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Differential Impact: Women in Media-Based Instruction and the
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Phase I

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Innovations in Education: Women, Media-Based Education and Curriculum Revision

As development specialists become more concerned with women's roles in development, the inter-relationship of education and development and its impact on women becomes clear. In addition, current thinking also recognizes the differential impact on women that innovations in education bring to bear. Currently, two areas of education of renewed interest and innovation are media technology for instructional purposes and curriculum revision. These two subjects form the basis of investigation for this paper.

Background

Education, both formal and non-formal has changed drastically in the Second Development Decade, the 1970's. Expanding school age populations, irrelevant curricula, rural to urban migration are among the factors forcing a re-evaluation of education's role in development. In the developing world, the re-assessment meant a declining real investment in education to less than 1 percent of total LDC expenditures. In U.S. AID, a new look at education manifested itself in several ways. First, the Agency focus changed from formal education to a new emphasis on non-formal programs. Priority changed from investment in higher education to a view toward educating larger numbers of the poorest 40 percent in primary basic skills.

While high growth rates in LDC's and continued growth in school age populations required instructional modes that could reach large numbers of students at low cost, new advances in communications technology made instructional radio (IR) and instructional television (ITV) competitive in cost efficiency with increased numbers of teachers. Moreover, not only could IR and ITV facilitate instruction to reach greater numbers of students, the instructional media enabled educators to reach illiterates through aural media. These two

circumstances, plus the cost-effectiveness of the media, encouraged a policy within AID which emphasized non-formal programs and greater commitment to media usage in education.

The re-assessment also resulted in a major review of curriculum, both formal as well as the new curricular modules that would be necessary for the short-term, flexible programs of non-formal education. Here again, AID review resulted in policy changes. Formal curricular changes were de-emphasized, while media intensive non-formal modes were developed.

Since 1973, research and development in education at AID has emphasized four areas: 1) analyses of the economics of education; 2) development of education communication technology; 3) non-formal education program development; and 4) higher education indigenous capacity building.

This paper will assess what two of these shifts in program emphasis and research and development--media-based education and curriculum revision--meant to women and the education/WID relationship. The report is based on interviews with AID officials, UNESCO officers, development specialists in private firms and academicians, as well as AID project papers and other Agency documents.

As Phase I of the investigation, this paper is a catalogue of current activities and programs both in the U.S. and the developing world that address educational media and/or curriculum revision.

For our purposes, educational media are defined as either print or broadcast media that are used to achieve specific educational objectives, either in formal, graded instruction or in non-formal skills-oriented training programs. The majority of innovations using educational technology utilize broadcast media; therefore, this discussion will focus on increased usage in media, largely involve curriculum changes in textbooks and other printed materials and will be discussed in the second part of this paper.

Media Education: The Differential Impact on Women

As indicated earlier, changes in any policy have differential impact on women. This is certainly true in terms of non-formal education programs, media-based education programs, and curriculum revision.

Women have a special interest in media-based education projects for several reasons. First, the air waves are open to everyone who has access to a receiver. Thus, while girls may be excluded from formal school because of cultural biases, household responsibility, male preference, lack of school space, and other reasons, females are not excluded from listening to the radio or television (if there is a television in the household).

Second, studies around the world have demonstrated that women's primary sources of information are aural. This is understandable, for it is easy to combine listening to the radio with household chores and child care. Moreover, a radio can go to the field with a woman while she performs her agricultural labor. In addition, the radio does not require literacy, only knowledge of the spoken language of the broadcast.

Third, a major use of instructional media is for basic teacher training and in-service retraining for primary teachers. Since most primary school teachers in the developing world are female, the use of instructional media impacts upon women as labor force participants and acquirers of new job skills. For example, when El Salvador undertook major education reform in the late 1960's, all teachers received one year instructional on the use of ITV in their subject areas. Approximately 65 percent of El Salvador's primary school teaching corps is female.

Media Based Education: Formal and Non-Formal Education Programs

Formal education, as used in this report, means a set of graded instruction which becomes progressively more complex that is taught by a trained specialist.

At the end of a given sequence, a diploma or some other certificate acknowledges successful completion of the program. Non-formal education is a short-term program with a specific short-term learning objective, usually an income generation skill. There is no certification. While we generally think of the formal education process as one taking several years, most non-formal programs are of short duration, lasting anywhere from six weeks to about two years at a maximum.

The uses of the media in education, both formal and non-formal, are widespread and continue to grow. Traditionally, broadcast media have been used in the developing world in formal education in two ways. The first usage is to augment direct instruction. In the LDC's, recruitment of qualified teachers is a constant problem. Expanding school age populations require increasing numbers of teachers at every level and the higher up the education ladder, the more difficult it is to find qualified teachers. One consequence of the qualified teacher shortage in the Third World is the student attrition that occurs in the transition from primary to secondary school. In many developing nations, the high wastage rate is directly attributable to the sharply reduced number of school places available for would-be secondary students. This sharp teacher reduction/student attrition rate syndrome impacts more severely on girls than on boys, for most nations in the developing world still value male education more than female, and in a case of limited school places, boys continue to get first option.

Given the teacher shortage and attrition rate syndrome, many nations, such as Nicaragua, have reasoned that if they were able to expand access to secondary school teachers, they would be able to accommodate more students and thereby increase the number of secondary school students. In the face of severe budget constraints and the rising costs of human personnel, such an investment in media-

based instruction which could reach larger numbers of students with low per/pupil costs may be wise.

The second use of media in formal education is for enrichment or supplemental instruction. In this instance, radio or television is used in conjunction with printed worksheets and major teacher involvement. A common sequence involves a teacher working with the class before the scheduled broadcast, listening to the broadcast with the class, and doing follow-up work on the concept or lesson after the broadcast.

ITV or IR in conjunction with classroom teacher instruction is a major vehicle for attempting qualitative improvement in instruction. ITV and/or IR used in this way may also improve the quality of the student by augmenting skills readiness, providing examples and generally encouraging comprehension of a new concept by re-inforcing the teacher's presentation.

Media-based non-formal education projects usually fall into one of three categories: 1) non-formal education programs that attempt to teach a basic skill, particularly literacy and/or numeracy; 2) non-formal media-based projects that attempt to teach a specific income-generation skill such as embroidery or handcraft; 3) non-formal education projects used to encourage development of a specific sector. The Man is Health project in Tanzania in which radio broadcasts were used to mobilize the nation to health self help projects is an example. The Tanzanian government was committed to improving the health of the nation through broad-based national action. The question was how to reach a broad segment of citizens without a major cost outlay. Radio proved an effective method of increasing national awareness and mobilizing the citizenry to sanitation improvements. Indeed, over 37.5 million person-hours were committed to the building of latrines and other sanitation facilities.

In addition to the three primary used discussed above, media-based education projects in non-formal education are usually tied to one of four sectors: agriculture, health, nutrition and family planning.

In the past three years, with the increased awareness that women in development is a serious concern and knowledge that workforces and productivity increase dramatically when women are integrated into market economies, more projects in non-formal education have tried to reach women through broadcast media instruction. The Latin America and Caribbean Regional Project, Educational Media for Women, acknowledging that farm family income is more effectively increased if all working members participate in new learning, noted that the project was:

an attempt to apply proven techniques in non-formal education to communicate existing information on relevant rural technology to low-income women who have historically participated in certain states of rural production and income-generation.

The paper goes on to state, "this activity proposes to knit together the fragments of successful small-scale efforts involving women and/or rural communications in response to an increasingly universal intention to capture the potential increases in productivity rural women can achieve."

The statement is, in essence, an open acknowledgement of the importance of women to agricultural development efforts.

II. Curriculum Revision

Curriculum revision, can take place in either formal or non-formal programs. The focus of this study is on curriculum revision within formal school systems. Within the formal system, four main factors are critical to the school: teachers, students, curriculum and facilities. While all four components necessarily interface, some are more critical than others. The component with which we are concerned, curriculum, is heavily dependent upon the teachers, to a lesser extent

upon student ability, and the facilities have still less impact.

Impediments to Curriculum Revision

There are several impediments to curriculum revision, particularly for the distinct purpose of eliminating sex-bias.

Growing concern about the irrelevancy of curriculum in many LDC's has highlighted the defects of many traditional programs. For many developing nations, the curriculum currently in use is the direct legacy of the colonial system. The hue and cry about the irrelevance of the model for developing world concern had a hearing, but given other education priorities, such as building additional schools, improved teacher training, establishment of vocational schools, often intrude.

In addition to the cost factor, social constraints enter the equation. Many ministers of education and other high ranking officials have come up through the ranks of the systems and privately feel that if the system was good enough to produce them, it is good enough for the present generation. Other the other side of that equation, many planners argue that curriculum changes with a new emphasis on practical and skills education will develop and perpetuate a class structure in which the rich will prosper with white collar training and jobs and the masses will continue to be on the bottom rungs of the economic ladder.

Curriculum involves textbooks and textbooks are big business. Since booksellers and publishers want continued usage and purchase of their products, they form another constituency that would prefer the status quo and, therefore, are not strong advocates of curriculum innovation.

Educators, also have a vested interest in the current system. Many teachers have been using the same texts, or no texts for years. They are set in their ways and comfortable. Curriculum revision is unsettling and may make new demands

in terms of additional content learning as well as new pedagogical techniques.

When one adds to the picture the fact that traditional academic curricula have been predominantly sexist, interpreting women as passive acceptors of reproductive and nurturing responsibilities as their primary role in life, while today's feminists around the world eschew the limitations of that one dimensional role, one can see that the clamor for change grows louder.

So it is within the context of major social change and education re-assessment that curriculum revision must be approached. Phase II of this report deals in depth with the prospects and pitfalls of curriculum revision.

We now turn to a brief assessment of projects utilizing media education or attempting curriculum innovation with a particular focus on or relevance to women.

III.

Selected Media-Based Instruction and Curriculum Revision Projects with Special Relevance to Women in Development

The newly realized importance of women and education in women in development activities is not enough. More than 10 years of development efforts have not benefitted from the economic and social participation of women, while women have been subjected to the dysfunctionality of maledominated development efforts. Such a situation of double displacement requires compensatory efforts to rapidly augment women's economic and social participatory skills. But given women's lower literacy rates, higher school wastage rates, often low self-esteem and general lack of experience in the civic participatory process, it is difficult to identify a starting point. The tendency is to take the most advanced group of women, those with some literacy and numeracy and offer them supplemental training. This trend will become evident in the nations and geographic regions in which the innovative programs in media instruction and curriculum revision occur.

This sampling of projects is based on interviews with U.S. organizations program officers as well as project papers and evaluations on AID funded education projects with special relevance to women.

International

1. Latin America and Caribbean Regional Project: Educational Media for Women.

The realization of women's considerable role in agriculture production and the fact that production would increase women's contributions were enhanced by new relevant information, prompted a LAC project jointly sponsored by AID and IICA (Inter-American Institute for Agricultural Science). In the words of the project paper, "This is not a research or study grant, but rather an attempt to apply proven techniques in non-formal education to communicate existing information on relevant rural technology to low-income women who have historically participated in certain stages of rural production and income generation." (Project Paper LAC Regional, Educational Media for Women, p. 1).

This project attempts to expand women's knowledge of agricultural procedures with the expectation that newer and greater knowledge will ultimately increase agricultural productivity and thereby increase farm family income. The project will have planned secondary benefits if women share their new information with friends and families, thereby expanding the network of knowledgeable women.

The focus of the project is the effort to provide information that enhances women's part in existing programs, not an attempt to develop parallel female-exclusive projects (Project Paper LAC, Educ. Media for Women, p. 5.)

Begun in 1978, the project will run through FY 80 with the possibility of further extension. There is no evaluation available at this time.

2. Radio Santa Maria, Dominican Republic.

This is a radio school targeted toward offering basic primary level skills.

skills. A unique feature of the program is its fee structure. Students pay a set fee every week which the instructors then forward to the central office. In addition to the obvious uses of the fee to defray expenses, particularly of printing materials, the fee also serves as a motivator of both students and teachers. For teachers the fee provides additional income, while, for the students, the cumulative investment reinforces study for high achievement, for after a number of weeks the student's monetary investment in the program is substantial.

This project, through evaluations has had an achievement rate of 50 percent literacy development, so that 50 percent of the participants had skills sufficient to allow them to pass to the next level of formal school.

Radio Santa Maria has been most successful in aiding participants with prior experience in the formal education system. Thus, it reinforces other evidences that supplemental education and non-formal programs usually benefit those participants who have enjoyed previous access to education. In radio education, background and follow-up sessions also seem critical. Areas in which materials were distributed in conjunctions with the lessons and teachers were able to provide supplemental work, the students achieved more.

No differentiation seems to have been made between boys and girls, and insofar as girls are proportionally represented in the classrooms exposed to the programs, girls should benefit equally. One cannot control individual teacher expectations and the self-fulfilling prophecy, but Radio Santamaria re-inforces the belief that the airwaves are neutral and theoretically allows girls the same exposure as boys.

3. Radio Primaria, Mexico.

This project aims to increase the number of youth matriculating to upper primary school. Although the project has enjoyed some successes, it has

encountered difficulties of poor reception, low quality supervision and follow-up activities, and problems in the maintenance of equipment.

Again, girls may benefit from this kind of instruction, individually at the same rate as boys. However, since the goal is to increase the number of students able to be accommodated in upper primary grades, girls stand to benefit more because of their initially proportionally lower numbers.

4. Accion Cultural Popular, Colombia.

The initial radio school, founded by a priest in Colombia in 1947, has spread through Latin America and now includes 36 projects in 17 countries. (The Role of Communications in Education, p. 52).

Florida State has contracted to evaluate the project and the results should be available by the end of this year.

5. Project IMPACT, Indonesia and the Philippines.

The Southeast Asia Ministries of Education Organization (SEAMEO) supports a center for education, INNOTECH (SEAMEO Regional Center for Educational Innovation and Technology). INNOTECH, in turn has developed a pilot project that radically alters the role of traditional teacher, involves the entire community in the learning process and utilizes the concept of children teaching children. Known as Project IMPACT (Instructional Management by Parents, Community and Teachers), this project was initiated in Indonesia and the Philippines and is now being developed in Liberia on an experimental basis.

The project demands a radical departure from traditional notions of appropriate curriculum. Instead of traditional texts, IMPACT uses a series of graded pamphlets. The teacher or an older student aids younger students in the mastery of the material. The student is then tested and continues to the next learning concept.

Project IMPACT is a significant breakthrough for the formal education of girls. One of the primary reasons for many girls' inability to attend school or do well is the fact that often household responsibilities or agricultural duties preclude daily attendance. If a young girl's attendance is sporadic, she falls behind in her work, feels herself a failure and drops out of school. Project IMPACT breaks the female wastage syndrome because it does not require daily classroom attendance. The student can complete the assigned learning module anyplace, bring it in to the teacher, who is available during regular school hours, and enjoy direct feedback for the academic work, obtain a new assignment and return home.

Since Project IMPACT is a part of the formal system, when a course is completed, one is promoted within the formal system. Ultimately, the girl can be graduated with all of the formal credentials that expand her options for work, specific vocational training or another type of higher education if appropriate.

Domestic Projects

1. DISTAR (Direct Instruction Model), University of Oregon.

This University of Oregon project of programmed teaching was initially developed to aid disadvantaged American youths. The program is characterized by a high degree of structuring, to the point of scripts, and prepared teacher questions.

The children provide rapid responses to questions that the broadcaster and teacher ask, thereby moving the class along at a fast pace. This type of programmed learning, with written responses may work well in a nation with largely underqualified teachers, for teachers have little latitude to intrude their own opinions or expertise into the learning sequence.

Whether or not this project and kind of learning has a differential impact on girls remains to be seen. If, in a given nation, a girl has been socialized

to be passive and not verbally responsive, there may be a problem. However, the enthusiasm of the lessons may compensate for that minor problem.

To my knowledge, the program is not being replicated in a developing nation at this time.

2. Martha Stuart Communications, Inc., New York, New York.

This female-owned, female-directed communication organization specializes in the production of films on women. Subjects of these 30 to 60 minute films range from women as managers in the United States to documentaries on women and family planning in nations as farspread as Jamaica and Egypt.

The films are used as instruments of awareness building and sensitization. The format allows women, with little direction from Ms. Stuart, to express their viewpoint on the positive benefits, social constraints and personal implications of the topic under discussion. This loosely structured format works very well and, through the obviously spontaneous interchange, women's true views about themselves and their relationship to their society emerge very clearly.

The films are not instructional in the pedagogical sense. They do not teach a concept or a skill, however, the films are educative by providing a vivid insight into the mind sets and social fabric of a crosscut of women in a given society.

The films in the extensive Stuart Communications library might be very useful as prefactory instructional aids for a variety of projects with a WID component. Each of the five reviewed would be useful in establishing sensitivity to women's special needs in development practitioners.

The films might also be used as an introduction for a skills-building course in family planning or related areas such as health, nutrition and infant health care.

When asked about the possibility of producing films with substantive content and basic teaching objectives, Ms. Stuart indicated an interest and a willingness to collaborate with development education specialists to produce training films. She has previously produced training films for the World Book. Her sensitivity to the special concerns of women in LDC's, plus her film-making expertise, make her a resource worth pursuing.

3. Dr. Bella Mody, Stanford University, Institute for Communications Research, Palo Alto, California.

At the Institute for Communications Research, Dr. Mody has been actively involved in several forms of communications research relating to women, from development of a framework for utilizing communications for outreach and incorporation of women in the development process, to evaluations of satellite television programs in India.

In addition to her research and writing, Dr. Mody has directed a graduate program that brings women from the developing world to Stanford for a two-year master's course in communications. Thus, she has been active in developing a network of trained female communications specialists equipped with up-to-date skills, albeit a small number, around the world. Previously supported by DSB, her program will no longer be funded by AID after FY80.

4. Center for Non-Formal Education, School of International Education, Michigan State University, East Lansing, Mich.

The Center, concerned with non-formal education in the Third World, is both a think tank and clearinghouse for information in the field of non-formal education. The Center operates an extensive library and referral service, offering special services to Third World subscribers. The NFE Newsletter, the Center's excellent publication, devotes each edition to a specific development concern, e.g., non-formal education and income-generation activities, or non-formal education and evaluation.

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Each edition of the newsletter contains an extensive bibliography and, in many cases, copies of the articles or publications annotated are available. The Center's bibliography on educational media and non-formal education is extensive, although few available articles address the specific issue of women and educational media.

The Center has many strengths, both in personnel and materials. All of the Center staff is working on advanced degrees; therefore, their ongoing familiarity with the development education field and current research strengthens the Center's outreach and access to "fugitive documents." Center director, Joan Claffey and Assistant Director, Mary Jo Pizzacola are women with considerable field experience in the developing world, as well as experience in development focus.

A spirit of openness, intellectual inquiry and sensitivity to development issues permeates the Center and the overall willingness to share information is most impressive. This AID-funded resource is a good starting point in any search for non-formal education resources and documents.

5. Academy for Educational Development

The Academy is well-known for its extensive media and educational development programs.

6. World Education, New York, New York.

World Education implements some of the best documented, most innovative programs in non-formal education. Its staff includes highly trained researchers who are able to combine hands on, field experience with academic expertise.

Their model for curriculum development in their non-formal programs includes a good deal of self-selection and participant participation. World Education has achieved widespread success in determining individual motivation, particularly among women, for participation in non-formal education programs. The curricular models developed in their projects are notable for the high degree of participant involvement in selecting the topics and skills to be mastered, as well as some pedagogical method input, if appropriate.

World Education has a major women in development focus in some of its projects, although it does not advocate women exclusive projects. Their experience has shown a desire of males to participate in a well-structured program that allows the participants a voice the planning and implementation of the project. Staff at World Education have also been prolific researchers and writers on both a theoretical and programmatic basis on the relationship of women in development to education and training.

Funded by AID, their projects in Kenya and the Phillipines involving rural women and education have been heavily documented and evaluated. However, they stress that curriculum development is project specific and emerges from the interaction and particular circumstances of the given group in a particular nation.

IV. Conclusions

Several trends emerged from this catalogue of media-based instruction and curriculum revision projects. Immediately we see the potential of media instruction in the formal school classroom, especially for primary school education. As long as girls are in the same classrooms as boys, they should benefit from the same instruction.

Another trend that we see is the conscious effort by developing nations to use ITV and IR as replacements for teachers. This desire to increase the

instructional base and standardize curriculum is understandable and laudable for expanding numbers of school age population in school. However, in situations where the majority of primary school teachers are women, and that is their primary source of entry into professional levels, planners must take note. Moreover, given some teacher resistance to IR and ITV, there is the possibility of indigenous labor union involvement, if teachers view use of the media-based instruction as the takeover of their function by communications technology and decide to protest, individually or through collective action.

As educators realize the potential of media-based education, more assessments of its uses will be undertaken. As of this writing, although IR and ITV are used extensively in Latin America, the projects are often special education projects and not a part of the integral, graded school system. This is more true of UNESCO projects than those funded by AID, however, the overall impact of the projects is diminished if there is no Educational Innovation and the integration to the wider educational program.

Educators also realize that even if broadcast media is the primary form of instruction, it is most effective when supplemented by print media in the form of textbooks, new learning modules, programmed learning sheets or a student syllabus. Radio Primaria and other Latin American efforts re-inforce the fact that students who have pre-instruction before and follow-up activities after the broadcast achieve higher test scores and retain the concepts learned longer.

In non-formal education, media-based instruction for women is still in its infancy. However, the acknowledgement that development interventions may have a differential impact on women has been made and donor agencies seemingly recognize that women as media target beneficiaries have needs that are different from those of men. Specialists realize that women are usually tertiary beneficiaries as a minority of any given target occupational group unless the program is

specifically designed for the integration of women into development efforts.

Finally, media-based education is only as successful as the curriculum on which it is based. It may be that development specialists can achieve two purposes. The time to impact curriculum change to eliminate sex bias is when a revision is already planned for other purposes. If curriculum developers specializing in media-based education could develop sex-bias free materials for media-based projects, jettisoning the old stereotypes about the proper role of women, then two populations of females would be well-served. Those adult women learning new skills through a non-formal media-based education project and young girls still in school who also need images of non-sexist female productivity. Ideally, broadcast media curriculum developers are sensitized to WID concerns and in both formal and non-formal programs will translate their concerns into sex-bias free materials.

This phase of the report has discussed current thinking in media-based education and curriculum revision for elimination of sex-bias and identified on-going programmatic trends in the effort to make education relevant and meaningful for women in the developing nations. Phase II will discuss media-based education and communications technology more fully, while Phase III will discuss curriculum revision and offer guidelines for developing sex-bias free curricula.