiterate. Moreover, Indonesia reflects the decreasing female enrollments as one moves up the education ladder. Females comprise 46 percent of primary enrollments, but by university level, females are only 29 percent of enrollments, while males move from 54 percent of primary enrollments to 71 percent of university enrollment.²⁸

The university, however, is not only the institution on which the largest portion of the education budget is spent; it is often the place where critical development decisions are made. Institutional capacity-building is a continual thrust at most LDC universities. University students are tapped as researchers, field assistants, teaching assistants in the development and execution of in-country research projects. Females who dropped out after primary school, have lost an opportunity to acquire skills that may have provided them with expanded employment and social options.

Nor do females enjoy equal access to non-formal programs. In many LDC's, women perform the labor, men attend classes to learn about labor-saving devices. Men are identified as participants to learn about new agricultural machinery, cooperatives and, most important, credit and banking.

One goal of non-formal education has been equalization of opportunity,

but in many cases non-formal programming has been used to further exacerbate existing inequalities of opportunities and access for women. This discrimination has ranged from the outright ignoring of women, to streaming them into male-perceived appropriate training -- invariably home economics. The non-formal program of the Chilalo Agricultural Development Unit, an Ethiopian integrated rural agricultural development project, included women in its training program, but only for home economics extension work or as assistant extension agents.²⁹ Similarly, in Korea women were included in agricultural development programs only as spouses of male participants and provided exclusively home economics classes.³⁰

Currently, it appears that the pattern of sex-regulated programs in which women learned health and hygiene has been transformed; now women learn handicrafts and hairdressing as well. Meanwhile, men continue to acquire new skills in agricultural production, commercial and industrial expertise, new knowledge about coops and credit.

These disparities of content point up a possible danger of non-formal education programs, a dual track system in which women are tracked to home-oriented training courses that do not offer them competitive market economy job skills, while males learn market economy skills and enjoy attendant higher income and earning power.

Evidence of this disparity has begun to appear. Women are entering the work force in developing nations in record numbers. But they are the population most likely to be unemployed, underemployed and on the bottom of the wage scale.

In Brazil women rose from 16.78 percent to 20.48 percent of the labor force between 1960 and 1970, while their percentage of national income

rose from 10.94 percent in 1960 to 13.49 percent in 1970. In other words, 20.48 percent of the labor force earned only 13.49 percent of national income. Moreover, although both sexes showed average income increases of over 38 percent, in actual fact males averaged 306 cruzeiros per month, while women made Cr\$ 186 on average per month.³¹ These figures demonstrate that women are employed less, at jobs paying them less money, and/or perhaps are receiving lower wages than males for similar work.

In Liberia, the dual system appears to be entrenched. The major occupational group, according to the 1974 Indicative Manpower Plan, is Farmers, Fishermen, Hunters, Loggers and Related Workers; the group comprised 68.2 percent of the work force in 1972 and is projected to comprise 58.2 percent in 1982. Female participation in non-formal programs related to this sector is less than 5 percent.³² The second largest sectoral occupation in the 1982 projections is Clerical and Sales Workers, who are expected to form 12.2 percent of the work force.³³ One would think that this is a natural market economy entry point for females, especially with the tradition of the West African market mummies. However, store owners and managers want literate sales persons, and with a female illiteracy rate of 93%, few women can meet that criterion.

Thus far, as we have seen, the report has painted a bleak picture. Formal education has provided disappointing returns, non-formal programs having seemingly discriminated against females; women have not enjoyed equal access to any kind of educational opportunity. We now try to put these issues into perspective relevant to women in development and education.

Comparative Functionality of Formal and Non-Formal Education
for
Women in Developing Nations

In the current atmosphere of educational re-assessment and change, it is appropriate to find out what has worked and what has not worked for women, what has been functional in their behalf and what has been dysfunctional.

Functionality was earlier defined as a structured, organized educational activity, formal or non-formal that increases the individual ability to operate in her environment. Two functionalities have been identified for this analysis: private functionality in which private rate of return for educational investment is measured, and social functionality in which the social benefits to the larger society are assessed.

Many educational activities result in private benefits and public or society loss. For the Indonesian female Ph. D. who was sent abroad for post doctoral work and never returned, her education was undoubtedly personally functional and the private rate of return quite high; however, the social rate of return was minimal. This is a case of educational dysfunctionality for the larger society.

Dysfunctionality views educational activities from the opposite point of view, examining points in time when education is no longer privately or socially useful. For instance, when a mother in Ganta, rural Liberia, having completed a basic education/nutrition course, ran out of powdered formula and fed her baby a similar white powder, cornstarch, and the infant died, her education, or lack of it, had been dysfunctional. The

young Moroccan semi-literate rug maker who migrated to Rabat, seeking employment in a competitive urban market with a 21 percent unemployment rate, had experienced a dysfunctional education.

The optimum functionality would be an educational activity of socio-economic benefit to the individual woman, as measured through higher income and her heightened sense of psychological and social efficacy; these individual private returns may be collectively translated into social returns as an active, aware citizenry, better able to achieve higher national productivity and other development goals.

This section examines three types of education functionality: Social, economic and demographic. Each one is analyzed for formal and non-formal education. The section concludes with a summary of the various functionalities and dysfunctionalities.

Social Functionality

The social impact of education is the one most vehemently discussed and most difficult to objectively evaluate. Discussion of the social spinoffs and benefits of education allow educators, developers and lay persons to set forth their dreams for humanity in ringing terms. Social goals of education can discuss moral rights, maximization of individual potential and enhancement of democratic values. Such lofty thoughts make it increasingly difficult to objectively assess how education is or is not meeting its objectives.

The social impact of education will be assessed by three criteria: (1) the social multiplier effect which investigates the question of how female education has worked to make more women aware of the importance

of education and expanded their demand for and access to education;

(2) the role model effect, which asks if the educated female has served as a role model for other females, encouraging them to attain similar achievement(s); (3) change agent/catalyst effect, which analyzes whether female education has been able to encourage and hasten social change and whether the educated female has been able to ameliorate the effects of encroaching modernity on other women.

A social multiplier effect means that one educated women serves as impetus for other girls and women to become educated and that the example is multiplied and each of the examples is, in turn, re-multiplied. In other words, if the opportunity for education is present, are females encouraged to use that opportunity. Nadia Youssef commented on a well-worn Moroccan argument that families will not allow young girls to take advantage of educational opportunities that do exist. It is improper for young girls to go too far away from familial influence; this kind of action may damage their character and reduces their marriageability.³⁴

Education as a social multiplier stands in direct opposition to that Moroccan view. The presence of educated women encourages other women to take advantage of educational opportunities, if available. One of the most compelling examples of the potency of the multiplier effect is the pivotal role mothers play in the education of their offspring. In the study of urban Liberian women mentioned previously, a full 98 percent of literate Monrovia women surveyed had their female offspring in school at earlier age, achieving higher grade levels than the norm for Liberia or sub-Saharan African nations³⁵ in a dramatic example of the social multiplier at work. Literate mothers had increased, or multi-

plied, the number of girls in school. In the same study, a similar survey of non-literate mothers revealed less than 40 percent of their female offspring in school.³⁶

Weis's study of Ghanaian secondary school students, also previously cited, indicated that pupils with mothers with some level of education were highly over-represented in the student population. While 6 percent of Ghanaian females in the general population had obtained any formal education, 58 percent of the sample mothers had attained at least primary education.³⁷

Some anecdotal evidence indicates that the presence of an single educated woman may not be sufficient to initiate the multiplier effect. A Zairean Ph. D. from Harvard recalled her age cohorts laughing at her and teasing her during vacations as the only girl in the village being sent away to school. It may be that a critical mass or certain percentage of cohorts participating in an educational activity with visible proof of the benefits of education is necessary to encourage local demand for education.

If a critical mass and tangible proof of the benefits of education are necessary, non-formal education may be more functional than formal, for the benefits are more quickly visible. Several ongoing projects might provide interesting data with which to test the hypothesis. The Thai sericulture project in which benefits appear only after the project has been operational for one year, may provide pertinent data with which to test the hypothesis.

At present, we can only conclude that if expansion of educational

opportunity is a social good, both formal and non-formal education achieve a social multiplier impact and are socially functional.

Education's utility as a role model is another test of its social functionality. In the developing world, education is status, and a female invariably achieves high status with education. The greater the rate of female illiteracy in the community, the greater the literate female's status and elevation as a role model. Role modeling is functional in that it encourages utilization of existing educational facilities and creates demand for greater female representation in available school and non-formal placement.

In addition, role models also provide support to female students when societal constraints operate against their continued education.

Perhaps it is as a change agent that female education has been most visible and effective. High profile educated females, as the purveyors of social change, have been able to cushion the effects of modernity on other women.

The Bangladeshi National Women's Development Academy is utilizing this principle of the female as change agent/catalyst for social change by recruiting women from rural areas for training and then having the women return to the same areas as teachers. Since rural Bangladesh is predominantly Muslim, women will be used exclusively as teachers and extension workers.³⁸ In that way, women familiar with specific local sub-cultures will be able to introduce new ideas and methods into the various local female communities.

The success of female family planning workers also testifies to the potential of women as catalysts for change. Whether trained through the

formal system or through a non-formal population program with an education component, female family planning workers have had demonstrated successes. In most LDC's, for a variety of reasons including highly structured and highly differentiated sex roles, females feel most comfortable talking to other females. This fact was dramatically demonstrated in the Perdita Huston follow-up of the family planning film, Marigoli.³⁹ In the film, a young Kenyan male interviews women from another village of his ethnic group, asking them questions about their motivations and reservations regarding fertility. In the Perdita Huston follow-up, women gave dramatically different responses to a female investigator.

Liberian Minister of Agriculture, Florence Chenowyeth, embodies the social functionality of formal education, serving as a role model, change agent, and through her position, stimulating the social multiplier impact. Minister Chenowyeth has instituted a new seed distribution program open to all Liberian farmers. Women, who perform approximately 80 percent of the agricultural work in Liberia, are the most active acceptors of the new free seeds. A spinoff of the distribution project is the sale of the agricultural surplus to local supermarket chains -- a cash benefit that is encouraging and increasing female farmers market economy participation.⁴⁰

From the above discussion, one can conclude that both formal and non-formal education are socially useful and functional; however, formal education imparts certain advantages that, comparatively, increase its functionality. Formal education induces the social multiplier effect with much greater frequency, perhaps because of its emphasis on literacy. The formal system holds, as a primary goal, the teaching of literacy and other cognitive skills; skills which are in and of themselves, status

symbols. Formal schools embody a status and legitimacy that non-formal programs have not yet acquired; therefore, the non-formal programs are not capable of inducing the same role model impact. Also, being a catalyst for social change implies a degree of legitimacy and authority that the formal system confers more easily than the non-formal system.

On the plus side for non-formal education, its benefits are more immediately visible and results of participation are manifested rather quickly, without the years of delay that often accompany formal education participation.

Economic Functionality

The goals of virtually every educational activity include: 1) increase in actual knowledge; and 2) development of cognitive and manipulative skills, which will, in turn, enhance individual well-being, often measured by increases in personal income and national productivity. The question being asked more and more frequently is the certainty and extent of the relationship among education, income and productivity. Indeed, the economic functionality of education is one of the bases of the current re-assessment of education. Developers are questioning whether investment in other sectors may be more cost/beneficial than increased investment in education.

Several tests of economic functionality exist; the three to be utilized here include cost/benefit analysis; rate of employment upon completion or termination of training or schooling; and the relationship of female job and skills training to labor market needs. In addition to the specific assessments, other trends related to the economics of education are noted: first, sex segregated labor markets, and second, the

possibility of a dualism in non-formal education projects, whereby women are tracked into low skills jobs in the secondary labor force, while men are trained for relatively high wage jobs with promotion possibilities in the primary labor force.

Sex Segregated Labor Market

When women are trained for specific categories of jobs and/or streamed into particular training programs, these occupations often tend to become identified as women's work. This identification may have two negative outcomes: 1) a sex segregated labor market; and 2) depressed wages in the specific industry or occupation so identified. Both of these conditions damp female wages, thereby defeating one of the major benefits of education-- increased income. A sex segregated labor market is dysfunctional, as are training and professional courses or schools that feed into such a system.

Examples of this type of educational dysfunctionality abound, particularly in the service professions of teaching and nursing. For example, 90 percent of primary school teachers in Paraguay are female,⁴¹ making primary education a field that is virtually for women only. In Malaysia, the majority of female students who fail qualifying exams for prestigious academic secondary schools are streamed into teachers colleges, severely limiting the quality of new teachers in terms of skills levels and pedagogical strategies. Furthermore, primary school teaching becomes identified with minimally qualified individuals, thereby weakening support for salary increases and software investment for primary education.⁴²

Similar cases of sex segregation are found in non-formal projects, particularly handicraft programs. Traditionally one of the few economic outlets available to women, many informal household handicraft operations were transformed into non-formal programs in the initial stages of interest

in women in development. The underlying idea was sound, involving good use of community resources; however, many of the programs continue to teach skills with limited marketability, little transferability and a future of economic obsolescence. Few men are going to enter the handicraft trades due to cultural constraints and low wages. Meanwhile, women are stuck in a sex segregated, low wage industry with little prospects for immediate transfer into training and/or employment with greater income generating potential.

Morocco offers a case to support the point. Only recently have Moroccan planners and politicians realized that the economy cannot absorb hundreds of illiterate and semi-literate women trained in non-essential trades such as personal hygiene and beauty skills. The new AID initiatives in non-formal education for women hopefully will alleviate a situation in which the emphasis on inappropriate, sex segregated training has resulted in economic dysfunctionality and unemployment.⁴³

Dualism and Labor Force Participation

There are dangers of dualism within the labor market in both formal and non-formal education. In formal education programs, the dualisms often appear more subtly. For instance, the majority of professional women worldwide are teachers and nurses. However, if we examine teaching as a profession more closely, we see that women are concentrated in the primary teaching level. As one moves from primary levels through university teaching, the number of women decreases significantly. In Brazil, for instance, 90 percent of primary school teachers are female, 34 percent of secondary level teachers, and 21 percent of university faculty.⁴⁴

Nor do women achieve administrative posts in education proportionate to their professional involvement in the field. Few women achieve principalships and even less attain decision-making posts within ministries of education. Table 1 indicates levels of female participation from primary through university levels in selected developing nations, and points up the dualism of the formal system in the primary labor market. In this case, it is not only a question of status, but a matter of income as well. Principals, administrators and university professors generally earn more money and experience greater job satisfactions from their income and decision-making abilities.

Non-formal programs may reflect or establish a dualism in the labor market, too. There appears to be a four part, sequenced pattern in non-formal program attempts to integrate women into the labor market. The pattern is particularly clear in Morocco, but apparent in other LDC's as well. The first step is organizing the traditional handicraft skills of women. The second step is expansion of the range of female skills to include hygiene, hairdressing and personal service skills. The third step is incorporation of commercial sector skills such as typing, childcare and dressmaking. Fourth, governments begin to actively seek ways to meaningfully integrate women into national economies, usually through competitive industrial and commercial training programs.

The problem is that women usually end up in the low paying jobs of steps one through three, without similar promotion opportunities and relatively higher wages found in non-sex segregated or male dominated fields of step four. Moreover, women do not have access to the step four programs because of the lack of fundamental job skills or educational cre-

Table 1: Females in the Teaching Profession by Levels
in Selected AID Recipient Nations

Country	Primary	Secondary (in percentages)	Higher Education
Afghanistan	18	n.a.	.05
Bangladesh	2	7	n.a.
Jamaica	79	67	n.a.
Liberia	28	11	7
Mexico	61	20	13
Morocco	21	n.a.	10
Nicaragua	79	n.a.	n.a.
Philippines	78	67	49

Sources: Patricia L. McGrath, The Unfinished Assignment: Equal Education for Women, Worldwatch Paper 7 (Washington, D.C., July 1976), Table 4, p. 34; and U.N. Statistical Yearbook, 1976.

dentials requisite to participation.

In Morocco, women were initially involved in handicraft programs under the aegis of two government-sponsored organizations, the Ouvoir Centres and the Foyers Feminins. The programs were subsequently expanded to include the personal services industry and then further expanded to teach commercial skills. However, in the commercial skills programs, women were limited to certain courses and curricula. While commercial training programs in typing, shorthand, and bookkeeping became female exclusive, the other commercial training program, accounting, was predominantly male.⁴⁵ Accounting generally offers higher income, higher status and greater promotion options than typing, shorthand and bookkeeping.

The Moroccan situation vividly demonstrates the relationship of cultural constraints to training and the resultant sex segregation and dualism within the labor force. Custom still obviates against female participation in certain professions and against certain integrated learning situations. The AID-sponsored, proposed Industrial and Commercial Job Training for Women Project attempts to solve the dilemma by providing the sex segregated learning environment that many developers and many Moroccans -- both men and women -- maintain that custom demands, while attempting training in non-traditional fields that hold prospects of immediate employability and advancement opportunities based on merit. The project, to be operated under the auspices of the Ministry of Labor, will focus on job skills for young women with incomplete formal education (although nine years of formal education is the prerequisite for entry into areas of specialized industrial training in drafting, electricity and electronics) by establishing a new Vocational Training Center for Women that will parallel a male prototype currently in operation.⁴⁶

The danger is that the trades into which women enter in large numbers will again be perceived as women only occupations. Programs that differentiate and discriminate by sex are generally economically dysfunctional to women, usually keeping them at the lower end of the wage scale in non-decision-making, low status jobs in which there is little opportunity for professional growth or advancement. Perhaps, realizing the potential dysfunctionality of this labor market dualism, economic planners should target a certain percentage, preferably close to 50, of females as a desirable participation figure for any given industry. With equal access and equal pay, this type of planned integration by sex might dramatically reduce, if not eliminate sex based dualism in the labor market.

Having discussed sex segregated labor markets and dualism in the labor force, we now examine the economic functionality of female education through three other criteria: income differentials, rates of return, and employment options.

Income

An educational activity is economically functional if it increases income. Formal education offers greater lifetime earnings than non-formal education. The more formal education a woman obtains, the greater her lifetime earnings are likely to be. Women who complete secondary school generally achieve higher incomes than those who dropout or who never attend school. The few women who attain higher education in LDC's have greater lifetime earnings than those who just complete secondary school. The direct correlation between amount of education and higher income is clear: the more formal education a woman achieves, the greater her projected lifetime earnings.⁴⁷

Again, the critical variable seems to be literacy. This is understandable, for a literate person has more cognitive skills and will generally find new employment more quickly than an illiterate. Indian secondary school graduates achieved average earnings 8 times the national per capita income, while Ugandan secondary school completers earn 20 times the average per capita income. Brazilian university graduates' incomes average 16 times that of illiterates.⁴⁸

Non-formal programs may lead to rapid increase in income initially, but subsequent increases are not on a par with increments projected for formal workers. A Monrovia tie-dye cooperative of ten women averaged \$2500 gross per month in each of the cooperative's first three months in operation; however, revenues gradually decreased to \$900 to \$1200 gross per month, although the latter amount, when divided into ten monthly net wages, was still above the national average monthly wage.⁴⁹

Rates of Return Analysis

The second criterion for economic functionality is rate of return for educational investment. Analysis has shown that in LDC's education has greater private rates of return than social ones, and that the highest rates of return within formal education accrue to the primary school graduate.⁵⁰ The majority of empirical studies on which rates of return analysis are based used all male samples. Although there have been some female specific studies, more rates of return analyses based on female samples are needed, for women may show greater social rates of return, given the marked influence as mothers they have on the education of current pupils.⁵¹

Employment

The third criterion by which to examine economic functionality is labor force participation after completion or termination of education, whether it is formal or non-formal. In general, formal school graduates

have experienced a period of unemployment before being able to obtain a first job. The period between school leaving and first employment has lengthened considerably in many developing nations, a trend that will probably continue as formal systems graduate increasingly greater numbers of completers than the economy can absorb.⁵²

Given the small percentage of women completing secondary school or university in the developing world, the time lag between school leaving and employment may be much smaller, if such a gap exists at all. This high employability of educated women may be due to several reasons. The female graduate is more likely to have parents with higher education and socio-economic status than her male counterpart -- parents who may hold influential positions and/or work in a profession in which they can aid their daughter in her job search. Secondly, due to the formerly discussed sex segregated labor market, women are likely to be trained in the service professions as teachers and nurses. Women comprise two thirds of all teachers in the developing world, and most of the remaining third are nurses.⁵³ Women are 70 percent of the primary teachers in Benin, 67 percent of teachers in the Phillipines, 72 percent of the teachers in Costa Rica, and 90 percent of the teaching training college students in Brazil.⁵⁴ Similarly, 61 percent of Ghanaian nurses are female; 72 percent of Costa Rican nurses, 76 percent of Thai nurses and 100 percent of U.A.R. nurses are women.⁵⁵ Since women in these professions know their options and are generally aware of their range of employment options, it appears that they may not be required to undergo the great hunt for the first job.

Third, rather than be unemployed, the female graduate may opt for underemployment; the college graduate who assumes a job as a secretary

is an instance. Fourth, with the new emphasis on integrating women into development, there may be special sectors and quotas in the labor market reserved exclusively for women. This is currently the case in Bangladesh where 10 percent of existing civil service slots are reserved for women.⁵⁶ In a 1974 analysis of pre-census figures for Monrovia, over 90 percent of women who had completed eighth grade were employed in the market economy. Virtually every woman with a university degree was employed.⁵⁷

In short, female employment for those who have completed their education seems not to be a problem. For women in the top education percentiles, education, in terms of employability and employment options, is functional.

Unemployment becomes a problem when women are dropouts from the formal system. In Morocco, one of the greatest employment problems is illiterate and semi-literate women seeking employment. Unemployed women actively looking for work totaled 21 percent in 1971, up from 2 percent in 1960. One of the three factors supposedly contributing to the upsurge in unemployment has been education. Among those women actually seeking work, 53 percent have had four years or more of education; 17 percent have had more than eight years of school.⁵⁸ This is a case of formal education dysfunctionality. Those women with four years or more of education are still illiterate, while those with eight years or more of schooling are semi-literate at best. These women represent a waste of resources and their dropping out merely raised further the cost of primary education. Even the non-formal programs currently being proposed by local ministries and AID will not include the 53 percent with four years or

more of schooling. Most options of the proposed Industrial and Commercial Job Training for Women Project require at least nine years of formal education.

These women may well be the Moroccan hard-core unemployed. Although they could traditionally gain employment as domestics, the rise in urban migration has escalated the qualifications for domestic work, and younger girls, 27.3 percent under 15 years old, who have completed primary school, are competing with the semi-literate and illiterate school leavers for jobs.⁵⁹ Fortunately, one of the non-formal programs AID is currently proposing for FY 80 aims to work with the Foyers Feminins to reach just this semi-literate and illiterate population.

Labor force participation and employment options for women with non-formal education experiences are mixed. Non-formal programs are, ideally, geared to provide job training and skills that will aid in finding jobs that currently exist. The programs should be based on current employment needs and labor market assessment.

Non-formal programs are economically functional if they provide two services: 1) teach job skills that may be quickly and actively utilized in the market economy; and 2) offer training that can interface with advances in intermediate technology by providing periodic opportunities for upgrading skills in consonance with changing labor market demands.

An example of an apparently functional non-formal program is the Pre-School Expansion for Children of Low Income Families, a project being implemented by Fe y Alegria (Faith and Hope) in Managua, Nicaragua. A two part project which will run pre-schools for poor Nicaraguan youth who are educationally disadvantaged in an educational system that demands

initial literacy before entering the formal primary system, the second phase of the project involves the design, production and distribution of pre-school educational toys made by low income adults who are trainees in Fe y Alegria-sponsored workshops. The workshops offer an opportunity to learn a marketable skill and retain one's own literacy skills by the continued opportunity to utilize the abilities to read and calculate, due to the close proximity to printed materials.⁶⁰

To summarize the discussion of economic functionality, our analysis has suggested that two overriding issues causing economic dysfunctionality are the sex-segregated labor market and a dual labor market resulting from unequal access to training programs. Examination of specific criteria of income, rates of private and social return, and employment options, seemed to suggest that formal education was more functional in all three areas.

Non-formal programs are also functional in raising income, but income in lifetime earnings will still not reach that of the formally educated person.

Employability depends on rigorous in-country assessment of the labor needs and subsequent program design to meet those needs. A major stumbling block are the semi-literates who are the underclass of the labor market. Non-formal programs can have their greatest impact on that group.

Demographic Functionality

Two major issues facing the developing nations are rural to urban migration and rapid population increases. Education, both formal and non-formal, impinges on both demographic trends. We will first examine the relationship of education to rural urban migration, and then examine

the impact of education on fertility.

Conventional wisdom and a multitude of empirical studies suggest that formal education leads to rural migration to urban areas.⁶¹ Several factors are offered as explanation. One reason is the lack of opportunity to utilize newly learned cognitive skills in the rural areas, and the knowledge that the skills can be used in another environment, one which also offers increased access to media and information. Rural school leavers may justifiably ask, "Now that I know how to read, what am I going to read?" suggests Coombs and Ahmed.⁶²

A second reason for migration to urban areas is wider opportunities for wage employment in the market economy offered in cities. Villagers learn of the wages, relatively high in comparison with rural income, and tend to view wage labour purchasing power in terms of manufactured goods (which cost more in the village under any circumstances) rather than in terms of food costs.⁶³

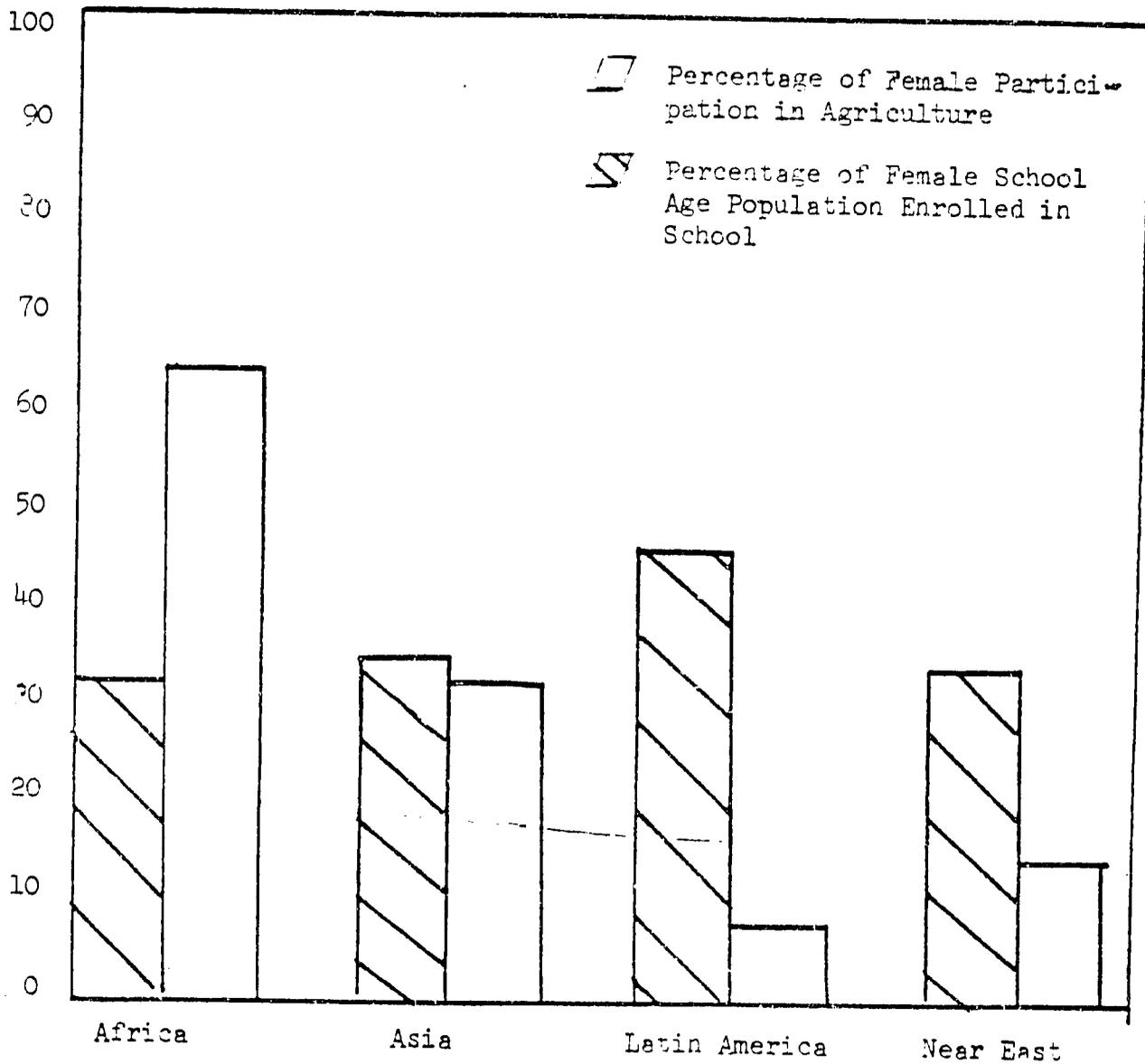
Although the lure of relatively high wage employment attracts men to the cities throughout the developing world, the wage economy does not lure women in all regions. Boserup points out that there seems to be a relationship between high female economic participation through agricultural productivity in rural areas and the decision to migrate. Women, who are major participants in agricultural activities and, therefore, economically active, are less likely to migrate. One reason for the low urban migration rates is that the labor of young women in Africa and Asia is needed for childcare and light household tasks so that their mothers' time can be freed for work in the fields. In Latin America and the Near East, areas in which women have not been economically active

through agricultural productivity, but restricted to domestic activities of food processing, cooking and childcare, the labor of young girls is not a necessity, and often they were encouraged to migrate to towns and cities to find wage employment.⁶⁴

It would appear that there is also a relationship between agricultural productivity and education that is, in turn, related to migration. In the areas of most intensive female involvement in agriculture, we find the lowest percentages of school enrollments. In Africa 65.2 percent of the female school age population are enrolled in school, and women supply 50 to 80 percent of agricultural labor.⁶⁵ At the other end of the spectrum, Latin American women are involved in agricultural production at an average rate of 3 percent, while school enrollment for females averages 88.2 percent of school age population.⁶⁶ The chart on the following page indicates the relationship of school enrollments to agricultural labor for four regions of the developing world. In short, the high percentage of educated females found in areas of low female agricultural and economic involvement, tends to encourage these females to migrate to urban areas, for there are no employment opportunities and no ways to utilize the skills learned in school in the rural environment.

A third reason for female migration is familial. If a woman's husband or father has migrated to the city, he has two options. He may send back money to help support the rural household, or he may send for his family. In areas in which there is opportunity for female employment, especially in industry in countries of Southeast Asia such as Thailand and Burma, or in domestic service, much of Latin America and the Near East, he may opt to move his family to the urban area, since his wife's poten-

Chart 1: Relationship by Percentages of Female Participation in Agriculture to Percentage of Female School Age Population Enrolled in School



Sources: Ester Boserup, Woman's Role in Economic Development (New York: St. Martin's Press, 1970), Table 3, p. 27, and Center for Integrative Studies, 1975.

tial income will, to some extent, replace her rural (often uncounted) in kind contribution as domestic worker and food processor.

A fourth reason for migration is the opportunity for further education. In most developing areas, technical and vocational schools, as well as the university (ies) are located in or near urban areas. However, continuance of education is an essentially male reason for urban migration, since female enrollment rates are very low at the level of university or technical/vocational education.

The above, then, are four reasons why women migrate to urban areas. Although all are important, the relationship between education and migration is the one that concerns this study. It would appear that education encourages migration for several reasons, two of which bear further explanation.

First, as previously stated, the rural educated woman has little opportunity to practice and retain her learned cognitive skills in the rural environment. The ability to read has opened a wider world and she may be anxious to see it. Sensing that she may have wider options to exercise than her illiterate sister, she may believe that she can obtain wage employment in an urban area because of her literacy.

Second, we have seen that if she is educated, she is not likely to be economically active in the rural area. She may as well migrate to the city, for she has nothing to gain by staying in her village.

Non-formal programs as well may encourage urban migration if a woman trained in a village-based, non-formal program decides to migrate to an urban area with her new skill. This may occur particularly in areas with a tradition of female involvement in commercial and indus-

trial activities such as Southeast Asia.

The functionality of education in these instances depends on the attitude of the government toward urbanization. If the government is attempting to discourage rural to urban migration, then formal education is dysfunctional. Non-formal education can be either functional or dysfunctional, depending upon completers post-program actions. One solution to this dysfunctionality is to increase and upgrade rural employment opportunities and to improve the quality of urban life. One measure of demographic functionality is the ability of the educational system or the non-formal program to enable the individual to do the most she can within her present environment.

The Bangladesh National Women's Development Academy project attempts to improve the rural environment. Through training, the project is attempting to reach rural women to encourage new nutritional practices, present innovative food processing techniques and introduce the concept of selling surplus crops for cash earnings.⁶⁷ These are all improvements that will make rural life more comfortable and, at the same time, increase the women's economic productivity.

Many developers, Boserup and others, argue that urbanization is the wave of the future and virtually inevitable. A high degree of urbanization has invariably been a condition of economic development. If national policy of a given nation encourages urbanization, then education is functional. Non-formal programs could be extremely beneficial in this type of situation in their ability to impart utilisable job skills to women in urban areas so that they may more fully contribute to the development process.

Many successful non-formal education programs that have not resulted in a degree of urban migration have been in the agricultural sector and have emphasized agricultural productivity rather than literacy.⁶⁸ One might hypothesize that a literacy component in non-formal projects encourages migration. If, however, literacy is de-emphasized or removed, we are back to the problem of extraordinarily high illiteracy for rural women and the negative implications that such illiteracy has for the educational attainments of young girls and women.

This situation presents a real conflict: a literacy component in a project may be dysfunctional in that literacy encourages urban migration; yet it appears socially functional for women to be literate.

To summarize, education does appear to be a critical variable in encouraging migration for women. Employment opportunities and level of economic activity within the rural setting are also important to young women. The consideration which makes education functional or dysfunctional is governmental policy toward urbanization.

Education and Fertility

The second demographic factor that we are examining in relation to education is fertility. The correlation between education and decreased fertility has been well-documented.⁶⁹

Studies have also shown that labor force participation correlates with decline in fertility.⁷⁰ Here both formal and non-formal education, by teaching marketable skills, are encouraging fertility declines and population stability.

Non-formal projects geared to women have often integrated population assistance components into programs. The Bangladesh National Women's

Development Academy noted:

Since increased education and economic productivity of women have been shown to correlate closely with declines in fertility, the educational benefits and skill training allowing increased economic participation should contribute to a reduced population growth rate.⁷¹

The paper goes on to cite a goal of the project as "acceptance of the small family norm."⁷²

Virtually all of the AID population assistance programs have an educational component, whether it is in actual professional or paraprofessional training such as the training of paramedics and auxiliaries in contraception and family planning, or training of midwives, or sex education in schools.

The Congressional funding presentations statement shows the extent of the interrelationship. "An essential element of A.I.D.'s population program is the provision of information and education programs to increase receptivity toward family planning, and expanded research on understanding the determinants of fertility."⁷³

It is our hypothesis that any educational activity that leads to acceptance of family planning services and proper appropriate use of those services is functional. However, both formal and non-formal programs are dysfunctional if the mechanics of birth control are imperfectly or incorrectly learned, since misapplication of birth control may result in increased fertility.

This chapter has examined functionality of formal and non-formal education through three criteria: social functionality, economic functionality and demographic functionality. Formal education appeared to be more functional socially because of the multiplier effect, role model status and change agent/catalyst function. Economically, both formal

and non-formal can be functional in terms of income and employment. Using the criterion of lifetime earnings, formal education offered higher income. Non-formal programs were cited as being socially useful in aiding the bulk of illiterate and semi-literate girls and women that the formal system simply cannot accomodate. Two economic dysfunctionalities were identified: the sex segregated labor market and the dual labor market. Finally, demographic criteria were examined. We saw that formal education leads to urban migration, while non-formal may or may not. If urbanization is viewed as acceptable, then each type of education was functional. However, if governments desire to retard urbanization, then non-formal programs that can quickly and dramatically improve the quality of rural life as well as provide job skills are the desired intervention. The relationship between education increases and fertility decline and female labor force participation and fertility decline were both cited and the conclusion reached that any education program was functional that contributed to increased knowledge and acceptance of family planning services.

Comparison between formal and non-formal education has shown that both can be functional at a given time in a given situation; however, both kinds of education can also be dysfunctional as well.

Several problems with the formal system should be pointed out as danger signals that will detract from the positives of formal education.

On the positive side, formal education gets initial high marks in its ability to teach cognitive and manipulative skills. In rate of return analysis (a measure of the net benefits of education), primary education brings greater private returns than any other type of education. We can safely assume that primary education also has the greatest functionality for females. First, it offers literacy and numeracy, enabling one to choose one's own sources of information and to expand the range of variables in individual decision-making. Second, primary education brings contact with the wider world. Third, it is helpful in any other type of educational undertaking and, as previously stated, studies indicate persons with any schooling do better in non-formal programs than persons who have had no schooling.⁷⁴

A second positive of formal education is that it broadens opportunities of participation within one's community and the greater polity. Non-formal programs can also expand a women's opportunities to participate, but the options are usually specifically related to her community rather than transferable to a wider arena. The difference is the level at which one can participate. The person with formal credentials is likely to be able to participate at a higher level of economic and pol-

tical sophistication than the person who has just completed a non-formal program. Any of the non-formal program for women can be taken as an example. In the Non-Formal Education for Women Program in Morocco, it is the women with years of formal training who are scheduled to receive further training as monotrices. If we talk about access and participation options maximized, we are usually talking about greater functionality accruing to formal education.

There are negative aspects as well as positive functions. Various dysfunctionalities are associated with formal education. In most LDC's, the formal system of organized learning is the legacy of the colonial era. Begun by colonial powers and/or missionaries, the purpose of early systems was to train clerks and lower level manpower. Based on metropolitan models, the schools often emphasized classical education, attempting to emulate Oxford or the Sorbonne, to the neglect of vocational and technical education. These embryonic systems were not meant to educate masses of people.

Today these embryonic systems have been expanded beyond their capacities to absorb students. Declining age structure, fast-growing school age population and public demand for more school places pressures the average LDC to allocate an average 20 percent per annum of the national budget to formal education.

75

Currently, to a large extent, formal education is still dysfunctional in its emphasis on general liberal arts skills that are not relevant to urban or rural life in the developing nations. Even when new nations revise their curricular materials to reflect their national heritages, they change the content, not the structure of the curriculum. A stu-

dent in an academic program still follows a liberal arts course with history, language arts, math, science and fine arts, courses that are, for the most part, irrelevant to her future in the developing world.

Formal systems have also been dysfunctional in their tendency to instill attitudes that belittle and eschew manual labor. Many students feel that a school diploma makes manual labor of any kind beneath their dignity and refuse jobs involving blue collar work, thereby prolonging their terms between school and employment. In effect, their employment selectivity reduces their lifetime earnings and contributes to economic dislocations.

Another dysfunctionality of the formal system has been dual tracking in which girls are counseled into "female appropriate" fields such as the arts and humanities and home economics, while boys are channeled into programs in which they learn math, science and technological expertise necessary for dealing with appropriate technologies.

A major dysfunctionality of formal education is its potential to establish and exacerbate distinctions between educated and uneducated women. Madame Kitty Labouet, an Ivorien librarian, called the educated/non-educated gulf "the heart of the matter."⁷⁶ The question is how do formally educated women bridge the gulf to help their illiterate countrywomen. If formal education encourages elitist tendencies and does not provide mechanisms to assure interactions between literate and illiterate, advantaged and disadvantaged, then it is dysfunctional.

This gulf between educated and uneducated manifests itself in still another kind of dualism, the dualism of the haves, or educated, who are educated and prepared for one labor market, and the have notes, women

who are virtually in a different economy. Studies have shown that formal education, rather than serving as the great equalizer in the developing countries, tends to widen the gaps between rich and poor, literate and illiterate, university graduates and the unschooled.⁷⁷

Developers and education specialists appear to be caught in a dilemma. In the developing world, the women are the poor, illiterate, non-schooled. After pointing out these dysfunctionalities of formal education do we abandon it and opt for non-formal involvement, or do we try to reform the formal system.

Before coming to any conclusions, let us examine some positive aspects of non-formal education and associated dysfunctionalities. Non-formal education programs are generally more flexible than formal systems and do not suffer from many of the structural defects and hidebound traditions found in many formal systems. Non-formal programs, often developed as short term responses to immediate problems, usually have more pragmatic goals than formal programs.

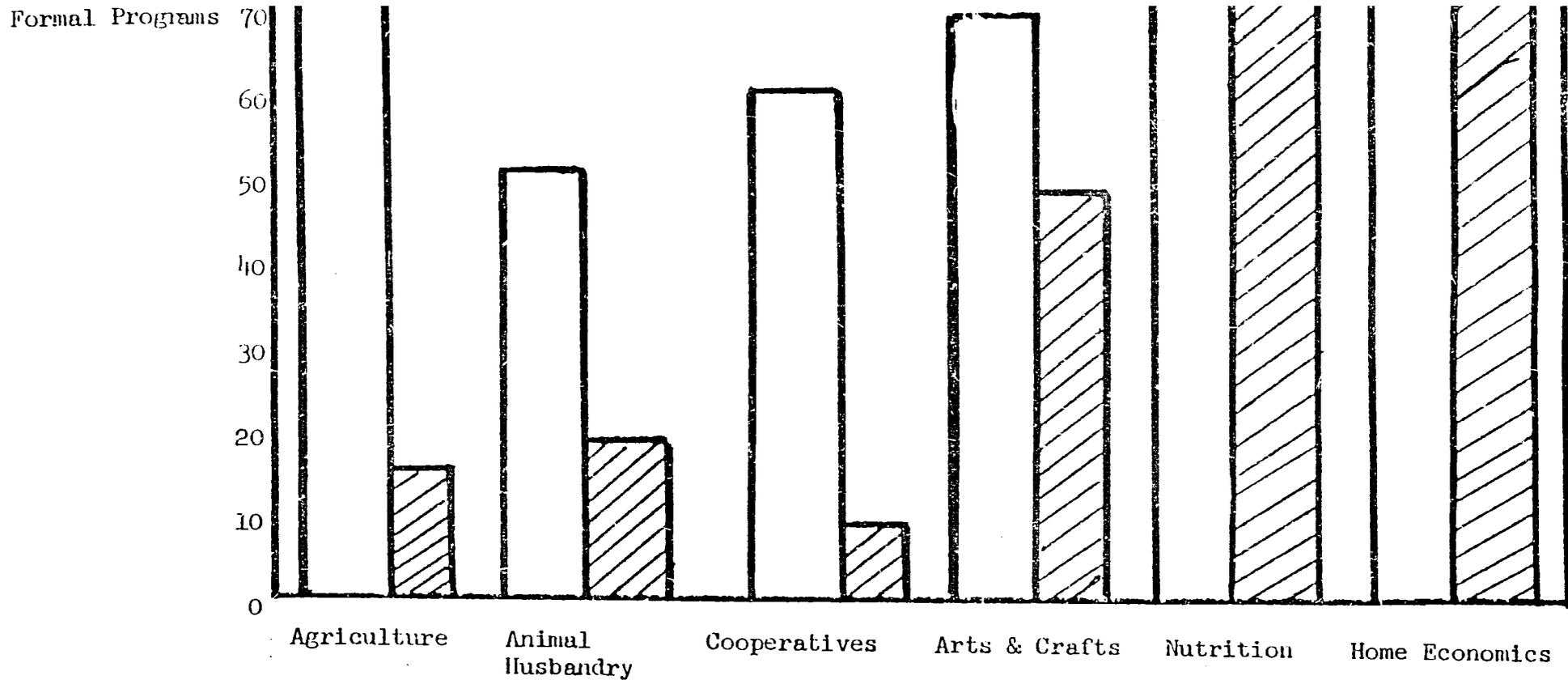
Non-formal curricula vary with the subject being studied. Some of the more innovative teaching strategies are currently being tried in non-formal education programs in LDC's. The use of comics, films and other media, especially radio, in innovative techniques that reflect concern with the cultural milieu and incorporate traditional ways of educating persons can be found in some non-formal programs. The next step, development of curricula specifically geared to women, is an undertaking under consideration and currently proposed for the Moroccan Non-Formal Education for Women Project.

There are, however, dysfunctionalities associated with non-formal

programs. First, non-formal programs, like formal ones, generally suffer from a lack of equal access for women, and tend to track women into "female-appropriate" programs. The following chart lists women's responsibilities as a percentage of total economic responsibilities and contrasts those percentages to access to non-formal programs. The Economic Commission for Africa found that in Africa, in agriculture, a sector in which women perform up to 80 percent of the labor, women have access to only 15 percent of non-formal education slots; whereas in home economics, a male-perceived female domain in which, in actuality, women perform 70 to 100 percent of the labor, they had access to 100 percent of the seats.⁷⁸ This kind of arbitrary access is grossly dysfunctional and counterproductive to integrating women into all aspects of developing economies.

A second dysfunctionality is the poor quality and/or inexperienced male teachers who often teach women. In Morocco, evaluators found that teachers of women in technical courses were, themselves, recent graduates of similar programs. Although these male teachers were textbook competent, they could not provide hands on guidance.⁷⁹ The possible negative consequences of this type of instruction are not difficult to envision. Women, upon completion of the course, may be employed, only to be found lacking certain skills necessary to successfully accomplish the job, and consequently stigmatized as incompetent.

A third dysfunctionality occurs if the non-formal program for women does not include a basic education component. Having explored the arguments for and against literacy at great length, on balance, it would seem that literacy is the key to greater participation in daily community affairs



Adapted from FAO/ECA, "The Role of Women in Population Dynamics Related to Food and Agriculture and Rural Development in Africa," unpublished paper, September 26, 1974 (Mineographed.), as quoted in Marian Fuchs-Carsch, Women in Ghanaian Development: An Annotated Bibliography, (Washington, D.C.: U.S. Agency for International Development, April 1975), pp. 8-9.

and greater upward mobility. Moreover, entry into many non-formal programs is by competitive exams. Women are at a clear disadvantage and cannot even be considered for entry if they are illiterate. Since women are the poorest of the poor and the most disadvantaged segment of many societies, and we know that literacy provides a socio-economic boost for the household in terms of income, a multiplier effect on school age children, and works to maximize options for further training, it is important to include a literacy component in a female-oriented non-formal program if at all possible.

The preceding observations conclude the discussion on the comparative functionality of formal and non-formal programs. The discussion has examined both types of education in terms of social functionality, economic functionality, demographic functional and structural/systemic functionality. The major conclusion is that both types of education are functional, depending upon the population to be addressed. Nevertheless, formal education, due to its longevity and acquired status (a remnant of colonial times), has greater prestige and, therefore, greater power and influence to effect access to and participation in community and national affairs.

VI.

Conclusions

Women are rarely on the cutting edge of decision-making in any nation of the developing world, and the prospects are dim for their immediate entry into the highest echelons of decision-making. Women are going to move into the mainstream in small, incremental steps. It is a long process.

One strategy for assuring entry involves identification of the elements and abilities decision-makers believe important, and working toward acquiring as many of those elements and abilities as possible. Decision-makers inevitably respect two things: money and education, for the two bring power. On the economic fringes, with low wages, low skills, the chances for LDC women acquiring significant wealth are individually and collectively minimal. The way open to women is through the vehicle of education.

This paper has examined both formal and non-formal education to determine which type is more functional for women. In many ways, comparative functionality is a moot point. The effectiveness, utility and functionality of the educational mode depends on individual country circumstances, and often, individual regions within the specific country. An effective instrument to accelerate the integration of women into development efforts in Morocco may be culturally inappropriate in Indonesia. The female animation rurale of Senegal could be irrelevant in highly urbanized Jamaica. Therefore, each nation must chart a course for itself, remembering the complementarity of formal and non-formal programs.

Formal education is encouraged for females from 6 through 14 years of age. The formal system, especially in primary education, has positive private and social rates of return, offers wider options for employment with greater lifetime earnings than non-formal programs. Formally educated women can and do serve as change agents and vanguards to advance the cause of women. Also, the social multiplier effect of formal education is demonstrably greater than that of non-formal programs.

Non-formal programs seem to be the only realistic means by which we can address the learning needs of the over 14 years of age female population. However, non-formal programs should be carefully further categorized by age.

Young women 14 to 25 form a distinct group with learning needs related to the transition from a single, childless girl to a married woman, probably with children. Literacy skills are extraordinarily important to this group, especially those young women who will make the transition from home-based cottage industries to market economy employment. The 14 to 25 year old group holds the hope for true integration of women into development. Their mature years ahead of them, these young women can be trained as a skilled job force, taught household related skills, and sensitized to family planning and child-spacing services.

Women from 25 to 40 may have had their children and, in many cases, are ready to combine household duties with outside of home employment. Emphasis in programs for this age group should be on job skills and intermediate technology training. Literacy and numeracy skills may be offered, but not mandatory. However, basic education refresher courses should be an integral part of every program that has literate women to

aid them in retention of literacy and numeracy skills.

Both formal and non-formal programs embody certain dysfunctionalities. Formal programs have to guard against too great an emphasis on liberal arts content which is usually irrelevant in the developing world. Also, the formal system encourages a feeling of superiority, an elitism which is counterproductive to females, decreasing their effectiveness as role models and change agent catalysts. Formal education can also exacerbate the distinctions between the have and have-not women, and create the conditions for the development of an urban, female elite formed by the daughters of upper and middle class persons.

Non-formal programs are dysfunctional if they do not include a literacy component for 14 to 25 year old women, for literacy will greatly enhance her opportunities for employment and increase her chances of successful completion of and greater benefits from the non-formal program in which she is participating. A second dysfunctionality of non-formal programs occurs when the job skills taught are irrelevant to labor market demands and employment opportunities of the economy. This unhappy situation damps expectations, aggravates unemployment and wastes scarce economic resources.

This paper has attempted to examine the options for women in development efforts in formal and non-formal education. Several conclusions emerged:

1. Both formal and non-formal programs have a place in education efforts. Each sphere of education will function more effectively if it is complemented by the other.

2. Women in various stages of their lives, have different learning needs, based on different environments, rural and urban, and specific responsibilities associated with different ages. Educational programs of both types should keep these different needs in mind.

3. Formal systems, though plagued by many problems, are a permanent factor in the development picture. Since status and power accrue to those who are formally educated, girls should be encouraged to enroll in formal education programs.

4. Formal systems can neither reach all of the illiterate women in LDC's, nor serve them effectively if they did reach them. Therefore, non-formal education for women is a logical alternative.

5. Access to both formal and non-formal education should be rapidly expanded for women, for the benefits of female exposure to formal and non-formal programs extend to a whole nation. Moreover, as Langston Hughes remarked, "A mind is a terrible thing to waste."

Footnotes

¹Robert S. McNamara, Accelerating Population Stabilization through Social and Economic Progress, Overseas Development Council Development Paper 24 (Washington, D.C.: Overseas Development Council, 1977), p. 34.

²Estimate based on data and extrapolations from Mayra Buvinic, Nadia H. Youssef, with Barbara Von Elm, Women-Headed Households: The Ignored Factor in Development Planning, Report Submitted to AID/WID (Washington, D.C.: International Center for Research on Women, March 1978), p. 5.

³For fuller discussion of mother's role in literacy retention, see John Simmons, Retention of Cognitive Skills Acquired in Primary School, World Bank Reprint Series: Number 35 (Washington, D.C.: The World Bank, 1976), pp. 87-92, and Beatrice Paolucci, Margaret Bubolz and Mary Rainey, Women, Families and Non-Formal Learning Programs, Supplementary Paper No. 6, Program of Studies in Non-Formal Education (East Lansing: Michigan State University, n.d.), pp. 26-31.

⁴Detailed discussion of current education problems and strategies are found in two of Simmons works: International Bank for Reconstruction and Development, Population and Human Resources Division, Education, Development and Poverty, by John Simmons. World Bank Staff Working Paper No. 100 (Washington, D.C.: International Bank for Reconstruction and Development, February 1974); and John Simmons, "Can Education Promote Development? A Personal View," Washington, D.C.: n.p., n.d. (Mimeographed.)

⁵Simmons, Education, Poverty and Development, p. 25.

⁶Ibid.

⁷Ibid., p. 32.

⁸Ibid., p. 33.

⁹Ibid., p. 34.

¹⁰Ibid.

¹¹Simmons, Retention of Cognitive Skills Acquired in Primary School, p. 83.

¹²J.M. Kapoor and Prodipto Roy, Retention of Literacy (New Delhi: Council for Social Development, 1970), as quoted in Simmons, Retention of Cognitive Skills Acquired in Primary School, p. 83.

¹³Garth L. Mangum. A Review of the Economic and Social Impacts of Education at the Micro Level Upon the Process of Economic Development (Washington, D.C.: Agency for International Development, July 30, 1977), p. 13.

¹⁴Ibid, p. 15.

¹⁵July 7, 1978 meeting with Richard L. Shortlidge, US/AID/PPC. Washington, D.C.

¹⁶Simmons, Retention of Cognitive Skills Acquired in Primary School, p. 89.

¹⁷Ibid.pp. 88-92.

¹⁸Lois M. Weis, "The Impact of Secondary Education on Attitudinal Modernism: A Ghanaian Case Study" (unpublished Ph. D. dissertation, University of Wisconsin at Madison, 1978), pp. 80-83.

¹⁹Vivian Lowery Derryck, "Liberia: Urban Women and Political Participation," Paper presented to the 14th World Conference of the Society for International Development, Abidjan, Ivory Coast, 1974, pp. 8-10.

²⁰U.S. Agency for International Development, Project Paper: Non-Formal Education for Women, 608-0139, Morocco. (Washington, D.C.: U.S. Agency for International Development, n.d.), Annex D, Section A.

²¹U.S. Department of State, Agency for International Development, Annual Budget Submission, FY 1980: Nicaragua (Washington, D.C.: Department of State, June 1978), p. 43.

²²Ibid., p. 32.

²³United Nations, UNESCO, Education and Training of Women, E/CONF. 66/3, PC 17, p. 17.

²⁴Ibid., p. 19.

²⁵Ibid., p. 21.

²⁶Ibid.

²⁷Simmons, Education, Development and Poverty, p. 61.

²⁸Overseas Education Fund, The League of Women Voters, "Women in Indonesia," 1975, n.p.

²⁹Philip H. Coombs, with Manzoor Ahmed, Attacking Rural Poverty: How Nonformal Education Can Help (New York: International Council for Educational Development, 1973), p. 97.

³⁰Ibid., p. 30

³¹Extrapolated from Simmons, Education, Poverty and Development, Annex 10, p. 63.

³² Interview with Dr. Euric Bobb, Project Manager, World Bank Planning Team, June 8, 1975, Monrovia, Liberia.

³³ Ministry of Planning, Indicative Manpower Plan for Liberia (Monrovia: Ministry of Planning, 1975), p. 69.

³⁴ Nadia H. Youssef, "A Report on Exploratory Discussions Regarding AID Assistance to Nonformal Programs for Women in Morocco" (Washington, D.C.: n.p., June 1977), pp. 1-3.

³⁵ Derryck, p. 9.

³⁶ Ibid., p. 11.

³⁷ Weis, p. 82.

³⁸ U.S. Agency for International Development, Education and Human Rights Division, "Project Paper: National Women's Development Academy/WID, 3880028, Bangladesh (Washington, D.C.: U.S. Agency for International Development, September 20, 1977), pp. 47-49.

³⁹ Sandra Nichols, Marigoli: A Population Study (London: Documentary Film Services, Ltd., 1976). The film is available from Pathfinder Fund with accompanying discussion and study guides.

⁴⁰ Interview with Mrs. Violette Bright, Liberian farmer and pharmacist, July 7, 1978. Washington, D.C.

⁴¹ U.S. Agency for International Development, Office of Women in Development, Draft: WID Report to 95th Congress, 1978 (Washington, D.C.: Agency for International Development), Latin American Projects Section, pp 21-23.

⁴³ This awareness is a major reason for the AID request. See Youssef, "A Report on Exploratory Discussions Regarding AID Assistance to Nonformal Programs for Women in Morocco," and/or any of the project papers for non-formal education programs for women to corroborate this view.

⁴² Interview with Beatrice Griffith, Peace Corps Training Staff, Malaysia, 1967-1971. Interviewed in Washington, D.C., July 4, 1978.

⁴⁴ Patricia L. McGrath, The Unfinished Assignment: Equal Education for Women, Worldwatch Paper 7 (Washington, D.C.: Worldwatch Institute, July 1976), p. 34.

⁴⁵ U.S. Agency for International Development, Project Paper: Industrial and Commercial Job Training for Women, 608-0147, Morocco (Washington, D.C.: Agency for International Development, May 1978), p. 4.

⁴⁶ Ibid., p. 2.

⁴⁷Mangum, pp. 21-22.

⁴⁹Interview with Elizabeth Hanna, Peace Corps Staff wife who offered voluntary technical assistance to the cooperative. The driving force behind the initial organizing of the venture, Ms. Hanna also served as the first bookkeeper. After her departure, Peace Corps Volunteer Jaqueline Lewis was assigned to the shop in 1974 through 1976. Author also volunteered services and had access to accounts and records of the operation, 1973 through 1977. Monrovia, Liberia.

⁴⁸Simmons, Education, Development and Poverty, pp. 27-28.

⁵⁰Simmons, Education, Development and Poverty, p. 23.

⁵¹See previous discussion in Chapter 2 on literacy and cognitive skills retention.

⁵²Simmons, Education, Development and Poverty, p. 29.

⁵³Ester Boserup, Woman's Role in Economic Development, (New York: St. Martin's Press, 1970), p. 125.

⁵⁴Ibid., pp. 126-129.

⁵⁵Ibid.

⁵⁶Project Paper: National Women's Development Academy/WID, 3880028, Bangladesh, p. 13.

⁵⁷Derryck, p. 9.

⁵⁸Project Paper: Non-Formal Education for Women, 608-0139, Morocco, p. 18.

⁵⁹Ibid., p. 14.

⁶⁰Annual Budget Submission, FY 1980: Nicaragua, p. 84.

⁶¹Sunday M. Essang, and Adewale Mabawonku, Determinants and Impact of Rural Urban Migration: A Case Study of Selected Communities in Western Nigeria (East Lansing: Michigan State University, 1974); Dale W. Adams, "Rural Migration and Agricultural Development in Colombia," in Economic Development and Cultural Change, Vol. 17, No. 4, 1968/69, pp. 527-539, both as quoted in Mangum.

⁶²Coombs, with Ahmed, Attacking Rural Poverty, pp. 18-19.

⁶³Boserup, p. 170.

⁶⁴Ibid., pp. 186-193.

⁶⁵ Percentages computed from chart of "World Number of Women in Schools at First, Second and Third Levels," from the Center for Integrative Studies, based on data from the UN Statistical Yearbook, 1973, as Boserup, p. 28. Of course, the UN statistics are inflated, being based on figures that the member states supplied about their own systems.

⁶⁶ Ibid.

⁶⁷ Project Paper: National Women's Development Academy/WID, 3880028, Bangladesh, p. 9.

⁶⁸ Tanzania offers some of best known examples, particularly noted after Nyerere's decision to emphasize agricultural skills rather than cognitive skills as part of his restructuring of education and development priorities. See Julius K. Nyerere, Education for Self-Reliance (Dar es Salaam: Government Printer, 1967).

⁶⁹ McNamara, pp. 29-31.

⁷⁰ Bernard Berelson, "Social Science Research on Population: A Review," Population and Development, II (June, 1976), p. 230.

⁷¹ Project Paper: National Women's Development Academy/WID, 3880028, Bangladesh, p. 7.

⁷² Ibid.

⁷³ U.S. Agency for International Development, Congressional Presentation, Fiscal Year 1979, Annex B, "Population Planning," p. 283.

⁷⁴ Mangum, pp. 14, 27-28.

⁷⁵ Simmons, Education, Poverty and Development, p. 13.

⁷⁶ Interview and discussion with Ivorien librarian, Kitty LaBouet, August, 1974, Abidjan.

⁷⁷ Simmons, Education, Poverty and Development, p. 27.

⁷⁸ Marian Fuchs-Carsch, Women in Ghanaian Development: An Annotated Bibliography (Washington, D.C.: U.S. Agency for International Development, April 1975), pp. 8-9.

⁷⁹ Project Paper: Industrial and Commercial Job Training for Women, 608-0147, Morocco, p. 7.

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