THE COMPARATIVE FUNCTIONALITY OF FORMAL AND NON-FORMAL EDUCATION FOR WOMEN: FINAL REPORT

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PART I

This section of the report serves as introduction and background. Chapter I defines the problem and sets the parameters of the study. Although many basic terms are routinely used in educational parlance there seems to be no consensus on the terms' meanings. Chapter II defines education terms relevant to this study and provides the definitions to be used throughout the report.

I.

Realization of the critical importance of women in development efforts has resulted in major shifts in development policies and strategies within the past five years. Governmental, nongovernmental and private voluntary organizations have lately acknowledged the pivotal role of women in development efforts, and are currently initiating projects and/or supplementing current ones with special women's components. Efforts range from rudimentary, base-line data collection studies, to appendaged women's components in ongoing projects, to comprehensive training programs targeted and geared specifically to women.

Agencies and experts are identifying a large number of project possibilities — and through the identification process are uncovering a deplorable lack of hard data on women. The hard data that are available indicate that education is a major component of the development process. Almost invariably, new women in development (WID) programs have an educational thrust, whether through upgrading and/or expansion of the formal education system or through a non-formal education program providing vocational training and job skills in areas such as agricultural extension, family planning, population assistance and cottage industry development.

But education, the hope and panacea of development a decade ago, has yielded disappointing results. Formal education programs are not living up to the expectations held out for them since early in the development experience. Individual post-education economic productivity is rarely as great as anticipated. Thousands of school

leavers relapse into illiteracy as soon as a year after completion or termination of studies. Increasing school age populations and escalating costs require continually higher percentages of national budgets to be spent on formal education.

Given the severity and magnitude of the education problems, the general disaffection with the quality of learning that formal systems have provided, and the clear impossibility of reaching the vast majority of the rural poor through formal education mechanisms, many planners have called for an increase in short-term programs that will provide basic literacy, numeracy and job skills without the costs and time investment required by formal education. But non-formal programs, many of them conceived partly in response to the formal education crisis, often are plagued by problems,too. Problems such as lack of status and lack of specific linkages to available employment opportunities frequently emerge.

And in the midst of the education disarray comes attention to the hitherto ignored variable: women in development. Despite the adage, educate a woman and you educate a nation, nearly two thirds of the world's one billion illiterates are women.[1] Women in the developing world have been systematically discriminated against in education in access to schooling at all levels, number of

years educated, vocational counseling and entry opportunities for many professions. Female illiteracy reaches as high as 93 percent in some African and Asian countries.[2]

Clearly this pattern of discrimination and unequal access 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.[3] Evidence indicates that female literacy is a major factor in controlling population growth; and maternal influence is a critical variable in literacy retention.[4]

The question that concerns development practitioners and education specialists is the best mode for reaching large numbers of women. The non-formal system offers short-term, flexible, inexpensive training; however, formal education has years of tradition and prestige behind it. The power of the formal system is based in its ability to bestow prestige and economic power through the system of accreditation. The power and status imbuement of credentials is hard to overestimate. And while some planners advocate the "quick" solution of non-formal programs for women, others cite the fact that the majority of women who have been integrated into industrial, professional and managerial positions in market economies, and virtually all women who have assumed notable national positions of influence and power, have been educated through the formal system.[5]

In brief, the problem can be stated as follows: given limited resources and competing priorities, how can planners and politicians best spend limited education allocations to assure the greatest benefits to women in terms of increased incomes, greater control over their own lives and more influence in community and familial decision-making.

Where do the education dollars do the most good? Which type or mix of education is more functional to provide the cognitive and vocational skills to empower women; for through their newfound power, women will insure their own integration into development efforts.

This project, Order #AID/otr-147-78-14, examines the above questions by analyzing the current situation of women in development in terms of education to ascertain whether formal or non-formal education has the greater functionality to accelerate women's integration into development activities. The project was divided into five phases.

Phase I. Phase I identified AID, interagency and international organization personnel particularly concerned with the issue of female education in developing nations; identified studies and/or AID projects, including those projects implemented by international and private agencies, dealing with women and education; investigated the possibility of a task force or a series of meetings to discuss current issues of women and education in LDC's; and suggested a strategy of action for the AID/WID office to impact on US/AID projects with a women and/or education component.

Phase II. Phase II examined the relative functionality of both formal and non-formal programs and the long-range implications of each; assessed, in so far as information permitted, the status of education for women in selected AID recipient countries; and analyzed recent and current AID programs with an education component to ascertain the percentage of female participation in each.

Phase III. Phase III involved development of policy recommendations in conjunction with the revision of the Agency's education policy paper; and development of programmatic recommendation to be implemented in conjunction with the new education policy directives.

Phase IV. Phase IV analyzed the political context in which educational change must occur; identified obstacles to widescale, systemic overhaul of LDC education; examined the issue of political sensitivities of education with special emphasis on the constraints and restraints on women.

Phase V. Phase V examined, using available materials, the history and progress in the education of rural girls and young women in the U.S. from colonial times to World War I, with special emphasis on female teacher training and the education of girls in one room country schools; and compared those findings to the situation of females in LDC's to determine the applicability of the U.S. model in development education for females.

This paper represents the final compendium of the various phases of the study. Copies of the full texts of the five phases are available from the AID Office of Women in Development.

I am most grateful for the assistance and cooperation of numerous AID officials who went out of their way to obtain documents and pursue contacts for me. Several officers offerred detailed criticisms of earlier drafts and many of their comments were invaluable. My sincere thanks to all of them.

Of course the burden of all errors of fact or interpretation are mine alone, and I accept full responsibility for them.

Interviews, conferences, professional meetings, as well as journal articles, reflect that there is no agreement on basic terms in the development education field. Educators, scholars and development practitioners may or may not mean the same things when they speak of education, and the variety of meanings grow as one discusses more specific terms such as non-formal education or informal learning. Consequently, it is useful to set forth this study's operational definitions at the outset.

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 regularly scheduled 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, as well as agricultural schools and teachers colleges.

Non-formal education is a structured program of learning in a non-institutional, non-school setting, usually within the participant's immediate environment, in which the content is specific 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 generally can be quickly assembled and usually can utilize available community resources. They are geared directly to the learning needs of the student participants, relatively inexpensive (not requiring elaborate infrastructure and costly materials) and responsive to the needs of client populations. 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 in agriculture, health and nutrition projects. In addition, many integrated rural development programs include a major education project, which invariably has an adult education or out-of-school education component.

Informal education involves the casual, unstructured learning that the individual continually experiences, especially during the formative years of youth. For instance, most

women learn to cook informally; not by organized, structured lessons, but through casual, continuous observation of their mothers or the female(s) in their homes who execute that particular household chore. Eighteenth and nineteenth century apprenticeship in the U.S. offers another example of informal learning, as apprentices literally watched their masters' every move. The essence of informal education is learning through observation and imitation, rather than structured lessons and pre-set curriculum.

Informal education by definition does not involve structured programs; therefore, it is not included in this study. It is defined because the two terms, informal and non-formal, tend to be used interchangeably. This study discusses non-formal education and that is the term that will be used.

Distinctions between non-formal and formal education also tend to become blurred in actual projects. For instance, a distance learning program highly dependent on radio and follow-up 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.

Functionality is another key concept in the study. Functionality is usefulness. For our purpose it means a structured, organized educational activity, formal or non-formal, teaching new cognitive and/or manipulative skills that increase the individual's ability to operate in her environment. This increased 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 a woman to generate and/or augment income; politically through increased participation in civic organizations, the political party system and/or election to national office; and demographically through family-planning and child-spacing decisions.

From the outset, we must also delineate the varying learning needs of different female age groups. For this analysis, girls and women will be divided into three age groups: six 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 and establish occupational involvement, frequently in household or agricultural employment; 25 to 40 are years of consolidation in which the decisions and initial advancement of the 14 to 25 years are cemented. After 40 years of age, the typical rural LDC woman does not seek participation in a formal

or non-formal education program. Her personal economic situation, social constraints and, perhaps, health problems may impede her participation.

Mindful of these definitions and distinctions, this report examines and compares the roles of formal and non-formal education programs in increasing a woman's ability to function more effectively in her society.

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.

PART II.

This section of the study examines the history of U. S. education and schooling in colonial Africa in an attempt to gain historic perspective on women and education. Chronologically, we will move from nineteenth century America and the rise of the common school, to the African colonial period, a twentieth century political phenomenon. Chapters III and IV will focus respectively on female education in nineteenth century America and the rise of the common school. Chapter V will discuss the colonial education legacy, using Africa as a regional example.

III.

The United States has one of the highest literacy rates in the world and an educational system that is the pride of the democracy. Belief in the effectiveness of education as a major vehicle of upward mobility stands as a hallmark of its social and political ideology. Moreover, Americans feel that education is a major key to development and that the American educational experience is worth transmitting to the developing world.

We will examine the applicability of the U. S. educational experience to women's education in the new nations by exploring selected aspects of U. S. educational history. The period under consideration is 1750 to 1918, although the investigation focuses on the period from 1850 to 1918, the formative years that witnessed and shaped the growth of public education in the U. S., a transformation all the more remarkable in a nation that initially perceived education as a private, individual responsibility.

Several parallels exist between the U.S. of the late nineteenth century and the developing world of the latter decades of the twentieth century. The U.S. was a new nation in the late eighteenth century world of emerging nation-states, as the LDC's are newcomers in the twentieth century world of industrial states. Both had educational antecedents in the European tradition, in the case of the U.S. through cultural heritage, and in the case of the developing nations through colonialism. Also, in the period under consideration both educational systems are embryonic; in the U.S. from the seventeenth through the

mid-nineteenth century, education was the responsibility of the various states and handled in a variety of ways depending on the predominant settler heritage, geographic region within the U.S., relative wealth of communities, and agricultural or industrial economic base. LDC systems, often fashioned from colonial bases, have less than 20 years experience, and similarly struggle to overcome regional differences.

Of course a major difference is in perceptions of the role of education. The rise of the common school — free, coeducational, basic education for white American children of every social class — was at that time unparalleled in the world. The school was perceived as the real melting pot Nathan Glazer described 75 years later, as it molded the children of immigrants and Yankees, urban factory workers and rural farmers into Americans. The LDC's, on the other hand, exist in a time when basic public education is perceived as a basic human right and citizens view access to education as a right and need that should be a first priority of new governments.

American education was as diverse as the people who settled the "new land," however, the general educational philosophy and tenets of the various groups were very similar. All of the early colonists shared the concern of preserving and maintaining European culture and manners in a new land. Failing to perceive Indian cultures as civilization, colonists talked at great length about establishing schools as a defense

against cultural barreness.

The desire to emulate European upper classes, while simultaneously creating a more democratic society shaped subsequent events. The novel experiment of a democracy in which all men had a voice in decision-making necessitated an informed electorate, albeit exclusively of propertied gentlemen. The theoretical and ideological underpinnings of this new democracy logically demanded that educational opportunities be expanded beyond the upper class to the middle class of landed gentry so that all voters could be capable of making rational decisions.

From the earliest years of nationhood, government and education were necessarily allied. In fact, by 1787 the Northwest Ordinance required that each township allocate a square mile for a school, and each state also had to allocate land for an academy or institution of higher learning.

Where were women during the founding and expansion of the nation? They were right beside the men, although female educational opportunities always lagged behind those offered males.

In the seventeenth and eighteenth centuries, education in the colonies reflected the educational modes of the European communities from which the settlers came. Females were to attend to household responsibilities and church duties. Women, like children, were to be seen and not heard. In church to question doctrine was heresy. Ann Hutchinson, a strong-

minded woman who dared interpret the word of God for herself, was summarily tried and banished from the Massachusetts Bay Colony in 1636.

In the new nation, the European model of sex segregated education remained the pattern for the upper clases, while lower class women experienced a gradual, but steady increase in educational opportunity. In eighteenth century New England, approximately 55 percent of women were functional illiterates as indicated by their inability to sign their names to their own wills;[1] however, by 1860 the female illiteracy rate in New England had plummeted to 5.4 percent.[2]

The nineteenth century was a time of giant strides forward in female education for all social classes, especially education at the primary level. Many young women attended dame schools. Particularly prevalent in New England, but popular nationwide, the schools were private establishments run by women, usually widows and spinsters, that taught young girls basic literacy and numeracy and any other specialized skills that the dame might have. Frequently the dames were barely more than literate themselves, and often the other skills taught were those learned informally by watching the proprietress complete her housekeeping chores such as cooking, sewing and kitchen gardening.[3]

While some upper class young ladies matriculated to the dame schools, the majority of girls receiving any education obtained it from the town schools. Between 1850 and 1860, 92.8 and 91.5 percent respectively of all students were public school pupils,

although there were regional variations in private school attendance.[4]

The status and curriculum of female education also varied by region New England was in the forefront of education both in percentage of scho age youngsters in school and low illiteracy rates. In the vanguard of female education as well, New England was the site of the nation's first girls' high school, established at Worcester, Massachusetts in 1824.

In the South, upper class girls were usually educated by private tutors, while lower class white girls had the fewest educational opportunities of any group of white females within the nation. In 1860, when the rest of the nation had lowered the female illiteracy rate to an average of 7.0 percent, female illiteracy in the South was 18.9 percent, reaching 20.0 percent in the central southern states.[5] (The correlation between high female illiteracy and low economic development of the South holds special significance for the LDC's, as as it seems to indicate a relationship between female literacy and economic development.)

For upper class southern young ladies, as in the case of would-be southern gentlemen, emphasis was placed on non-academic accomplishments viewed as essential for participation in southern society. Southern girls were much more likely to be proficient at needlepoint, embroidery and French than their sisters in the rest of the nation.

In the West, pragmatism carried over into the schools in terms of pupil composition and subject matter. Class stratification was less rigid and there were fewer private schools, although some did exist. The overwhelming majority of female students matriculated at co-educational town schools. Pioneer women and girls of all classes had no time to

Table 1: Literacy Rates and Rate of Manufacturing by Regions in the U.S., 1860

Region	% White Males	% White Females	Average Number of Laborers	Annual Value of Products
New England	96.1	94.6	391,836	$468,599,287
Middle Atlantic	95.6	93.5	546,243	802,338,392
North Central	94.4	90.8	209,909	384,606,530
South Central	88.0	80.0	110,721[a]	155,531,281[a]
South Atlantic	87.9	82.2		

Sources: Maris A. Vinovskis and Richard M. Bernard, "Beyond Catharine Beecher: Female Education in the Antebellum Period," in Signs: Journal of Women in Culture and Society, Vol. III, No. 4 (1978), p. 261; and Francis G. Walett, Economic History of the United States (New York: Barnes and Noble, 1955), p. 88.

[a] Combined figure for both South Central and South Atlantic states..

Note that in terms of annual value of products manufactured and in the number of laborers employed, the southern states, both central and Atlantic, ranked far behind the rest of the nation. Literacy rates for white females also fell significantly below the rates of the rest of the country. If manufacturers and industry tend to gravitate toward areas with a high literacy rate, as evidence seems to indicate, then inceased investment in basic education as an incentive and attraction to potential investors is an appropriate strategy for the LDC's.

emphasize Romance languages and needlework; they needed courses in English grammar, mathematics, geography and scientific principles directly applicable to their frontier circumstances.

Approximately 50 percent of American white females between five and 19 were attending school in 1860, the overwhelming majority, 91.1 percent, in public schools.[6]

But school was no bed of roses for the girls. Male superintendents and principals believed that there were limits to a useful and suitable education for a girl, namely to be a better wife, mother, sister -- helpmate -- to an educated man. However, male administrators were very careful to distinguish between appropriate female education that ultimately was to serve young men, and over-stimulation of the same young men by close proximity to the young ladies. Since cost constraints necessitated that female education occur in the same building as male tutelage, the male educators came up with some imaginative schemes to separate the sexes.

Ingenious schedules were arranged. Often girls would attend classes from six to eight o'clock in the morning before the boys arrived, or they would attend later in the afternoon, after the boys had departed. If the two sexes were forced to attend school during the same hours, often efforts were made to separate the two groups by a waist high wall or some other permanent division.[7] Failing a concrete barrier, students would usually be separated by sex with the fireplace as the divider. In such divisions, the boys and girls frequently sat back to back.

As the century wore on, the efforts at artificial separation waned, especially at the elementary level. Nevertheless, co-educational play and fraternization were strictly discouraged. Extra-curricular activity time presented a major danger period. Many educators were firmly convinced that co-educational play was intellectually and morally damaging. In most schools, it was strictly forbidden. Dire consequences befell the transgressor with punishments such as the below:[8]

1. Boys and girls playing together: 4 lashes
2. Girls going to boys' play places: 2 lashes
3. Boys going to girls' play places: 3 lashes
4. Boys misbehaving toward girls: 10 lashes[9]

The curriculum was also different for the two sexes. The aims of educating young men were twofold: informed citizenship and training for livelihood. On the other hand, young girls were trained to be helpmates. Female curriculum was more likely to emphasize domestic science and home-oriented occupations. With the exception of a very few educators, mostly upperclass females themselves, no one really thought that the education of young women was as important as that of young men. The brains of women were thought to be smaller that those of men. Woman's place was still primarily in the home.

Proof? She could not vote; was likely to be married by the age of 16; and needed post-primary education for very little purpose, according to the dominant beliefs of the time. Consequently, if one had to

decide who, among several children, would attend school, a daughter would not necessarily be a priority candidate.

The presence of growing numbers of female teachers provided a much needed alternative view for young women of their self-worth and options. Throughout the nineteenth century, growing numbers of women entered the teaching profession, although invariably at the primary level. One reason for the female presence was the fact that they did not demand the salaries of male teachers in either the public or private sector. Another was the belief, popularized by Henry Barnard and Horace Mann, that women were "naturally" better teachers of young children than men. Equally important, while men had other employment options during the prosperous years of the century, women welcomed an opportunity to expand their employment options from domestic, agricultural or factory work and move into the white collar arena.

The history of female education from colonial times through the rise of the common school moved in fits and spurts. Culturally bound to Europe, and intellectually responsive to the needs of American males, by the late nineteenth century, female education was also attuned to national economic demands. The growth of the factory system and the demand for educated laborers consolidated earlier female gains. Co-educational primary schools were entrenched, providing common education for the mass of middle and lower class youth by teaching common subjects and common values to the overwhelming majority of American boys and girls.

Two additional factors had major significance in assuring that women were able to achieve as much as they did in education: compulsory education laws and coeducation.

By mid-century, enrollments and access to educational opportunity for women became significant with the passage of compulsory education laws. Again, Massachusetts lead the way. In 1852 Massachusetts instituted compulsory education for both sexes for children between eight and 14 years of age. The youth had to attend school at least six consecutive weeks and a minimum of 12 weeks in a given calendar year.

The coming of compulsory education really marks the beginning of an era in female education. Compulsory education meant that it was against the law to keep your daughter at home working on the farm all year. In Massachusetts, followed rapidly by large numbers of other states, God-fearing, law-abiding Christians did not want the taint of civil disobedience to bring them shame -- so daughters went to school.

The second hallmark in female education was its coeducational nature. The coeducational aspect of American common schools is rarely recognized for the phenomenon it was. The European tradition on which so much of early colonial education was based, did not support co-education. In nineteenth century America, a nation in which women were initially barred from participation in the greatest social movement of the time, the abolition movement, and were generally believed to be intellectually inferior to men -- girls still managed to attend the same schools and sit in the same classes as boys.

By 1822 the U. S. Commission on Education reported that virtually all American public elementary education was co-educational.[10] Primary education was the beginning and end of formal education for most American children of the nineteenth century, so for all intents and purposes, white American boys and girls had the same teachers and learned the same curriculum in the same classrooms at the same time.

There was, seemingly, no widescale opposition to primary coeducation from the earliest days of the public schools. Widespread belief prevailed that girls, as well as boys, must be literate and receive the same rudimentary education.

Many possible reasons can be found for this easy acceptance of a revoluntionary principle unique at that time in educational philosophy. Perhaps as upper class women such as Emma Willard, Catherine Beecher and Mary Lyons focused attention on female education (though primarily for upperclass women), male attitudes toward female education softened somewhat. Probably one of the most important reasons for the acceptance of coeduation was the cost of separate schools. It costs twice as much to subsidize two school facilities in a location in which one could accommodate student needs.

The need for educated factory workers in the North and skilled agricultural and non-formal rural workers in the West also may have encouraged female coeducation. Finally, all of the preceding reasons were reinforced by the ideological pragmatism of nineteenth century America.

In essence, it seemed that cost factors, innate pragmatism, economic demands and lack of conscious sexual prejudice in education all contributed to and encouraged coeducation. When queried by the U. S. Commission on Education on the reasons for coeducation, the responses reflected the confluence of factors that enabled coeducation to become a fixture of American public school education:[11]

> It is the natural arrangement that boys and girls should be together in school as they are in the family.
>
> Economy is the chief reason. To obtain the same excellence in grading and instruction would require a much larger teacher force were the sexes separated.
>
> There is no appreciable difference in the mental capacity of boys and girls during public school life.

American views of female intellectual capacities and female rights to education had come a long, long way.

The common school came into its own arouund 1850. A convergence of movements and social forces resulted in a coalition of businessmen, social reformers, abolitionists, and labor leaders all working toward reform and overhaul of the educational systems of the various states.

The common school, as the emerging institution came to be called, was free, coeducational, and often rural. The school concentrated on the education of youth between five and 14 years of age. As stated above, two major goals girded the system: 1) education for citizenship, so that men could constitute an informed electorate; and 2) education to provide jobs skills and the ability to earn a livelihood.

Throughout the nineteenth century the facilities were rudimentary. Literally one large room with slat benches and dirt floors, heated by a massive fire which as often as not bellowed smoke through the entire room rather than warm air, frequently lacking panes for the crude windows, the learning facilities were makeshift, rarely providing comfortable environments conducive to learning.

Generally, before 1850, the schools were supported by town taxes assessed on the basis of property or bond issues, depending on the legislation of individual states. State funding of education was a radical departure from any education philosophy existing at the time. In the mid-nineteenth century many Americans still believed that the individual family should

finance its children's education unless the family was one of paupers. This belief was manifested through the rate bill, a bill which determined the amount charged a family for each child in school, calculated by the number of days spent at school during a given academic year. Virtually, a tuition charge per pupil, the rate bill made a parent think twice about sending all of his children to school for the entire year. Girls, of course, suffered most under this system. Parents reasoned that a boy had to make a living; therefore it was more important to send him to school to get "some learnin'."

Poor families were exempted from paying the rate bill. However, the bill was discriminatory against the poor, for to have one's rate bill waived, one had to publically declare one's poverty. Thus in Puritan ethnic-conscious nineteenth century America, many families preferred to keep their children at home and illiterate rather than publically acknowledge their poverty.

The educational reform movement of mid-century challenged the form of support to public education and gradually individual states assumed coterminous responsibility with local communities for financing common schools. As states began to offer funds to local communities for public education, communities began to take a stronger interest in public schools. Increased monies plus the gradual abolition of the rate bills, persuaded many families to send their children to free common schools.

The common school usually offered an eight year course of study with the educational cycle divided into a three year primary section, a three year intermediate phase and a two year completion phase. The curriculum emphasized basic skills at the primary level. English, grammar and mathematics formed the basis of the curriculum. Geography was the next addition, and science courses were introduced as knowledge of scientific principles and their applicability emerged, especially in the frontier areas.

The common school was well named. Not only was it established for the common child with the goal of teaching common values, the students all used the school's one common room. In addition to sex divisions, if possible, grade distinctions were made also, usually by makeshift rows. The smallest children were seated on short benches in the front of the room, closest to the teacher and the fire. Older children sat progressively further from the front, with senior scholars sitting against the back wall.

Given such physical facilities and close contact, pedagogy had to be adaptive. The open classroom and tutorials in which older children teach younger ones are not twentieth century innovations. Senior pupils were often required to help younger students learn to read. Upper classmen corrected arithmetic, explained scientific principles and generally assisted with the education of the young.

The close quarters and relative isolation of rural schools, made them especially adept at utilizing community resources. The Midwest and Western wilderness and prairie formed a natural

learning laboratory. School teachers made varying use of the opportunities according to their own backgrounds and teaching strategies.

Through all of the fads and experiments that have characterized American education over three centuries, the public school has been the most radical and the most enduring. It is also the educational institution most relevant to the developing world.

Several parallels come easily to mind. In the period of establishment, 1850 to 1918, these school were established in predominantly rural areas in which only a small percentage of the adult population was literate. Literacy usually preceeded the move to an urban area. The developing world is overwhelmingly rural and, similarly, a small percentage of the adult population is literate. Moreover, evidence indicates that literacy in the LDC's also often tends to encourage rural to urban migration.

The school facility of one large room, the one room school house, is similar to schools in many developing nations. Often when schools are built with separate classrooms, open venting for air movement circulates sound as well as air, and audibility from one classroom to another is quite clear. Consequently, the teacher is faced with a de facto one room school house with a large open classroom.

Curriculum comparisons yield further similarities between the U.S. rural common school and the rural school in the

developing world. Teachers in one-room school houses taught basic skills for two main reasons. First, the state of knowledge was not nearly as advanced. In most instances drilling in English and mathematics with a smattering of geography and science was all that the teacher was capable of teaching. Second, basic skills education was appropriate and necessary for survival and upward mobility in the era of westward expansion. While curriculum in the formal schools in the developing world tends to be diffuse with a bewildering array of subjects in which the basic skills often are lost, often the non-formal programs are similar to those of the common school, for frequently non-formal projects stress basic literacy and numeracy skills.

Women's roles in education are also similar. Women were often teachers in the common schools, in some states and territories they comprised over 60 percent of the teachers.[12] Similarly, in many developing countries, the majority of primary school teaching staffs are female. For instance, 77 percent of Philippines primary teachers are women, while Benin females form 70 percent of the primary school teaching forces.[13]

In the nineteenth and early twentieth centuries, American women were more desirable than men as teachers because they would work for less pay and were more acquiescent to the requests and demands of parents and local school boards. In one New England town, while a female was paid from $1.50 to two dollars per week, plus board, a male in the same community received $23.00 per month, or approximately $5.85 per week.[14]

Similar disparities exist around the world, particularly in LDC's in which the economic needs of women are often considered less significant than those of men.

Educational reformers such as Henry Barnard and Horace Mann strongly influenced by Prussian models of education, were convinced that women were, by nature, better teachers and were especially artful in achieving close rapport with young children. Similar attitudes exist today, especially in the Moslem world. Moroccan teachers find their occupation "particularly suitable" because in the school situation "women are in contact only with other women or with children."[15]

The enduring faith that education is critical to the perpetuation of the democracy among Americans, is matched by an equally ardent belief among leaders of developing nations that education is basic to democracy and a prerequisite to economic takeoff. New nations come into being with the cry of universal education. Conferences from Bandung to Addis Ababa have re-affirmed a primary commitment to education -- education, first and foremost. Moreover, UNESCO and other international humanitarian and voluntary agencies all proclaim the importance of literacy and numeracy, while citing education as a basic human right. In an age when all nations claim to be democratic, one quickly understands how education becomes a necessity to perpetuate the democratic or would-be democratic state.

Of course there are significant differences between the common schools of nineteenth century America and the public schools of twentieth century developing nations. Pedagogically,

our knowledge of the world is so vast that continuing curriculum study is imperative so that we know more about the process by which children and young adults learn. Politically, the gap between rich and poor countries has widened considerably. With the revolution of rising expectations and the need to telescope social change, countries do not have the luxury of experimentation in education.

Competing demands for limited funds compel establishment of development priorities. Education can be assured a significant portion of development funds only if it produces tangible social benefits and social rates of return equal to those realized from investments in other sectors.

Moreover, in the U. S. a national consensus for universal, free primary education formed in the nineteenth century. In many LDC's, a similar concensus does not exist, for the middle class often has a vested interest in restricting learning opportunities so that it can continue to enjoy the privileged status that derives from education.

The relationship between education and politics is particularly sensitive in the developing nations. Education was a pillar of colonial government, both in theory and actuality, as well as a central factor in the nationalist movements that preceeded independence.

Most colonial authorities pursued education for their own short term ends of educating lower and middle level manpower. The ramifications of education — particularly the fact that a literate person can choose his or her own sources of information — did not fit into the conscious policies of the British, French or Belgians except in isolated instances. By and large, colonial powers pursued haphazard, pragmatic education policies.

In Africa, these policies ranged from the indirect rule of the British, manifested in missionary controlled education, to French policy which was anticlerical and, technically, state controlled, although a high percentage of colonial education in French-speaking Africa was missionary supported. The British struggled for an all encompassing theory until the Dual Mandate of Lord Lugard, and the French vacillated from assimilation to association; however, a few generalizations can still be made about colonial education activites in Africa.

First, the importance of education really emerged retrospectively. In their attention to satisfaction of immediate needs, none of the major colonial powers had adequate manpower or leisure time to contemplate the ultimate outcomes of educating indigenous persons.

Second, the turning point that proved to be colonial powers' undoing was their sponsorship of indigenous males to pursue higher education in the various metropoles.

Upon their return, the newly educated African men felt that they should be given responsibilities to represent their own people. They argued that educated Africans could and should speak for the illiterate masses. Herbert Macaulay, Casely Hayford, H. C. Bankole-Bright, and E. F. Small were only a few of the early educated middle class who protested the narrow confines of their upward mobility. They protested vigorously, but "properly" and legally. After several years of protest in the early decades of the twentieth century, the the first generation educated elite was outmanuevered by an alliance of the colonial powers, traditional chiefs and other indigenous authorities.

The second generation of educated Africans, those who returned during the late interwar period and after World War II, were not as legalistic as their educated forebearers. They did not believe Casely Hayford's admonition, "Above all we must be constitutional!"[16] This second generation of educated Africans perceived the subtle gradations of status, understood influence and power, and quickly realized that they would never achieve true equality under colonial governments with final authority in Europe.

The second generation elite reached this understanding through education. Education was the key. Once a person could read, he or she could read anything. Education brought literacy and a means of mass communication. Education brought political sophistication, knowledge of organizing tactics, reinforcement from the experiences of others expressing similar protests.

Third, education doomed colonialism; World War II hastened its demise. The political awareness of the power of literacy — encouraged through daily newssheets, letters among nationalists, etc. — was heightened by Africans who fought overseas during World War II and saw the importance of the written word as a communications tool. For these Africans education was also knowledge of outside forces and different modes of living. Moreover, the reserve and awe of colonial masters was obliterated on the battlefield.

When the second generation elite returned from World War II and realized the futility of agitation within the colonial framework they were willing to challenge the system. Education, more than any other single factor, brought Africans to the conclusion that they had to fight for independence. The majority of African leaders who lead the struggle were highly educated: Nkrumah had studied at Lincoln University and the London School of Economics, Senghor had taught in a French university. Balewa, Azikiwe, Nyerere were all well educated in the Western tradition. Eduation brought full understanding of freely flung words such as

freedom, equality, nation, and independence. Education provided the conceptual framework for political strategies that led to independence. Education enabled nationalists to negotiate with their superiors and transform the superior/subordinate relationship to one of equality.

Rarely were women involved in the high echelons of the nationalist movements. This is quite understandable; education is critical to discontent and few women were educated in colonial Africa. Some of the nationalist leaders understood the power of women and involved females in the independence movements from the beginning. Sekou Toure and Kwame Nkrumah were two West African leaders who saw early the potential importance of African women in nationalist politics. Nkrumah, who found much of his support among the lower classes, often attributed his eventual success to the strong support offered him by Gold Coast market women. Similarly, Sekou Toure owed a great debt to the illiterate rural women who supported his cause. Indeed, Toure has avowed that female aid was critical in the fateful 1958 referendum in which Guinea was the only colony of French West Africa to vote to reject membership in the confederation of French West African states, a choice which lead to immediate independence for the colony within the same year.[17]

Women were important in the nationalist movement in several countries, usually nations with a radical socialist bent. Although illiterate, many of these women won election

to national assemblies and legislatures. Madame Bebe of Tanzania was a favorite M.P. of the Dar-es-Salaam Daily Standard. Madame Sekou Toure, prominently featured in the Guinean papers and visible on a variety of posters, exhorted women to work shoulder to shoulder in development efforts. Unfortunately, after the first three to five years of independence, the exhilaration and euphoria wore off and the need for substantive expertise became more apparent. Corruption was rife in several new African nations. Many of the female nationalist movement leaders who had become active in national politics were toppled with various purges to end corruption or defeated in ensuing elections. Madame Bebe, for example, lost her stature and her M.P. status in the Tanzanian cultural revolution of 1969-1970.

Thus women lost power in two ways during the late 1960's. First, caught in corruption and bribery scandals, they lost their political power. Second, in the serious business of national integration and institution building they did not have the requisite skills because they lacked appropriate education.

Interestingly, Mozambique, the radical former Portuguese colony which attained its independence in 1975, is also finding it difficult to maintain women in decision-making positions within party cells. Unlike African women of a decade ago, Mozambiquan women are fighting their gradual ostracism through appeals to the central government and party councils. In several instances local decisions have been reversed and women re-instated in policy

positions at the local level.

Events and attitudes of colonial powers determined that males had access to Western education, and for the most part, women did not. Education was critical in raising awareness of the impossibility of equality under colonial rule. Men could analyze colonial situations, communicate their conclusions to other men in similar positions, and organize nationalist movements to work to end colonial domination. Women often provided the much needed ranks to swell numbers, but their roles were supportive. They were not conceptualizers, initiators, or organizers.

In the new states, after early participation, regardless of nationalist movement participation, women usually retreated to supportive roles and left institutional politics to men. Women were further disadvantaged by the new necessity for literate manpower and professional expertise, both of which were in short supply among females.

Part III

Leaders of new nations came to independence with the fervent belief that education was a prerequisite to economic development and social modernization. Twenty-five years later, education and its benefits are being re-assessed throughout the developing world.

This section of the study provides an overview of formal and non-formal education and discusses the status of women and education. Chapter VI sketches some of the current programs of formal education, then discusses the role of literacy in non-formal programs, an issue currently being debated by growing numbers of educators. Chapter VII documents the access and opportunities available to women in both formal and non-formal education programs.

VI.

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 the basic assumptions underlying educational priorities and policies, for analysis has proved these very assumptions questionable at best, untrue at worst.[1]

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.[2] Furthermore, an added grade or level—more schooling—does not by itself increase the productivity of the individual worker.[3]

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. 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.[4] In school, poor children learn a social hierarchy that mirrors society, and their low status within that hierachy. Often, the poor students, because of economic and environmental pressures, fail. This failure, usually internalized and exaccerabted by parental disappointment and/or

punishment, often becomes a self-fulfilling prophecy.[5]

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 alientated from the ruling party.[6] On the other hand, 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.[7]

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 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 had returned to illiteracy.[8] In an 1968 study in India, formal school leavers with six years of schooling has lost 20 percent of their skills, while participants in six years of literacy classes had a literacy laspe rate rate of 45 percent.[9] 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 simultaenously with, or in lieu of, modern attitudes.[10]

In short, the formal education system, as currently constituted, is of questionable effectiveness and highly inefficent. 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 Issue in Non-Formal Programs

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 visible results in the short run.

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. Arguments continue between literacy education proponents who advocate universal literacy as a moral right and intellectual facilitator and other developers who maintain

that significant progress is possible without literacy.

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.[11] Literacy, in the advocates' views, is an important tool for development.

Others argue that literacy may be important, but it is not imperative. These educators and planners point to projects in which participants have been able to develop their own goals and identify their own learning priorities. In many projects income generation skills are a first priority, while literacy assumes a lower rank.[12] Those questioning the necessity of literacy go on to cite low retention rates in rural areas (largely because of a lack of materials to read), and question the cost benefits of the whole literacy teaching/retention process.

Three arguments will be discussed here: 1) the role of literacy in a pre-literate society; 2) literacy retention and cost benefits; and 3) non-formal program discrimination against illiterates.

Shortlidge points out that being illiterate in a society that is predominantly illiterate does not have the same social stigma as that attached to being illiterate in a preponderantly

literate society.[13] 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, if it can be retained, 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.[14] 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.[15] 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,[16] 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 that the national norm.[17]

Literate mothers make formal education more cost efficent. 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.[18] 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 pre-condition for 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."[19]

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."[20] It appears that both of the above cited projects plan to make extensive use of print media; a form of communication that constitutes a discrimination in favor of literate females, for 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 essence of the problem: to maximize benefits from the program requires literacy, but literacy as a pre-condition to participation is discriminatory.

VII.

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

Women have not been a part of the mainstream of educational activity anywhere in the developing world. An estimated 65 percent of the world's illiterates are women.[21] Women and girls are less likely to enter school in the first place and more likely to drop out because of social and economic pressures.

In the developing world, women do not have equal access to formal education at any level from primary school through higher education; the same inequality of access appears to be true of 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.[22] 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.[23]

In access to vocational and technical education, females are, again, underrepresented. A UNESCO report on female education and

Table 2. National Illiteracy Rates and Female Illiteracy Rates in Selected Countries

Nation	Total Illiteracy (%)	Male Illiteracy (%)	Female Illiteracy: Total %	Female Illiteracy: Rural %
Afghanistan	93.6	88.0	99.0	n.a.
Bangladesh	78.4	66.6	91.3	92.3
Indonesia	61.0	47.2	73.9	n.a.
Jamaica	18.1	21.4	15.2	n.a.
Nicaragua	42.5	42.0	42.9	67.0
Brazil	33.8	30.6	46.9	57.3
Colombia	19.2	18.0	20.2	36.8
Morocco	78.6	66.4	90.2	98.7
Liberia	91. 1	86.1	95.8	97.0
United Rep. of Tanzania	71.9	57.3	85.1	n.a.
Upper Volta	98.5	98.0	99.0	n.a.

Source: UNESCO Statistical Yearbook, 1976. Paris: Unesco Press, 1978), pp. 43-56.

training noted, "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."[24] Moreover, girls are usually enrolled at the non-supervisory worker training level, rather than at the managerial technician one; consequently, they are trapped in low skills jobs and are not candidates for advanced training for positions requiring higher levels of education and expertise.[25]

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.[26]

Female enrollments are in inverse proportion to the amounts spent. 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 per- [illegible] ments to 71 percent of university enroll- [illegible] are females underrepresented in first and [illegible], but they also receive a proportionately smaller share of university monies, due to their even smaller numbers

at the higher levels.

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, and teaching assistants in the development and execution of in-country research projects. Females who dropped out after primary school have lost twice: first, they have lost the opportunity to acquire sophisticated cognitive skills, and second, they have missed an opportunity to expand their employment and social options.

Why and how did women's education reach this dismal state? The reasons for discrimination against females are varied and far-reaching, ranging from parents' distrust of the unknwown, e.g. school, to vehement denial of the necessity of education for women. In many LDC's, parents are reluctant to invest in a girl's education because her major role is still viewed as one of nurturing children and remaining in the traditional sector of society. Moreover, in many societies the monetary return on parents investment in their daughter's education will be enjoyed by her spouse, not the family that sacrificed and faced the derision of friends and neighbors to send her to school.

Other reasons involve the fear of the changes in girls that education might bring. A young girl may become "sassy" or "frisky"

or "think that she's better than her family." Another fear, this one based on fact, is that the girl may see her options expanded by moving away from her parents and home, usually to an urban area. A related social constraint is the lack of separate residence facilities for females at boarding schools. Parents will not send their daughters to schools that cannot guarantee that cultural norms of sex segregation will be maintained.

Even if one had answers to the questions and fears of parents, there is still the problem of school costs. Many nations cannot provide free universal primary education and school fees are expensive. When schooling is tuition free, books and uniforms, transportation and school related expenses still add up to a hefty sum. Furthermore, a daughter in school may be a double loss; not only is her education costly, her household and/or field work contribution to the family is also lost. It seems that costs, family circumstances and cultural expectations all conspire to limit the number of female school places available and to dampen demand for increased female enrollment.

In colonial Africa, ruling European powers reinforced existing sex differentiation by discriminating against females in education throughout the colonial era. The extent of discrimination varied from one colonial power to another, but educational opportunities for women were few, far between and almost invariably the prerogative of the colonized upper class.

Table 3. Estimated Female Enrollments by Level of Education for Major Regions of the World

Region	Year	Total		First Level		Second Level		Third Level	
	Year	1,000's	%	1,000's	%	1,000's	%	1,000's	%
Africa	1960	7,663	36	7,125	37	506	29	32	18
	1965	11,201	37	10,247	39	893	29	61	20
	1970	15,136	39	13,488	40	1,541	31	108	23
	1974	19,911	40	17,163	41	2,552	34	196	25
Asia	1960	42,364	37	33,131	39	8,794	33	529	24
	1965	58,833	38	45,082	40	12,758	33	993	28
	1970	71,520	39	53,582	41	16,330	34	1,607	29
	1974	83,570	39	61,317	41	20,135	35	2,119	31
Latin America	1960	14,926	48	12,835	48	1,920	47	171	30
	1965	20,297	48	16,720	49	3,279	48	298	33
	1970	27,206	48	21,398	49	5,227	48	581	35
	1974	33,823	48	27,079	49	5,227	48	1,218	39
Oceania	1960	1,465	47	1,054	48	381	48	30	28
	1965	1,715	47	1,149	47	517	47	49	30
	1970	1,983	47	1,265	47	641	48	77	34
	1974	2,138	47	1,273	47	738	48	126	38

Source: UNESCO Statistical Yearbook, 1976, pp. 98-99.

This table demonstrates that although the number of female enrollments has increased at all levels of education from 1960 to 1974, females continue to comprise decreasing percentages of total enrollments as the level of education rises.

Table 2 indicates sex differentials in formal school enrollments for French West Africa between 1922 and 1945.

Table 2: School Enrollment by Sex in French West Africa

Year	Female Enrollments	Estimated Total
1922	1,000	25,000
1938	6,529	56,852
1945	21,355	110,951

Source: Suret-Canale, Jean. Colonialism in French West Africa. Paris: Moutton, 1966, p.45.

Figures for any area of colonial Africa would be comparable. The small number of women who were educated were so privileged through the prestige of the family, the personal whim of an "enlightened father" or as a protegee of a forward-thinking colonial woman. Basically, colonial officials were educating Africans for laborers and low level skilled workers. The prevailing cultural mores, both European and African, indicated that women would not be the first persons to enter the modern sector, an attitude perpetuated by colonial governors and officials who assumed that leaders and potential laborers were men. Moreover, women were undependable workers because of the possibility and high incidence of preganancy. Also, an underlying pride among African males caused them to resent African women dealing directly with the colonizers; this feeling also limited opportunities for interaction.

In the 1945 to 1960 period of nationalist sentiment, the number of girls and women educated did not increase dramatically. In 1960, the year of independence for many African states, girls and women comprised 37 percent of primary level, 28 percent of secondary level and 25 percent of higher education students.[28] Since 1960, the situation has improved, both in African and worldwide. Developing countries moved from 46 percent of school age populations in school in 1960 to 62 percent of school age populations total enrollment in 1975.[29] Although female enrollment rates are rising rapidly, major disparities between male and female enrollment rates still exist. The

difference or gap between the percentages of male and female enrollment and the differences in absolute number disparities at all levels have narrowed. Table 5 indicates increases and changes from 1960 through 1975.

Table 5

Percentages of Female Enrollment in Africa by Level of Education from 1960 through 1975

Year	Primary Level	Secondary Level	Third Level
1960	37	29	18
1965	39	29	20
1975	41	34	26

Source: Development of School Enrollment: World and Regional Statistical Trends and Projections, 1960-2000. UNESCO, ED/BIE/CONFINTED/36/4/Ref. 2., Tables 4 and 17.

Despite the increases in enrollments, the current education outlook for girls and women is bleak. Nowhere in sub-Saharan Africa do female enrollment rates at any level of education equal male enrollment rates. And although total enrollment rose from 1965 to 1975, boys enrollment increased by 9.7 million, while girls increased by 8.0 million.[30] The percentage increase may have been larger for girls, but in absolute numbers, female enrollments still lag behind those of males.

Moreover, these disparities will increase in the decade from 1975 through 1985 according to UNESCO projections. Girls in West Africa and Middle Africa will continue to suffer some of the lowest enrollment rates found in the entire world at all levels of education.[31]

Access to school placement - "getting in" - is just part of the problem. Although she cleared the first hurdle, admission, seven year old Baindu, a West African school girl, will find it difficult to continue her education. The difficulty will grow with each passing year. The dropout and wastage rates for women are usually three to four times as high for women as for boys.[32] Girls are the first to be asked to leave school if there is a financial squeeze in the family. Moreover, they usually achieve lower grades than boys for a variety of possible reasons. First, in most cultures they are not spared their household chores because of school attendance; they are usually physically tired. Second, the self-fulfilling prophecy is at work. Teachers expect them to achieve less than boys, they in turn internalize this sub-expectation, and do, indeed, perform below capacity. Since promotion is based on mastery as indicated by test scores in most African nations, girls are often asked to repeat a grade.

Even if Baindu manages to overcome problems of access, fatigue, and lowered expectations, and manages to reach secondary school, she must now fight the education system

in tracking. Most girls are tracked in liberal arts as opposed to the hard sciences, commercial and clerical skills courses as opposed to industrial training ones.

Vocational and technical training programs present more obstacles to Baindu. Statistically her chances of getting in to a vocational or technical programs are one in eight. Education officers rarely encourage females to enter vocational skills training programs. These males argue that it is useless to train women in vocational skills because no one will hire them due to cultural considerations. Although response to this argument must be country-specific, employers when presented with qualified women in usually tight labor markets, have invariably accepted the females in nations as diverse as Morocco and Liberia.

The vocational and technical school biases become more clear when one looks at access and enrollment figures. Until the mid-1970's, girls were actually prevented from participating in vocational and technical education programs in several nations.[33]

If Baindu has opted for a professional career, chances are 8 out of 10 that she will be a teacher. However, she cannot teach at just any level. Usually she will become a primary school teacher. Although women comprise the bulk of the primary school teaching force in many nations, for example, Brazil, Dahomey and the Philippines,[34] women rarely become

principals. Data from around the world confirms that women are discriminated against in administrative and decision-making jobs in education. In a U.S. sample of 400 vocational school directors, males held 93 percent of the top administrative posts.[35] In the Philippines, while 77 percent of primary school teachers are female, 22 percent of principals are women; 57 percent of secondary school teachers are female, but only 12 percent of secondary school principals are women.[36]

Women are discriminated against in formal education in access, enrollments, counseling, job options and promotions. But what of the adult women who have no option for the formal system.

Non-formal programs for women offer a way out of the dilemma. The rationale usually states: since women have been discriminated against in access to educational opportunities, compensatory programs should teach them much needed skills that will facilitate their entrance into the modern, market economy and generally help to integrate women into development activities. Since they have been the victims of discrimination, they should be tracked in great numbers into compensatory and remedial programs.

It may be that non-formal programs offer women the best opportunities for literacy training and skills development, but discrimination exists in non-formal education as well. Females do not enjoy equal access to non-formal programs. In

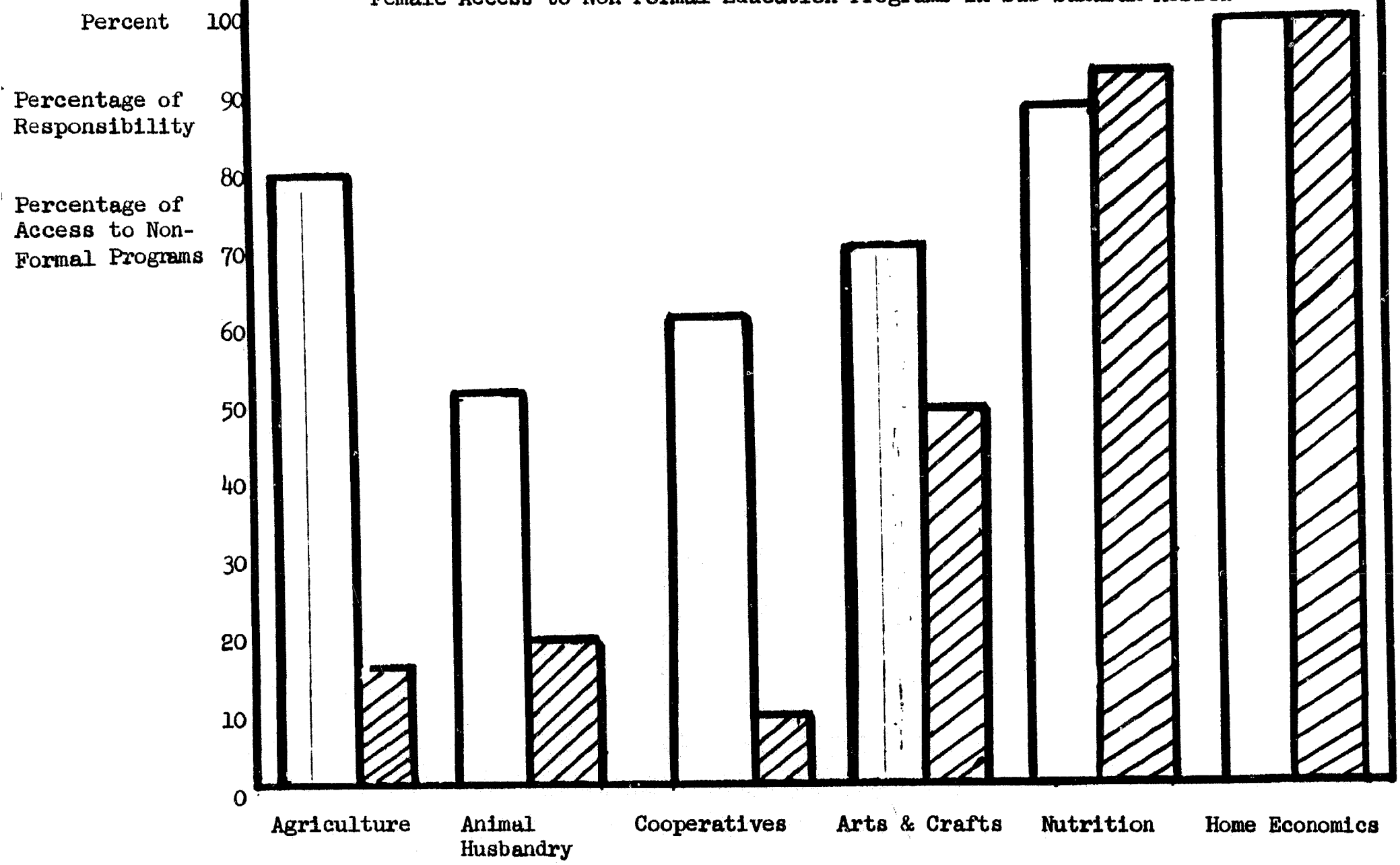
many LDC's, women continue to perform the bulk of agricultural and domestic work while men attend classes to learn about labor-saving devices. Men are identified as participants to learn about new agricultural machinery, cooperatives and, most important, credit and banking.

The pattern of sex-defined programs in which women learned health and hygiene has been transformed: now women learn handcrafts and hairdressing and similar low-paying jobs. Meanwhile, men continue to acquire new skills in agricultural production, commercial and industrial expertise, new knowledge about cooperatives and credit.

One goal of non-formal education has been equalization of opportunity, but in many cases, non-formal programming has been used to further exaccerbate existing inequalities of opportunities and access for women. This discrimination has ranged from 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.[37] Simiarly, in Korea women were included in agricultural development programs only as spouses of male participants and provided home economics classes exclusively.[38]

These disparities of content point up a possible danger of

Chart 1: Relationship of Selected Agro-Economic and Household Responsibilities to Female Access to Non-Formal Education Programs in Sub-Saharan Africa*



* 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 (Mimeographed.), as quoted in Marian Fuchs-Carsch, Women in Ghanaian

non-formal education programs, a dual track system in which women are tracked into 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 monetized economic sector 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 20.47 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.[39] 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 186 cruzeiros on average per month. These World Bank compilations corroborate a similar finding by Glaura de Miranda that Brazilian women earn one third the wages and salaries of similarly employed men per annum.[40] These figures demonstrate that Brazilian women experience more unemployment, work for less money, and receive lower wages for similiar work than do their male cohorts.

In Liberia the dual system in which women are the economic underclass, seems 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.[41] The second largest sectoral occupation in the 1982 projections in Clerical and Sales Workers, who are expected to form 12.2 percent of the work force.[42] One would think that this is a natural market economy entry point for females, especially with the tradition of the West African market mammies. However, the urbanized market store owners and managers want literate sales persons, and with a female illiteracy rate of 93 percent, few Liberian women can meet the literacy criterion.

Perhaps the most flagrant and best known dualism occurs in rural areas in agricultural training programs in which women's meager access to training programs in no way reflects the overwhelming percentage of time that they spend in agricultural labor. Particularly in Latin America, an abundance of evidence has revealed that women generally spend a great deal more time in agricultural pursuits than previously realized.[43] In fact, worldwide female agricultural input has been undercounted, while conversely, their representation in non-formal programs which teach innovative techniques, introduce credit management practices and facilitate participant contact with the modern world, has been very limited.

These non-formal programs have tertiary spinoffs. They provide participants with exposure to new ideas and often establish initial contacts with urban officials for rural residents, even if it is only through the extension worker. These ideas and contacts often translate into inter-personal communications skills that are useful in political settings. Women's projects, oriented toward incorporating traditional skills and cushioning the impact of social change, often do a disservice by not forcing women to interact more in the modern world.

So far, this report has painted a bleak picture of women and education in the developing world. Formal education has provided disappointing returns; non-formal programs have discriminiated against females; women have not enjoyed equal access to any kind of educational opportunity. We now try to put these issues into programmatic perspective by examining the functionality of formal and non-formal education programs.

PART IV

More and more development practitioners realize that development efforts are doomed if 50 percent of the population remains excluded. In the current atmosphere of educational re-assessment and change, it is especially appropriate in regard to women, to find out what has worked and what has not worked, what has been functional in behalf of females and what has been dysfunctional.

Functionality was earlier defined as a structured, organized educational activity, formal or non-formal that increases the individual's ability to operate in her environment.

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 impact most vehemently discussed and most difficult to evaluate objectively. 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 her example is multiplied and each one of the multiplied example 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 commonly heard Moroccan argument that families will not allow young girls to take advantage of educational opportunities that do exist, for it is improper for young girls to go too far away from familial influuence; this kind of action may damage a young lady's character and reduce her chances of marriageability.[1] Youssef maintained that this cultural retention argument was invalid in the modern socio-economic milieu in which income from all family members was important, if not critical to survival.

Education as a social multiplier also 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 Monrovian women surveyed had their female offspring in school at earlier age, achieving higher grade levels than the norm for Liberia or sub-Saharan African nations[2] in a dramatic example of the social multiplier at work. Literate mothers had increased, or multiplied, 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.[3]

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 mothers of the students in Weis's sample had attained at least primary education.[4]

Some anecdotal evidence indicates that the presence of a 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 AID 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 much of the developing world, education brings status, and a female invariably achieves higher 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.

In addition, role models also provide support to female students when societal constraints operate against their continued education. The support offered by role models becomes especially important in the more traditional developing nations whose perspectives on appropriate roles for women have not been changed by modernizing forces.

Teachers are a common role model, and school girl crushes often help determine future occupational choices among female students. A longitudinal study of northern Nigerian female students revealed that students who modeled themselves after their female teachers were more likely to complete school, had higher labor force participation rates and experienced a greater frequency of integration into the market economy, than the majority of those students who had modeled themselves after traditional persons and/or family members. The traditionally oriented students also were likely to have remained in purdah.[5]

As a change agent, education of females has been particularly 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.[6] 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 development/population assistance film, Marigoli.[7] 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.[8]

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 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 segregrated labor market; and 2) depressed wages in the specific industry or occupation so identified. Both of these conditions depress 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,[9] 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 level and pedagogical strategies. Furthermore, primary school teaching becomes identified with minimally qualified individuals, thereby weakening support for salary increases and software investment.[10]

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 litte 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 "female appropriate," sex segregated training has resulted in economic economic dysfunctionality and unemployment.[11]

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.[12] 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 6 indicates levels of female participation from primary level through university in selected developing nation, and points up the dualism. 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.

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. In the fourth step, governments begin to actively

Table 6: 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.

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 the 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 credentials 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.[13] 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 contraints 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.[14]

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. 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 reduce 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 secondary school graduates. 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.[15]

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.[16]

Non-formal programs may lead to rapid increases in income initially, but subsequent increases are not on a par with increments projected for formal workers. A Monrovian 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 about $1000 gross per month, although the latter amount, when divided into ten monthly net wages, was still above the national average monthly wage.[17]

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.[18]

Like most investigations, the majority or empirical studies on which rates of return analysis are based used all male samples. Those studies that have included a female sub-sample indicate that they, too, benefit most from primary education. However, Blaugh, in studying rates of return on education in Thailand, found that women earn less at each age and at each level of education than comparable male cohorts.[19] Moreover, women show slightly lower private rates of return. Ironically,

the social costs of education were not as high for women as they were for men, mainly because once out of school the females do not earn as much; therefore, it is cheaper to keep a girl in school than a boy.[20]

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, especially given the marked influence as mothers they have on the education of their offspring.[21]

Application of rate of return analysis to non-formal programs in Morocco revealed striking outcomes. The findings are based on results of field work using a sample of 1600 Moroccan male fulltime employees. One of the most significant findings is the fact that at no point did illiterates achieve the earnings of primary or secondary school graduates.[22] This finding is a powerful argument to retain literacy components in non-formal programs. Otherwise, one is curtailing income growth, which is antithetical to the whole rationale of non-formal education. On a more encouraging note, Psacharopoulos found that there is a point at which experience starts to serve the same function as schooling, usually between the ninth and tenth year.[23] At that point of experience and/or training, internal rates of return are very close to the schooling rate of return. Consequently, Psacharopoulos concluded, if budgetary or other constraints preclude expansion of the formal education

system, non-formal training may be able to meet vocational education objectives.[24]

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.[25]

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.[26] 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.[27] 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.[28] 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.[29] 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.[30]

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, contrasted with only 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.[31] 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 may be literate but have trouble maintaining their literacy. Moreover, they hold unrealistic beliefs about the jobs that they will be able to find. These women represent a waste of resources and their dropping out merely raises 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.[32] 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 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 as 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 through continued opportunities to utilize one's abilities to read and calculate, due to the close proximity to printed materials.[33]

To summarize the discussion of economic functionality, this analysis has suggested that two overriding issues causing economic dysfunctionalism 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.

X.

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.[34] 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?" Coombs and Ahmed suggest.[35]

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[36] which are usually unmonetized on the village level.

Although the appeal 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 relatively low female urban migration rates in Africa and Asia is that the labor of young women 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 been economically active in agricultural productivity, but even more active in domestic activities of food processing, cooking and childcare, the labor of young girls has not always been a necessity, and often young females were encouraged to migrate to towns and cities to find wage employment.[37]

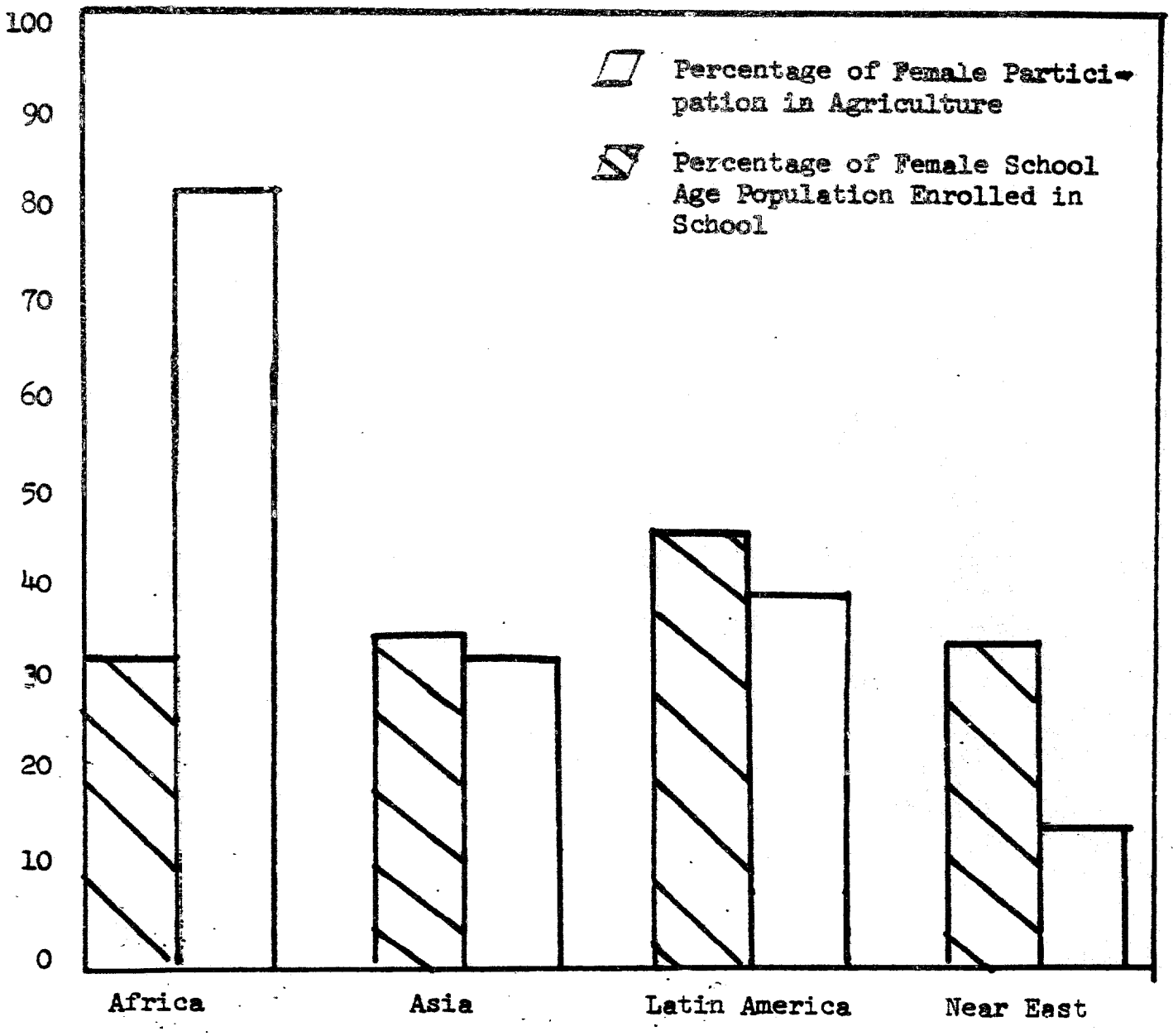
It would appear that there is also a relationship between agricultural productivity and education that is, in turn, related to migration. In the areas of most intensive female involvement in agriculture, we find the lowest percentages of school enrollments. In Africa 65.2 percent of the female school age population are enrolled in school, and women supply 60 to 90 percent of agricultural labor.[38] At the other end of the spectrum, Latin American women are involved in agricultural

production at an average rate of 40 percent, while school enrollment for females averages 88.2 percent of school age population.[39] 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 relatively low female agricultural involvement, tends to encourage these females to migrate to urban areas, for there are fewer employment opportunities and 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, but remained committed to his family, he has three major options. He may send back money to help support the rural household, he may send for his family, or he may save his money and look forward to the time of his return to the rural home. Family migrations occur frequently in commercial industry intensive nations such as the Southeast Asian nations of Thailand and Burma or in nations with high female employment in domestic service, such as much of Latin America and the Near East. In such situations, a male head of household may opt to move his family to the urban area since his wife's potential income will, to some extent, replace her rural (often uncounted) unmonetized 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

Chart 2: 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.

male reason for urban migration, since female enrollment rates are very low at the level of university or technical/vocational education.

Finally, women may migrate because the rural environment is stultifying and their workloads are too overwhelming. Whiteford, in a study of women and migration in Colombia, found that sex roles were so closely defined that women viewed migration as a saviour and a welcome escape. In Whiteford's words, "Migration is liberating."[40]

Extraordinarily heavy workloads may also encourage women to leave their rural homes. Palmer found that the average working day of women in Haryana State, India was 15 to 16.5 hours. Females' direct contribution to agriculture was 50 percent.[41] Many women decide to migrate to escape the interminable drugery that some find in rural existence.

There are, then, a variety of reasons for female migration to urban areas, and education is only one of them. But there are are several ways in which education can impact upon the decision.

First, as previously stated, the rural educated women 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 as contribute to urban migration if a woman trained in a village-based, non-formal program feels that her new skill will enable her to find employment in an urban area. This may occur particularly in areas with a tradition of female involvement in commercial and industrial 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 the completers' post-program actions. One solution to this dysfunctionality is to increase and upgrade rural employment opportunities and to improve the quality of rural life. One measure of demographic functionality is the ability of the educational system or the non-formal program to enable the individual to achieve more within her present environment.

The Bangladesh National Women's Development Academy project demonstrates one effort to improve the rural environment. Through training, the project is attempting to reach rural women to encourage new nu-

tritional practices, present innovative food processing techniques, and introduce the concept of selling surplus crops for cash earnings.[42] 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 invariably has been a condition of economic development. Non-formal programs could be extremely benecial 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.[43] 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 may encourage urban migration; yet it appears socially functional for women, rural as well as urban, 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. One 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.[44]

Studies have shown that labor force participation also correlates with decline in fertility.[45] Both formal and non-formal education, by teaching marketable skills, encourage fertility declines and population stability.

Non-formal projects geared to women have often integrated population assistance components into programs in other sectors. 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 skills training allowing increased economic participation should contribute to a reduced population growth rate.46

The paper goes on to cite a goal of the project as "acceptance of the small family norm."[47]

Virtually all of the AID population assistance programs have an educational component, whether it is in actual profess-

ional or paraprofessional preparation such as the training of paramedics and auxilaries 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."[48]

It is our hypothesis that any educational activity that leads to acceptance of family planning services and appropriate use of these 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.

XI.

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 that persons with any schooling do better in non-formal programs than persons who have had no schooling.[49]

Another positive factor in formal education is its broadening of opportunities of civic participation within one's community and the greater polity. Non-formal programs can also expand a woman's

opportunities to participate, but the options are usually specifically related to her community and not easily 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 political sophistication than the person who has just completed a non-formal program. Any of the non-formal programs 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 associated with formal education. In most LDC's, the formal system of organized learning is the legacy of the colonial era. These embryonic systems were not meant to educate masses of people and today these old 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 18 to 24 percent per annum of the national budget to formal education.[50]

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 often change the content, but not the structure of the curriculum. A student 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 been dysfunctional also 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 Ivorian librarian, called the educated/non-educated gulf "the heart of the matter."[51] The question is how do formally

educated women bridge the gulf to help illiterate countrywomen. If formal education encourages elitist tendencies and does not provide mechanisms to assure interactions between literates and illiterates, advantaged and disadvantaged, then it is dysfunctional.

We now turn to examination of some of the positive and negative aspects of non-formal education. 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.

Since non-formal curricula vary with the subject being studied, some of the more innovative teaching strategies currently being tried are found in non-formal modes. The use of comics, films and other media, especially radio, in innovative techniques that reflect concern with the cultural mileu 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 chart on page 62 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.[52] 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.[53] 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 in 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 and greater upward mobility. Moreover, entry into many non-formal programs is by competitive exams. In these instances 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, exercises 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.

PART V

So far we have explored the history of U.S. education and colonial African education as it related to women; examined the state of modern education, both formal and non-formal for women; and analyzed the functionality of formal and non-formal programs as they impact upon LDC girls and women.

However, educational change does not take place in isolation. The political environment poses constraints that can facilitate or hinder women's progress toward equal educational opportunity. This section explores some of these constraints and speculates about possible outcomes of a major investment in female education. Once again, sub-Saharan Africa is the region explored in depth.

Chapter XII examines several political axioms and their relationship to women and education, focusing on the pivotal role of the middle class. Chapter XIII analyzes the daily business of education and discusses women's tangential role in the operations aspects of education in LDC's. Chapter XIV hypothesizes about the possible consequences of significant female involvement at all levels of education.

XII.

Education is a political activity. In any nation limited amounts of money and human resources are available for allocation to education and human resources development activities. The determination of who gets what amount of money for which educational activity involves political decisions. Allocation choices between men and women, children and adults, formal and non-formal programs will advantage some segments of the population and disadvantage others.

The political nature of education is heightened and deepened because educators have built-in biases based on their own personal experiences. To reject too much of one's personal educational experience for innovation and experimental changes is to reject an integral part of one's self. Most persons with development experience can summon forth a memory of an LDC education official who constantly lamented the current state of student knowledge and skills while recalling his own school days of high quality (usually colonial) teachers and dedicated students. This official and hundreds of others like him have a tendency to fund and support projects that reflect the traditional, inflexible, elitist formal systems under which they were educated.

Moreover, no matter what one's academic training, there is a propensity to consider oneself knowledgeable about education because one has undergone it. Curiously, this phenomenon does not carry over into other professional areas. Few people consider themselves lawyers after being involved in litigation or mechanics after a simple car repair. Similarly individual education does not make one an educator, a concept "lay educators" find hard to accept. In short, these education experts through personal experience make it difficult for professional educators to act decisively to improve programs without the encumbrances of emotion and nostalgia.

One hardly needs to add that the overwhelming majority of the educators of whom we speak are male, for the majority of LDC women have not been a part of the educated, chosen few and, consequently, they are not part of the education decision-making apparatus. In the developing world, women have been disadvantaged -- physically, economically, socially and educationally. Women have suffered discrimination in education in terms of access, enrollments and tracking.

Women have been on the periphery. Often they lack basic literacy and nunmeracy skills as well as the political organizational skills necessary to effectively compete for scarce resources. They sometimes fail to see the relationship among education, politics and development.

Education is a political instrument. It was used by the colonial powers, the nationlist leaders and the nation builders in new states. Now it is being utilized by post independence regimes who have come to power promising democracy, stability and equality. Each nation has a ruling elite charged with using available resources for the betterment of the ruled. Education is one of those resources in very limited supply that leaders are mandated to use for the public good.

Education is a powerful, limited commodity at the service of the ruling elite, a commodity providing decision-makers with many options in its use. While on the one hand, cost constraints make it necessary to restrict access and opportunities to education, on the other hand, education, popularly viewed as a panacea for underdevelopment, is the one promise of the nationalist movement most difficult for leaders to abandon.

Decision-makers work in a framework configured by several political realities. A few are discussed below in terms of their implications for women.

1. Education, is usually dominated and apportioned by the middle class. The middle class, seeing no benefits to itself in expansion of access to educational opportunities, safeguards education options for its members while simultaneously attempting to limit rapid expansion of education to the lower classes.

This limitation strategy means that middle class women who have historically enjoyed access to educational opportunities, can continue to do so. Most educational systems have been successful in co-opting the educated middle class women to work within the existing socio-educational network and maintain belief in education as a middle class prerogative, rather than a universal right.

Some of these middle class and upper class women will acquire conflicting values and loyalties. In the new age of female consciousness, loyalty to sisterhood, and awareness of the stark realities of female rural poverty, many women are protesting against the very systems that spawned them. In Nicaragua, for instance, one of the primary opposition groups to the Somoza regime is lead by a 27 year old, university educated female philosopher. She has, in turn, united other urban educated women who have reportedly joined with uneducated rural women to form a strong alliance militantly opposed to the existing regime.[1]

2. The middle class is the main beneficiary in any education endeavor or reform. Upper classes have traditionally sent their children to be educated in Europe or the United States. It is the middle classes that keenly appreciate the potency of education as a vehicle of upward mobility. Moreover, most fundamental change is really implemented by the middle class.

3. The issue of female educational opportunities is a potentially volatile one. The important factor here is the extent of female active participation in the nationalist effort, for activism makes women a voice that must be reckoned with. These independence activists were quite often illiterate market women. One other major source of rank and file supporters was voluntary associations. Many of the associations' members were intensely involved in nationalist activities and nation-building efforts twenty years ago, and are no longer actively involved in politics. In most cases the women were not effectively integrated into post-independence governments. Those that were elected to legislatures and national assemblies were often casualties of corruption and scandals, such as Madame Bebe of Tanzania. Education decision-makers would do well to note the potential alliance of current educated females and earlier activists.

Important to policymakers is the fact that the daughters of these former activists are now young women. These daughters are likely to have had the benefits of education that their mothers may have missed. Upwardly mobile through education, and aware of their mothers' contributions, this new generation of educated females has feet in both camps and might successfully align the illiterate, activist market mammies camp with the middle class females who have modern skills and strong academic backgrounds. This is powerful alliance could probably topple many regimes.

As early as 1929, the market women rioted in Lagos and forced radical changes in British administration of the colony. It is difficult to estimate the potential strength of an educated and activist female alliance.

Politicians were previously able to count on female support because they were a neglected and underestimated force. Moreover, they were often illiterate, malleable and dependent on literate males for their information. If access to educational facilities becomes easier for them, they can assume responsibility for their own sources of information and be in a position to hold male politicians and leaders accountable for what they say. In short, increasing female educational opportunities may work to the detriment of current officials, eroding a certain support base and replacing it with the careful scrutiny and concise questions that literacy may bring to politically active women.

4. Expansion of educational opportunity becomes a matter of risktaking. The question is posed as follows: do politicians want to risk offending some constituencies to empower others. Several constraints work against expansion of female educational opportunity.

First, there is no guarantee that the expansion of educational opportunity will coincide with expansion of the employment base and economic capacity to absorb the newly educated. Current constituencies with a vested interest in maintaining the status quo argue that one is merely increasing the number of qualified persons competing for scarce jobs by educating more women.

Unemployed school leavers are politically volatile largely because of their unmet expectations and frustrations with a system that cannot accommodate them. They are a thorn in the side of most regimes in the LDC's. Politicians have a vested interest in keeping them appeased, and thus expansion of female educational opportunity is not an attractive option.

Second, one runs the risk of offending the middle class which is not interested in sharing its socio-economic options or milieu. Offending the middle class is a major risk that few politicians want to take. With the international agency emphasis on basic human needs and reaching the poorest 40 percent of populations, the middle class is often ignored. The poor are not powerful. They cannot articulate their needs, wants or grievances with the sophistication of the middle class. The poor do not command the well-organized political support of the urban middle class. The middle class clearly perceives the relationship between power, reform and the ballot box and is likely to vote in large numbers. The tendency, then, is to assuage the middle class and go slow on education reform, while providing other services to the rural poor and the poorest 40 percent.

Expansion of educational opportunities for girls between 6 and 14 might be more politically acceptable, for all parents hope that their children will surpass them. Education is still perceived as the major road to upward mobility (although World Bank economists and others argue that this is not necessarily

the case) so a decision to increase access would be likely to have the support of parents. But the politicians must be careful that other issues do not intrude and obfuscate the education issue. Primary level school age populations cannot vote, but their parents can. If the linkage between specific politicians and increased educational opportunities can be clearly made, then the choice is attractive. Nevertheless, there is a significant risk factor involved.

5. Women, like minorities and other disadvantaged groups, will gain access to a given system — in this case, the educational system — when the system has been denuded of power and impact, and has been left as an ineffectual shell. Middle class males have enjoyed the benefits of the educational system, and, as the affluent youth in LDC's, have been the beneficiaries of educational innovations and improvements.

Curiously, growing disaffection with LDC education systems has crescendoed just as LDC women have clamored for more access and equality of educational opportunity. Now that the disadvantaged demand access to education, the problems suddenly manifested are legion. Rates of return analyses indicate that education does not offer higher social rates of return when compared with equal investment in other sectors; cost effectiveness and cognitive skills development effectiveness are in doubt; there is uncertainty over the

relationship of education and higher worker productivity. Inevitably, the social costs of previous errors in policy and implementation will be borne by the currently disadvantaged: girls, women and the rural poor.

6. Non-formal programs, a temporary solution to the problem of rising expectations amid employment scarcity, may be a political saviour for the regime in power, but it will merely exacerbate class and economic cleavages in the future.

Several problems surface as soon as one begins to examine non-formal programs from a political perspective. First, non-formal programs will encourage the two track dual education system in which status, prestige and higher income will accrue to those who have gone through the formal system. Persons who participate in non-formal programs may have job skills that will enable them to engage in income generating activities, but the positions that non-formal graduates will assume will not offer salaries, promotion opportunities or status similar to those to be found in positions available to persons with formal education credentials.

Second, much of the foreign aid monies provided for nonformal programs targeted to the rural poor is actually allocated for training managers and instructors. Usually, these instructors are middle class persons with required formal education credentials.

The irony is that non-formal education, which is primarily aimed at disadvantaged rural poor and women, often

further entrenches them in their second class status.

In the battle of increasing educational expenditure in the face of the aforementioned conflicts, political leaders and education decision-makers must tread warily. One solution is to loudly proclaim the regime's commitment to education and expansion of educational opportunities, decry the lack of funds to actualize the expansion objectives and continue to operate the educational facilities as usual. A second option is to publicize new education innovations and, in a flurry of activity, actually change very little. In option two, those advocating change are mollified; the middle class, which is the support of the regime, is satisfied.

A third option is to really attempt to restructure the educational structure so that disadvantaged groups, namely women and the rural poor, have opportunities of increased access to educational opportunities, in programs that provide rigorous cognitive skills and market economy employment opportunities within the national economic context.

For the non-revoluntionary regimes with which AID deals in large part, options one and two are tempting. The losers under these options are the young persons in the educational system. Option three, the hardest to implement, also involves the greatest risks. Whereas school children cannot vote and illiterates can often be swayed to vote in the interest of the existing regime, the middle class can and will exercise its power at the ballot box independently.

Politics permeates the business and economics of education from ministries to teachers. This section examines the myriad ways in which politics intrudes upon the learning objectives of education. Let us begin at the top, as do elites in LDC's, with the ministries of education.

No educational administrative decision is without political undertones. In the world of severely limited budgets in which as much as 20 percent of development expenditure is allocated to education, education provides livelihood for many persons. Although many women earn their livings as teachers, especially in the primary levels, women are not well represented in the higher eschelons of education decision-making.

Liberia is a rare exception to male dominance in education. Women hold three top administrative posts within the Ministry of Education: Director of Curriculum and Textbooks, is the post held by Dr. A. Doris Banks Henries, wife of Speaker of the House of Reprsentatives Henries, the man from whom much of her power derives; Dr. Bertha Banker Azango, is Assistant Minister for Research; and Dr. Azango's deputy, Josephine Badio, is a U. S. trained curriculum specialist, whose husband is a county superintendent, the equivalent of an American state governor.

Moreover, the daughter of Liberian President William R. Tolbert, Christine Tolbert Norman, runs the only bookstore in town that stocks necessary primary and secondary school text-

books. Mrs. Norman also sits on the Ministry of Education's textbook advisory committee which recommends or disapproves all government schools' required txtbooks. Textbook ordering, provision for Monrovia and outlying government operated schools, runs into hundreds of thousands of dollars per annum.

Mrs. Henries' books are directly antithetical to the current Liberian political intention of unification among Americo-Liberians and indigenous peoples. Her Civics for Liberian Schools, required reading for all eigth grade students, begins by citing the hardships of the settlers when they first encountered the indigenous "savages." Mrs. Henries admits that the book needs revision and has been planning to do so since 1974. Liberians officials privately comment that the book is reactionary. However, due to the position of her husband, Honorable Richard Henries, Speaker of the House of Representatives, her severest critics are silent in Ministry of Education meetings and discussions.

Strong and opinionated as these women are, they owe their power to the reputations and positions of their husbands. Although the secondary echelons of the Ministry of Education are staffed by women with professional and advanced degrees, the highest corrridors of power remain exclusively male. No woman, however well qualified, has ever been Minister of Education.

The exception to this male dominance is Dr. Mary Antoinette Brown Sherman, President of the University of Liberia. A Cornell University Ph.D., Dr. Sherman has fought consistently to place university education above politics. In 1976 she resigned as Dean of Teachers College based on the Board of Trustees' denial of her request for sabbatical leave. The Board of Trustees was at that time chaired by the Vice President of the nation, Honorable James Greene. Dr. Sherman's request was denied on tangential issues which evaded the real question of her support of unorthodox faculty points of view and the rights of free speech in a university environment.

After an absence of about one month, she was asked back to the university as Vice President for Academic Affairs. The university president, with whom she had fought so bitterly, was appointed Minister of Education. The incumbent minister conveniently resigned to run for the national legislature.

Since 1976 Dr. Sherman has been elevated to the presidency of the University of Liberia, with the approval of virtually all the faculty and strong support from the students. At a March 1978 convocation, the students presented Dr. Sherman with a symbolic sword so that she could rid the university of its enemies of free expression, wipe away inferiority and mediocrity, and restore the atmosphere of free and independent thinking.[2]

The example of Dr. Sherman is rare in the annals of women in higher education. Few women have achieved sufficient stature and respect to do battle with the university hierarchy, the national administration, national leaders of the rank of president, vice president and speaker of the House of Representatives, and win. Dr. Sherman emerges as an example of the social functionality of formal education. She serves as a role model and catalyst to encourage other women to become educated and aid in the development efforts of their nations.

Her path will not be easy to follow. Education, in its daily operations aspects, is male dominated territory, especially in the developing world. Women are rarely included.

We now turn to discussion of various aspects of the education system — from school site selection to curriculum reform to the ramifications of decentralization -- and examine the impact or lack of impact of women.

In most African nations, school site selection is theoretically based on numbers of school age population per square mile or within a given radius of the proposed location. More often than not, however, location is based on the political quid pro quo. The spinoff patronage jobs associated with a building project are a source of prestige and power to the politician who is powerful enough to bring this kind of social infrastructural development to his district.

Women are virtually excluded in this basic political patronage on three counts. First females are rarely legislators

who can lobby for targeted school construction sites. Second, virtually nowhere in the developing world does one find female contractors bidding on school construction projects. Third, women are seldom found in the policy-making ranks of eduational administration.

Access to educational opportunity is very often based on the presence of a school in one's own or a nearby community. Political consideration in school site selection takes the question of access of girls to formal education facilities totally out of their hands and out of the hands of their parents. Decisions on school placement are made by male politicans based on the political exigencies of the situation. If girls can benefit, so be it — but they are no one's primary concern. Politicians are not accountable if rates of female enrollment do not increase rapidly simply because of lack of facilities in high density female population sites.

Teacher certification also has a political dimension for females, for the majority of women in education teach at the primary level, and do not have four years of college. Many were educated at rural teacher training institutes or normal colleges.

Current thinking among education specialists advises that teachers should have four years of college experience and become certified. While this is an admirable goal, it stigmatizes women and once more they are on the bottom of the totem pole. This uncertified status will diminish promotion and salary

increments for them.

School curriculum also involves the interaction of politics and educational decision-making. Curriculum development is big business as new nations try to move away from the colonial models and develop curricula more relevant to nation-building. In 1965 students in Korhogo, rural Ivory Coast, were using French history and social studies books which began with the classic statement of all Gaul's division into three parts. Now students in Korhogo are using Ivorian textbooks with more local relevance. The development and production of new materials is an expensive undertaking and a lucrative contract for the French firm(s) involved. Women are rarely authoritative historians or social scientists; therefore the new indigenous curricular materials may still overlook women and their national contributions. In analysis of social studies materials in Liberia from 1974 to 1978, women were still illustrated doing traditional jobs. All of the active, vital modern sector jobs (with the exception of primary school teaching) were illustrated with male figures. Traditional jobs, such as pounding yams, making cassava and carrying water were illustrated with females.

Illustrations in textbooks and other curricular materials use males in most photographs and drawings. Approximately 75 percent of figures in American textbook illustrations are male.[3] A similar percentage of male dominated illustrations appear in West African textbooks. (While the most blatantly biased

American materials are either being revised or discarded, the lag time for American produced texts to reach African nations and their internal debates about the relate importance of sex-bias-free materials versus more copies of older texts, will take from two to five years.)

This kind of discrimination is very subtle. It builds a case that women do not involve themselves with interaction with modern society to the extent that men do. Women are retiring; men are aggressive. Men explore; women harbor and maintain. Men are better at math and numbers, learn new languages more quickly, and read with better comprehension. These images, perpetuated and reinforced by textbook images, do, in fact, become truth. Male students in three public high schools in Monrovia were view by their teachers are more curious, more aggressive, more diligent pupils in homework preparation than their female classmates. Higher scores on standardized tests corroborated the teachers' impressions.[4] Textbook images help to establish and then reinforce a self-fulfilling prophecy of female inferiority. Textbook attitudes and illustrations are subtle manifestations of biases, but more insidious because of their subletry.

Curriculum innovations and textbook changes run into obstacles from several sources. Textbook committee members may have favorite texts from their school days. Bookstore owners, often having stockpiled for two years in advance, are adamant and effective lobbyists for maintaining current texts, no

matter how culturally irrelevant and sexually biased the book, so that they do not lose money.

Decentralization of education is often recommended to make education more cost effective and more relevant to local needs. It is usually opposed by education ministry officials because it is putting educational decision-making in the hands of noneducators, often illiterate villagers. Decentralization would also diminish ministry power and possibly eliminate some jobs.

Although any such decisions would have to be country-specific, by and large decentralization would not necessarily aid women. Local persons chosen to be responsible for education would be likely to be men. Rural areas tend to be more parochial than urban areas and acceptance by local authorities of the importance of female education may be difficult to achieve.

Rural persons are usually the purveyors of the old creed and the last people to accept new ideas. Education for women in many LDC rural areas is viewed as a waste of scarce resources. Moreover, education for women may encourage urban migration which rural parents in three out of four developing regions do not support. Also important is the widespread conviction that women make better wives if they are not over-educated. Education has generally meant female demand for a voice in child-bearing decisions and this, too, may discourage local authorities from actively seeking to increase the number of girls in school.

The strongest advocates of increased female education are likely to be found in urban ministries of government. The situation is similar to that of many minorities in the United States. The federal government became the strongest ally of Black Americans and other minorities. Similarly, in the developing world, national legislatures and capital located ministries are making decisions that will alter female lives. Educated females who form the main lobbies for female activists are also found in the cities, and it may be difficult for women to identify female spokespersons and/or male advocates on the village level. A Tanzanian female M.P. recalled that 1975 Tanzanian legislation calling for 50 percent female enrollment in all Tanzanian secondary schools encountered enforcement difficulties in several rural areas. However, the force of the central government compelled compliance.[5]

When final authority rests with an unfamiliar official in a distant city, it is often easier for the local inspector or other official to do his job. In classic displacement, he or she can shift the responsiblity for implementation of the law, i.e, the Tanzanian equal enrollment law, back to the central government, arguing that he is merely a hireling, an implementor of national policy.

Politics and education are integrally intertwined. Every aspect of education from school construction to certification to decentralization to instruction is pulled into the skein. This section has touched on a few current issues in the hope of further highlighting the complexity of the relationship.

Why should women be educated? Why should more women be literate? First, it may be politically wise. In nations in which women were a significat force in the drive toward independence, they may feel that educational opportunities are their due. This is certainly the case in Ghana. Nkrumah, significantly aided by the market women of Accra and other female voluntary associations of the Gold Coast, was compelled to consider women in his post-independence development programs.

Even if the mothers were not educated, they wanted educational opportunities for their children. It was for future generations and their opportunities that mothers fought. Ghanaians valued education and used it as a major criterion on which to elect their leaders. After independence, Nkrumah had no choice but to integrate women into the new government and institutions.

Second, development efforts are hampered by an illiterate population. An illiterate population is a dependent population. Literacy helps in storage and retrieval of information and comprehension of new concepts. Indian studies have shown that literate farmers usually produce higher yields per acre.[7]

Third, the evidence seems to indicate that there is a relationship between increased education and decreased fertility, although recent Indonesian data casts doubt on the relationship for that particular country.[8] Most developing nations are acutely aware of the pressues of increasing population, even if they

proclaim a pronatalist attitude, for education expenditures are continualy rising to merely keep pace with increasing school age populations.

Perhaps it is easier to talk about the consequences of not educating women. If we retain the status quo, educational opportunities will continue to accrue to the middle classes. Some women will be educated in the formal system that offers social and economic mobility, status, political and personal rewards. Most lower class women who gain any access at all to educational opportunties will find them through the non-formal system of training and job-skills programs. These jobs will train them to be hairdressers, dressmakers, and artisans — jobs without power, prestige or promotion possibilities — or bookkeepers, secretaries and similar clerical and commercial sector skills — jobs that support male decision-makers. Non-formal programs will not teach skills that will enable their graduates to compete with professionals and managers. Political leaders do not generally have to worry that dressmakers, artisans and secretaries will become radicalized theorists ready to overthrow the regime.

The chasm between mostly urban educated women and predominantly rural illiterate women will continue to grow. Urban women, exposed to more stimuli, having greater access to limited educational opportunities and more access to market economy employment, will grow further and further away from

their rural sisters who are illiterate, unsophisticated and confronted with different problems. As women's perceived needs and interests diverge more widely, so will their associations.

It may be that urban educated women will ally themselves with existing, male-dominated political structures and voluntary associations rather than continue to strike alliances with distant, illiterate rural women with different interests and preoccupations. This, of course, would work to the advantage of political leaders and is another unspoken argument for not expanding female educational access.

The consequences for expanding educational opportunities for women to equal those of men are hard to foretell in the developing world. Several possible consequences seem plausible.

Equal educational opportunities will most certainly result in economic re-adjustment as women begin to participate more fully in national development. Currently, most women with college educations in the developing world are employed full time in the market economy.

The often heard male fear that women will take over their jobs and leave male heads of households unemployed is ill-founded. First, women head approximately one third of households in LDC's, so they need employment equally as much as male heads of household. Second, an educated pool of workers is usually a lure for new industry and an incentive for investment. Investment means more jobs.

The real danger is that women will leave school, be the last hired because of sex biases and take jobs for which they are overqualified, creating a situation in which women form the bottom of the economic pyramid — the secretaries, typists and clerks who support the rarified apex of male decision-makers.

Another economic readjustment stemming from an increasingly educated female populace would be the diffusion of female economic power away from market mammies and into the wider political arena. Such a development might also signal a significant economic alliance as these formidable women begin to choose literate girls and women to compute their earnings, work as their accountants and monitor their investments rather than hire young men with literacy and numeracy skills.

Some social dislocations may erupt if the Western model has any relevance. As women begin to earn more money, they will necessarily want a greater share in familial decision-making. In several cases in Liberia, women whose incomes rose dramatically because of their employment,encountered conflict over monetary matters in their marriages. In a women's tie dye cooperative, three of the ten original partners were divorced within one year of project startup. In all three cases the husbands reportedly stated that their wives were too independent.[9]

It would seem likely that women with literacy skills would also begin to make more decisons individually and

participate in familial decisions. They would also expand their sources of information both through their literacy and through casual job interactions. Thus the potential for conflict within families would be increased.

Social benefits would accrue to families with educated mothers. First of all, children with literate mothers stand a higher chance of attending school. A study of Monrovian literate women indicated that 98 percent of literate women had their daughters in school. Moreover, their daughters were achieving higher grade levels at earlier ages.[10] A study of Tunisian males and cognitive skills retention indicated that family environment and mothers' supervision of homework were significant variables in literacy/numeracy retention.[11]

Child health and family nutrition also improve when the mother of the family is educated. Consequently, over time, female education might significantly lower health costs.

Finally, most of the evidence indicates that the more education a women has, the fewer children she is likely to have. Although the correlation is clear with the exception of Indonesia, a causal relationship has yet to be established. However, it seems logical that the more options a women has, the more she knows about quality of life for children versus quantity of children. The more she knows about maternal and child health care, the more willing she will be to limit family size.

Perhaps the most challenging consequence of education will be the changing interaction among women. Although the options are many, one hopes for a merger of urban and rural women. Hopefully, women may perceive their commonality and problems as women qua women as more important than sectoral differences.

PART VI

In the past section we have assessed the interaction of women in development and education both historically and in contemporary societies. Having examined the situation and having seen the magnitude of the problem of female integration, we now turn to the question of what can developers and LDC officials do to rapidly alleviate the worst aspects of the female under-education problem.

This section offers recommendations for actions to attack the problem. Chapter XV presents a philosophical rationale for education interventions and offers general recommendations. Chapter XVI develops a programmatic recommendation of a prototype one-room school. Chapter XVII suggests a WID office strategy to impact on other Agency bureaus and sections. Chapter XVIII discusses further meetings and research to continue the exploration of the relationship of education to women in development.

XV.

Women are not in the forefront of development activities anywhere in the developing world. But recently planners have realized that it will be difficult to meet development objectives without first integrating the previously forgotten half of the population.

Education stands as one of the most critical sectors through which countries have traditionally achieved modernity. Russia, China and Cuba are the most recent examples of a pattern which indicates that there is a correlation between education, increased GNP and general economic development. In all three of these countries, the women were educated right beside the men. In the U.S., the major model of development for the world, women had reached a 90 percent literacy rate by 1860. In all of the rapidly modernized nations, twentieth century primary education included women as well as men in equal number.

Acknowledgement of the importance of female education and its necessity for development has not won universal acceptance in the developing world. Males and females in the LDC's often have different perceptions about the role of women and their involvement in the modernizing process. Iran is a current example of this disagreement over appropriate female roles. The shah's efforts to modernize and secularize women were one of the major factors cementing op-

position against him. Behind the Iranian conflict lie differences in perceived ways that a nation-state should modernize, and women's roles captures a significant portion of the attention and debate.

Sokoto, northern Nigeria, offers another example of a major difference in perceptions of appropriate female roles. In this Islamic strong hold, male perceptions of a good Islamic wife and those of western-educated Islamic women themselves are in direct contrast. When asked why they ranked a primary school teacher at the top of a list of admirable community role models, while the chief's wife was at the bottom, the educated women replied that the teacher could effect community change, while the chief's wife "is shut in, and has no power to do anything positive, only grumble, and hope her man [sic] will do something."[1] Significantly, in the same study, male respondents ranked the chief's wife at the top and the primary school teacher rated last place — the bottom.[2]

Our responsibility as an assistance-granting nation places us in a moral quandary. One the one hand, it is culturally chauvinistic to become involved in another culture's major differences in perceptions and in attempts to alter ideas and beliefs held by people for thousands of years. On the other hand, development is an integrated process, and some cultural interventions may be necessary if an assistance project is to succeed.

One sector in which these interventions are necessary is education. Determination of the type of project that will produce maximize positive benefits depends, to a great extent, on the cultural mileu of the project locale.

Education is so sensitive precisely because it impacts on long held beliefs. One cannot assess its gains in clearcut evaluations such as in the health sector in which one can measure infant mortality declines, or in agriculture projects in which an evaluator can document increased crop yields. Education is slow and painful and psychologically wrenching. It is sensitive because it confronts long-held beliefs with indisputable facts. It offers new and uncomfortable ways of viewing the world. It brings new faces and personalities with strange ways, or old faces and personalities return to the village drastically altered.

Education is discomforting and unsettling on the one hand, yet on the other hand, it offers literacy and numeracy, skills which can lead to greater income generation, increased health care, lower infant mortality, and a whole range of modern services.

And so the question is not whether to intervene, but the best method of intervention. Now that the realization of the importance of women has come to the fore, what special programs and interventions will be most effective. In education, this comes down to essentially a formal or non-formal intervention.

This study has examined which type of educational interventions will be more effective for women in the LDC's, formal or non-formal ones. This section offers recommendations for future AID projects dealing with education and women in development.

Education does not exist in a vacuum. Nowhere has this proved more true than the developing world. If educational programs, formal and non-formal, could be isolated from their environments, one would probably find that functionality and dysfunctionality occurred program by program. In the complexities of the real world, however, each program must be examined in its own social, economic and political contexts. Several observations can be made in light of the above statement.

First, most developing nations are committed to the formal system for prestige, historical tradition, political/ideological ideals, and a variety of other country-specific reasons. LDC commitment to formal education can be measured by the vast sums of money allocated to it year after year. In most developing nations, an average of 20 percent of all development expenditures are allocated to education.

The formal system provides status and confers power; formal credentials certainly help one gain influence and access to the decision-making echelon of the political process. In essence, if one wants to be influential and powerful — become educated. Join the Old Boy Network to gain contacts and influence.

Second, non-formal programs tend not to serve elites. Non-formal programs deal with the disadvantaged majority on the lower levels of the wage economy if they have managed to break out of the subsistence syndrome; persons without much education, little material wealth, and little hope of escaping the poverty cycle without a timely intervention by an outside authority, be that authority their own governmment, US/AID or an international relief agency such as the Red Cross.

Third, until the mid-1970's, women were really a forgotten element in development. Now developers and women are in a great rush to challenge the male domination of the developing world; to rectify errors and redress insidious discriminations. However, all of the recent activity involves only a small percentage of LDC women. The winds of change have not yet penetrated rural Jamaica and upcountry Zaire. To women in most parts of the developing world, change comes slowly and millions continue to toil at age old tasks without hope for change within their lifetimes. But these women have hopes for their children. It is in their children that they see their tomorrows.

Fourth, we cannot make the mistake of many well-intentioned planners of the past and lump all LDC women into an undifferentiated mass. Different ages groups of women have different educational needs. Needs also vary between urban and rural women. Thus, there are several distinct groups to consider in recommendations on WID and education.

Recommendations

1. Six to 14 year old girls should be encouraged to enter formal school by broadening the access of girls and women to the formal system.

From this study's earlier assessments (Phases II, III and IV), formal credentials are mandatory if women are to gain entry into the decision-making process. The overwhelming importance of credentials in the world of decision-making demands a clearcut policy decision: a commitment to expansion of educational opportunities for six through 14 year old girls within the formal education system so that girls and young women have access to 50 percent of existing places in primary and secondary schools.

The importance of formal education in terms of increased income, enhanced feelings of self worth, potentially lowered fertility, and expanded socio-economic options have been well documented. Harder to document are the intangible perquisites and fringes of friendship; the internalized understanding of large bureacracies; the discipline established by merely appearing in the same place at the same time every day. This generalized socialization and the cognitive and manipulative skills developed in formal classroom settings are collectively important enough for girls to share with boys in equal numbers.

Although experimental education programs such as dis-

tance learning centers and widespread use of media instruction have met with notable success in experimental forms, educators and decision-makers have yet to accept persons who have acquired skills in this manner as the intellectual or social equals of persons who have obtained their education through the formal system. While it is too early to have empirical documentation, one may hypothesize that completers of these programs may still find some social and economic options closed to them. Until the experimental programs achieve the same status as the formal system, every effort should be made to concentrate on female parity of enrollments in the formal primary and secondary levels.

2. Outstanding female primary school graduates should be identified and encouraged, with scholarship aid if necessary, to continue their education.

While there is general agreement with the overall goal of basic primary education for young people between the ages of six and 14 years, it is important that a percentage of girls and the poor, the traditionally disadvantaged, receive more than basic education. Generally, prestigious, elite primary and secondary schools in LDC's largely have catered to male populations. One goal of the new AID education policy should be to redress this male imbalance and aim for parity of access for girls to existing places within currently operating formal primary and secondary schools.

Strategy for implementing this objective involve first, identification of the outstanding schools. One criterion by which to determine excellence would be test scores. The second step would be breakdown of the student body by sex. If the school is sex integrated, then efforts must be taken to expand the enrollment of young women until they comprise half of the student body. If the outstanding schools are sex segregated, then the highest ranked female schools should be compared with the highest ranked male schools in terms of test scores, curriculum, quality and nature of guidance counseling, and university and/or employment placement after graduation. Third, if any areas are found in which female schools are notably inferior, expert technical assistance should be made available on a short-term basis.

3. AID recipient countries should be encouraged to enact legislation requiring parity of access to education by sex by a specified target date.

Although very few nations still have legal barriers to female formal education, social constraints still obviate against female participation. For instance, one reason for low female university attendance in Afghanistan has been the lack of separate dormitory facilities at the university in in Kabul.[3] Another social constraint in many Islamic nations has been the restriction against girls being taught by men. A third reason, common throughout the developing world, is

based in the notion that when girls marry, they will not be the primary wage earners in most families; therefore, their education is of secondary importance.

Legislation provides concerned girls and women with official support when faced with recalcitrant persons who reiterate old norms. An example is Tanzania, the East African nation that enacted legislation requiring 50 percent female enrollment in all secondary schools. The Tanzanian legislation, enacted in direct response to International Women's Year, was passed in 1975.

Knowledge that the government is concerned and considers female education a priority will spread quickly to the populace; in the Tanzanian case, enhancing and boosting the self-esteem and political participation of women. Although one cannot document cause/effect relationships, the number of women in the Tanzanian parliament has risen to 22 of 230 M.P.'s; women hold 10 out of a total 40 seats on the National Executive Council, the highest policy-making organ of TANU, the only political party. All of these women, as well as two female cabinet members and a Regional Commissioner, have formal credentials.[4]

4. Females 14 to 25 years of age should be encouraged to join non-formal programs to acquire job skills and literacy.

Again, these women have potential social functionality as change agents and productive members of the labor force. This is the group that is the critical target for intervention, the

swing group that can be upgraded relatively quickly. A non-formal program that can intervene before these young women get married and have children is most effective. By providing skills that may lead to employment, thereby increasing the young woman's options for labor force participation, and possibly delaying pregnancy, the program may have also acted as a population assistance intervention as well.

A basic education or literacy component is essential in women specific and women inclusive projects targeted to this age group. In a world which relies increasingly on the written word for communication, retrieval and storage of information, it is a definite disservice to limit these young women's abilities to function in the increasingly modern world. Moreover, literacy increases income, while illiterates virtually never achieve the incomes of literate persons.

5. Females 25 to 40 years of age should not be ignored, but encouraged to enter a skills-oriented non-formal program.

For this group a basic education component should be optional. Familial responsibilities and social constraints may make literacy training a low priority with little direct relevance to their life-styles and environments.

6. Non-formal programs should be focused on job skills applicable in and relevant to country specific labor markets and economic forecasts. Recent research by World Education and

others have found that non-formal program participants, when asked about their education priorities, invariably listed income generation skills first.[5] Women as well as men face the problems of economic hardship, and their inclusion in relevant skills courses is essential.

Programs should move away from emphasis on the four H's: home economics, health, hygiene and hairdressing, to reflect women's other responsibilities and tasks, ones upon which they may spend the majority of their time.

7. Non-formal programs should attempt to employ as many indigenous female instructors as possible.

Indigenous women enhance the social multiplier, serve as role models, and often ameliorate the unsettling effects of modernization. Noting, however, that professional teachers often have trouble relating to less privileged peers, particularly in the developing nations, pre-service counseling sessions should be required to acquaint and sensitize the female teachers to possible attitudinal problems.

8. Because of past neglect, special compensations may be necessary to quickly upgrade female education, especially in curriculum revision.

Nowhere is the past neglect as blatant and obvious as in the curricula of the new nations. Curriculum materials should be drastically revised, with a portion of the materials geared specifically to females. Female examples should be utilized

in teaching areas of major female responsibility; e.g. agricultural manuals for use in Africa and Asia should incorporate female examples to better reflect realities of labor divisions.

Although there has been considerable discussion of the development of curriculum modes that are useful in a variety of LDC settings with slight modifications in-country, the status of women varies radically from country to country — even within different regions of the same country — and the feasibility of utilizing a standardized mode in women-oriented programs should be carefuly investigated before a final decision is made. However, final judgement on that aspect of curriculum reform can await development of an actual prototype.

9. Follow-up mechanisms are necessary to re-inforce the skills and concepts learned during a non-formal education program and to reduce the chances of relapse into illiteracy and non-numeracy.

It is suggested that one or two outstanding graduates from each program be identified and hired by the program to undertake follow-up studies of their former classmates. This post-program participation would serve two purposes: first,it would reward high achievement and excellence by guaranteeing at least temporary employment for outstanding graduates; secondly, it would probably enable critical intervention by the neo-graduate to aid any former participants encountering difficulty utilizing the skills learned in the program. This type of

timely intervention by a sympathetic colleague qua change agent could aid program leavers when they initially encounter difficulty, before the problem gets compounded and becomes unsolvable.

10. The need to interface formal and non-formal programs is critical for women.

A 17 year old girl who has achieved high competencies in a non-formal program should have an opportunity to enter the formal system, if her options are to be truly maximized. Similarly, the 17 year old school leaver should have an opportunity to learn a marketable skill through a non-formal program and thereby obtain her degree or certificate.

11. Although the non-formal system cannot and should not imitate the formal system, the infrastructure of the formal system may prove useful to project implementation. In the Tanzanian project of the Experimental World Literacy Programme, a marked improvement in instruction accompanied project takeover by the Ministry of Education from the Ministry of Agriculture and Rural Development. This dramatic improvement was attributed to the "ready-made, highly formalized organizational infrastructure [of education] which operated at the local, regional and national levels."[6]

The major programmatic recommendation for new projects is a new look at the inexpensive coeducational model of the one room school house. The modest, old-fashioned school represents a viable mode of increasing educational effectiveness with present resources, for the one room school teaches us that the physical facilities are not critical for successful learning to take place.

Four characteristics of the common school stand out as particularly pertinent to education in the developing world: 1) the rural nature of the majority of one room schools; 2) the universality of coeducation; 3) the use of pedagogical innovations; and 4) the compulsion factor in school attendance.

The rural nature of the one room school house house makes it especially relevant, for the overwhelming majority of third world peoples live in rural areas that are either without schools or serviced by a facility that is the equivalent of the one room school. They are plagued by the same problems that bedeviled the American rural school: difficulty in attracting and retaining teachers; limited access to new teaching materials and technology; and all important — limited funds.

The environments in which learning takes place are also similar; each holds a high percentage of illiterate adults who believe that education is important; however, they are unable to provide the supports that create an environment conducive to

learning and supportive to student achievement.

One of the first lessons to be learned from the one room school mistresses and masters is that a teacher must rely on her or his own skills and ingenuity, while viewing her or his environment positively. The African Primary Math Series (APMS), an AID-sponsored project developed by Education Development Center, and the West African Primary Math Project, an outgrowth of APMS, both encouraged teachers to use common materials easily obtainable within the local environment. Ordinary substances such as sand, leaves and sticks were used in new ways to teach basic skills. From these teaching strategies, teachers were able to apply the ideas to their own environments.

The second aspect of the common school directly applicable to the developing world is its coeducational nature. Discussed earlier as an unheralded phenomenon in the U.S. in its own time, coeducation and its impact is of critical importance to girls and young women in LDC's. Coeducation assures that the same curriculum is available to both men and women (although females at levels beyond the common school must be watchful so that they are not tracked into a traditionally female course in the classics, humanities and/or fine arts). Coeducation increases the likelihood of female benefits from curriculum innovations and new courses, for quality education has traditionally gravitated toward male student populations.

Coeducation also creates a more realistic social environ-

ment that encourages the breakdown of stereotypes. Men see that females can be equally intelligent and women learn that men are fallible.

Coeducation certainly augments admissions possibilities to the Old Boy Network. Often contacts really secure a job, especially in the developing world where the educated, by mere fact of their small number, form an elite. A name and the right recommendation are often all important. A woman is much more likely to acquire the contacts or at least be acquainted with decision-makers if she attended the same schools. Moreover, she will have had the opportunity to see the Old Boy Network in action. Such exposure begins with primary education at an age at which children are malleable, before stereotypes are ironclad.

In the third applicable aspect of the common schools, pedagogical innovation, the technique of special significance is the utilization of older children to teach younger children. A time-honored technique born of necessity and desperation (too few teachers and too much boredom in older students), the technique has proved a very successful teaching mechanism. In a study of British school children, both tutors and tutees benefited.[7] Each group achieved higher test scores than did cohorts who did not have the tutorial experience. The old adage that one really learns as one teaches is truly applicable here.

Since one of the major problems in LDC education is reten-

tion of both literacy and numeracy, the technique should be of benefit in the area of cognitive development by providing more opportunities for students to practice their cognitive skills in a meaningful way.

Children teaching children is a technique useful in the affective domain as well. By encouraging students to help others, it develops by demonstration, the value of sharing for the benefit of the common good.

Pedagogically sound, it demands closer attention to ongoing lessons. Students are very concerned with "getting it right" so that they can, in turn, "teach it right." In Liberian classrooms, attention levels increased noticeably and the quality of questions rose significantly when university seniors realized that they would, in turn, be teaching certain concepts to underclassmen.[2]

Project Innotech, an AID-sponsored project in Indonesia and the Philippines, and its spinoff, IMPACT, utilize the strategy on the community level. In the Indonesian program, literate school children teach parents as well as younger children, thereby diffusing their knowledge to even greater numbers.[3]

The fourth aspect of the U.S. common school that is relevant to the LDC's is its compulsory nature. This aspect of formal education in the developing world is a politically sensitive issue. It is difficult to require school attendance by all children when there are not adequate places to accommodate the youngsters if universal compliance could be achieved. Moreover,

there are no prospects for increased financial support to education, for, as previously stated, most nations already allocate an average of 20 percent of their development budgets to education, an incredibly high amount for poor nations to invest in a single sector.

However, the compulsory nature of primary schooling is a major key to increasing the number of girls who have access to education. Parents cannot argue that girls are needed for domestic chores, nor can they discriminate and send boys to school while girls remain at home to maintain the farm and/or household if the law demands that young girls between the ages of six and 14 years of age attend school.

Compulsory education is also beneficial to the state as well as the individual. A long-term investment, it fosters a broad based literate population in the next generation.

Emphasis on the one room school at the primary level and its potential low costs might help solve some of the monetary problems associated with compulsory education. Moreover, a focus on the one room school concept also corresponds with the new Agency emphasis on basic primary education as opposed to higher education. AID risk monies for experimental projects could create a prototype model with little major expenditure, by utilizing an existing structure. An AID-sponsored education project in Colombia has begun along these lines and follow-up of this model would be most useful.

XVII.

After analyzing the status of LDC women in terms of education and educational development, the question becomes one of determining the best strategy for increased AID/WID office impact to implement the above recommendations. This chapter addresses this strategy problem and offers a step-by-step plan of action.

Although in organizational terms, the Bureau for Program and Policy Coordination (PPC) and the Bureau for Development Support (DSB) have equal weight and have similar direct access to the AID administrator for final arbitration of policy conflicts, in fact, PPC sits in the pivotal policy-making position for two reasons. First, PPC has access to more data through the PPC mandate to obtain information from all divisions within the Bureau as well as data from each of the regional bureaus. More data means more information on which to base decisions.

In terms of impact strategy, first and most importantly, the WID office should maximize its input through PPC. More specifically, the WID office should establish direct contact and clear liaison with the Office of Human Resources, Policy Development and Program Review (PPC/HR/PDPR).

Efforts should also be made to establish a working relationship with the three major offices of DSB involved with education: 1) Office of Education and Human Resources; 2) Office of International Training; 3) Office of Rural Development and

Development Administration.

A relationship with the Office of Education and Human Resources is especially important because that office represents a nucleus of educational planning for both formal and non-formal programs. A liaison is needed to encourage special attention to female participation to the fullest extent possible, particularly to expansion of the data base on female access to education and the impact on females of new school construction.

Liaison with the regional bureaus is also important, especially in terms of projects that can be identified from the inception for long-term evaluation.

The following four point strategy has evolved during this project's exploration of the Agency and its education programs. The suggestions below form a strategy for increased WID office impact on AID education policies.

1) As soon as possible, the WID director should hire an education specialist who can systematically and thoroughly review each on-going project in the Office of Education and Human Resources (E/HR) and assess its implications for women.

2) The WID office should use its position on the Agency Coordinating Committee on Education to assure access to each education project in its initial project paper stage, before it starts through the formal approval system.

3) When feasible, AID mission directors should be asked to

ascertain data on the status of women specific and women inclusive education projects, and training programs with an education component such as population assistance, health education, and agricultural extension, in an effort similar to the study conducted in the WID office on women and agriculture in Africa.

4) Although many of the offices implementing education projects do not have statistical data and/or evaluatory information on projects, other divisions and bureaus concerned with education have developed tabular information specifically addressing various education issues. A systematic effort to obtain copies of all Agency reports, charts and documents on women and education would certainly strengthen the WID data base and provide concrete, in-house information on which to base project suggestions.

XVIII.

One of the aims of the study was investigation of interest in and feasibility of an inter-agency task force on women in development and education. Virtually all of the persons interviewed expressed some reservations about task forces. Four reasons were commonly repeated. First, there are too many existing task forces investigating a bewildering variety of topics. Second, task forces tend to remain at the theoretical level. There exist enough theories about education and development; what is needed are practical solutions to operations and programmatic problems. Persons interviewed were wary of getting bogged down in academic discussions of the merits of various research methodologies and, consequently, inability to reach conclusions, particularly about causal relationships. Third, task forces are too time-consuming, usually blanketing the participant with several xeroxed papers which he or she never reads. Fourth, task forces, like organizations and bureaucracies, tend to perpetuate themselves and never phase out; there is no termination and no closure.

The alternative suggestion of a series of meeting on WID and education met with much more favorable response. Persons interviewed suggested a number of safeguards to make a meeting series more effective. First, the meetings should be aimed at operations level problems. Again, the overabundance of theories was mentioned. Second, participants invited should be employed

at the operations, field experience echelon, rather than the agency directors and/or organization heads level. Third, previous field experience should be an absolute requirement for participation.

Therefore, it is recommended that the AID/WID Office initiate a series of meetings on the impact of education on the integration of women into development efforts. The meetings will have three major objectives:

1. To identify and establish a network of organizations and personnel specifically interested in the theoretical and programmatic implications of both formal and non-formal education for women in development;

2. To establish a clearinghouse in which problems and trends in education can be analyzed for policy implications for WID and correlative strategies developed where appropriate;

3. To provide a forum for problem-solving in a confidential atmosphere in which the experiences of other education specialists can provide fresh insights and new perspectives in discussions of current project problems.

The meetings should be scheduled over a period of one year, beginning in April 1979 and ending in March 1980. Six to eight meeting should be scheduled, each focusing on a separate issue of WID and education. Suggested meeting duration is four hours, or one half of a workday, to allow adequate time for discussion of the topic, as well as meaningful exchange on current issues and ideas.

The agenda for each meeting should include: 1) substantive discussion of a pre-determined topic; 2) comments on particular

issues of WID and education; 3) a problem-solving session in which participants could discuss problems encountered in on-going projects. The problem-solving sessions would be off-the-record to encourage a free exchange of information without fear of repercussions to agencies or persons in attendance.

Participants should be drawn from those organizations identified as having a specific programmatic interest in WID and education. Participants should include professional educators with field experience, development planners and social scientists from a variety of governmmental and non-governmental agencies and institutions. Spoecial efforts must be made to insure a mix of both formal and non-formal education specialists.

Chart 3 lists U.S. governmental departments and agencies, international and multilateral organizations and PVO's identified as having a specific interest in the relationship of women in development and education. The majority of participants would probably be female, since most of the persons identified and interviewed were women, as were their further references. To achieve maximum effectiveness, participation should be limited to 20 persons per meeting.

Each of the projected six meetings would be structured around a specific education/WID topic. A suggested list of topics might include the following:

NAME OF ORGANIZATION	FIELD EXPERIENCE IN WID PROGRAMS	FIELD EXPERIENCE IN EDUCATION	ON-GOING PROJECTS SUITABLE FOR EVALUATION	CO-PROGRAMMING POSSIBILITIES	FUNDING SOURCES
Academy for Educational Development	Yes	Yes	Yes	Yes	AID, others
African-American Institute	Program under Development	Yes	Yes	Yes	AID, Ford Foundation, others
Overseas Education Fund of the League of Women Voters	Yes	Yes	Yes	Yes	AID, others
Research Institute on Immigration and Ethnic Studies	No	No	No	No	Smithsonian Institution
Women at the Center, Univ. of Mass, Amherst	Yes	Yes	No	Yes	Undetermined
World Education	Yes	Yes	Yes	No	AID, others
ACTION: Peace Corps	Yes	Yes	Undetermined	No	U.S. Govt.
U.S. Dept. of Health, Education and Welfare	No	No	No	No	U.S. Govt.
U.S. Dept. of Labor	No	Yes	No	Yes	U.S. Govt.
World Bank	Yes	Yes	Yes	No	Not Applicable
UNDP	Yes	Yes	Yes	No	Not Applicable
UNESCO	Yes	Yes	Yes	No	Not Applicable
UN/IWD, Secretariat	Yes	No	No	No	Not Applicable

CHART 3

Selected U.S. government, international and private voluntary organizations and their interest in WID and other

Meeting I — Toward an AID/WID Education Policy: Discussion and Commentaries

The Agency's new education policy paper paper has highlighted concern about education and discussions have begun on implementation strategies.

The AID/WID Office, having determined that education was a priority area, could focus discussion at the initial meeting on the general Agency education policy and specific WID/education strategies that complement the new policy.

Meeting II — Integration and Increasing Access of Females to Formal Education

The positive benefits of formal education for women have been well-documented in previous phases of this study. Development planners must now ask what are the best means for integrating girls and young women into the formal system. What is the optimum age for formal system entry; at what age does the cost/benefit ration make formal schooling an unrealistic economic undertaking?

These kinds of questions would form the basis of the substantive agenda for Meeting II.

Meeting III — The Role of Non-Formal Education in the Integration of Women in Development

There are over 500 million illiterate women in the world who do not and will not have access to formal education, yet to survive, many of these women must leave subsistence existence and enter market economies.

Formal systems clearly cannot accommodate all of these women; other means must be tried. Non-formal programs are a highly recommended alternative. Meeting III would discuss the costs, benefits and limits of non-formal programs.

Meeting IV — Accreditation and Credentials

The major draw-back to non-formal programs lies in the programs' inability to guarantee the

the earning capability and socio-economic status that formal programs can. The problem of credentials is especially important to women, for they rely on formal credentials to acquire access to decision-making power on every level -- from the home to the community to the national legislature.

Meeting V — Complementarity and Integration of Formal and Non-Formal Programs

The complementarity of formal and non-formal programs has become increasingly apparent as more and more participants find market economy employment after completing non-formal programs. Research has shown that persons with some formal education perform better in non-formal programs than persons with no formal education background, 4/ supporting the need for integrating the two types of programs.

Moreover, a problem with some non-formal programs is training that prepares participants for dead-end jobs. There should be a mechanism whereby an outstanding non-formal program graduate has options to continue her training/education. An interface between formal and non-formal systems would allow women options limited only by their abilities. The possibilities of such interface require further examination.

Meeting VI — Education and the Mass/Elite Gap

An emerging problem is the socio-economic distance that education puts between urban, educated women who are well integrated into the market economy and their rural, agriculturalist sisters who are usually illiterate and stagnating at the subsistence level. Distrust and disdain for rural females often accompanies formal education.

Effective mechanisms for approaching the problem and strategies for coping with it warrant serious attention.

Other possible topics include curriculum revision, the use the media in education, and the role of the family in literacy and numeracy retention. Final decisions would be based on the

on the needs and interests of the AID/WID office and the meeting participants.

PART VII

This final section of the report summarizes the major findings of the various phases of the study and concludes with some final observations on the current relationship of education and women in development efforts.

XIX.

This five phase study was commissioned to examine both formal and non-formal education in the developing world to determine which type of education is comparatively more functional for the rapid integration of women into development efforts.

Phase I identified A.I.D. personnel, other U.S. governmental agencies and international organizations concerned with issues of women in development and its relation to education. The investigation concluded that there was a great deal of interest in the subject, but most program officers in most organizations were too busy with daily responsibilties to devote serious consideration to the policy implications and social ramifications of educational accessibility, enrollments, tracking and dualism. The major recommendation was a series of meetings with participants from representative governmental agencies and PVO's to further explore the dynamics and relationship of education, both formal and non-formal, to women in development.

Phase II analyzed the comparative functionality of both formal and non-formal education. It concluded that comparative functionality became blurred in actual programs. Women at different stages in their lives had different learning needs. In the formative years, the 6 through 14 age group, formal education was deemed more useful, while girls over 14 years old were held more likely to benefit from non-formal training. The

two types of education complement each other, and, if used in tandem, selectively and appropriately, are a powerful force for integrating women into socio-economic mainstreams of developing nations.

Phase III suggested policy and program recommendations that were developed in conjunction with the new Education Policy Paper also being reviewed at that time. Major recommendations were

1. Expansion of placement of girls, ages six to 14, into formal school programs by assuring their legal access to 50 percent of existing school places over a specified period of time.

2. Increase of access of females 14 to 25 years old to non-formal programs with a mandatory literacy component.

3. Availability of non-formal programs to women 25 to 40 years old with emphasis on skills training to enable income generation activities and an optional literacy component.

4. Program emphasis on the model of the one room schoolhouse, particularly its co-educational aspects which is of major social benefit to both boys and girls.

5. Major curriculum revisions to replace sexual stereotypes and to render the curricular content more relevant to females by reflecting women's true social and economic contributions to their societies.

6. Interface of formal and non-formal programs so that outstanding graduates or completers of one type of educational program may be phased into the other laterally, without the disincentive of again beginning from basics.

Phave IV analyzed educational change in the political context. It noted that education and politics are integrally related. Education is a limited commodity, usually controlled by the middle class. The prospects of the middle class voluntarily expanding access to large numbers of women through the formal system are very slim. However, the possibility

exists of an alliance among educated, urban women, illiterate rural women, and deposed female political activists. Such an alliance might pose a powerful challenge to the existing regime; and consequently, women may be able to agitate for increased access by threat of massive organized opposition. Basically, however, they must try to gain access to the formal structure, even if at a slow, incremental pace, and beware of efforts to track the majority of young girls and women into non-formal programs.

Phase V queried the relevance of the U.S. common school model to LDC education of females. It concluded that there are several parallels between the U.S. of the nineteenth century and the LDC's of the post-industrial era. The U.S. experience, particularly in the common school, was applicable. Four aspects of the common school that seemed particularly relevant were: 1) rural or small town location which necessitated a curriculum which de-emphasized the classics for a basic skills and science orientation; 2) the co-educational nature of the schools which allowed girls in the same classroom as boys, while they received the same instruction and learned to compete and interact with boys; 3) use of pedagogical innovation in which older children taught younger children, a technique that was of enormous benefit to both; and 4) compulsory education for both boys and girls which made it unlawful for parents or guardians to discriminate against girls by keeping them at home to help with household and/or farm chores while

boys attended school.

The final report has integrated the findings of the different phases of the study and, on that basis, offered recommendations and conclusions. The final report, divided into six parts, is summarized below.

PART I

Part I provided definitions and terms of reference. Formal education was defined as a structured system of institutional learning that becomes progressively more complex as a student advances through the system. Degrees are conferred upon completion of various levels with demonstrated competencies. Non-formal education was described as a structured program of learning of limited duration with immediately attainable goals related to the participant's life style and/or occupational prospects. Non-formal programs often take place outside of a school and do not result in degrees.

PART II

Part II began with a retrospective view of American educational history to ascertain what, if any, relevance the American experience has for the developing world. The discussion focused on U.S. female education and the American common school, established and consolidated between 1830 and 1900.

The significance of the U.S. model is its indication that female education is beneficial to national development. The period of massive economic expansion in this country coincided with a rapid growth of publicly supported co-education and the widespread literacy of American mainstream (non-minority) women. Industrial leaders, economists and businessmen realized that it is better to have literate workers than non-literate employees. It was more cost effective as well, especially with

the introduction of the factory system, for the written word is a quick, convenient way of transmitting instructions to large numbers of persons with an inherent information retrieval mechanism.

The U.S. model also demonstrates that literate women contribute to to national development through their labor force participation as well as through familial roles of molding attitudinal development in children. Significantly, the American south, with the highest female illiteracy rate in the the United States and less overall emphasis on basic education was also the least developed area of the nation.

A further rationale for investment in education is the importance of an informed electorate. Initially the U.S. educated its citizens so that its male citizens might be wiser, more knowledgeable voters. This commitment naturally carried over to women when they achieved the vote. In the modern world of ostensibly democratic states, women have achieved the vote in 117 countries. It is in the best interest of these states that women who might exercise this right make decisions based on their own information and conclusions rather than be swayed by the opinions or demagoguery of others.

The history of female education in the U.S. and the rise of the common school were contrasted with the female educational experience under colonialism, particularly the colonial situation in sub-Saharan Africa.

Women were always on the periphery of the African colonial situation. In concert with prevailing European attitudes toward women, African females were relegated to non-status by being virtually ignored. African women were not integrated into the socio-

economic mainstream and education of females was, at best, a very minor consideration.

The primary goal of colonial education was the fulfillment of colonial labor requirements at low to middle level manpower needs. Colonies were administered on a pragmatic, ad hoc basis and so were the educational facilities. The powers, pre-occupied with immediate exigencies, failed to foresee the longrange implications of a cadre of educated Africans.

By the time a second generation of educated Africans had been exposed to the metropolitan experience, they realized that they would never achieve equality with Europeans under colonial rule. Education and the thwarted upward mobility of the educated Africans really precipitated the nationalist movements.

Several foresighted nationalists involved women in the various drives for independence. Nkrumah, Sekou Toure and Nyerere were among the leaders who realized that women were an untapped resource whose numbers could increase the ranks of their supporters and whose monies could swell their coffers through the powerful, wealthy market mammies of Lagos, Accra and other African cities. Women were co-opted for the movement and several assumed positions in the new independent states' governments. However, within five years, in most instances, women found themselves on the periphery of power and decision-making. Two main reasons hastened their decline. First, many of the initial post-independence governments were corruption riddled. When the deals and double deals were exposed, many female politicians lost their positions, both appointed and/or

elected. Second, it quickly became clear that many women did not have the requisite skills to hold high level jobs and contribute to national development.

PART III

The next section of the report addressed the question of exactly why women were not educationally prepared and the extent of their under education. Chapter VI presented an overview of the current status of formal and non-formal education. Education, the panacea of development a decade ago, is in disarray. 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.

In non-formal education, the assessment centered on the current debate about the necessity of a literacy component in non-formal programs. Those arguing against the necessity of literacy point to the fact that there is no social stigma attached to illiteracy in a pre-literate society; that literacy is often lost for want of opportunity to practice the skill; that non-retention inflates the cost of literacy training; and that there is a danger of non-formal programs being discriminatory if they require a literacy component.

Literacy advocates, on the other hand, assert that literacy is an important tool of upward mobility and social status, especially in a pre-literate society. The literacy lapse argument was met by the findings in several studies that mothers play a critical role in the success or failure of a child's education. The presence of a literate mother significantly increases the likelihood that a child will attend

school and succeed in the endeavor. The discrimination argument was countered by the knowledge that experience has shown that literates and those with some formal education background, perform better and and benefit more from non-formal programs than do illiterates.

For a variety of reasons, from status to attitudes toward educa - tion of offsprings, the report advocated continued and renewed emphasis on female literacy.

A detailed examination of female education, especially access and enrollments, followed in Chapter VII. Historically, women have experienc systematic discrimination in education in terms of access, enrollments and career guidance. In post-colonial nations women had been discimi- nated against in education since the arrival of the Europeans. In sub- Saharan Africa a girl's chances of education were only one ninth those of a boy. In 1978 the situation had changed worldwide, but girls' chances of school enrollment were still considerably lower than those of boys. In no region of the developing world are the enrollment rates of girls equal or close to equal to those of boys. Girls are the last chosen and the first to be forced to drop out if their sponsors run into financial difficulty.

Discrimination in access and enrollments is only the tip of the the iceberg. Girls are tracked into certain "female appropriate" courses and dissuaded from technical or vocational school application. Prior to 1970, girls were actually banned from technical and vocation- al schools in some nations. If a young woman manages to overcome these obstacles and attain professional status, within the academic/ education community, her battles are still not over. She may teach,

but rarely at the university level. She is more likely to become a primary school teacher, but rarely a school principal.

Discrimination against women carries over to non-formal programs as well. Women do not have equal access to programs that offer non-traditional skills. Women are trained in the LDC 4 H's: health, handcrafts, home economics and hairdressing — traditionally female spheres in which the opportunity to learn transferable skills leading to options in the modern market economy are very scarce. Tracking and discrimination in non-formal programs may lead to a pyramidal socio-economic structure in which women provide the unskilled and semi-skilled support services of the pyramid's base while men perform the skilled jobs and control decision-making at the apex.

PART IV

Part IV of the report dealt with the main question: the comparative functionality of formal and non-formal education projects for women. Three indices were used: social functionality, economic functionality and demographic functionality.

In analyzing social functionality, the social multiplier effect, role modeling, and the change agent/catalyst function were analyzed for formal and non-formal education. Formal education outdistanced non-formal programs in social usefulness. Formal education stimulated the social multiplier effect with much greater frequency, perhaps because schools embody a status and legitimacy that non-formal programs have not yet acquired. Virtually all female role models, primarily teachers, but including other women in high visibility positions, had obtained formal education and thereby re-inforced the formal school as an instrument of

upward mobility. Non-formal efforts probably can excel in the change agent/catalyst function, for its benefits are more immediately visible and the results of participation can be quickly translated into practical, everyday terms.

In economic functionality as well, formal education seems more beneficial. Formal education provides greater lifetime earnings than non-formal education. Rate of return analyses show greater private and social rates of return for formal education, although non-formal catches up between ten and twelve years into one's employment cycle. Women who complete secondary school seem to be fully employable; however, female primary school dropouts have the highest unemployment rate of any group of job seekers in many LDC's.

Non-formal programs are also economically functional if they provide training and job skills that can be utilized in the market economy. However, many non-formal programs re-inforce a dualism that tracks women into traditionally female jobs and teaches men the transferable and/or management skills needed for rapid promotion. (Formal programs are also dysfunctional when they overtrack girls into liberal arts, home economics and other fields in which there are limited employment openings and not great transferability of skills.)

Non-formal programs are most functional economically 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 technology. They are socially useful in aiding the bulk of illiterate and semi-literate girls and women that the formal system simply cannot accommodate.

Demographic functionality was the last area to be examined. We saw that formal education often leads to urban migration, while non-formal program participation may or may not result in a move to the city. If urbanization is viewed by a given government as an acceptable phenomenon, then both formal and non-formal education are demographically 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 relationships 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.

The major conclusion of the comparative functionality analysis was that both types of education had a role to play in increasing female access to educational opportunity. The type of program should be dependen on the population to be addressed.

PART V

Having assessed educational opportunity and benefits for women, the report then turned to the political environment in which any educational change would take place. Again, the regional focal point was sub-Saharan Africa.

The major conclusion was that the prospects for change within the foreseeable future are small. Education is a political instrument, entrusted to the ruling regime to use for the benefit and development of the people. "The people" usually translates to the middle class. Poli-

ticians are loathe to tamper too vigorously with the education system, for they realize that education is the monopoly of the middle class, and an unspoken understanding between the middle class and political leaders prohibits decision-makers from tilting toward radical educational innovation.

In the case of offering greater opportunities for women within the educational system, the problem is slightly different and other factors come into play. Offering increased educational opportunities to women will disadvantage some men. Moreover, an illiterate population cannot hold its leaders accountable to the same extent that a literate populace can. Literate women will demand more information, follow arguments more closely, and present more challenges to politicians than will illiterate women. Currently, male literacy rates in almost every country in the developing world are significantly higher than those of women, so the problem is self-evident. How do political leaders, if they are willing, overcome literate male resistance to being a non-priority, even in the name of redressing previous imbalances? A possibility even more sobering to politicians is an alliance of educated women and the retired female activists of the nationalist period.

In the final analysis, the politics of education comes down to risk taking. Do political leaders want to risk expansion of educational opportunities for girls, given the fact that it may mean disadvantaging some males and subjecting themselves to vulnerability and potential challenge by an education/activist women's alliance.

PART VI

Part VI presented recommendations and strategies for their implemention. The major recommendation was the strong encouragement of formal education for females from six 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 the learning needs of the over 14 years of age female population can be met. However, formal programs should be carefully categorized by age so that skills appropriate to the ecnomic and social needs of the target population can be taught.

Young women, 14 to 25 years, form a distinct group with learning needs related to the transition from a single 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 in development. Their mature years ahead of them, these young women can be trained as a skilled work force, as well as sensitized to family planning and child-spacing services.

Women from 25 to 40 years 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.

Eleven recommendations emerged from the study:

1. Six to 14 year old girls should be encouraged to enter formal school by broadening the access of girls and women to the formal system.

2. Outstanding female primary school graduates should be identified and encouraged, with scholarship aid if necessary, to continue their education.

3. AID recipient countries should be encouraged to enact legislation requiring parity of access to education by sex by a specificed target date.

4. Females 14 to 25 years of age should be encouraged to join a non-formal program to acquire job skills and literacy.

5. Females 25 to 40 years of age should not be ignored, but encouraged to enter a skills-oriented non-formal program.

6. Non-formal programs should be focused on job skills applicable in and relevant to country specific labor markets and economic forecasts.

7. Non-formal programs should attempt to employ as many indigenous females instructors as possible to enhance to the social multiplier, serve as role models and ameliorate the unsettling effects of modernization.

8. Because of past neglect, special compensations may be necessary to quickly upgrade female education, especially in terms of curriculum revision.

9. Follow-up mechanisms are necessary to re-inforce the skills and concepts learned during a non-formal education program and to reduce the chances of relapse into illiteracy and non-numeracy.

10. The need to interface formal and non-formal programs is critical for women so that outstanding non-formal program completers can have an opportunity for further education in the formal system.

11. Complementarity of formal and non-formal programs should be further investigated. For instance, often the administrative structure of the formal system can aid in the effective implementation of non-formal programs. Other examples of complementarity should be evaluated.

ONCLUSION

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 will move into the mainstream in small, incremental steps. It will be 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 these elements and abilities as possible. Decision-makers inevitably respect three things: money, power, and education. A review of world leaders quickly indicates that women hold no political power. On the economic fringes, with low wages and low skills, the chances for LDC women acquiring significant wealth individually or collectivcely are minimal. The way open to women is through the vehicle of education.

Why should women be educated? In addition to the philosophical arguments of education as a basic human need and the unanimous agreement that education is a basic human right, there are several concrete reasons for educating women. First, development efforts are hampered by an illiterate population. Ample evidence from the major developed and rapidly developing nations demonstrate that there is a relationship between levels of educational attainment and economic development. Second, to educate males and not educate

females is costly and counter-productive. Many studies have demonstrated that educational attainments of mothers and mothers' supervision of homework are critical variables to students' educational achievements and retention of literacy. Third, evidence indicates that there is a relationship between increased education and decreased fertility. Fourth, it is politically advisable to educate women. Dashed hopes and delayed dreams have a way of festering and erupting. When women perceive their options as being inexorably limited, they will demand expansion of their opportunities and hold those leaders who restricted their options accountable.

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 that upgrading of soci-economic conditions and achievement of development goals will proceed much faster if the total population is involved.

FOOTNOTES

PART I

1 Robert S. McNamara, Address to the Massachusetts Institute of Technology (Washington, D.C.: International Bank for Reconstruction and Development, 1977), pp. 29-30.

2 The Environmental Fund, "World Population Estimates," prepared by Wilson Prichett, III (Washington, D.C.: The Environemntal Fund, 1977).

3 Estimate 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.

4 For a fuller discussion of a 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.

5 Women who have achieved political successes such as Indira Gandhi, Golda Meir, and former UN General Assembly President Angie Brooks Randolph of Liberia, have invariably had impressive formal credentials.

PART II

1 Maris A. Vinovskis and Richard M. Bernard, "Beyond Catharine Beecher: Female Education in the Antebellum Period," Signs: Journal of Women in Culture and Society, III, No. 4 (1978), p. 867.

2 Ibid., p. 863.

3 Walter B. Kolesnik, Coeducation: Sex Differences and the Schools (New York: Vantage Press, Inc., 1969), p. 69.

4 Vinovskis and Bernard, p. 860.

5 Ibid., p. 861.

6 Ibid., p. 860.

7 Kolesnik, pp. 85-86, and Vinovskis and Bernard, p. 865.

[8] Kolesnik, p. 86.

[9] Kolesnik reported that if there were a punishment for girls who harassed boys, it was not recorded.

[10] Ibid.

[11] Ibid.

[12] Frederick M. Binder, The Age of the Common School, 1830-1865 (New York: John Wiley and Sons, Inc., 1974), pp. 76-79.

[13] Ester Boserup, Women's Role in Economic Development (New York: St. Martin's Press, 1970), p. 129.

[14] David B. Tyack, Turning Points in American Education (Waltham: Blaisdell Publishing Company, a division of Ginn and Company, 1967), p. 158.

[15] Boserup, p. 127.

[16] Caseley Hayford"s admonition to his colleagues in the National Council of British West Africa typified the search for legitimacy within the confines of legal protest that the first generation of educated Africans firmly embraced.

[17] Kathleen Newland, Women in Politics: A Global View, Worldwatch Paper 3 (Washington, D.C.: Worldwatch Institute, December 1975), p. 19.

[18] Personal interview with Jean Sindab, Department of Politics, Yale University, September 12, 1978, Washington, D.C.

PART III

[1] Detailed discussion of current education problems and strategies are found in two works by John Simmons of the World Bank: Education Development and Poverty, International Bank for Reconstruction and Development, World Bank Staff Working Paper No. 188 (Washington, D.C: IBRD, February 1974); and John Simmons, "Can Education Promote Development? A Personal View," Washington, D.C.: n.p., n.d. (Mimeographed.)

[2] Simmons, Education, Poverty and Development, p. 25.

[3] Ibid.

[4] Ibid.

[5] Ibid., p. 33.

[6] Ibid., p. 34.

[7] Ibid.

[8] Simmons, Retention of Cognitive Skills Acquired in Primary School, p. 83.

[9] J. 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.

[10] Garth 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.

[11] Ibid., p. 15.

[12] Catherine D. Crone, "Research on Innovative Nonformal Education for Rural Adults: Implications for Literacy Motivation," prepared for Bellagio IV Workshop on Educational Research, November 17, 1978. (Mimeographed.)

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

[14] Simmons, Retention of Cognitive Skills Acquired in Primary School, p. 89.

[15] Ibid., pp. 88-92.

[16] Lois 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.

[17] Vivian 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.

[18] U.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.

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

[20] Ibid., p. 32.

21 McNamara, p. 34.

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

23 Ibid., p. 19.

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

28 Development of School Enrolment: World and Regional Statistical Trends and Projections, 1960-2000, International Conference on Education, XXXVIth Session (Paris: UNESCO, ED/BIE/CONFINTED/36/4/Ref. 2), p. 15.

29 A Summary Statistical Review of Education in the World, 1960-1975, International Conference on Education, XXXVIth Session (Paris: UNESCO, ED/BIE/CONFINTED 36/Ref. 1), p. 4.

30 Development of School Enrolment, Table 18, p. 37.

31 Ibid.

32 Ibid., pp. 29-34.

33 Access of Girls to Secondary School, UNESCO, WS/0166, 97 (EDS), (Paris: UNESCO, February 28, 1966), p. 3.

34 Boserup, p. 129.

35 Patricia L. McGrath, The Unfinished Assignment: Equal Education for Women, Worldwatch Paper 7 (Washington, D.C.: Worldwatch Institute, July 1976), p. 37.

36 Boserup, p. 129.

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

38 Ibid., p. 30.

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

[40] Glaura Vasques de Miranda, "Women's Labor Force Participation in a Developing Society: The Case of Brazil," Signs: Journal of Women in Culture and Society, III, No. 1 (1977), p. 261.

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

[42] Ibid., p. 72.

[43] For a detailed discussion of the underevaluation of female economic participation, especially in agriculture, see Carmen Diana Deere, "The Agricultural Division of Labor by Sex: Myths, Facts and Contradictions in the Northern Peruvian Sierra," paper presented at Joint National Meeting of the Latim American Studies Association and the African Studies Association, Houston, Texas, November 2-5, 1977.

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[1] 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.

[2] Derryck, p. 9.

[3] Ibid., p. 11.

[4] Weis, p. 82.

[5] Jean Trevor, "Western Education and Muslim Fulani/Hausa Women in Sokoto, Northern Nigeria," in Conflict and Harmony in Education in Tropical Africa, ed. by Godfrey N. Brown and Mervyn Hiskett (London: George Allen and Unwin Ltd, 1975), p. 260-263.

[6] 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.

[7] 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.

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

[9] 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.

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

11 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.

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

13 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.

14 Ibid., p. 2.

15 Mangum, pp. 21-22.

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

17 Interview 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 from 1974 through 1976. Author also volunteered services and had access to accounts and records of the operation from its inception in 1973 through 1977. Monrovia, Liberia.

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

19 Mark Blaug, "The Rate of Return on Investment in Education in Thailand," Journal of Development Studies, XII, No. 2 (1976), p. 281.

20 Ibid.

21 See previous discussion in Chapter 6 on literacy and cognitive skills retention.

22 George Psacharopoulos, "Schooling, Experience and Earnings: The Case of an LDC," Journal of Development Economics, IV (1977), pp. 40-42.

23 Ibid., p. 47.

24 Ibid., p. 48.

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

26 Boserup, p. 125.

27 Ibid., pp. 126-129.

28 Ibid.

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

30 Derryck, p. 9.

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

32 Ibid., p. 14.

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

34 Sunday 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.

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

36 Boserup, p. 170.

37 Ibid., pp. 186-193.

38 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, and Boserup, p. 28. Of course, the UN statistics are inflated, since they are based on figures that the member states supplied regarding their own systems.

39 Ibid.

40 Michael B. Whiteford, "Women, Migration and Social Change: A Colombian Case Study," International Migration Review, XII (Summer 1978), p. 239.

41 Ingrid Palmer, "Rural Women and the Basic Human Needs Approach to Development," International Labour Review, CXV, No. 1 (1977), p.99.

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

43 Tanzania offers some of the 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).

44 McNamara, pp. 29-31.

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

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

47 Ibid.

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

49 Mangum, pp. 14, 27-28.

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

51 Interview and discussion with Ivorian librarian, Kitty LaBouet, August, 1974, Abidjan.

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

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

PART V

1 The New York Times, Section H, p. 27, Sunday, July 30, 1978.

2 Interview with Mrs. Williette Jupiter, Member, Board of Trustees, University of Liberia. Washington, D.C. May 17, 1978.

3 Report on Title IX, Report of the State of Massachusetts Board of Educatin, June, 1977, p. 4.

[4] As correlated with Liberian National Examination scores for 1976 and 1977 and internal evaluations conducted by the University of Liberia, William V.S. Tubman Teachers College.

[5] Interview with Corono Faida Busongo, Member of Parliament, United Republic of Tanzania, Washington, D.C., June 5, 1978.

[6] McGrath, p. 37.

[7] Mangum, p. 38.

[8] See findings of 1978 Indonesian population research/survey sponsored by US/AID, available from the Office of Population, US/AID.

[9] Discussions with Elizabeth Hanna, cooperative organizer, Monrovia, Liberia, 1973-74.

[10] Derryck, pp. 8-10.

[11] Simmons, Retention of Cognitive Skills Acquired in Primary School, pp. 87-92.

PART VI

[1] Trevor, p. 262.

[2] Ibid.

[3] Congressional Presentation, Fiscal Year 1979, Annex B, p. 605.

[4] Busongo interview.

[5] Crone, p. 3.

[6] The Experimental World Literacy Programme: A Critical Assessment (Paris: The Unesco Press, 1976), p. 111.

[7] Alan Gartner, Children Teach Children (New York: Harper and Row, 1971).

[8] Experiment in course, "Curriculum Innovations and Methodology," University of Liberia, March-July Semester, 1977.

[9] For project paper, internal evaluation results and further information, see education specialists in ASIA/TR/EHR, especially G.S. Hammon and A. Doyle.

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