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Clearinghouse on
Development Communication

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MEMORANDUM June 30, 1978

TO: Gerald Gold, Contracting Officer
Willis C. Schaefer, AID/DS/ED Project Monitor

FROM: Jill Merrick, Project Director

RE: Semiannual Report on Contract AID/ta-C-1381
Project No.: 931-0925-73
Title: Clearinghouse on Development Communication
Contractor: Academy for Educational Development

Enclosed is a substantive report covering work under the Contract AID/ta-C-1381. An administrative report covering expenditures is also included. The appendices to the substantive report include:

A. Plan of Work
B. Project Profiles produced
C. Development Communication Reports produced
D. Sample products produced beyond CDC contract specifications
E. Administrative Report

THE CLEARINGHOUSE IS FUNDED BY THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (DS/EHR)
AND OPERATED BY THE ACADEMY FOR EDUCATIONAL DEVELOPMENT

Semiannual Report on

Contract AID/ta-c-1381

January 1, 1978 - June 30, 1978

The purpose of this contract is to address "the information needs of AID officers and their immediate counterparts regarding the applications of communication technology to development problems." Development problems are treated according to the sectors defined by AID: food and nutrition, population and health, education and human resources. An equally important topic is the role of communications in integrating development efforts undertaken in various sectors.

In order to accomplish these objectives, a number of information products were designed: state-of-the-art reviews on specific topics, succinct communication project "profiles," and the quarterly Development Communication Report (which grew out of Instructional Technology Report produced under contract AID/ta-c-1056). Below, the activities under the first half of the contract year are listed, and are related to the plan of work.

During the first two quarters of the contract year, work continued on the "project profile" series (Stage 2, no. 1 of the work plan). Development Communication Report numbers 22 and 23 (Stage 2, no. 3) were produced. These products are contained in Appendices B and C, respectively.

The Clearinghouse participated in planning and designing information support seminars and meetings on development communication. In preparation for DS/ED seminars and in response to the numerous requests that have come to the Clearing-

house from the field, CDC has translated key Project Profiles into French and Arabic. These are included in Appendix D. Work is continuing on the Spanish translation of Project Profiles.

A major reorganization of the resource collection on which the Clearinghouse draws in the production of its quarterly products was undertaken during the period covered by this report. CDC regularly sends notification of important acquisitions to DS/ED.

Finally, the Clearinghouse staff responded to 992 requests for information and publications by mail and received and consulted with numerous visitors in its quarters at the Academy for Educational Development.

ANNEX A

[illegible]

[illegible]: Clearinghouse [illegible]

1. Preparation of Project Profiles [illegible] of [illegible]

Based upon an agreed upon strategy [illegible] the Clearinghouse and PS/TA (Ms. [illegible] by T/AID), [illegible] the [illegible] classes, [illegible], as well as in a [illegible] [illegible] or [illegible] [illegible] analyzed. Each [illegible] is prepared on the basis of a single [illegible] such as, [illegible] evaluation [illegible], results, and costs.

Projects profiles will continue [illegible] according to relevant [illegible] provided [illegible] to [illegible] a quality [illegible] which [illegible] of the various [illegible] of [illegible] for [illegible] project planning. The [illegible] will [illegible] in drafting the "relevant AID [illegible]" section of the [illegible] in connection related projects.

The [illegible] of project profiles will continue to be at the estimated [illegible] of eight (8) [illegible] per year. As such the [illegible] project data [illegible] quality may not be available, alternative [illegible] for appropriate types of [illegible] the available. The [illegible] to be worked out between the Clearinghouse and PS/TA.

2. Production of a monthly [illegible] on development [illegible] and [illegible] of [illegible].

The Clearinghouse will continue [illegible] writing, editing, production, and distribution of the [illegible] to [illegible] (Monthly Development Bulletin), [illegible] under this contract and its predecessor (AID/ic-[illegible]).

3. Reference services in the field of [illegible] development [illegible] to development [illegible].

Appropriate services will continue to include the identification of timely and relevant documents and related [illegible], the organization of such materials, and the preparation of [illegible] sets of selected materials for use by AID representatives [illegible] in meeting special requests from AID for project and [illegible] support. Services will also continue to include the development of responses to requests from AID Mission officials, LDC representatives, and representatives of the development community as agreed upon between the Clearinghouse and PS/TA.

4. Maintenance of the Clearinghouse collection of documents on certification technology on a current [illegible] basis.

Maintenance of the Clearinghouse resources will continue to include documents and related non-print media, distribution lists of interested AID and LDC officials, and such special distribution lists as may be agreed upon between the Clearinghouse and DS/ERR.

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PROJECT PROFILES

The brief project descriptions presented here focus on communication's role in successfully increasing the impact and effectiveness of development programs. Created specifically for program planners working in less developed countries, the reports range across sectors and are meant to bring to future project planning the benefits of strategies that have worked well in the past.

To facilitate comparing and contrasting of different approaches, each Profile follows a uniform format. To insure that the information provided is current and accurate, we have sent draft Profiles to personnel from the various projects and incorporated their suggestions and corrections. Finally, we have provided references on documents where those interested can read further into the project. Copies of these documents can be requested through the Clearinghouse or directly from those listed under the "Contacts" section. Indeed, through this section, the Clearinghouse endeavors to put those involved in project planning, directly in contact with one another.

Project Profiles are produced at a rate of eight per quarter. At the end of four quarters, the 32 project reports published during the year are indexed according to sector focus, use of the media, geographic region, etc. We welcome your comments on the usefulness of these Profiles, your suggestions for future improvement, and information on communications projects that might become future Project Profiles.

Jill Merrick
Clearinghouse Director

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Academy for Educational Development, a nonprofit planning organization, and supported by the Development Support Bureau of the U.S. Agency for International Development as part of its programs in educational technology and development communication.

THE CLEARINGHOUSE IS FUNDED BY THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (DS/EHR)
AND OPERATED BY THE ACADEMY FOR EDUCATIONAL DEVELOPMENT

THE SHADAB INTEGRATED RURAL DEVELOPMENT PROJECT
Pakistan

TARGET AUDIENCE:	People living in 60 villages in the vicinity of Lahore (approximately 184,000 people)
OBJECTIVES:	To stimulate increases in agricultural production and marketing opportunities, to encourage the development of rural industries and housing projects, to set up cooperatives and credit schemes, to create opportunities for self-help and community involvement, and to conduct educational activities
MEDIA:	Print and interpersonal communication
DONORS/SPONSORS:	Pakistan's Integrated Rural Development Program, The Family Planning Association of Pakistan, and Pakistan's Ministry of Agriculture
DURATION:	Established in 1971; ongoing
CONTACTS:	M. Sadiq Malik, 26-Hill Road, F.63, Islamabad, Pakistan; John Rowley, International Planned Parenthood Federation, 18-20 Lower Regent Street, London SWIY 4PW, England

DESCRIPTION:

The Integrated Rural Development Project at Shadab followed a string of integrated development projects that were at best half-successful. Like its failed predecessors, the project was designed to increase agricultural production. But it embraces virtually every aspect of rural life — something most of its forerunners did not. The components of the *Shadab Project* include community development, agricultural education and assistance, banking and credit schemes, elementary education for both adults and children, and a multi-dimensional family-planning element that includes vocational training, youth work, and literacy courses.

The linchpin of the *Shadab Project*, which serves as a pilot and a model for the IRDP in Pakistan, is organization. Coordinated under an umbrella whose spines are most flexible at the greatest distance from the center are all government agencies involved in rural development, as well as all semi-official, private, and commercial concerns with the same interests. The 60 villages in the project area are divided into ten union councils, and technical, material, and educational services are provided at the level of the administrative center, the *markaz*. This system is supervised by a project manager assisted by two helpers (one who manages technical affairs, another who watches over the cooperatives) and ten lower-level assistants (graduates of agricultural colleges who offer farmers advice and organize activities at the union-council level).

The approach to rural development taken by the *Shadab Project's* directors is to give the villagers the wherewithal they need to order their development priorities for themselves. Often, information is enough. But when it isn't, the project's beneficiaries use the same channel through which information flows to get other kinds of help: they go to the *markaz*, where most government and other agencies have representatives. These same administrative centers serve as the headquarters for the federated farmers' cooperatives.

At the village level, the project manager's ten assistants dispense information and supplies, help farmers arrange for the sale and shipment of produce, negotiate loans and credit for farmers, tend demonstration plots, help farmers put on agriculture fairs and exhibitions, and conduct meetings. Time permitting, they also organize youth clubs, oversee the provision of rudimentary health services, and form adult-education classes.

Adult-education classes are also conducted by the Family Planning Association of Pakistan in conjunction with this project. Utilizing trained teachers and print materials, these classes focus heavily on family-planning messages. Family-planning workers encourage local adults to attend the classes, and volunteers from the literacy classes also serve as agents to motivate people to try family-planning devices.

The long-range goal of the *Shadab Project's* director is to get government funds decentralized and dispersed through the *markaz*. Meantime, near-term plans include conducting training seminars for field staff and rallying more local leaders to the cause.

RESULTS:

Apparently, the *Shadab Project* has not been evaluated systematically. Signs of its successes and weaknesses have, however, caught many observers' eyes, and the family-planning component has been assessed quantitatively.

Indicators of success include a fourfold increase in agricultural production in one high-rainfall area included in the project, the fourfold increase in the number of family-planning acceptors in one year (from 779 in 1973 to 3,322 in 1974), and the construction of an all-weather road that facilitated trade and that brought government staff to some isolated villages for the first time. In addition, some farmers report getting two crops per year out of land that used to support only one and making other breakthroughs in crop yields.

On a more negative note, the speed with which project workers hoped local successes would be multiplied was, it is now thought, highly unrealistic given the limited availability of resources and trained personnel, and given the bureaucracy's predictable resistance to total integration. Nevertheless, as of early 1978, some 635 projects modeled after the Shadab Project had been started in rural Pakistan.

OF NOTE:

- Nine primary schools and 35 adult-education centers established in the Shadab area double as facilities for the People's Open University, which caters to rural people interested in pursuing vocational and technical training or taking university-level courses.
- Leaders and other key villagers were organized at the project's inception into a "model committee" whose guidance has proved critical to the *Shadab Project's* success.
- An estimated 95 percent of the farmers in the *Shadab Project* area were illiterate when the project began.
- Originally, the project manager was supposed to enlist the support of voluntary agencies, but most such agencies in the area turned out to be defunct, short of resources, or too poorly organized to be effective.
- According to the first project director, an impediment to achieving "horizontal coordination" in rural development is the feeling among those in various government departments that IRD is a superior department and a potential threat to the sovereignty of other agencies. "We are trying to convince them that we are not a department, but a program," he said while in charge.

REFERENCES:

"Family Planning Education in Action: Some Community-Centered Approaches," Judy el-Bushra and Susan Perl, IEC Broadsheet #8, International Extension College and IPPF, London, 1976.

"Punjab's Push for Prosperity," John Rowley, *People*, Vol. 2, No. 3, International Planned Parenthood Federation, London, 1975.

"Description of Shadab Pilot Project Chung," document printed by the Government of Pakistan, undated.

Clearinghouse on Development Communication
April 1978

ACCION CULTURAL POPULAR HONDUREÑA
Honduras

TARGET AUDIENCE:	Illiterate and semi-literate *campesinos* throughout Honduras
OBJECTIVES:	Initially, to help *campesinos* acquire literacy skills and information related to health and community development; later, to set up an agricultural education program and to help *campesinos* organize politically and socially
MEDIA:	Radio and print
DONORS/SPONSORS:	Social Christian Movement
DURATION:	Begun in 1960; ongoing
CONTACTS:	Prof. Vilma de Pacheco, Acción Cultural Popular Hondureña, Apartado C-24, Tegucigalpa, Honduras; Dr. Robert A. White, Instituto de Investigaciones Socio-Economicas, 4a. Calle, 4 y 5 Ave. Altos de la Urbana, Apartado 786, Tegucigalpa, D.C. Honduras

DESCRIPTION:

Acción Cultural Popular Hondureña (ACPH) is both the education arm of the Honduran *campesino*-based self-development movement called the Popular Promotion Movement (PPM) and a young relative of Colombia's ACPO radio schools. ACPH got its start in 1960 when a Honduran priest, P. Jose Molina, returned from a brief internship at ACPO and helped set up an experimental radio school in the environs of Tegucigalpa. Although now supervised by a lay board of directors, the school has relied heavily upon the grassroots parish networks and upon the motivating power of the pulpit in its efforts to spread literacy and information.

ACPH was essentially an ACPO transplant in its early years, and ACPH's system and textbooks were adapted from Colombian models. Like its prototype, ACPH called upon rural pastors to work up support for adult literacy classes. These local clerics selected one volunteer auxiliary teacher (or "monitor") from a *campesino* family in each community. In turn, these monitors were trained to recruit students, organize classes, help the regular classroom teachers supervise student work, and file monthly reports on the attendance and progress of the classes. Monitors also took charge of the texts, radios, and other classroom materials.

By 1964, when student enrollment had reached almost 15,000 and the schools had been operating long enough to make reflective evaluation of their success meaningful, the emphasis of ACPH programs was switched from promoting literacy and short-term community-development campaigns to forming local organizations of the poorest *campesinos* in order to help the "disinherited" to create political and economic leverage. Reading and writing remained part of the curricula, but to these academic courses were added programs aimed at developing attitudes and skills that would enable the *campesinos* to organize themselves and to act responsibly to further their own social and economic welfare. The watchwords of the consciousness-raising activities became 'participation' and 'democratic leadership.'

In the late 1960s and early 1970s, ACPH took another step in the direction of equating adult education with politicization. The radio schools adopted Paulo Freire's psychosocial approach to personal and community self-realization. To consciousness-raising, the communication of fundamental skills, and the identification of indigenous leaders was added a fourth mandate — the formation of regional and national *campesino* organizations able to deal with government agencies. Part of the impetus for the organizing activities has come from members of the Christian Social Movement — university students and young professionals with training in agronomy, education, or economics — who aligned themselves with the PPM by 1970.

A recent change in ACPH's focus of operations, the addition of a four-year primary-school program leading to a diploma recognized by the Honduran Ministry of Education, took place in 1972. In 1977, ACPH introduced an agricultural education program using paraprofessional agronomists and mass communication methods to make agricultural technology available to small highland farmers in remote communities.

RESULTS:

ACPH has been evaluated by both its own staff and by professional evaluators called in from outside. The finding of a study conducted in the mid-1960s by outside observers was that enrollment was encouragingly high but that several factors (among them the facts that nothing prevents literate students from taking the courses and exams, that no reliable tabs are kept on the number of students who repeat each year, and that "cooperation" between the test-takers and test-givers was rumored to have taken place) made the qualitative aspects of the literacy and numeracy segments hard to assess. Sparse population distribution, lack of leisure time in which to study, administrative pitfalls, and adverse weather conditions were also identified in that study as unquantifiable determinants of the program's impact.

A more rigorous evaluation, conducted in 1971 by an American and based upon an analysis of a stratified sample of 794 radio-school students, confirmed the continued existence of the socioeconomic impediments identified in the earlier study and raised the question of the value of literacy to *campesinos* with little to read and little time in which to read it. This study found that roughly 108,000 students enrolled in ACPH between 1961 and 1970, that about 18,000 of that number were examined and passed at least once, and that only two-thirds of those who took an exam actually achieved minimum functional literacy (defined as the ability to recognize a series of words, match words to pictures, write one's name, and to answer in writing one or two questions about a passage).

The picture of the consciousness-raising and organizing activities of ACPH and PPM that emerges from the second study is brighter than that of the literacy program. ACPH has established a development communication system that has made possible the construction of hundreds of rural schools and many neighborhood water systems. It has served as the basis for the organization of *campesino* women's groups, consumer cooperatives, 300 agricultural production groups, and many local *campesino* pressure groups involved in land recuperation.

OF NOTE:

- The literacy programs are broadcast six days a week for a single seven- or eight-month term each year. The advanced classes are broadcast in mid-afternoon and the beginners' lessons in late afternoon. Groups meet in homes, schoolrooms, or parish halls.
- In 1970, an estimated 30 percent of those *campesinos* taking the literacy courses had nothing in their homes to read. Unlike ACPO, ACPH has not published inexpensive booklets and newspapers for the *campesinos* to enjoy at home.
- ACPH is one of the few radio school systems in Latin America that has adapted the psychosocial method (originally designed for direct teaching) to radio teaching.
- ACPH uses a combination of *campesino* paraprofessionals, the radio, volunteer agricultural promoters, and a system of neighborhood demonstration plots to communicate agricultural technology at low cost to small farmers in remote mountain communities.
- The basic education and agricultural education programs of ACPH are part of an integrated rural development system of private agencies that includes consumer and marketing cooperatives, a national federation of *campesino* women, an agricultural lending institution, and *campesino* pressure-groups.
- ACPH is developing a radio-mediated program of primary school education that is closely integrated with agricultural education and organized in terms of flexible, brief units of one month to six weeks each.

REFERENCES:

"Mass Communication and the Popular Promotion Strategy of Rural Development in Honduras," Robert A. White, *Radio for Education and Development: Case Studies*, Vol. II, May 1977.

"An Evaluation of the Rural Development Potential of the Radio School Movement in Honduras, Robert A. White, Centro Loyola and Department of Anthropology and Sociology, St. Louis University, October 1972.

"The Radio Schools of Honduras," Jack Lyle with Joel Martins and Jacques Torfs, *New Educational Media in Action: Case Studies for Planners*, UNESCO, 1967.

Clearinghouse on Development Communication
April 1978

MY BROTHER'S CHILDREN
Nigeria

TARGET AUDIENCE:	Relatively well-off townspeople among the nine million Yoruba of the Western and Kwara States
OBJECTIVE:	To promote family planning by presenting it in the context of the traditional indigenous culture
MEDIA:	Film, print, and interpersonal communication
DONORS/SPONSORS:	Family Planning Council of Nigeria; International Planned Parenthood Federation
DURATION:	Conceived and carried out in 1971
CONTACTS:	F.O. Okediji and W. Ogionwo, Family Planning Council of Nigeria, P.O. Box 12657, Lagos, Nigeria; Duncan Hazelden, IPPF, 18/20 Lower Regent St., London SW1Y4PW, England

DESCRIPTION:

The Family Planning Council of Nigeria joined hands in 1971 with the International Planned Parenthood Federation to sponsor a broad-based, family-planning education program the chief feature of which was to be a film. In consultation, the two groups decided to aim the campaign at the Yoruba since the materials would have to be tailored to peculiar geographical and cultural/tribal customs if it was to have the desired impact upon its viewers. Two other factors influencing the choice of a target audience were the FPCN's longtime presence in Yoruba territory and the success of its clinical services and facilities in Kwara and the Western State.

IPPF and FPCN hired a commercial British film company to produce the film "My Brother's Children." The film company, in turn, subcontracted another agency to conduct a basic survey of the Yoruba's views on acceptable roles for women, family structures, and family sizes. Researchers concluded on the basis of this survey that the elder members of families (which are extended rather than nuclear) shape the family members' attitudes and behavior, that family members take responsibility for each other's welfare, that wives are expected to be subservient and devoted to their husbands' interests, that women make substantial — if erratic — contributions to the family purse, that men tend to measure their sexual potency in terms of the number of children their wives bear, and that the decline of polygamy in Nigeria (with its customary separation of husbands and wives while children are being weaned) has adversely effected attempts to control population.

Once the story line had been developed, the film producers collaborated with two Yoruba communicators — one of whom is a well-known actor — on the final script. They then staged and filmed the polished version of the play in a Yoruba village using a professional but local acting company. Finally, on the basis of fieldworkers' responses to a test showing, the film was edited.

Advance publicity for the film consisted of newspaper reports, radio interviews and a televised showing of the film. When the 34 copies of the film were released during Family Planning Week in December 1971, so were two comic strip versions of the screenplay. (Both the film and the comic strip were reproduced in English as well as Yoruba.) Other forms of publicity included posters, bumper stickers, and the all-out person-to-person efforts of Nigerian family-planning fieldworkers.

Typically, the film was shown in a family-planning clinic and followed by a discussion led by a fieldworker. The discussion leader attempted to move the viewers first to vocalize their reactions to the film and then to progress from the expression of opinion to the formulation of plans for action. Other showings of the film both within and outside Nigeria were before audiences composed of university students, development workers, and medical and government personnel.

RESULTS:

The film "My Brother's Children" was evaluated by a Nigerian sociologist charged with determining both the suitability of the medium and the impact of the messages. He was also asked to compare the effectiveness of the film alone to that of the overall education effort. To carry out the study, the sociologist identified two demographically comparable Yoruba villages with relatively easy access to urban centers; one of these rural communities was to serve as an experimental village, the other as a control. After distributing questionnaires in both villages and showing the film in one, the researcher measured the viewers' extent of recall, attitude change, and acceptance of the filmed messages.

The sociologist concluded that the film had had little effect on the attitudes of those who saw it — a finding borne out by the tendency of the fieldworkers to use it less and less after the initial barrage of showings. Probable reasons for the film's failure to spur attitude changes include the alien nature of the medium and of the equipment used to show the film, the complexity of the messages carried in the film, the distorted presentation of some local customs, and the lack of receptivity among Nigerians to any message that can be construed as negative or threatening.

OF NOTE:

- Film was chosen as the primary medium in this campaign because it could accommodate the oratory of traditional Yoruban didactic drama but, unlike some other dramatic forms, was not associated with fertility or sexual potency rites and messages.
- To minimize the possibility that viewers would find the film preachy or high-handed, the central character was not allowed to become an object of scorn. Instead, he served as a narrator and told the story of his brother's irresponsible, unchecked fertility.
- Kola Ogunmola, the chief actor in the film, secured a copy of the film and integrated it into his own regular performances.
- An urban target audience was selected on the presumption that it would be a receptive audience. Urban couples, it was felt, might be more egalitarian in terms of decision-making, more apt to understand the need for change and to experiment with new lifestyles, and less likely than rural people to count on children as additional sources of income.
- The film struck some viewers as not quite true to life when a village elder gave a bride lengthy advice, instead of merely his blessing, at her wedding.

REFERENCES:

Family Planning Education in Action: Some Community-Centered Approaches, IEC Broadsheet No. 8, Judy el-Bushra and Susan Perl, International Extension College and International Planned Parenthood Federation, 1976.

"Family Planners Find Tradition and Child Mortality Barriers to Acceptance of Programs in Rural Nigeria," *World Education Reports*, No. 8, January 1975.

Clearinghouse on Development Communication
April 1978

ASSISTANCE TO RURAL BROADCASTING
Afghanistan

TARGET AUDIENCE:	Farmers in the Afghan provinces of Wardak, Logar, Kunduz, and Herat (approximately 17,500 people)
OBJECTIVES:	To improve rural broadcasting as a means of supporting rural development activities and to test the feasibility of establishing in Afghanistan a communication system involving radio, cassettes, and farmers' feedback
MEDIA:	Radio, tape recorders and cassettes, and interpersonal communication
DONORS/SPONSORS:	Food and Agriculture Organization of the United Nations; Afghanistan's Ministries of Agriculture and Education; Australia's FFH/AD; and Radio Afghanistan
DURATION:	Initiated in 1973; implemented in 1976; Phase I terminated in 1977; Phase II pending
CONTACTS:	Trevor L. Stockley, Rural Broadcasting Specialist, Ministry of Agriculture, Kabul, Afghanistan; Abdullah Naik, General President of the Extension Department, Ministry of Agriculture, Kabul, Afghanistan; S.Y. Wasiq, Director, Radio Afghanistan, Kabul, Afghanistan; and Fazel Rahim, Deputy Minister for Agriculture, Kabul, Afghanistan

DESCRIPTION:

The Assistance to Rural Broadcasting Project took shape in 1973 following meetings in Afghanistan of government officials with the Chief of FAO's Development Support Communications Branch. The project was designed to reflect the Afghan Government's desire to keep farmers apprised of improvements in agriculture and livestock-production techniques and to make them aware of the existence and availability of credit, equitable means of distributing irrigation water, and the possibility of forming farmers' cooperatives. By the time the political and logistical obstacles to implementation had dissolved, 1976, the project had acquired a second dimension — that of a communication support system for the national land reform then in progress.

Abandoning early plans to establish and then to test the feasibility of a rural radio forum in Afghanistan, the project directors decided that a communication system involving radio, cassettes, and farmers' feedback would meet local needs better than the conventional radio forum could. Accordingly, tape recorders and one hundred tapes were purchased, and a survey aimed at determining the kinds of information that farmers wanted and could use (and that project employees could provide) was carried out. In December 1976, tapes produced on the basis of the survey findings were circulated in two provinces.

The radio component of the communication system was already well-established in the project area when the project began. Radio ownership in rural Afghanistan is high and the Ministry of Agriculture's Department of Extension and Development has been contributing twenty minutes of programming to the nightly broadcast of "Village, Home and Agriculture." However, members of the production corps and listeners alike were far from satisified with the quality and content of the broadcasts. To upgrade program effectiveness, then, a foreign consultant was brought into the Radio Unit of the General Directorate of Information and Publishing of the Department of Extension and Development to provide in-service training for one year to the seven full-time staff members. At the same time, additional recording equipment was bought and a staff vehicle was secured for use in making field trips and collecting farmers' feedback.

Fifty-six extension agents from eight extension units were selected to participate in the project. After being briefed and receiving radios, these agents conducted the sixteen meetings that served as the pre-project survey and visited villages on Wednesdays (when "Village, Home and Agriculture" was broadcast) to drum up interest in the radio broadcasts, to distribute cassettes (in Wardak and Logar only), and to solicit farmers' requests, criticisms, questions, and comments.

Reflecting both the strengths and difficulties encountered by staff members in this project, tentative plans for extension of the project beyond the pilot phase specify that the combination of radio, cassette recorder, and extension agent be retained, that a full-time technician/maintenance person be hired, that Radio Unit personnel be well-versed in either agriculture or extension work, that a filmstrip component be added to the media mix, and that more study be devoted in the future to measuring the rate at which farmers adopt improved practices.

RESULTS:

Records kept by the extension agents show that 3,883 of the roughly 17,500 farmers in the target area had heard at least one tape — a finding confirmed by an extrapolation of the figure (22.5 percent) reached in the evaluation survey. In contrast, two out of every three farmers in the area had heard programs on the national land reform, and four out of five of those who heard the message felt that all their questions had been answered satisfactorily.

In addition to exposure to the medium and the message, increases in knowledge, the correlation of contacts (with tapes and extension agents) with radio-listening habits, the relationship between the specificity of the message and the likelihood that the hearers will act upon it, the relationship between the tendency to provide feedback and the tendency to take action based on newly acquired information, and the relationship between the timeliness of the message and the adoption of advice were all studied.

Not surprisingly, the spread of ideas proved easier to trace than the spread of improved agricultural practices. Moreover, little effort was made to measure changes in farming techniques since the project resources were limited. Research did, however, establish that farmers in the experiment acquired information that they considered useful, tended to value cassette-carried (as opposed to that passed from farmer to farmer) information more as they grew accustomed to the medium, and contended more or less unanimously that "Village, Home & Agriculture" had improved markedly during the year of the experiment. The evaluation survey also showed that half the farmers who had heard the tapes listened regularly to the radio broadcast, compared with three in ten of those who had not heard the tapes. As for the hypothesis that the more tailored a particular recommended technique is to local needs the more likely it is to be tried, it held good for only three of the five variables tested.

OF NOTE:

- The pre-broadcast survey revealed that farmers tended to be interested in topics that are seasonal, local, and related to decisions they have to make. Specifically, the cassettes carried information on the control of rye grass in wheat, of rust and smut in wheat, on the pruning of fruit trees, and on the control of field mice.
- Field trips related to the project were far more than whirlwind tours. Some lasted as long as 25 days.
- Post-project research indicated that receptivity to the broadcast and taped messages had nothing to do with a farmer's age and that level of education correlated with willingness to try a new practice with respect to only one of the five variables measured.
- The FAO-employed consultants who conducted the in-service training for members of the Radio Unit developed a training manual, "Notes on Communicating Through Radio," and a glossary of technical terms.
- Wardak and Logar were selected as sites for the cassette experiment because agriculture extension programs in both were already active, farmers and village leaders were prepared to participate in the project, local authorities promised to cooperate, other development projects were under way, control groups could be identified for experimental purposes, and roads were good enough to permit year-round access by a vehicle with four-wheel drive.

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Clearinghouse on Development Communication
April 1978

(While it is standard procedure at the Clearinghouse to ask persons intimately involved with the projects described in this series to review the draft Profiles, strenuous efforts to obtain such comments before the publication deadline were in this case unsuccessful.)

RADIO EDUCATIVE/PILOT PROJECT IN COMMUNICATION MEDIA IN ADULT EDUCATION
Senegal

TARGET AUDIENCE:	Senegalese farmers, livestock producers, fishermen, and others (roughly two million people)
OBJECTIVES:	To provide food producers with practical information and with the opportunity to express their opinions systematically and effectively; to provide technical training
MEDIA:	Radio, correspondence, film, and interpersonal communication
DONORS/SPONSORS:	The Senegalese Government (sole supporter since 1973) and UNESCO (until 1973), with technical assistance in the preliminary stages from the governments of Canada and France
DURATION:	Initiated in 1968; ongoing
CONTACTS:	Boubacar Sock, EARO UNICEF, P.O. Box 44, 114 Nairobi, Kenya; Henry R. Cassirer, Les Moulins, 74290 Menthon-St. Bernard, France; and Radio Educative, Office de Radio/Télévision du Sénégal (ORTS), B.P. 1765, Dakar, Senegal

DESCRIPTION:

Senegal was the only African nation to take UNESCO up on the offer made in the early 1960s to establish "a pilot center for the production and testing of audio-visual materials and equipment for adult education" in Africa. The project that subsequently emerged had two dimensions: *Radio Educative Rurale* (now called simply *Radio Educative)* and a five-year television component (which ended in 1969). The TV broadcasts, 121 programs in all, were directed to 250 women in Dakar and remained strictly experimental. The radio broadcasts, in contrast, were originally intended for a potential audience of 800,000 (the farm population in the three *Wolof*-speaking administrative regions reached by the pilot broadcasts) and later became nationwide. The primary aims of the project were: to test the use of modern media in the context of adult education in Africa, to create a demonstration center of possible use to other developing countries, to train local people to become technicians and producers, and to help restore to ordinary people the sense of personal power eroded during decades of colonial rule.

The complexity of its mandate and numerous administrative bottlenecks within the Senegalese bureaucracy together kept the radio component from getting into full swing until 1968, when President Senghor himself intervened. Calling for government reorganization and cooperation, Senghor provided the missing ingredient: committed leadership. Under his guidance, *Radio Educative* became an information duct, a change agent, and a government watchdog.

Under the project design finally implemented, 57 radio listening groups were established in the pilot provinces of Thies and Diourbel in the Sine Saloum. Programming was to focus on topics of local and pressing concern — namely, the production and marketing of groundnuts, the responsiveness of government agencies to the peasant farmers' needs, the ways in which debts are incurred and repaid in the villages, and other critical social and health problems. The groups were led by regional staff members of the department of "Animation Rurale" (which has since merged with other government departments) or by animators recruited as volunteers in the village, each of whom took a three-day training course in group dynamics. The third element of this communication system, farmer feedback, took the forms of recordings made in the field and letters. Members of listening groups dictated letters, with the handful of literate members doing double duty as scribes, to the higher-ups in government and to the President himself. In these letters, the peasants aired their complaints, exposed what they believed to be cases of government ineptitude, and took the government to task for standing behind unfair or short-sighted policies — all of this they did without fear of censure and with the intention of making themselves heard.

RESULTS:

The most meaningful indicator of *Radio Educative's* initial impact is probably its effect on national policy. As a direct outcome of the "radio dialogue" begun in 1968, a flood of letters poured into government offices, a flood that eventually moved President Senghor to standardize the price given to groundnut producers (to the great advantage of the producers in remote areas, who were once discriminated against in the marketplace) and to annul in 1970 peasant debts contracted in the purchase of seeds, agricultural equipment, and supplies.

A second indicator of *Radio Educative's* worth is its expansion and its continuation. *Radio Educative* has operated without any foreign assistance since 1973. While some observers feel that the growth in the number of people participating in listening groups has not kept pace with the growth in the number of individual listeners and that the potential of the broadcasts to promote community participation is thus not being realized, overall response has by all estimates remained excellent. More than 500 villages have sent in thousands of letters, and the "malaise paysan" is showing some signs of crumbling in the face of incentives for action and participation.

Over time the listening audience has dispersed, with group listening giving way to individual listening. Reasons for this shift include the disappearance of *Animation Rurale* activity, *Radio Educative's* lack of personnel and transport, and the boom in cheap transistor radios. This tendency has not reduced the project's impact or emphasis on feedback, however.

OF NOTE:

- Since anyone who understands *Wolof* can profitably listen to *Radio Educative's* broadcasts, the actual audience has always exceeded the target audience. In addition, programs in *Peul, Malinke,* and other languages are now being prepared.
- About 70 percent of *Radio Educative's* programs are recorded outside the studio.
- Broadcasting in *Wolof,* which many Senegalese peasants speak, presented special problems to the less than astute moderator of a listening group since *Wolof* has a special feature: a code for transmitting messages intended only for the ears of the initiated.
- Three *Wolof* concepts used to interpret the peasants' statements are "TAWAT" (complaining), "DIGUAT" (disputing), and "THIOW" (making a fuss about a problem).
- Some government employees have complained about *Radio Educative,* claiming that peasants have no need to write the authorities when the authorities' representatives are on hand to hear them out or that it is disrespectful and counterproductive to challenge the existing administrative hierarchy.
- At a pan-African communication conference in Dakar in 1977, Senegal's President Senghor said that "educational radio should above all help peasants to cultivate the most authentic African values — courtesy, a liking for work, and a sense of solidarity — at the same time that it instills in them the sense of thrift, organization and method, qualities more properly European."
- In the early years of the project, some Senegalese viewed it as a UNESCO communication laboratory, while UNESCO employees tended to view the project as a joint venture of mutual benefit to both UNESCO researchers and the Senegalese people.

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Communication & Rural Development, Juan E. Diaz Bordenave, UNESCO, Paris, 1977.

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Clearinghouse on Development Communication
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MALI LIVESTOCK II PROJECT
Mali

TARGET AUDIENCE:	Malian farmers and herders
OBJECTIVES:	To introduce conservation techniques and range-management practices and to improve breeding and production techniques in order to raise the nutritional and economic status of Malians and generate foreign exchange
MEDIA:	Radio, cassette tapes, audio-visual materials, and interpersonal communication
DONORS/SPONSORS:	Agency for International Development and the Government of the Republic of Mali
DURATION:	Preliminary phase begun in April 1977; ongoing through June 1979; 2nd phase planned for 1979-1981
CONTACTS:	Boubacar Sy, Director General, Office Malien du Betail et du Viande (OMBEVI), B.P. 1382, Bamako, Mali; Benedict Tisa, 45 Haddon Avenue, Westmont, NJ 08108, USA; Almouzar Maiga, Thurston F. Teele, or Philip W. Moeller, c/o Chemonics, International Consulting Division, 1120 19th St., N.W., Washington, D.C. 20036; Robert Reeser, Bamako (ID), Department of State, Washington, D.C. 20520

DESCRIPTION:

Negotiations between the U.S. Agency for International Development and the Malian Government on the *Livestock II Project* got under way in drought-ridden Mali in early 1977. More than a relief effort, the project they designed was to provide a basis for self-sustaining agricultural development and to reduce the suffering associated with resettlement schemes. Its specific objectives are to promote the adoption of range-management, livestock-production, and agricultural practices that will increase productivity on existing croplands and enable Malians to farm land that is presently uncultivated. Its three fronts reflect three different but mutually reinforcing approaches to problems that the project designers feel are economic, social, and technological: it has (1) a program in the Dilly region that is concerned with developing, testing, and applying new techniques for dealing with dry lands and livestock problems; (2) a program and facilities in Bamako for training extension workers; and (3) in the southernmost region a "new lands" program focused on the development of underutilized lands (a chief feature of which is tset-se fly control). At the moment, the project staff includes twelve long-term specialists and a variety of short-term consultants.

The training component of the *Livestock II* Project may eventually encompass programs for five different kinds of audiences: existing cadres of livestock extension workers, recent college-level graduates of the *Institut Polytechnique Rural* (IPR) in Katibougou, graduates of IPR's middle-level program in Bamako, graduates of the *Ecole des Infirmiers Veterinaires*, and eighth or ninth-graders from non-technical schools. The courses for these groups are designed to prepare enrollees to assume greater responsibilities — the graduates of the *Ecole des Infirmiers Veterinaires*, for example, will become more well-rounded livestock and range-management advisors, and the youngest trainees will become village-level change agents. Some trainers and administrators are to receive initial training in the United States, and refresher courses are to be conducted periodically at the Sortuba project center for others.

The project's communication specialist, whose full-time services will be required for at least two years, assumes a battery of responsibilities. Some of these tasks are ongoing, while others relate to specific stages of the project's development. Open-ended activities include materials production, facility and equipment maintenance, and coordination of the center's business with that undertaken in the field in Dilly. Sequential activities comprise reviewing available production resources, procuring equipment, field-testing materials (charts, tapes, slides, etc.), stockpiling audio-visual aids, and conducting a thorough evaluation of the communication component at the close of the project's second year in 1979. Perhaps most important, the communication specialist will train change agents in communication methods and in the use of A-V materials in extension work.

RESULTS:

Still in its preliminary phase, the project has not been evaluated. The results of pre-project research, however, have revealed many social and economic factors that are sure to determine the eventual success or failure and the duration of the project.

The pre-project analysis of socio-cultural factors (part of which consisted of personal interviews conducted in six villages with different ethnic identities) indicated that the habits and the needs of the villagers range widely. Some villagers are migratory, some are not. Some are dependent solely upon livestock or agriculture for a living, while some live in mixed economies. At the same time, interaction and cooperation among the many ethnic groups appears to be extensive. Investigations of socio-cultural factors (including human and animal disease patterns, nutritional status, range-management techniques, and knowledge of such subjects), though fairly thorough, were impeded by language differences and by researchers' use of some terms unfamiliar to rural Malians.

The chief findings of the consultant who examined the communication component of the project — that new visual media will have to be introduced slowly and via the agricultural extension agents, that project workers can take very little for granted with respect to the villagers' exposure to modern media, that indigenous media and traditional performers should be used, that the literacy rate is low among the target population, and that the credibility of the staff promises to be a problem and a challenge — show that Mali's needs and problems are typical of those of many developing countries.

OF NOTE:

- Most of the people trained as change agents are recruited from the areas in which they will later work, and many are already in government employ in agencies other than OMBEVI.
- Visual aids are not used solely as teaching devices. They are instrumental in data-gathering, eliciting feedback, and winning local support for project activities.
- OMBEVI, FAO, Radio Mali, and *Alphabetization Functional* collaborate in the operation of the *Mali Livestock II Project.*
- With tape-recorders, one consultant suggested in a first-term report, change agents could help establish an oral library, contribute more significantly to evaluation and monitoring activities, and learn at home at self-selected paces.
- A pre-project survey on women's contribution and role in agriculture was conducted to help project planners focus on the needs of rural Malian women.
- Many Malian staff-members have received overseas training in such countries as Cuba, the United States, and Germany. According to one consultant, these Malians have a keener understanding of the "expatriot mentality" than most expatriot staff-members have of local culture.
- Even before the visual aids used in this project were pre-tested, the target audience was surveyed to determine how familiar and receptive it was to photographs and drawings as media. In general, people responded most positively and actively to realistic pictures of familiar activities, objects, and settings.
- Each technical-assistance specialist has a Malian counterpart who will eventually take over his or her job.

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"Final Report: Livestock and Ranch Development in the Dilly Area — Sociological and Communications Aspects," Walton Johnson, Chemonics, August 1977.

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Clearinghouse on Development Communication
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KIPSIGIS HOMESTEADS CATTLE-DIP MANAGEMENT PROGRAM
Kenya

TARGET AUDIENCE:	Maneret dairy farmers near Sotik and Kipsigis (about 200 in all)
OBJECTIVES:	To use small media to provide cattle-raisers with educational and motivational information related to a tick-eradication program
MEDIA:	Cassette tape recorders, posters, photoessays, photographs, film, print, and interpersonal communication
DONORS/SPONSORS:	U.S. Peace Corps; the Government of Kenya
DURATION:	Begun in 1970; ongoing
CONTACTS:	Bruce E. and Alisa K.A. Lundeen, Arusha Appropriate Technology Project, P.O. Box 768, Arusha, Tanzania; Joseph Kenyua, Cattle-Dip Supervisor, Sotik, Kenya

DESCRIPTION:

The U.S. Peace Corps began the *Kipsigis Homesteads Cattle-Dip Management Program* in 1970 to make headway against the fatal strains of tick-borne cattle diseases so widespread in Kenya. The adult-education component of the project was later revised and expanded when it became apparent that the project had gone awry. Additional educational activities were needed because many of the local farmers clearly did not understand how dipping cattle controls ticks or why dipping cannot work unless it is done regularly. Indeed, some farmers did not dip any of their cattle, some did so in a hit-and-miss fashion, and some dipped only their upgraded animals, leaving the indigenous Zebu stock open to tick attacks. At the same time, the dipping facilities were not being maintained properly, and the Kipsigis Cooperative's management was not obtaining enough chemical concentrate to keep the dipping solution at the necessary strength.

Discussions with farmers and local veterinary workers confirmed the assumption that the farmers did not understand how dipping cattle controls ticks. They also revealed that farmers who did grasp the relationship were reluctant to pay dipping fees when the chemical solution was too weak to be effective. While veterinary extension workers had tried to remedy these problems by consulting with groups of farmers and with members of the Cooperative management, their lack of experience with nonformal adult-education approaches fitted them to do little more than chide uncooperative cattle farmers.

To fill this information gap, two Peace Corps volunteers worked with the veterinary extension agents to develop photobooklets (with Swahili captions and an accompanying taped narration in the local language), three-dimensional demonstration models, and other audio-visual aids for use at the dipping facilities and in farmers' meetings and Cooperative Committee sessions.

Care is exercised in all these learning activities to involve the *Wazee* (or "venerable elders"). These older farmers are called upon to tell of bygone animal-husbandry practices, and their stories prompt the other farmers to reflect upon changes (such as the introduction of graded animals) and their implications. All the farmers in the groups are free to ask and answer questions and to share information. Outside resource people participate in these discussions, too, but they take pains to refrain from introducing new information until the local people are ready and able to use it.

Outside of the meetings, the primary medium is the audio cassette recorder. Use of the recorder enables project workers to obtain farmers' reactions to the educational activities, to share the proceedings of these meetings with farmers unable to attend, and to record oral history related to agriculture.

RESULTS:

Through discussion, solutions that incorporated both knowledge within the community and new information relevant to the farmers' needs and situations were developed.

Management of the dips became more efficient, a greater emphasis was placed upon maintaining the correct chemical concentration in the dip tanks, an improved system of record-keeping was devised and put to use, and much-needed repairs to the dipping facilities were made. Many farmers began dipping all their cattle regularly, as well as adopting other improved animal-husbandry practices. As a result of these changes, veterinary records show, cattle deaths due to tick-borne diseases decreased substantially once the communication component of the project was functioning.

OF NOTE:

- Educational Field Days were held in the Sotik area, starting in 1970. These Days offered farmers a chance to learn more about animal diseases and animal-husbandry practices.
- To illustrate the idea that understrength solution will not kill ticks, project workers conducted a simple demonstration using only a test tube, colored liquid, and toy cows.
- The written records kept as part of this project show which farmers have dipped their cattle in a given week and how many of his cattle each dipped. Such records, along with calendars, have helped illiterate farmers in particular. They both show the importance of precise timing to effective planning.
- Language problems and production difficulties have limited the effectiveness of 16mm film in this project.
- The audio-visual aids developed in conjunction with the *Kipsigis Cattle Dip Program* reflect Andreas Fuglesang's finding that black and white photographs with insignificant details blocked out often convey information to illiterates better than do silhouettes, line drawings, or untouched-up photographs.
- Slides are displayed outdoors in plastic folders in the daylight, so projectors and darkened rooms are not essential to the program.
- Secondary-school students in Kipsigis listen to the tapes and look at the photoessays made for the Manaret farmers. This way, the two age and social groups keep in touch.

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"Kipsigis Homesteads," Bruce E. Lundeen and Alisa K.A. Lundeen, unpublished photoessay, undated.

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July 1978

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MASS MEDIA NUTRITION-ADVERTISING CAMPAIGN
Philippines

TARGET AUDIENCE:	Rural low-income households in the provinces (approximately 2.5 million inhabitants)
OBJECTIVES:	To test the effectiveness of modern marketing and advertising techniques in changing behavior, attitudes, and knowledge related to the nutrition and health of infants
MEDIA:	Radio and limited interpersonal communication
DONORS/SPONSORS:	The Philippine Government, the U.S. Agency for International Development, and the National Media Production Center of the Philippines
DURATION:	Late 1975 to late 1976
CONTACTS:	Dr. Florentino Solon and Dr. Josefina Patron, National Nutrition Council, Ministry of Health and Nutrition, Manila, Philippines; Candy Formacion, Department of Nutrition, University of Iloilo, Iloilo City, Iloilo, Philippines; and Thomas M. Cooke, Manoff International, Inc., 2080 L Street, N.W., Washington, D.C. 20036

DESCRIPTION:

The Mass Media Nutrition-Advertising Campaign was launched in recognition of the sorry nutritional status of many Filipino children and of the inadequacy of using traditional means to counsel the mothers of underweight babies. Apprised of the successful use of advertising and marketing techniques to reach undernourished populations in India and Ecuador with practical tips on diet and food preparation, Filipino nutritionists in the National Nutrition Council decided to try that approach. Their specific goal was to get Filipino mothers to enrich with chopped vegetables, oil, and fish the watery rice porridge *(lugaw)* given to their infants to supplement breast milk. The hidden task, more difficult than spreading messages, was to overturn some ingrained and incorrect — but widely held — ideas about the nutritional needs of the newborn.

The project activities began in 1975, when the U.S. Agency for International Development agreed to provide funds to hire a U.S.-based advertising and social communication firm to work with Filipino planners to design, carry out, and evaluate the campaign. The first step involved the U.S. team and their local counterparts in an exploratory trip through the target site (Iloilo Province, rural population 700,000). Early visits were scattershot attempts to gather impressions while later forays were part of a controlled survey of carefully selected mothers. The baseline survey revealed that only 3 percent of the mothers in the project area had heard of the practice of adding oil to *lugaw* and that none had actually tried it. More mothers (5 and 17 percent, respectively) had tried adding vegetables and fish to the mixture.

Message development, the second stage of the project, proceeded according to principles followed in commercial advertising. Message designers assumed that creating interest in a particular idea requires enlisting sympathy for the proposer of the idea — a feat that involves making sure that the message bearer is perceived as sane, likable, authoritative, and deserving of respect. They also took pains to insure that the change under discussion was not viewed as more sweeping or disruptive than it actually was. These and compatible beliefs informed the six 60-second spot dramas that were eventually developed, tested, revised, recorded and sent out to area radio stations.

The six pre-recorded messages were broadcast in rotation from 15 stations during both the morning and evening hours, the times rural families are most likely to listen. Once the broadcasts began, the locally recruited project workers distributed information on the concepts being promoted and on the campaign itself to the health and nutrition rehabilitation centers in the project area. Related information that had been developed with the help of Filipino doctors in another context was also supplied to the radio stations for distribution in response to listener requests. Broadcasts continued uninterrupted for one year.

Since the ability of radio messages alone to change food patterns was to be tested, no other special educational activities were undertaken during the test period. Doctors, nurses, and rural community workers were informed of the rationale of the campaign, but they were not encouraged to carry out any special education programs.

RESULTS:

A pre-project survey, an interim survey conducted in May of 1976, and a post-project questionnaire were used to evaluate the impact of this campaign. The interim survey, conducted in May of 1976, revealed that the percentage of mothers who added oil to *lugaw* increased from 0 to 23 in eight months. The number adding vegetables rose from 5 to 17 percent, and those adding fish rose from 17 to 27 percent. The comparable figures calculated after the final survey were 24 percent for oil, 17 percent for vegetables, and 27 percent for fish.

The post-project interviews also revealed that radio's role as a source of nutrition information was most strongly evidenced by the target audience's reports of adding oil. On the other hand, participation in and knowledge of existing nutrition and health service programs were more closely associated with adding vegetables and fish, traditional themes of nutrition education. No relationship between adding oil and these programs was found. This suggests that the innovation of adding oil may be attributed to the radio messages.

A separate survey of community health workers in the test area supported the findings of the household survey.

OF NOTE:

- The phrases and idioms that mothers used in the preliminary pre-project interviews were woven into the broadcast scripts and messages.
- Local health and nutrition workers served as hosts and guides to the survey team. For many, the survey offered the first chance they had had in months to visit remote places and talk with the people they are supposed to serve.
- In the first months of the campaign, the "Vegetable Message with Doctor" was played more frequently than the "Oil Message with Doctor" simply because station managers failed to understand that each message must receive the same exposure because each is vital and different from the others. This problem was cleared up in a meeting of station managers.
- The same U.S.-based advertising firm that conducted the campaign in the Philippines conducted similar projects in Ecuador, Nicaragua, and the Dominian Republic, as well as other social communication projects in the United States.
- A mini-drama format was selected because the "novella" (or soap opera) is extremely popular in the Philippines and because it can accommodate the conflict that always arises when an unorthodox idea is presented.
- According to the advertising firm in charge of the campaign, the virtues of spot ads are many. Production costs are low, the passive listener is reached, spots can be inserted within and between the most popular programs, and spots do not tire the listener the way lectures or discussions sometimes do.

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THE CANDELARIA PROJECT
Colombia

TARGET AUDIENCE:	Colombian families in the state of Valle (approximately 7,000 people in the pilot phase)
OBJECTIVES:	To provide comprehensive health services (with special emphasis on nutrition and family planning) to the rural poor
MEDIA:	Print, calendars, and interpersonal communication
DONORS/SPONSORS:	The Colombian Ministry of Health, the University of Valle Medical School, and the Rockefeller Foundation
DURATION:	University-directed preliminary activities, 1958-1967; Experimental Phase, 1968 to 1974; project expanded to include other sites, 1974-present
CONTACTS:	Alberto Pradilla, Coordinator, Editor of the *Candelaria Papers*, Fundación para la Educación, Apartado Aereo 2805, Cali, Colombia; Dr. Alfredo Aguirre, Dept. of Social Medicine, Medical Faculty, Universidad del Valle, Apartado Aereo 20353-2188, Cali, Colombia; Jaime Rodriguez, Director, PRIMOPS, Cali, Colombia

DESCRIPTION:

The *Candelaria Project* was born of information and insights gleaned from several studies and short-term medical interventions conducted between 1958 and 1968. Ten years of research and practice in Candelaria County revealed, among other things, that almost half the area's pre-school children suffered from malnutrition, that the principal causes of childhood illness and death were gastro-intestinal and other preventable diseases, that fewer than 15 percent of the houses in the area were fit for human habitation, and that 84 percent of the homes in the project area had no sewage connections. In short, medical researchers came to the conclusion that the chief determinants of health — indeed, of survival itself — were socioeconomic factors such as income levels, employment rates, and land-tenure practices. At the same time, they found, health resources were scarce and expensive, too much emphasis was being placed upon curative measures and too little on preventive medicine, and both education and the coordination of health services were being neglected.

With these findings uppermost in mind, project planners from the existing Candelaria Health Center developed a program aimed at eliminating malnutrition. Because they were convinced that few medical problems require the attention of highly trained physicians, they designed the project to make maximum use of "promoters," young female paramedics who doubled as health educators. These promoters were recruited from the locales in which they were to serve and received six weeks of training. They were compensated with certificates, Christmas presents, and the opportunity to further their training as nurses' aides. Their work consisted of paying visits to every family in their community at least once every eight weeks. During these visits, the promoters looked for signs of malnutrition and for causes of death and disease, gathered data on the health of each family's children, dispensed information on health and nutrition, and identified cases requiring a doctor's care.

Health cards and Mother's Almanacs were distributed routinely by the promoters in this project. A health card was kept for each child under five years of age by the child's mother. The "Almanac" — actually a wall calendar imprinted with visual messages on family planning, infant feeding, sanitation, hygiene, and other health-related subjects — featured different reminders each month.

The promoters formed the backbone unit of the project, but their efforts were integrated with those of a service unit (staffed by nurses, nurses' aides, and midwives) that handled medium risk cases and by a third unit (consisting of a medical student and a registered nurse) that handled the most serious cases.

RESULTS:

The site of various university-supervised medical interventions during the decade preceding the beginning of the comprehensive health project, the county of Candelaria was not a typical community in 1968. Nevertheless, significant positive changes in health status have been registered since the beginning of the family-care program — in spite of a 25-percent decrease in purchasing power and a substantial decrease in nutrient consumption during the time under consideration. The overall birth rate fell from between 50 to 60 per 1,000 during 1960-1968 to 45 per 1,000 during the following four years. At the same time, natality rates decreased from between 57 and 60 per 1,000 during the first period to 41 per 1,000 in the second.

General health and nutritional gains have been astonishing in light of reduced economic circumstances. As a result of programs to immunize mothers and supervise midwives, neonatal tetanus has disappeared from the area. The incidence of diarrheal disease has decreased from 16 percent to 5 percent as a direct consequence of the *Candelaria Project*, and the prevalence of malnutrition among pre-school children has decreased by 25 percent (by 30 to 40 percent for children who entered the program as infants).

Once the experimental phase closed, the project was expanded and it now covers the whole State of Valle. Like the pilot, the expanded project is aimed at turning every mother into a health "promoter" within her family.

OF NOTE:

- Promoters received continuous in-service training aimed at improving their performance and addressing problems encountered on the job.
- Besides motivating the promoters and providing medical care, members of the service unit analyzed the questionnaires and other materials and information collected by the promoters.
- The Colombian Ministry of Health requires all medical graduates of the social medicine program of the University of Valle to serve in a rural area for one year after graduation.
- During the time the project was being designed, a law that would have obliged 18- to 20-year-old women to render one year of compulsory social service was under review. The law never passed, but some of the women in question became interested and involved in the project nevertheless.
- In 1966, the *Candelaria Project* area was identified as one in which "masked infanticide" occurred. In other words, some desperately poor and harried parents with too many children did not seek medical help when one of their children was stricken by an easily curable disease such as diarrhea and allowed their child to die.
- Some evidence shows that the same socioeconomic factors that determine the health of the rural poor in the project area are radically transforming the structure of families in ways that demand increasingly large social and political sacrifices of mothers.
- The "Candelaria Papers" are now being edited for publication by members of the Fundación para la Educación Superior.

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FUNCTIONAL LITERACY AND FAMILY-LIFE PLANNING PROGRAM
Thailand

TARGET AUDIENCE:	Illiterate and functionally illiterate Thai adults
OBJECTIVES:	To offer adult literacy training that is compatible with Thai Buddhist philosophy and that centers on applying self-knowledge and technical know-how in daily life
MEDIA:	Print, photographs, radio, and interpersonal communication
DONORS/SPONSORS:	Government of Thailand with assistance from World Education; the Overseas Development Mission; and the International Bank for Reconstruction and Development
DURATION:	Begun in mid-1970; expanded annually and ongoing
CONTACTS:	Mr. Sunthorn Sunanchai, Director, Adult Education Division; Mr. Kowit Vorapipatana, Deputy DG, Department of Educational Techniques; Mr. Thongyoo Kaewsaiha and Somprasong Witthayakiat, Adult Education Division, Ministry of Education, Bangkok, Thailand; and World Education, 1414 Sixth Avenue, New York, N.Y. 10019, U.S.A.

DESCRIPTION:

Thailand's *Functional Literacy and Family-Life Planning Program* was devised in 1970 to replace literacy programs characterized by high dropout rates and low knowledge gains. The program was designed by the Ministry of Education's Division of Adult Education with foreign and local technical assistance to reflect the Thai people's assumed interest in making appropriate decisions related to daily problems, the Buddhist underpinnings of Thai culture, and the Thai Government's interest in family planning.

Project planners' dedication to a practical curriculum and their sensitivity to Thai ways and beliefs found common expression in a traditional Thai concept — *Khit-pen*. Translated variously as "critical thinking," "rational thinking," and "problem-solving," *Khit-pen* is essentially a means of living harmoniously in nature and society by adapting both oneself and one's environment. It has roots in the Four Noble Truths of Buddhism but is compatible with the modern relativistic notion that the best solution to a problem varies with the time and place and individual.

Curriculum developers in this project share five beliefs: that Thai illiterates are already attuned to *Khit-pen*, that changing attitudes and beliefs alone cannot solve all development problems, that teachers involved in this program need special training courses, that classroom materials must reflect local problems and local concerns, and that adult education should be a positive and painless activity. To serve these beliefs, the developers have adopted a four-step approach. First, they identify the conditions or problems, conducting a survey and forming a curriculum committee that includes educators and representatives of rural development agencies. Second, they select the subjects to be used as lesson material, making sure that the curriculum is neither lopsided nor irrelevant. Third, they develop and pre-test lesson cards for the students' private use and posters or enlarged photographs for use in group discussion. Fourth, they adapt the teaching techniques, primarily group discussion, to the topic.

The illustrated lesson cards used as the basis of group meetings are dispensed one or two at a time. Students thus are never overwhelmed by what seems like an impossible amount of unfamiliar material, and they can measure their progress as they collect useful information. The card system also enables planners to adapt the curriculum to local conditions by adding or deleting parts of sets. As an added bonus, the cards cost less than conventional textbooks to develop and use.

The discussion-centered program, conducted by trained, paid facilitators, is backed up by efforts to help the newly literate retain and further develop their skills. Libraries (provincial, district, and mobile), newspaper reading centers (built by the villagers and supplied by the government with three daily newspapers), public education units (where current information is distributed by the government), and government-sponsored radio and correspondence courses are all integrated into the nationwide program.

RESULTS:

An evaluation of the project's pilot phase, conducted at the close of the first six months of operation, was based upon the results of a detailed questionnaire. Slightly over half the original participants were given tests designed to measure their literacy levels and mathematical skills and to reveal their attitudes toward the subject matter covered in class. These findings were assessed in terms of the results of tests given prior to the opening of classes and of tests given to four control groups whose members received more conventional literacy training. This evaluation revealed that reading-test scores of both the experimental and control groups increased an average of 2.5 grade levels after 180 hours of classroom instruction. In effect, the experimental students made gains equivalent to those in classes in which the primary emphasis was on literacy skills. Similarly, the gains made by both groups of students in math skills were also comparable, though the experimental group fared somewhat better. In terms of positive attitude changes, the experimental students reported significant changes of perspective with respect to 18 of the 22 concepts covered in the test, while the students from the traditional classes registered no significant changes.

On the basis of the success of the pilot phase, which was conducted in two provinces, the *Functional Literacy and Family-Life Planning Program* extended to five additional provinces in 1972. At present, the program is conducted in over 40 of the nation's 72 provinces.

OF NOTE:

- A pilot functional literacy program in northern Thailand in the province of Lampang in 1968, though more successful than its predecessors, was typified by low teacher morale, sporadic attendance, and low retention rates — an indication of the problems the *Functional Literacy and Family-Life Planning Program* expected to encounter.
- Of the 73 concepts originally selected for the project, 18 were related to agricultural practices and income-earning, 30 to health and family planning, 11 to general economics, and 14 to responsible citizenship.
- When the project expanded into the Malay-speaking southern region in 1972, special problems were encountered. There, Thai had to be taught as a second language, certain aspects of the curriculum had to be modified to meet the needs of the Muslim population, and the cards on agricultural practices had to be adapted to the needs of rubber-producers. In 1976 similar adaptations were made for a program for the hill tribe groups in northern Thailand.
- Graduates of the functional literacy program receive a lower primary-school (grade 4) equivalency certificate.

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Clearinghouse on Development Communication
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RURAL RADIO EDUCATION PROJECT
Paraguay

TARGET AUDIENCE:	Rural out-of-school children and adults (approximately 700 students in 1978)
OBJECTIVES:	To provide primary level instruction to rural people via radio; to experiment with different methodologies and techniques for providing rural radio education; to help the Ministry of Education and Worship in Paraguay institutionalize mechanisms for making rural radio programs feasible and effective
MEDIA:	Radio, print, and interpersonal communication
DONORS/SPONSORS:	The Center of Tele-Education of the Ministry of Education and Worship, Asunción, Paraguay, and the U.S. Agency for International Development
DURATION:	Begun in 1976; ongoing
CONTACTS:	Lic. Mabel Palacios Moringo, Directora, Centro de Tele-Educación, Ministerio de Educación y Culto, Asunción, Paraguay; Donald Swanson, Academy for Educational Development, 1414 22nd St., N. W., Washington, D. C. 20037, U.S.A.

DESCRIPTION:

Paraguay's Ministry of Education and Worship became involved in the production of educational radio broadcasts four years before the *Rural Radio Education Project (RREP)* took shape. Since 1972, it had supported the annual production of between 50 and 60 hours of radio programming for use in primary and secondary schools. Sponsoring *RREP* thus entailed the expansion, rather than the creation, of administrative and technical capabilities in order to produce roughly 300 hours of programming per school year. With a five- to sixfold increase in production, the Ministry hopes to offer rural Paraguayans, many of whom have no access to schools with full six-grade curricula, the chance to complete primary school. Accordingly, the Department of Caaguazú was selected as the project site because its educational needs and handicaps are typical of rural Paraguay's and program emphasis was placed on courses at the upper primary grade levels.

The Department of Tele-Education spent 1977 designing the radio curriculum and the instructional materials, preparing and pre-testing radio lessons, and conducting on-site research activities. During this period, department members developed 540 instructional programs at the third- and fourth-grade levels, along with companion materials in print, and made plans for producing these radio programs. Their research efforts consisted primarily of studying the student-age population of Caaguazú and its radio-listening habits, and of selecting four towns in Caaguazú as test sites and organizing project centers in them.

The second year of the project, 1978, was dedicated to improving and building upon the foundations laid during the first. The first 540 programs went into production while outlines for the second 540 (the fifth- and sixth-grade lessons) were drawn up. Broadcasting via a commercial radio station began, and research activities and field-testing continued.

On the brink of full-scale implementation, the project as of mid-1978 serves over 700 students and includes 45 learning centers (at which anyone with two years of formal schooling can take *RREP's* entrance exams and students in the program meet in groups and receive the help of volunteer monitors). The completed lessons cover language (including Spanish as a second language), mathematics, social studies, science, health and nutrition, and communication. These lessons are broadcast in 15- to 20-minute programs on weekdays.

RESULTS:

The *Rural Radio Education Project's* evaluation component has not been running long enough to permit an evaluation of learning gains. However, evaluative activities have been conducted in conjunction with this project since its inception, and preliminary findings have influenced the project's evolution. High interest among members of the community (particularly with respect to enrollment and attendance) and among radio-station owners (who have volunteered to rebroadcast programs and to dedicate prime time to some *RREP* broadcasts) are especially positive indicators of the project's impact. These indicators make some of the potential handicaps uncovered in baseline and first-year research — the prevalance among the listeners of serious social problems such as alcoholism, for example, and the difficulties posed to some *RREP* students by Spanish-language broadcasts — easier both to cope with and to put into perspective. Formative evaluation efforts have also showed that the listening audience has a strong interest in music and sports, one of many findings that poses no problems but gives the programmers some guidance.

The first comprehensive evaluation of student gains will get under way in March of 1979 at the end of the first full cycle of classes. Eventually, cost-benefit analysis will be conducted, the effectiveness of the various program components (radio, monitor/aid, etc.) will be assessed, and the relative gains made in all the communities involved in the project will also come under scrutiny.

OF NOTE:

- The use of free commercial radio is fundamental to the conception and the success of the *Rural Radio Education Project.*
- To meet the mixed demands of the learners, the educational broadcasts are in *Guarani* and Spanish while all the printed supplementary materials are in Spanish.
- Broadcasting began under extremely adverse conditions. Production took place in a borrowed studio, and power failures in both the stations and the listeners' homes were frequent.
- Before curriculum design could proceed apace, the Ministry of Education had to agree upon a precise definition of "primary instruction." Only then could the Ministry successfully undertake the formidable task that took up the first year of the project — creating from scratch a rural radio primary-school curriculum.
- A special series of Saturday-morning broadcasts aimed at familiarizing the population of Caaguazú with radio-education techniques was conducted throughout the first year of the project. The broadcasts were also used to win over regular schoolteachers, many of whom felt threatened by the new system.
- A series of pre-project interviews revealed that 70 percent of the population regarded agriculture as the most important lesson theme. Hence, agricultural information and advice are woven into the coursework, particularly into the literacy and language courses.
- Test sites also serve as administrative centers.
- While *RREP* workbooks have been received enthusiastically, less expensive alternatives to them may have to be developed.

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RADIOPRIMARIA
Mexico

TARGET AUDIENCE:	Primary-school children (especially fourth-, fifth-, and sixth-graders) in the environs of the city of San Luis Potosí (approximately 2,075 children in 1975)
OBJECTIVES:	To increase the number of primary-school children served by six-grade primary schools without increasing the cost of the public educational system
MEDIA:	Radio, print, some visual aids, and interpersonal communication
DONORS/SPONSORS:	Mexico's Secretariat for Public Education
DURATION:	Begun in 1970 after a one-year pilot; ongoing
CONTACTS:	Concepción Rivera Guzmán, Directora, *Radioprimaria*, Dirección General de Educación Audiovisual, Calzada Circunvalación y Tabiqueros, México 2, D.F.; Peter L. Spain, Institute for Communication Research, Stanford University, Stanford, CA 94306, U.S.A.

DESCRIPTION:

Radioprimaria is a response to a shortage of teachers that is itself a reflection of a shortage of education funds. It was designed by Mexico's Secretariat for Public Education (SEP) to increase the number of Mexican primary schools at which instruction at all six grade-levels is offered. In practical terms, it enables one teacher to handle the three higher grades by shifting part of the teaching burden to the radio. The governing idea is that four teachers plus educational radio broadcasts can do the work of six teachers and do it at a relatively low total cost. The radio is not supposed to replace or displace classroom teachers but to buttress and to extend their efforts. It was originally intended to permit four- and five-grade schools to offer the complete primary curriculum and primary certificates.

The instructional radio lessons are prepared by eight radio teachers in DGEAD's (Dirección General de Educación Audiovisual y Divulgación) broadcast studios in Mexico City. They are then bussed 260 miles northwest to Station XEXQ at the University of San Luis Potosí, which broadcasts them without charge from 9:00 a.m. to 1:45 p.m. on Monday through Friday. These lessons typically occupy 90 minutes of each five-hour school day. Eighty percent of them are directed toward all three upper grades, while the remaining 20 percent are geared toward specific grades. All make repeated reference to the textbooks distributed free by SEP to all Mexican primary schools, all are discussed in a fortnightly mimeographed teacher's guide and program schedule ("Correo de *Radioprimaria*"), and a few are accompanied by visual aids. The 1,250 programs needed for a school year are broadcast at the rate of five or six per day and focus on Spanish, arithmetic, history, and geography, covering nature studies, practical activities, and physical education in less depth.

Radio-classroom teachers, most of whom commute either daily or weekly between their homes in the city and the rural communities they serve, are given an introduction to the *Radioprimaria* system, but teacher turnover is so great that some confusion and misunderstanding on their part is inevitable. Similarly, they are supposed to be subject to supervision and periodic on-the-job inspections, but controls have been exercised in a hit-and-miss fashion. On the other hand, much is required of both the inspectors and the teachers. Inspectors, for example, are expected to furnish their own transportation for use on the job, while many teachers personally supply the classroom radio. Neither transportation nor radio maintenance is provided systematically by SEP.

Enrollment in *Radioprimaria* has fluctuated. Originally, 49 schools (and some 2,800 children) representative of those eventually to be served by a nationwide *Radioprimaria* system were involved in the program. The number of involved schools dropped for several consecutive years before climbing to 65 in 1975. However, the *Radioprimaria* lessons are now directed only at fifth-graders, so the total number of children reached by *Radioprimaria* is smaller (2,075).

Other changes of importance are the switch to a larger radio transmitter in 1973, which expanded *Radioprimaria's* reach by 20 to 40 kilometers in all directions, and the introduction of a new lesson format in 1974 that features dramatized interchanges between teachers and students instead of lectures.

RESULTS:

The lack of strictly comparable control groups, reliable enrollment statistics, and other evaluative tools clouds the meaning of data on *Radioprimaria's* impact. However, investigations of the project's effectiveness have been quite far-reaching, taking into account community attitudes toward education in general, employment patterns and prospects, and both technical and administrative pitfalls, as well as test scores and other conventional indicators of educational success.

Children in the radio classrooms perform at least as well as their counterparts in regular classrooms do on standardized achievement tests. But this finding must be viewed in light of the fact that the great majority of radio classes (an estimated 80 percent) are in schools that had six grades before the project began (and are thus not the intended beneficiaries). Moreover, power failures, other technical problems, a lack of administrative guidance, shortages of resources, and teachers' reluctance to use the system have all militated against *Radioprimaria's* success. When 44 radio schools were visited by evaluators in 1972, for example, one was inexplicably closed while 18 others were not making use of the radio lessons.

Surveys conducted in 1972 of teachers' pedagogical beliefs, the activities of primary-school graduates in the San Luis Potosí area, attitudes of rural people in the area toward rural education, and the local job market revealed that students, their families, their teachers and their prospective employers regard a primary certificate as an employment credential that is necessary but not sufficient. These studies showed that few primary-school graduates make practical use of their educations and that while most do not leave their hometowns, the few who do move to the city cannot expect their schooling to win them jobs in an employment market flooded with secondary-school graduates.

OF NOTE:

- Most lessons are used year after year, so a child who has spent three years in a radio classroom has heard some of the taped broadcasts three times.
- Before 1975 (the last year the project covered students other than fifth-graders), students in radio classrooms were expected to engage in private study while lessons not intended for their grade were broadcast.
- Well over one hundred schools request the *Correo*, even though only 65 of them make use of the radio broadcast. Apparently, the *Correo* helps teachers in ordinary classrooms prepare their courses.
- An objective of *Radioprimaria* at the project's outset was to extend educational opportunities via radio to people over 15 who had not finished primary school. Nothing has been done to realize this objective, however.
- Although public education commands the largest single share of Mexico's national budget, only about a fifth of Mexico's primary schools have the full six grades.
- *Radioprimaria* is thought to have a large incidental audience composed of adult listeners in Mexico City and San Luis Potosí. Some broadcasts are also picked up by classrooms not involved in the program, though the number is not known.

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TARAHUMARA RADIO SCHOOLS
Mexico

TARGET AUDIENCE:	Children and other residents of the Tarahumara Sierra (especially its 50,000 Indians)
OBJECTIVES:	To meet the practical and academic needs of Tarahumaran Indian children and adults by increasing their social and employment opportunities while reinforcing their cultural identity
MEDIA:	Radio (until 1974), printed materials, and interpersonal communication
DONORS/SPONSORS:	The Catholic Church as represented by the Vicar Apostolic of the Tarahumara region; limited support from agencies of the Mexican Government
DURATION:	Begun in 1955 as extensions of the 50-year-old Jesuit-run educational programs; granted legal status as a part of Mexico City's Iberoamerican University in 1957; ongoing in modified form (without radio)
CONTACTS:	Director, Jesuit Mission Headquarters, Sisoguichi, México; Sylvia Schmelkes de Sotelo, Centro de Estudios Educativos, Avenida Revolución 1291, México 20, D.F. México; Dean T. Jamison, The World Bank, 1818 H St., N.W., Washington, D.C. 20433, U.S.A.

DESCRIPTION:

The *Tarahumara Radio Schools (TRSs)* have roots in the Jesuit missions that have operated in the Sierra Tarahumara since 1900. But while the charter of the children's boarding school that opened in 1900 called for the eradication of "barbarism, pagan atmosphere, and ignorance," the schools have not weathered pedagogical revolutions unfazed. Emphasis now falls upon practical education informed by Freirean precepts — though the sobering difference between goals and achievements, particularly with respect to reaching the target audience, cannot be denied.

The 1970s have been uneasy times for the *TRSs*. Alarmed by high dropout and absentee rates and aware that the schools were benefitting primarily the Spanish-speaking population rather than the Indians for whom they were principally intended, *TRS* project authorities asked the Centro de Estudios Educativos to assess the schools' impact. In 1971, members of this Mexico City-based research organization visited the Sierra Tarahumara to collect information on *TRS* teachers, students, graduates, and the families of students. To redefine the objectives and functions of the schools, they had first to calculate the true impact of existing objectives and functions.

At the time of the study, 46 schools that together served 1,081 students dotted the ten Sierran municipalities. Each school had one or two auxiliary teachers. These auxiliaries, themselves educated only through primary school, organized the classes around radio broadcasts (of government-selected curricula) transmitted centrally from mission headquarters in Sisoguichi, counselled students and checked their work, and attended summer training courses in teaching methods and the subjects they taught. The classrooms they supervised typically contained students of all four primary grades. To accommodate the mixed needs of all students, the radio programming covered a different subject each hour, devoting 15 minutes to each grade level. Students tuned in for one quarter-hour segment each hour, completing written exercises for the remaining 45 minutes until a new subject was taken up. Five of the 46 schools open in 1971 were boarding schools whose students returned home on the weekends.

Several sweeping changes had taken place by 1975, the most important of which was that radio use was dropped entirely. In addition, summer courses for auxiliary teachers had replaced the goal of proficiency in subject matter and methodology with that of mastery of local customs and language. New bilingual teaching methods had been put into use, the unintegrated schools had been shut down, and both school supervision and materials had been upgraded.

RESULTS:

While the lengthy statistical and analytical evaluation conducted in 1971 showed that the *TRSs* prepare fourth-grade students about as well as do schools in the capital, such a tiny proportion of *TRS* students finish the fourth grade that the more important questions relate to the determinants of enrollment in and completion of the courses. To answer such questions, the research team identified many predictors of success in the children's socioeconomic environment.

Tarahumara Indians, few of whom speak Spanish and thus comprehend the Spanish broadcasts, fared less well than their non-Indian peers in overall mean achievement (in language but not arithmetic skills) and were much more likely than their counterparts to fall farther behind as they advanced through the grades. These results, researchers contend, together suggest that cultural and linguistic factors militated against Indian children in the program. Variables that correlated with interyear dropout rates included opportunity costs (what it costs to replace or do without a child's help at home or work), the level of the child's father's education, and the child's ethnic background. To the population sample, education appeared to have more to do with prestige or with some notion of school as an innate good than with the expansion of employment opportunities — a finding confirmed by employment data as well as by interviews with students, graduates, and their families.

The evaluation, which was used as a basis for some of the changes made in the program in the early 1970s, also covered teachers' qualifications and duties, school policies, and the curriculum.

OF NOTE:

- Since 1971 the Tarahumara Sierra has been the site of Presidential visits and of development activities sponsored by the National Indian Institute, the Administrative Committee for the Federal Program of School Construction (which has built boarding schools to prepare Tarahumaran community-development workers), the Ministry of Public Works, and the National Institute of Rural Community Development. The thrust of the projects initiated by these agencies is toward the integration of the Tarahumara into Mexico's national life.
- Radio use was discontinued partly because delays caused by equipment failures interrupted the flow of instruction.
- One reason the reforms proposed after the 1971 study failed is that missionaries with 15 years of experience in the radio schools were understandably leery of adopting sweeping changes suggested by outsiders. They also resisted the idea of shifting the program's emphasis away from reaching young children.
- Although designed from the beginning to serve young children in a formal school setting, the *TRSs* were influenced by Colombia's *Radio Sutatenza* — a nonformal education program primarily for adult *campesinos*.
- Some of the factors that have governed the evolution and reform of this project are those that impede "education for development" in many Third World countries. The Sierra Tarahumara is an agricultural region, one of Mexico's remotest and most mountainous areas. Its dispersed population consists of Indian and non-Indian (mainly *mestizo*) groups that have not mixed except in commerce, and its resources have been exploited primarily by non-Indians and outside companies.

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THE COMILLA PROJECT
Bangladesh

TARGET AUDIENCE:	Rural people in the administrative unit of Comilla (approximately 200,000 people)
OBJECTIVES:	To use nonformal education, surplus labor, and technical innovations to raise agricultural productivity and to promote voluntary community development activities
MEDIA:	Audio-visual aids, demonstrations, print, slide and audio tapes, folk media, and interpersonal communication
DONORS/SPONSORS:	Academy for Rural Development (Bangladesh), the Ford Foundation, and the International Cooperation Administration (now the U.S. Agency for International Development)
DURATION:	Started in 1959; ongoing
CONTACTS:	Director, Academy for Rural Development, Comilla, Bangladesh; Akhter Hameed Khan, Visiting Professor of Agricultural Economics, Michigan State University, East Lansing, Michigan, 48823, U.S.A.

DESCRIPTION:

A prototypical development effort, the *Comilla Project* has weathered a civil war, bureaucratic upheavals, and the better part of two decades. It was designed by the national government's Academy for Rural Development as a development laboratory in the most adverse of socioeconomic conditions. In the roughly 100 square miles of the Comilla Thana (jurisdiction), average farm size, annual income, literacy rates, and life expectancy rates were among the world's lowest when the project began. Infant mortality rates and population density, on the other hand, were spectacularly high.

No master plan guided the *Comilla Project's* planners. The Academy staff members, assisted by advisory teams from Michigan State University and the Ford Foundation instead began with the theories and research findings of social scientists and an intimate knowledge of the customs, business methods, and agricultural practices prevailing in the Comilla Thana. Thus equipped, they tried to find practical ways of meeting five carefully chosen objectives: (1) to base the project on sound economic principles likely to promote increased production and family income; (2) to develop a new institutional framework whose keystone is two-way flow of ideas and information between the village and the project offices; (3) to focus project activities on immediate problems without losing sight of long-term concerns; (4) to encourage the formation of disciplined groups of citizens who band together voluntarily in order to pool their resources, make decisions affecting group welfare, and discover new ideas and practices; and (5) to involve all project officials as teachers and guides rather than as supervisors.

A four-part project was developed to serve the five key objectives. The first component is a federation of agricultural cooperatives — each of which consists of 30 to 60 members and includes a chairperson, a manager, and a model farmer. Parallel to this federation is one composed of co-ops of artisans and laborers. Both the agricultural co-ops and the Special Cooperative Societies fall under the purview of the Thana Central Cooperative Association, whose members are representatives of the constituent organizations. The second component is the Thana Training and Development Center, a sort of campus at which project activities are coordinated and integrated, information is distributed, and classes and demonstrations are held. The third component comprises the women's program and other special activities aimed at helping passed-over groups increase their earning power and better their health. The fourth component, rural works, entails irrigation, electrification, and building projects.

The emphasis in the nonformal education activities is on solving basic problems related to agriculture, employment, health, nutrition, and family planning. Little distinction is made between educational and business activities, weekly meetings serve in lieu of formal classes, and the use of the mass media is foregone in favor of more intimate training devices.

RESULTS:

By 1978, the *Comilla Project* had 15,000 members in 420 agricultural cooperatives. The agricultural cooperatives had brought roughly 16,000 acres of land under plow by installing 286 irrigation pumps and tube wells and had adopted higher yielding varieties of crops. One report shows that about 95 percent of the land in the Comilla Thana was being cultivated by farmers who had embraced at least one of the practices being endorsed to increase production. Somewhat contradictorily, a survey conducted in the early 1970s by the Academy showed that nonformal education activities, while perhaps cost-effective, had not deeply affected more than 10 percent of the area's rice cultivators. The impact of such educational activities on other target groups was not systematically evaluated.

Bureaucratic infighting in the aftermath of Bangladesh's war of independence in 1971 impeded project expansion, but probably the most significant result of the *Comilla Project* is its widespread replication under the Integrated Rural Development Program. A nationwide program modeled after the *Comilla Project* was adopted in 1972 as part of Bangladesh's first five-year plan. The expanded program, however, reportedly suffers from the neglect of education activities, poor management, and a lack of both funds and materials.

Current emphases in the program fall upon local institution-building and the improvement of the physical infrastructure, dual priorities that Bangladesh planners associate with China's successful rural development program. According to one development analyst, the most serious handicaps to realizing the goals embodied in these priorities are (1) a lack of integration of efforts to build roads, irrigation systems, councils, and cooperatives and (2) the counterproductive rivalry of proponents of various development approaches.

OF NOTE:

- Nonformal education activities within the *Comilla Project* have accounted for only a small portion (estimated at 15 percent) of the project's total costs.
- *Imams* (Moslem prayer leaders) were given teaching roles in this project, an assignment that both made use of local talent and disarmed potential resistance from the conservative *imams* themselves. The Ministry of Education, however, disapproved of this move.
- Some of the rural elite have taken charge of local nonformal education groups only to use classes as a cover for exploitive business dealings.
- U.S. grants under PL480 were used to erect some of the buildings and other facilities used by the Thana Training and Development Center in the 1960's. But since then, the Government of Bangladesh has been providing the facilities.
- Academy-level personnel (U.S.-trained professionals) at first resisted taking on grassroots responsibilities and duties not usually shouldered by the professional class in Bangladesh. But most now admit that fieldwork and frequent contact with the villagers help keep program objectives and activities realistic. The Academy's faculty is now intimately involved with project development and nonformal education.
- Village singing groups infuse performances of traditional songs in local markets and villages with messages on agriculture, family planning, and Academy projects.
- One analysis of why the success of the *Comilla Project* has been difficult to duplicate focuses on four essential but scarce ingredients: charismatic leadership, virtual bureaucratic autonomy, the (albeit guarded) willingness of academics to maintain direct contact with the project's beneficiaries, and openness to various development models.

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development communication report

TO AND FROM THE FIELD: COMMUNICATIONS & AGRICULTURE

How Information Flows To Small Nepalese Farms

In Nepal, where most people live on small subsistence farms, rural development is constrained by the divisive relationships between the rural poor and the rural rich and by those between urban and rural dwellers. The competition of needs — for food and fiber, mechanisms for marketing produce, effective governance, education, personal maintenance, and health care — also complicates the development process.

Critical to each of these factors is the 'ow of information. Information affects the technology of production; prices of such supplies as seed, feed, and fertilizers; the demands of local and distant markets; and other vital functions. More important, the willingness and ability of any group to change is directly related to the extent of information flow between that group and other groups.

This in mind, we at the Institute of Agriculture and Animal Science attempted to determine how information flows to 69 selected small farms in Nepal's Chitwan District, which contains the part of the Rapti Valley known as the Inner Terai. The particular farms were selected because they are near I.A.A.S. and because Institute students had already gathered interview data (related to farm operations and farm-family characteristics) on them.

(The three wards of Shardanagar Panchayat that were studied included no large farms, though a few farms in other wards of the Chitwan District are ten times the size of those surveyed. Seven persons and 6.45 large animals (buffalo, cattle, goats) lived on the average farm, which comprised 1.91 hectares. More than 85 percent of the farms grew at least three different cereal crops, and many had small itchen gardens.)

Two patterns taken into account in this study are fairly common in the rural developing world. First, the major information channel seems to be word of mouth, and most information seems to come to small farms through visits from relatives, various officials, and commercial people.

Second, some farms in this area receive information from many different channels, and others are relatively cut off. Twenty of the 69 families were found to be receiving information on at least three of the four available communication channels: (1) radio, (2) letters, (3) membership in an organization, and (4) three or more official visits. Ten of these families received information through none of these channels, and 14 farms reported that only one of the channels was available to them.

Since the written word is sometimes a major source of agricultural information, each family was asked if any of its members could read. Only 7.2 percent of families had no literate members. Over 75 percent reported that a boy or man among their number could read, and 17.4 percent said that a girl in the household could. The largest farms had a significantly higher proportion of literate girls than the sm ller farms did. Just over one-third of the farms reported receiving a newspaper, and only 14.5 percent said they received magazines. Twenty-six of the farmers stated that they tell others what they read.

With respect to farm size, the smallest farms and the largest farms reported getting more newspapers than the middle-size farms, perhaps because some of the farms under one bigha (0.67 hectares) in area may be owned by families that are also involved in retail shops and other non-farm activity. If these smallest farms are ignored and the other three sizes compared, there is significantly more newspaper reception on the very large farms (those over 4 bighas, or 2.71 hectares).

Radio receivers are owned by 33.8 percent of the farm families studied. These sets seemed to be evenly distributed among small, medium, and large farms, but families on very large farms owned a significantly larger number of receiving sets (27.9 percent). When asked for their preference among radio broadcasts heard, the farm families listed

(Continued on page 2)

An Overview of Communication in Agriculture Projects

If strategies of agricultural development sometimes seem muddled, perhaps it is partly because today's planners have wisely refrained from rejecting past models out of hand. Each model has been found wanting in one way or another, yet each has left something of value for subsequent programs.

Communication strategies are inescapably wedded to changes in farming practice. Small wonder, then, that recent spokesmen on the role of communication in agricultural development tend to talk softly: their own complex set of questions and variables must be reconciled with every change in the equally complex set they inherit from economists and sociologists.

A drift in communications thinking is identifiable, though. The rather narrow post-war focus on the transmission of messages from centralized or national sources has gradually given way to a more expansive emphasis upon a variety of kinds of communication among people at all levels and distances in a developing agricultural country. This shift, an inevitable product of change in the accepted strategies of agricultural development, can be traced through at least three distinct but related phases. Moreover, it appears to be entering a fourth phase, the implications of which merit a close look.

The Diffusion of Innovation Model

Applied to agricultural development, the Diffusion of Innovation Model reflected the rather simple observation that if *all* farmers could achieve yields as high as those of the *best* farmers, production would rise dramatically. It directed the communicator to focus attention on ways to persuade more farmers to adopt innovative agricultural practices and technologies.

Early research on the Diffusion Model concentrated on the series of stages

(Continued on page 2)

A publication of the Clearinghouse on Development Communication
Supported by the Development Support Bureau of the U.S. Agency for International Development

Information Flows (Continued)

"Nepali News" as the most popular program, with 78.3 percent of listeners claiming to hear it regularly. Another 56.5 percent reported that they liked broadcasts of songs and music. Only 17.4 percent reported hearing the teachers' training program, and 8.7 percent said they listened to the children's broadcast. No listener reported having heard an agricultural broadcast.

Among 23 listeners, the most popular time of day for listening was from 2:30 to 3:00 p.m., when 87 percent had their radios on. Another large group listened from 3:00 p.m. to 4:00 p.m., and fewer than half as many listeners were tuned in between 1:00 p.m. and 2:30 p.m.

More than twice as many farms received information by letters via postal service as read newspapers or listened to the radio. Here, the very large farms reported the lowest numbers receiving letters, large farms next, and the medium farms (one to two bighas) received the most. Again, the farms of less than one bigha did not fit the pattern.

Visits by professionals to the farm were more frequent than any of the other information contacts reported. All but one farm in the study had been visited by a representative of the Sajha Cooperative, and 88.4 percent had been visited by the Pradhan Panch. School teachers had been to 71.1 percent of farms, and health department personnel had set foot on 60.9 percent of the farms studied. Of all the official visits reported, the least visitation was done by the Junior Technical Assistant from the Department of Agriculture; he had been on only two (2.9 percent) of the 69 farms. Although farmers were asked about visitors from the Irrigation Department, whose canals go through all wards studied, none had seen anyone from that department.

On the assumption that organization membership would facilitate the exchange of information, farmers were asked if they belonged to any organizations. Only 5.8 percent said they did.

When asked about personal contacts, 42 percent of this group reported that relatives visited often, 45 percent said that their relatives came sometimes, and 13 percent said relatives' visits were rare. The highest proportion of relatives' visits were experienced by families on the smallest farms.

A large proportion of the families reported that they visited the bazaars. While 56 percent indicated that one person from the farm went to the bazaar, 34 percent stated that two persons from the farm attended regularly, and 8.6 percent said that three persons from the farm did. On the smaller farms, more reported two persons going to the bazaar than reported one person attending. On the largest farms, the reverse holds true.

Among the most frequently used channels for information flow to the farm are commercial visitors. Just under 60 percent of the farm families stated that they were visited by salesmen or vendors, and an equal proportion reported visits from persons trying to buy things. In both cases, the smaller farms claimed more commercial visits than the larger farms.

The results of our study suggest that personal visits might well form the central core of any program designed to provide information to these farms. These data further imply that information flow might be significantly increased by increasing the number of radio receivers in rural areas, and by designing broadcasts specifically for these potential listeners.

The data further suggest that since officials from various organizations do visit the farms, they could be utilized as effective channels of information flow. They could dispense verbal information, posters, charts, and even printed matter. With most farms having at least one reader present, the benefits of distributing written information are potentially great.

Finally, information seems to flow through the bazaar and the local tea houses. Therefore, demonstrations near the roads leading to such places, as well as posters, charts, and public radios, are also promising channels for communication in places like the Chitwan District.

■ **George H. Axinn and T. Mallick, Institute of Agriculture and Animal Science, Rampur, Nepal**

Overview (Continued)

through which each individual presumably must pass in adopting new techniques (awareness, interest, evaluation, trial, and adoption or rejection). In addition, diffusionists tried to modify communication strategies to meet the needs of various types of farmers (innovators, early adopters, early majority, late majority, and laggards). Programs based upon the Diffusion Model stressed information on how to evaluate and apply innovations, as well as messages designed to make people more receptive to change.

The Diffusion Model had its day. But studies and observations throughout the 1960s began to reveal its oversimplifications. It offered no way to deal with circumstantial factors (particularly credit, market, and tenure considerations) that might bar a farmer from accepting certain innovations even while acknowledging their worth. It also failed to include any test of whether the technologies it promoted truly suited the needs of the users. And its almost exclusive focus on the "opinion leader" and the "early adopter" often left out those most in need.

In terms of communications and communication policy, the Diffusion Model also contributed to a warped view of the importance of the mass media and especially media of non-local origin and control. It limited the communication task to that of bringing into the community ideas and information from outside. Feedback was thought of only as a way to test the adequacy of a message and to modify it to make it more effective, not as a source of ideas for changing the agricultural development strategy itself. The enormous variance between regions, and even from farm to farm, got little attention. The model did nothing to mitigate the emphasis so many countries were placing on national media out of concern for nation-building and for the development of a national consensus.

The Package Programs Model

The Package Approach to agricultural development grew out of a rising awareness that information is not by itself a sufficient source of improvement in agricultural productivity and in the rural family's welfare. Arthur Mosher's stress on the situational differences among farmers and between regions was quickly endorsed by others. As early as 1965, Early Heady was pointing out that campaigns of persuasion are fruitless unless the farmer also has a "bundle" of other techniques and aids (including, for example, credit, markets, irrigation, and such inputs as improved seeds, fertilizers, and pesticides).

Package Programs quickly found application the world over, and these applications were soon modified and refined. India's Intensive Agricultural Districts Program (IAD) revealed, as did similar programs elsewhere, that commitment and cooperation at the highest level among a whole range of governmental agencies is a prerequisite to success. The Puebla Project in Mexico showed the kind of special effort needed to devise a Package Program that would help the poorest farmers within the context of an overall effort to raise total food production. The Masagana 99 Project in the Philippines demonstrated the difficulty of integrating such diverse "package" components as the extensive use of radio, the creation of new credit and price-support programs, the formation of farmers' interest groups and an interagency coordinating authority, and the involvement of top-level political leadership.

Not yet adequately evaluated, the Package Program appears to be surrounded less by harsh criticism than by tough questions. In particular, some observers have questioned how well the experience with single-crop Package Programs can be applied to those programs that involve many crops and to factors other than production. Another challenge has been posed by the lack of any dependable formula for forcing various governmental departments to work together and to buttress each other's efforts.

For the communicator, the significanc of the Package Programs was that the called attention to previously unmet needs for communication among agency representatives and stressed upward communication from the rural family to the agencies involved in agricultural develop-

ment. They also reflected the recognition that only the farmer himself can report whether seeds or fertilizers are available at the appropriate time and places and that market malfunctions must be communicated to those who can make changes.

While sound in some respects, the Package Programs Model did little to shift attention away from national or centralized media and messages. It helped encourage awareness that different farmers may need different informational inputs, but its practitioners still viewed messages primarily as coming into the community from outside. Justification of localization and of investment in local media was based on the presumed value of both in making externally originated messages more accessible, comprehensive, and persuasive. Lamentably, autonomous local communications found little or no place in the Package Programs Model.

The Induced Innovation Model

Both the Diffusion Model and the Package Programs Model assumed as their starting point a "given" body of available farm technology and a "given" set of rural institutions. Only slowly did the growing awareness of how these change lead to a search for the forces behind change and for ways to make technology and institutions more responsive.

Probably the most convincing analysis along these lines was put forth by Vern Ruttan and Yujiro Hayami in 1972. They contended that technical change and rural institutions are "guided along an efficient path by price signals in the market, provided that the prices efficiently reflect changes in the supply and demand of products and factors and that there exists effective interaction among farmers, public research institutions, and private agricultural supply firms."

Ruttan and Hayami recommended several specific improvements that relate to communications. Public sector investments could modernize the marketing system "through the establishment of the information and communication linkages necessary for the efficient functioning of the product and factor markets." Organizing farmers into politically effective local and regional farm "bureaus" or "farmers' associations" could produce a valuable "dialectic interaction among farmers and research scientists and administrators." Improvement of communication within the scientific community could bring the agricultural research facilities of developing countries more fully into "the main currents of scientific and technical innovation."

This analysis applies most aptly to a commercial agriculture in which development is described in terms of increased production and marketable surpluses of market commodities. But heavy reliance on the market mechanism and on profit motivations may not be enough where bettering the lot of subsistence farmers, landless laborers, and other low-income rural people is proposed as an important development goal. "Appropriate technology" proponents, humanists, and even some hard-boiled economists may continue to view with growing impatience an approach that offers so little to those outside or on the fringes of the market economy.

The Fourth Way

All three models have brought and continue to bring significant contributions to agricultural progress. Yet, a strategy limited to them will probably be inadequate to the challenge of the years ahead. What is beginning to arouse attention is a model that is increasingly decentralized and user-oriented, one that pays attention to the needs and preferences of rural families, as well as to national production goals.

Ronald Havelock has described a user-oriented model as having five essential points:

> "First, that user need is the paramount consideration and the only acceptable value-stance for the change agent; second, that diagnosis of need always has to be an integral part of the total process; third, that the outside change agent should be nondirective, rarely, if ever, violating the integrity of the user by placing himself in a directive or expert status; fourth, that the internal resources, i.e., those resources already existing and easily accessible within the client system itself, should be fully utilized; and fifth, that self-initiated and self-applied innovation will have the strongest user commitment and the best chances for long-term survival."

Such a concept would be hard to apply fully in agricultural development, since so many decisions about the allocation of human and other resources are based on national goals that, initially at least, are as likely to consider the preferences of the rural family an obstacle to be overcome as an end to be satisfied. At the very least, however, development is beginning to be seen as a process of problem-solving through which those who face the problems can articulate and communicate to the "experts" their needs for knowledge or research. In agriculture, this is coinciding with a rising awareness of the wide variations and the rapid and often unforeseeable changes in regional and individual farm situations. These variations and changes help explain why national (as opposed to local) planning has so often brought disappointing results for the agricultural sector.

Ten years ago, communicators simply asked how messages about improved farming practices could be made more persuasive and brought more fully to the attention of the people on the land. Today, important new questions have emerged:

1. What channels of communication are needed to bring together the contributions of diverse public and private agencies in meeting agricultural development needs?
2. What communication innovations are required to help rural people clarify their options, organize their resources, and make those outside the community aware of their needs?

One change is slowly but surely making itself felt — the erosion of the traditional view of economic planners that labor and management (and this means the whole working population in a rural area) are merely "factors" of production. Once we accept that the well-being of each individual and each unit has validity alongside national goals, new requirements arise. In particular, communication media and strategies must be aimed at insuring that decisions that relate to development are in the hands of the people they affect.

With declining acceptance of the notion that the only important messages for agricultural development flow from the top down (or the center outward), more energy and imagination must be devoted to the wider dispersion of communication skills, resources, and control. This needed dispersion is primarily geographical, but it should also be viewed as broadening the communication opportunities of people who until now have listened without speaking.

The creation of farmers' organizations designed to voice farmers' concerns, exert pressure on national governments, and dispense timely agricultural market information seems a logical first step toward participatory development. In addition, it also seems clear that rural people need better opportunities to get experience with the written and spoken word: opportunities to put in writing messages that will be read, opportunities to speak in public and to gain confidence in doing so. Rural community organizations can contribute greatly to all of these goals and to their vehicle, functional literacy.

There are stubborn obstacles to such local initiatives. One is that significant economies of scale are possible only when expensive communication technologies can be concentrated in a few hands. Another is the fact that autonomous local media tend to be less professional in form and style than the well-staffed, well-financed national network. A third problem is political: besides their potentially divisive effect as promoters of regionalism, dispersed and independent media are too seldom used to give voice to a variety of local views and too often used simply to reinforce entrenched local power.

The agricultural communication strategy of the future will undoubtedly be a hybrid strategy. It will continue to include national and regional mass media. It will continue to stress ways to make the messages conveyed through these media more understandable and more relevant. But it will certainly also be directed ever more at unlocking the energy and creativity latent in the rural community.

■ **Bryant E. Kearl, Department of Agricultural Journalism, University of Wisconsin**

They Listen If They Can: Reaching Bangladesh Villagers Via Radio

Desh Amar Mati Amar — "My country, my land" — is a broadcasting program aimed at stimulating the overall development of rural Bangladesh. The program reflects the hypothesis that radio is the most appropriate technology to reach the villagers, enlist their support, and strengthen their capabilities. The wide-ranging broadcasts focus on forestation efforts, the domestication of animals and birds, the development of fisheries, the development and welfare of rural youth and women, and population control and family planning.

Although Bangladesh has a total population of nearly seventy- two million, it has issued only half a million radio licenses. But an estimated two million radios are in use within the country, and at times as many as one hundred people band together around a single radio for community listening.

Visits to the villages, as well as a survey of listening habits in four representative sections of the nation, have yielded some useful findings about the potential of this medium for agricultural development. First, a few glimpses of radio in action as observed in the countryside . . .

Traveling in Bangladesh inevitably means coming across a tea shop containing a radio blaring the latest music or, perhaps, some folk drama. Turn a radio on while in a marketplace, such as the weekly rural bazaar, and a crowd forms immediately. People in Bangladesh obviously like listening to the radio.

At-home radio listeners scattered in 64,000 rural villages probably make up the largest audience. Invariably, the relatively better-off landowner owns the radio and controls its use, and many villages have no radios at all. Still, it is primarily through this medium that information about agriculture is normally transmitted — sometimes a course in fish cultivation, other times some information about fertilizer.

Bangladesh has both land resources and the human resources needed to develop that land. What it desperately lacks is the material inputs and the knowledge at the village level to utilize them. Of the two shortages, that of technical inputs is often greatest. Fertilizer capable of boosting a rice crop may be mentioned over the radio when it is not available to the villager. Coordination is lacking and follow-up is minimal.

Visiting a rural village twenty miles from Khulna, a major port city in the south of the country, one of us was struck by how quickly radio was able to transmit information, not only from the capital of Dacca, but from 12,000 miles away. Just a few hours after the results of the American presidential election were known, a young animal-husbandry official chatting in a small candlelit room was able to announce that Jimmy Carter had been elected. His news source was a transistorized and battery-operated radio.

In one village near Rangpur, farmers were able to make better use of their land through local initiatives made possible by information supplied by radio. Their yields of rice per acre nearly doubled through use of fertilizers and high-yield seeds first heard about on radio.

To obtain more systematic data on how radio broadcasts affect villagers, Radio Bangladesh has conducted a four-region survey of listening habits.* UNICEF collaborated on the survey as part of its efforts to help increase Bangladesh's capacity to deliver basic services and produce agricultural inputs.

Radio was the medium of choice for the familiar general reasons — reach, economy, accessibility — and a few specific ones: watching motion pictures, for instance, is still considered a sin in rural Bangladesh except for the young generation, and TV viewing is catching on only slowly in the countryside.

The results of the personal interview survey were not conclusive, but they did point to the potential means of upgrading and extending radio use, and some findings illuminated problems endemic to radio use in severely underdeveloped countries.

First of all, the prohibitive costs of a receiver and radio batteries were revealed. Of the majority of the respondents who were farmers or day laborers, only 8.76 percent owned sets. Not surprisingly, land ownership, plus educational level, were the chief determinants of radio ownership.

Second, most radio owners stated that they feel "economic pressure" when they purchase batteries at the high rate. Moreover, there is an inverse relation between the cost of the battery and the amount of time the set is turned on, suggesting that increasing the supply of receivers and subsidizing their use may be desirable. The small number of respondents belonging to the higher income groups possessed 45.83 percent of all radio sets in Bangladesh.

In sum, very few rural people own radios, but community listening, usually in the house of a neighbor, is widespread. Most of the respondents who do not have their own radios listen in the village market, shops, or in a neighbor's house — indicating that if the villagers were provided with radios, they would listen more. Two-thirds of the respondents listen to the programs, with the most popular shows being news, news commentaries, and *Desh Amar Mati Amar*. Also popular are music, songs, and religious programs.

The respondents confirmed the investigators' hypothesis that radio is the most effective means of communication in rural Bangladesh. When asked to suggest improvements in the *Desh Amar Mati Amar* programs, most respondents merely advocated the prolongation of the programs. They also suggested further increasing the focus on increased food production, proposed a new program "item" for land less laborers, and requested more songs on crop production and more discussions on common human diseases.

On the basis of the data, the investigators reached some conclusions that development communication specialists in other countries may find worth pondering. They found that the farmers are genuinely interested in learning about food production, animal husbandry, and land use, and that a significant number of people want the programs lengthened. Less encouraging is the fact that two-thirds of all rural people are not receiving the agricultural message, either because they have no radios or they cannot maintain them.

Obviously, making radios cheaper to buy and maintain is Bangladesh's main communication problem. Getting people to listen is just as obviously not. ■

Moncef Bouhafa was information officer for UNICEF in Dacca, Bangladesh, for three years, before joining UNICEF headquarters in New York City. **Ronald Gross**, co-author of the recent volume *Communications Technologies in Higher Education*, has just returned from Bangladesh

* *Radio Use in Rural Bangladesh: An Evaluative Study on Effectiveness of Radio as a Means of Communication*, compiled and edited by Suha Khanam, Radio Bangladesh, 1976, [illegible] a copy of the report, write to UNICEF, GPO Box 58, Dacca, Bangladesh.)

Fulbright-Hays Awards in Communications

The Council for International Exchange of Scholars (CIES), Eleven Dupont Circle, N.W., Washington, D.C. 20036, is now accepting applications from U.S. citizens for the following Fulbright openings:

1. *Film and Television Institute, Poona, India:* a film-production consultant with technical experience in production of 16mm films for educational television. Ph.D.s in communications or educational television preferred. Starting June/July 1978.
2. *University of Brasilia, Brazil:* Lecturers in one or more of the following at undergraduate and graduate levels: communication theory and research; psychology of social communications; communication technology and social and cultural change; communications in formal organizations; communication media and nonformal education; communications and development. February December 1979. Portuguese needed.

The senior Fulbright-Hays program also provides opportunities for scholars from abroad to lecture or conduct post-doctoral research in the United States.

Participatory Communication in International Agricultural Research Centers

The current trend in agricultural communication in developing countries is toward emphasizing the message and the social dynamics of its transmission. Advanced technology in communication media, important as it may be, is receiving commensurately less attention. The strongest voices warn that the medium is not the message in agricultural development, that farmers need information about new technology, and that extension and communication networks do little good if the messages extended and communicated are not relevant. In other words, we have been urged to look first for factual, scientific, and problem-oriented messages, and then for technology and media to transfer them. We are being told, in effect, that the problems of agricultural development stem from the absence of adequate scientific knowledge in a form that farmers can use.

An historical irony underlies this communication problem and helps explain the aforementioned trend. Plant breeding and scientific agricultural experimentation have been carried out chiefly in the temperate zones in which the industrial countries lie, but most of the plants on which humankind now depends for food seem to have originated in the tropical and the sub-tropical belts that today include the less developed countries.

Since the systems of cultivating food crops in many of these poorer countries have remained largely unimproved, current agricultural development policies emphasize agricultural research aimed at coming up with better plant varieties and improved methods of cultivation. This approach requires the development of a special communication strategy capable of linking research personnel in the developing countries with both farmers in their countries and the international agricultural research centers. Indeed, the communication function of the newly established network of international agricultural research centers is unique and challenging. Established under the supervision of the Consultative Group on International Agricultural Research (CGIAR), these centers reflect the assumption that major increases in agricultural development and food production will be achieved through improving agricultural research in developing countries. Charged with developing improved varieties, efficient farming systems, and better agricultural practices, they are also expected to establish a viable international communication network capable of transferring the newly developed technology to the national research and production institutions in the developing countries.

The communication function of the International Center for Agricultural Research in the Dry Areas (ICARDA), for example, is critical in the early stage of formulating the research program. Scientists attempt to learn at this point from their colleagues in the countries of the region about the main issues and problems hampering the development and improvement of local food crops. For instance, national research institutions in ICARDA's region have expressed concern about the need to find solutions to the problems of excessive losses in lentils and chickpeas caused by labor shortages during harvest time. This problem requires either the development of tall and erect varieties suitable for mechanized harvesting or the adaptation of harvesting machines to accommodate the characteristics of existing varieties. ICARDA scientists are working on both alternatives. It takes time to find the solution, but herein resides the communication challenge and task: The process involves creative interaction between ICARDA research workers and the scientists of the national programs in the region before the technology is presented to the farmers for testing and adaptation. Contacts with the national research scientists are maintained through systematic visits and information exchange, and new varieties are thus being co-developed by the national and international institutions.

Equally important, participation of all concerned is ensured, but separating lines between national and international efforts are not drawn. The new product is accepted by the national scientists because their own efforts are reflected in its development. This acceptance is the main step in crossing national borders with technology that makes a difference where it counts — in farmers' fields.

(Part II of this article will cover the complementary communication process being established to move newly developed technology from the national research institutions to the farmers' fields.)

■ **Sawki Barghouti, Head of Communication and Training, ICARDA, Aleppo, Syria**

On File at ERIC

Recent entries in the ERIC (Educational Resources Information Center) file include two discussions of rural development with an emphasis on agriculture.

- Bowman, M.J. *Rural People and Rural Economic Development. IIEP Seminar Paper 21.* Paris: UNESCO, 1975. 120 p. (ED 135 533)

  This paper discusses development as a process involving the generation, diffusion, and realization of new opportunities. The following topics are discussed: (1) the development process, including such issues as visible unemployment, rural to urban migration, the dualism of labor markets, population growth, and the disequilibrium of economic life in the development stage; (2) the adaptive and innovative attributes of human beings; (3) an economic analysis of people-changing processes, skill mobility, and the markets for "jobs" and "work;" (4) progressive agriculture, including its relationship to efficient information systems; (5) the rural non-farm economy, including education, communication, and innovation in the non-farm enterprise; (6) strategies for enlarging opportunities, including a focus on the interdependencies of education and development and on economic incentives and agricultural progress. Available from International Institute for Educational Planning, 7-9 Rue Eugene Delacroix, 75016 Paris, France. ($.60). Also available from EDRS in microfiche only for $.83 plus postage.

- Medlin, W.K. *Problems in Planning Rural Education for Agricultural and Nutrition Development: A Review of Relevant Findings from Communications Research. IIEP Seminar Paper 16.* Paris: UNESCO, 1975. 56 p. (ED 135 529)

  Rural education research and field experience related to the communication of relevant knowledge to disadvantaged rural populations in the developing nations are examined. Findings indicate that decisions on knowledge dissemination are usually strongly influenced by groups with social and/or political weight, that clients tend to learn most effectively when engaged in decision-making related to their needs, and that curricular and instructional development are most successful when actual and potential utilization of knowledge by clients, as well as the appropriateness of instructional theories to a given rural setting, are taken into account. Available from International Institute for Educational Planning, 7-9 Rue Eugene Delacroix, 75016 Paris, France ($.60). Also available from EDRS in microfiche only for $.83 plus postage.

Documents available from EDRS can be ordered from ERIC Document Reproduction Center, P.O. Box 190, Arlington, VA 22210. Order by ED number and enclose payment for the price plus postage. For information about ERIC, indexes to ERIC documents, and other services, write ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, New York 13210.

■ **Barbara B. Minor, Publications Coordinator, ERIC Clearinghouse on Information Resources**

THE BASIC VILLAGE EDUCATION PROJECT

A Day in Momostenango

An affable blanket-seller who thought the empty backseat of my compact car reasonable grounds for a quick introduction was the first of many Guatemalans to help me form a firsthand impression of the impact of Basic Village Education. After giving him a moment to arrange his bale of wares and then plying him with questions about the market he had attended in San Francisco el Alto the day before, I sued for the information I really wanted. Did he listen to Radio Momostenango? He did, regularly.

Radio Momostenango has been broadcasting agricultural information and advice, public service announcements, and indigenous music and drama to the villagers of Momostenango eight hours a day, six days a week since 1976. The second of two stations established jointly by the Academy for Educational Development on contract to A.I.D. and by the Guatemalan Government as part of the five-year experiment in agricultural communications known as the Basic Village Education Project, the station broadcasts to a potential audience of 900,000 listeners in split shifts and two languages, Quiché and Spanish.

I didn't have to ask the next villager I spoke to whether he listened to Radio Momostenango. He works there, logging in the letters the station receives from its listeners. Ricardo was busy with the day's mail when I arrived, but he put aside his work long enough to acquaint me with the broadcast equipment, introduce the Spanish-speaking "disc jockey" Cesar, and locate the station manager.

The number of employees and the level of sophistication of the equipment at Radio Momostenango are deliberately kept low so that the Guatemalan Government will be able to maintain both when outside support is withdrawn at the close of the experimental phase in early 1978. The station itself consists of three small rooms with an entrance in common. The station's broadcast equipment cost only $25,000. The staff is composed of three full-time and two part-time employees, a Spanish-speaking broadcaster and a Quiché-speaking broadcaster, each of whom is on the air for a few hours a day, a project secretary, who handles the station's paperwork and helps maintain the equipment; the station manager, who oversees all operations, contributes to program development, and doubles as an announcer; and a watchman.

The station manager, another unabashedly partisan informant, represented my third yes vote. Mario Mendizabal didn't give me much time to reflect on how my informal poll was going, however. Within 20 minutes of my arrival, he had ushered me out of the hilltop station and into the village — a neat analogy, I later thought, for the way BVE works.

The BVE experiment includes four communication treatments, each of which is used in a different area and matched with a control. The first is radio alone. The second is radio combined with personal contacts made by a BVE-trained monitor. The third makes coordinated use of radio, a monitor, and an agronomist. The fourth, added when the project was modified in 1975, relies upon the unaided efforts of a monitor working in an area unreached by the BVE radio signal.

Mario's idea was to let me see for myself, and the first thing I saw was what appeared to be a ceremony in progress on the far side of the hill. In the shadow of the radio tower and within earshot of a program on modern agricultural practices, a dozen older villagers were burning the previous year's broken pottery and the prize specimens of the last maize crop. It was the thirteenth day of the Mayan calendar, the time to make offerings for the dead and for the coming harvest.

BVE's target audience in several respects typifies peasant farmers throughout the Third World. The average farmer reached by BVE has little or no in-school education, works at most a few acres of relatively unproductive land, lives some distance from an industrial and financial center, and out of necessity derives some income from nonagricultural activities.

Almost mincing steps as the mid-morning heat began to take its toll, we negotiated several steep slopes (the perpetual traverse of which must make the Indian villagers lion-hearted) to get to the edge of town. After pausing to inspect the local geophysical attraction, wind-lashed limestone spires twice the height of neighboring pines, we set foot on one farmer's field and laid eyes on many. A few stalk-stream patches looked planed, but most have been contoured to thwart erosion — as recommended on Radio Momostenango.

Five Years in Guatemala

The Basic Village Education Project in Guatemala has investigated the effectiveness of various combinations of mass media and interpersonal approaches in reaching the small farmer. Some of the findings identified after five years of study seem to have major implications for other projects utilizing radio as a medium in agricultural development. Presenting these findings along with some of the background assumptions capsulizing the educational philosophy behind BVE, and touching upon the research methods used may set the stage for discussion.

Major Findings

Major findings at this point suggest first of all that a high level of radio listenership can be achieved — even in a subsistence farm population. During the first year of the BVE Project, over 90 percent of the respondents in the Eastern project area reported listening to "Radio Quezada."

Second, "educational" radio programming can develop a strong following. During the first years of the project, 35 percent of radio listeners reported a preference for educational programs over other program types, and preference for such programs has continued to increase over the life of the project. In the final experimental year, 1976, over 50 percent of all radio listeners polled preferred educational programming. Most of the shift reflected the erosion of a long-standing preference for popular music programs.

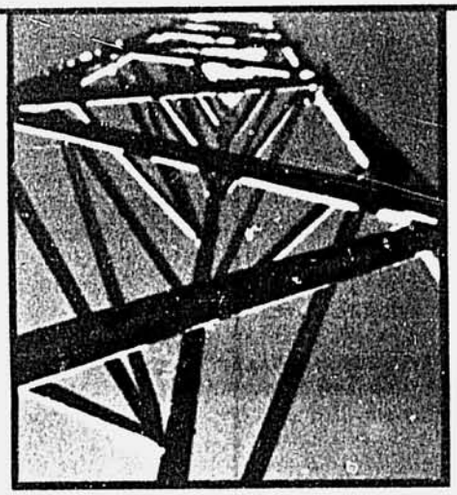
Third, the amount of time spent listening to radio programs may increase as the result of a project such as BVE. In BVE's first year, only 5 percent of the farmers reported listening to the radio all day. In the final year, the percentage had increased to 15 percent — probably an indication that more farmers were listening to transistor radios in the field while they worked.

Fourth, educational radio programming can increase listeners' useful knowledge of agriculture significantly. During the first year of programming, 53 percent of the respondents reported that they obtained agricultural information from the radio, and this proportion increased over the project's duration. During the final experimental year, 73 percent reported using radio as a source of agricultural information.

Even when respondents were asked to choose between several sources of information on a particular agricultural practice, radio remained an important source. During the first year of BVE, 52 percent of those reporting new information about fertilizer use reported that radio was their main source of such information. Similar percentages were established for later experimental years.

Fifth, educational radio programming can affect agricultural practice positively. Individuals receiving the BVE educational programming changed many of their agricultural practices over a two-year period. A 65-item survey showed (So did farmers in the control areas, but change among

■ K C



BVE Programming

■ Edgar G Nesman Thomas A Rich and Sara G Rivers BVE Evaluation Project University of South Florida

AN INTERVIEW WITH DANIEL BENOR

An Israeli agronomist and extension-service expert, Daniel Benor has spent more than 20 years setting up agricultural extension services that now affect some 50 million farm families in some of the world's poorest countries. His approach to extension is described at length in a recent World Bank monograph, "Agricultural Extension: The Training and Visit System," which he wrote with James Q. Harrison.

On February 8, 1978, Benor met with the staffs of the Clearinghouse and the Academy for Educational Development, of which the Clearinghouse is part. Relishing the role of devil's advocate in a roomful of the media-minded, Benor put forth his belief that the mass media are best used in agricultural development to interest and motivate farmers rather than to transfer basic information and skills.

Watchful readers are invited to write the editor in response to the following transcription of Benor's provocative remarks.

Staff: How did you get involved in agricultural extension work?

Benor: I was a cotton and wheat farmer myself for many years before I studied extension principles. One thing led to another.

Staff: How did your technique evolve?

Benor: Cotton and wheat happened to be the main crops in the Seyhan project area in Turkey where I started out. It was easy to convince those farmers that I knew what I was talking about, and once the farmers trusted me, I had no trouble commanding an audience. The farmers listened. Now I don't believe that farmers won't listen, only that they won't listen to people with nothing useful and timely to say.

Incidentally, it's no fun to work in the Seyhan project anymore. The cotton and wheat grown there scratch the ceiling all the time. It's impossible to get higher yields than Turkish farmers get there. When we started, no farmer got 2.5 tons of wheat per hectare. After four years, the same remained true. But all of them used to get less than that amount and now every single one gets more.

Staff: You scarcely refer in your monograph to the use of media in your style of agricultural extension work. Why? Because you stress a face-to-face approach?

Benor: First of all, our method is not face-to-face. I don't think much of extension services that try to reach each farmer face-to-face. An extension service should be able to deliver vital messages to all of the farmers without making personal contact with all of them. We use "contact farmers" to deliver the messages to the entire farm population. And by contact farmers, I don't mean the biggest or richest farmers, but ordinary farmers who have earned their neighbors' trust and respect. If you reach 10 percent of the farmers, the others will be reached, either through seeing innovations in the field or hearing about them.

Staff: How are the contact farmers selected?

Benor: By the community and the extension agents together. But the farmers are not in government employ. Once you pay the extension agent, other farmers will consider him special, an agent of the government. So contact farmers get nothing but know-how for their trouble. We are not in the business of trading goods or seeds for work. The main qualification is that the contact farmer is accepted by the society. He is not someone with extra privileges.

Staff: How do you select the people who train the contact farmers?

Benor: Have you ever seen a bank without money or a supermarket without stock on its shelves? The only thing we sell is know-how, so we pay a lot of attention to training the extension agents. Having a strong, single line of command is essential to our success. The ratio of extension agents to extension officers is about one to six or eight, and that ratio is the same at every level of the service. The agents are trained by the officers once a fortnight at the same time and the same place each session.

Staff: In your monograph, you say that restricting the size of a project area is preferable to "diluting" the power of the agricultural extension service, and you suggest that an agent-client ratio within the range of one to 500 and one to 800 is best for most kinds of agriculture. Have you ever considered using media to extend the area of a project's impact to include a second tier of clients?

Benor: I can offer no scientific explanation of how I arrived at that agent-client ratio. Experience was my teacher. Of course, messages cost more to deliver as the ratio shrinks. But we never use media *instead* of the extension agent. Media are treated not as labor-substitutes but as complements. Radio, for example, cannot teach farmers to use elevated nurseries in paddy production. What it can do is raise the interest of the farmers in this technique. It can also provide simple instructions and recommendations to the farmer who has had some contact with an agent.

I am delighted to involve available media and media specialists in the effort, but I don't think that even TV can train farmers in field practices. Farmers need people to demonstrate and to check their progress and to help them take into account the special characteristics of their own plots of land. TV cannot be specific enough. I appreciate the media, but I regard them as helpers.

Staff: You contend, then, that mass media are relatively unimportant — deserving, say, only 5 percent of a project's budget?

Benor: I can't give you a precise figure. In extremely underdeveloped countries, the media can be used to attract farmers to programs and make them aware of their options. But in such countries, highly specific and centrally developed messages sent out in lieu of extension agents don't work. The same tack works among the most highly agriculturally developed countries. There people need good ideas that reach them via the media and have the means to try those ideas out. For countries between the extremes, other strategies have to be used.

Staff: How do you identify where, when, and how to use the media to supplement agent contacts, especially where no extension service exists?

Benor: I have no specific recipes, but I do know that the media will have little impact unless their use is combined with an extension service. Farmers may listen, but they won't follow, and that makes all the difference. With extension agents in the field, advice spread via the media can be effective. I myself broadcast five minutes of highly technical information over radio to farmers every morning for years.

Staff: How are you conveying information through all levels of the agricultural extension service and insuring that the information the farmers get is appropriate and timely?

Benor: This is where the media can be helpful. When we have a message by a top Subject Matter Specialist (or SMS), no more than two weeks ever goes by without the opportunity to deliver that message. Five thousand extension agents in West Bengal, for example, can get any message to the target audience in two, never more than three, weeks. Each group of 50 to 60 extension agents is overseen by an SMS. SMSs pervade several levels of the system, and these mid-level SMSs are not mere postmen; they interpret the message in light of local needs and make the necessary adjustments before making carefully-tailored recommendations.

Staff: Is this entire process oral? If so, how do you know that the message remains intact and consistent across all these transfers?

Benor: The training program for extension agents is different in each state because conditions differ. Messages do change, but that change reflects a local reality. Training sessions consist of lectures, discussion, and two- or three-hour sessions in the fields. That way, the agents know what they are talking about and rote memory becomes relatively less important. Agents also receive printed hand-outs to refer to later.

Staff: Does the farmer get such hand-outs?

Benor: No, the rural majorities are illiterate in many of our project areas. What the farmer gets is a verbal explanation that he can understand. He is also exposed to illustrated posters. Farmers have remarkable memories for useful information because constant practice reinforces their knowledge. Some illiterate farmers amaze me with their ability to rattle off the scientific names of plants and plant diseases.

Staff: Can what you are doing be done in areas where there are not enough extension agents?

Benor: I have never been to a place where there are not enough extension agents. Extension agents don't have to have high school diplomas and two or more years of training in agricultural science and extension principles.

In Nepal, for example, where there are not enough high school graduates to serve as such agents, we selected the better farmers, hired them on a contract basis, and trained them to do extension work. With the back-stopping of the SMSs and the research people, they do a fine job. The only place where an extension service cannot be started is where all farmers get the same yields and use the best existing techniques to get them. A shortage of good people to work in the service is never the problem.

Staff: How do you make sure that your Subject Matter Specialists are getting accurate information about local conditions and that they prepare the right messages?

Benor: Subject Matter Specialists spend one-third of their time doing adaptive research, one-third in the farmers' fields, and one-third training the extension agents. They have plenty of opportunities to see the impact of what they are doing and to confront the farmers' problems firsthand. In short, the Subject Matter Specialists know the facts of life. The best indicators of the appropriateness of the messages are increased production and income and the fact that the inputs the agents recommend go out of stock so rapidly.

Staff: You are describing a picture in which the agents have the answers to the farmers' problems, a situation in which what you call "know-how" is all that's needed to make things work. But aren't agricultural conditions in some parts of the world so deteriorated that even the experts are stumped?

Benor: Yes. The extension service can't work miracles. It can't make rain. It can't turn back floodtides. Farmers understand that. In Sri Lanka, for example, we started a project in the midst of a drought that lasted for years. The attitude of the farmers there was sane. "The yields are terrible," they said, "but the little we get is thanks to the extension agent's help." Success is relative, so all we can do is to make the best use of existing resources.

Staff: It's easy to go along with you when you say that learning agriculture from an extension agent beats learning agriculture from a radio or TV presence. But doesn't training agents, giving them on-the-spot refresher training every two weeks, and providing them with vehicles cost a small fortune?

Benor: We figure that in Indonesia the whole exercise can be paid for completely if the farmer can increase his yields of only one of his crops, paddy, the equivalent of 12 kg per hectare. Yet, Indonesian farmers often realize half-ton gains per hectare. With our approach, the amount of government money spent on each farm family is well below that spent in any country. Cost is scarcely a consideration. No country in the world can afford *not* to spend this money.

Staff: How do you know that agents' reports reflect what is actually happening?

Benor: It's simple, really. We don't rely on written reports at all. People *at every level of the system* pay unannounced, even spur-of-the-moment visits to the farmers' fields. The fields are the final test. What's more, if the extension agent isn't doing a good job, his supervisor is held responsible. The incentive to spot-check often and carefully is obviously great in a system like this, and that incentive works.

Staff: When a project works less than successfully, what usually goes wrong?

Benor: There are no failures as far as I am concerned. But there are political problems. In particular, transferring agents from the aegis of one agency to another in order to establish a single line of command causes problems. But it can be done. People at the top have a stake in making agencies more effective; they just have to be convinced of the enormous potential for positive change that attaches to the risk they take.

Staff: But what do you do when existing agricultural extension services and government bureaucracies resist your methods?

Benor: I've heard the kind of stories that your question implies you have heard. Their main thread is "this will never work." Naive as it may sound, though, things "destined" to fail often do work if it is kept uppermost in the minds of those involved that satisfaction in one's work is a universal goal — for the extension worker and the government bureaucrat, as well as for the farmer.

Enthusiasm and personal effectiveness form the same kind of self-perpetuating cycle that dispiritedness and personal ineffectiveness do. The excitement of the well-trained, and so well-received, agricultural extension worker is wonderful to see, and it lasts.

Staff: Would you say, then, that the essence of your approach is organizational change?

Benor: Yes. Teaching and training are vital, but quite a few people know how to teach and train. If I stress the importance of organizational change, it is because that is ultimately more difficult and is a prerequisite to whatever else happens.

Having the right message is also vital, and not just for extension agents. I have the "right message" when I approach high-level ministers and government supervisors.

Staff: In your booklet, you say that a main problem with existing agricultural extension services is that the agents are overburdened and expected to carry messages on too many subjects. In your view, would eliminating that problem require setting up separate services for each sector?

Benor: No. One extension service is enough. Most development problems relate somehow to farming and income-generating activities, and when explicitly agricultural messages are not pressing, extension agents can tell the farmer about the nutritional value of local crops and can relate increased agricultural productivity to decreased needs for large families. But the agricultural message takes priority, and extension agents should not be burdened with jobs like dispensing pills or keeping the farmers' credit records. Such time-consuming activities deflect the agents' energies and weaken the program.

Staff: Any final words?

Benor: Yes. To me, organizational structure is the key to what I am doing. But I regard my work as primarily a communication service, so in one sense we share a deep interest.

"Agricultural Extension: The Training and Visit System" can be obtained from the World Bank, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A.

Rural Education and Agricultural Development — On and Off The Official Record

Agricultural development projects do not operate in virgin territory. Their success is conditioned primarily by the receptivity and adaptability of the rural people. Rural education is thus its cornerstone.

"In large areas of the world production per man is low — so low that many families barely glean enough calories from their meager crops to keep them alive . . . The critical need for better and more widespread efforts in agricultural education and extension must be recognized . . . (vital are the) adoption of approved extension methods; . . . adequate training of personnel needed in carrying into action the agricultural programs . . .; general and vocational education among farm people . . ."

Such were the very first findings adopted in Quebec City by the First Session of the Food and Agriculture Organization of the United Nations. The time: October 1945.

Thirty-two years later the Joint FAO/ILO/UNESCO Advisory Committee on Agricultural Education (the JAC), meeting in Geneva for its fourth session, reported as follows:

"Member States need to give priority to the training of agricultural personnel in their development plans . . . efforts should be made to give attention to organized participation of rural people in the planning and implementation of rural development programs, including training programs . . . (There is) need for a much more dynamic approach to agricultural education and training than is presently the case."

In layman's English, this diplomatic language means that 17 specialists from all continents meeting in the spring of 1977 found training of agricultural personnel throughout the developing world on the lower rungs of governments' priority scales and the participation of rural people in their own education grossly inadequate.

The preamble of the 1977 JAC report could thus have been taken word per word from the Quebec report: "millions of families barely glean enough calories from their meager crops to keep them alive." In fact, their number has increased in the intervening three decades.

During these 30 years the pace of change was hectic; rates of economic growth increased spectacularly, the volume of world trade increased even faster; political independence swept two continents; international agencies grew in number and in stature; technological progress proceeded at an undreamed of pace, especially in the fields of genetics and agronomy; and major intergovernmental world conferences on Population, Environment, and Food were held. Yet, increasing numbers of rural poor have been left behind.

Besides the devious obstacles to harmonious rural development identifiable in the socio-economic structures of developing countries and in the prevailing international economic order, should not some assumptions implicit in agricultural development projects be indicted? The problem is not new and was so topical ten years ago that the directors general of the three international agencies primarily responsible for its solution convened a World Conference on Agricultural Education and Training in Copenhagen in July 1970. There, the communication gap was scrutinized. The major finding was that development policies and projects were all too often conceived and operated without regard for the necessary involvement of the very people they were intended to promote. Similarly, curricula in education at all levels were conceived from an academic standpoint and seldom reflected the basis and felt needs of the recipients. True for genuine national programs, these criticisms were even more relevant when international cooperation was concerned. The single most glaring failure was the practical absence of teaching and training materials in the languages of the peasants.

While no new global assessment of the progress in rural education has been undertaken since 1970, world education's qualitative improvement does seem somewhat more satisfactory than its quantitative growth. Sociologists have made a valuable contribution, and the presumptuousness of the international expert has abated noticeably.

In the field of concepts, international developments were influenced by some major events: the UNESCO report on "Learning to Be" (1972), the World Food Conference (1974), and the reorientation of the World Bank's program toward giving better service to the poorest of the poor. In all these activities, education and communication were treated as basic components of an integrated rural development strategy. At the same time, the concept of education was broadened and formal schooling lost part of its artificial supremacy to become a phase of life-long education. Exploring the consequences of these conceptual changes, the JAC in its 1973 report stressed that "education must correct the handicaps due to being born into an economically and culturally deprived environment" and that "absolute priority must be given to education geared to the economic and social development of rural areas seen not only as harboring the least favored sections of society but also as offering mankind its brightest prospects."

The universal acceptance of the essential role of integrated rural development is perhaps best illustrated by the decision to substitute for the Second World Conference on Agricultural Education (originally scheduled for the early eighties) a commission meeting within the framework of the forthcoming World Conference on Agrarian Reform and Rural Development to be convened by FAO in early 1979.

At the moment, three subjects in particular call for intensive research and study: first, the improvement of the "image" of agriculture, a goal that the educational system can further significantly by changing the attitudes of children; second, the strengthening and upgrading of the corps of middle and low level extension personnel; and, third, the realignment of the objectives of teaching at all levels to support integrated rural development.

■ **Roger Savary, International Federation of Agricultural Producers, Paris**

Call For Copy

Upcoming issues of *DCR* will focus on communication planning and policy-making, needs assessment, community development, family-planning activities, learning games, and formative evaluation in communication projects.

Knowledgeable and experienced readers are invited to submit manuscripts on these subjects to the editor. Articles on other subjects of interest to *DCR* readers will also be reviewed, since even theme-dominated issues will carry timely material on a variety of subjects.

Highest priority will be given to previously unpublished material, and every effort will be made to review every manuscript.

Liklik Buk — A Pocket Encyclopedia For Village Leaders

Communication has always been a challenge in Papua New Guinea — where over 700 languages are spoken. With the coming of independence in 1975, the need for a broad base of informed citizens compounded the considerable problems of information exchange.

Like many developing countries, Papua New Guinea accords high priorities to agriculture and rural development as means of decreasing both food imports and urban migration. These priorities often require communicating with those people most difficult to reach — rural villagers who may live in isolated spots and who probably speak only the language of their area.

How do we reach these people? Perhaps the most obvious way is through the people around them. Illiterate farmers, like all of us, need to have information presented in an understandable form. Charts and graphs on glossy paper are not very impressive to village farmers. Their assessments are usually made on the basis of evidence they can gather themselves.

For example, pigs in Papua New Guinea are traditionally allowed free run in the villages and surrounding areas. Only gardens are fenced. This system is easy to maintain — the pigs forage for food and sleep in or under the village houses. So, when farmers see a local school or agri-

cultural extension officer building a pig house, they scoff "It is so much work to build a pig house and keep it clean, as well as bring food to the pigs Hardly worth the effort!"

The scoffing farmers, however, keep a close eye on the project and, if it goes well, they may note that the pigs grow big, that the area is clean, and that the pig manure helps gardens and the crops grow well The farmers may consequently decide to build pig houses If they do, the school project will probably afford an opportunity to continue to observe and learn.

Such communication is usually between the farmer and someone he knows, someone who lives near him but who has a wider scope of acquaintances — a teacher, a pastor, or an agricultural extension officer And this "someone" is probably literate

Aiming at expanding this kind of communication, the Melanesian Council of Churches has come up with *Liklik Buk*, a rural development handbook catalogue for Papua New Guinea, intended for literate village leaders who can communicate by doing

Liklik Buk represents an effort to present in one book a wide range of possibilities and information It contains short articles on crops, fertilizers, animals, health, simple technologies and processes, as well as lists of useful books and organizations An article on a crop, for example, may contain some specific information on where to obtain seeds, how to grow them, what experience farmers have had with the crop in Papua New Guinea, as well as list where and how to obtain further information In addition, the *Liklik Buk* Information Centre in Lae provides information in answer to readers' requests. It is also organizing a small library.

Liklik Buk has been well received both in Papua New Guinea and abroad. The second edition of 12,000 copies sold out in less than a year and is currently being reprinted. Agricultural training colleges, teacher training colleges, and the PNG Department of Primary Industry have been bulk purchasers Comparable organizations from the Solomon Islands and other South Pacific island countries have also ordered the 'buk.' The book has found a large audience overseas among the 'back to earth' cult too

As a sizable portion of village leaders are literate in Pidgin but not English, *Liklik Buk* is currently being translated into Melanesian Pidgin — quite a task since Pidgin is not a very defined or technical language. The Pidgin edition will be based on the second English edition, but the presentation will differ in view of the new target group.

The true impact of *Liklik Buk* awaits evaluation. But if robust sales mean anything, needed and once scarce information is making its way toward some of Papua New Guinea's most geographically and linguistically isolated people

■ **Ed and Mini Arata, Liklik Buk Information Centre, Lae, Papua New Guinea**

Development Communication and The University

Can regional universities handle the prickly but essential job of integrating government nonformal education efforts in development communication at the community level? This might well be the real question behind a three-year exploratory study on communication technology for rural education that begins in the Philippines early this year, with World Bank funding, under the aegis of the Educational Development Projects Implementing Task Force (EDPITAF) of the Department of Education and Culture.

The new study is one component of a pilot project on the use of "cost-saving communication technology" — chiefly radio and the print media abetted by personal interaction — to expand educational opportunities in the countryside Its test site is the University of the Philippines at Los Baños (UPLB), which has a strong College of Agriculture and whose avowed clientele is the rural poor.

Worked out in answer to the universal lack of development-communication teaching materials that can be plugged into the media, the exploratory study will also test a learning system through which such materials can flow and be used by target groups The framework of the system already exists the constellation of regional and farmers' training centers that make up the newly created Philippine Training Center (PTC)

Meant for the continuing education of trainers, extension workers, and local leaders, the PTC has its national office and regional center quartered at UPLB Extra planks might have to be built into the framework to meet the unique requirements of the communication-technology study but, whenever possible, the study will ride on the PTC system, which it was in fact designed to complement in its pilot stage.

The development-communication study team must interact with assorted service, media, educational, and civic agencies currently engaged in teaching farmers, out-of-school youth, and other residents of rural communities. It will have to mind internal linkages too, for the university has its own sticky spots in which inter-disciplinary projects can bog down.

But the biggest task is dovetailing study objectives and operations with those of the other agencies ministering to the same clientele in the pilot site, since each organization has its own commitments and identity to uphold. The major agencies involved are the Departments of Agriculture, Natural Resources, Agrarian Reform, Local Government and Community Development, Public Information, the National Media Production Center, and the PTC.

The politics of inter-agency cooperation and coordination has always been thorny, in the production of development-communication materials as elsewhere. It is here that a regional university that has a relatively disinterested image, that is highly credible to the rural clientele because of its long-standing extension ties, that is half-in and half-out of the government bureaucracy, and that is thus less subject to pressure can make an acceptable coordinator. Its rural educational radio station and communication teachers and researchers are also plus-factors in this case. Probably its best asset, however, is its wealth of reliable and up-to-date information on agriculture and related fields — information that can be converted into media materials.

The content of the radio programs, print materials, farmer forums, and other supportive media of the Los Baños study is openly and unabashedly technology, a research-based practical and social technology of the sort that a university is best equipped to generate Unlike similar radio projects elsewhere that stress the social unfolding of the individual, the Los Baños study, in the tradition of agricultural extension, sees economic, occupation-related information as the starter of development.

University scientists, even the agricultural kind, have always been subject to charges of ivory-tower research, sometimes with good reason Today when "appropriate technology" and "popular participation" have become by-words in development, the equally current concept of technology transfer in relation to the rural poor comes under some suspicion If this handicap persists, fielding scientists so that they may get an accurate reading of rural problems may be the answer. The development-communication study may have yet another potential avenue for dialogue its multi-media rural communication system for the use of extension workers, local leaders, rural families and (to close the circle) service agency decision-makers.

If, later on, the exploratory study graduates into a full-blown project with other regional sites like the PTC, it is going to want many more development-oriented young people trained in operating educational community media. The regional universities can plan ahead for this and similar eventualities by taking a hard look at their communication and extension programs now — if, that is, they are among the new kind of universities coming up in the Philippines and in other developing countries that see themselves as full partners in rural development.

■ **Nora C. Quebral, Professor of Development Communication, University of the Philippines at Los Baños**

Folk Media Exchange

Ross Kidd of the Boipelogo Education Project in Botswana is building a collection of documents on folk media, the contents of which will be reflected in an annotated bibliography he plans to append to his doctoral thesis. Write to Kidd at Private Bag 005, Gaborone, Botswana.

A Communicator's Checklist

1 Some social scientists must go to incredible lengths to rescue common sense from a live burial by their colleagues, and Wilbur Schramm is on the side of the rescuers. He's a master synthesizer who knows a good idea when he spies one and who gives credit where it is due. Moreover, he indulges in few of those guilt-ridden exercises of revisionism whereby some academics try to "historicize" (that is, disown) their past goofs. Schramm is, in other words, well qualified to perform the task he has undertaken in *Big Media, Little Media — Tools and Technologies for Instruction:* a systematic assessment of the research on the uses, costs, and potential of educational media.

At once an inventory and a manifesto, *Big Media, Little Media* was written under a U.S. AID grant in 1974 and revised in 1977 in light of new research findings and extra time to reflect. As the title implies, Schramm's method of investigation in this book is comparison. What is not immediately apparent is the pervasiveness and complexity of the big/little contrast. At the most general level, Schramm expresses the opinion that it is time to concentrate on micro-research (research that, for example, "compares two or more ways of accomplishing a specified instructional task . . . for a given kind of student in a given situation") and to let macro-research (research that, for example, "compares the outcome when sixth-grade arithmetic is taught by a classroom teacher to the outcome when it is taught by an instructional medium") slide for a while.

Accordingly, he himself devotes less attention to distinguishing between the small fry and the big fish among media options (a fairly routine task once definitions are worked out) than to laying the groundwork for the development of a three-dimensional taxonomy of media uses, learning tasks, and learner needs (audience composition). Indeed, as if to astonish the mind's eye, Schramm adds a fourth dimension or range of considerations to this construct — cost-benefit and unit-cost analysis.

Given Schramm's firm commitment to resist absolutes and his equally firm belief that educational media planners will be more or less at sea until these various sets of categories can be put on the same grid or at least cross-referenced, it is not surprising that the taxonomy he dreams of does not emerge from his book. Schramm does not seem surprised anyway. He seems to recognize that his is a mid-wife's function and that by putting the findings of economists, psychologists, and media analysts into parallel forms and identifying the many research gaps, he is setting the stage for the work that remains to be done before all the pieces make sense. This recognition, in fact, probably accounts for Schramm's brave decision to treat learning theory, economic analysis, and technological capabilities as the one messy whole that they are instead of as independent variables that will combine in the same fashion and with the same results under all conditions.

As the chapter on the economics of mediated education suggests, nothing is without its costs. Even intellectual integrity. Schramm's willingness to entertain several sets of questions simultaneously and to bestride so much academic territory leads him into a few self-contradictions. Particularly confusing is his waffling on the question of appropriate technology: he uses the term "super media" throughout the book only to debunk it in the conclusion and states in Chapter 8 that "a combination of media is likely to accomplish more than any medium by itself" after quoting in Chapter 2 evidence to the effect that "in numerous conditions the use of two channels (to the brain) may be less productive than one."

Flaws and all, *Big Media, Little Media* stands a chance of becoming a classic text. It is full of examples and case histories, abundant in insight, broad in conception, and well worth reading.

Big Media, Little Media — Tools and Technologies for Instruction can be obtained from Sage Publications, Inc., 275 South Beverly Drive, Beverly Hills, California 90212, U.S.A. for $17.50 in cloth and $7.50 in paper. ■ **K.C.**

2 A propagandistic approach and a heavy dose of Swedish political thought are the two hurdles for readers of *Whither Video? Commercial Commodity or Public Property* by Margareta Ingelstam. Yet, the book is a valuable morning's reading for those considering videogram investment. If you know people in a national government currently wrestling with communications law, they may (to use a pitchman's phrase) thank you for recommending this English-language summary of an apparently longer Swedish work.

"Videogram" is the translation of a Swedish term for videotapes, videodiscs (a technology still in development), video cassettes or any picture or sound-and-picture material shown on a television set without broadcast reception. *Whither Video?* offers cursory analyses of the various systems available, including an incomplete rundown of specific brands, prices in Swedish Krona included (U.S. $1.00 = Skr 4.65, a fact not in the book).

This work includes what may be the first analysis of videogram use in library activities and community television production — areas in which Sweden is a world leader. Suggestions are offered on how videograms can be employed, and there are tips on the use of the new technology in teaching. (Don't allow educational material to run more than five to eight minutes, the logic goes, or group members get bored and impatient about having their say!)

The method chosen for distribution of pre-produced videograms is an issue considered critical to the future of the technology, and the author offers various options.

Ingelstam also steps onto the newly plowed ground of television's technological danger: not injury from X-rays or eye strain, but the growing fear that a TV-suckled society loses the ability to distinguish reality from unreality. She cites a range of studies to justify her statement that "all sound and picture programs involve particularly serious hazards for children." She worries about the human race being reduced to a "media mollusc," and she clearly hopes readers will at least consider the advantages of doing without television — a subject only now beginning to be discussed in the U.S., the world's most TV-saturated society.

One thing this book does not do is offer any true discussion of the issue cited in its title. The book is wholly on the side of government control of the technology, non-commercial development of videograms, and a videogram-distribution system divorced from commercial and mass marketing considerations. There is only one remark from the "commercial" side of this issue, that from a distributor of violent and sexually explicit films. It is a statement chosen to provoke loathing for the speaker's species in the stomach of every reader. Not even Walt Disney is spared. In the writer's mind commercial television is apparently all bathwater, no baby. Her viewpoint has been absent from most literature and criticism of the medium, particularly in the television-dominated U.S. media.

The book offers many video-development alternatives, and even two 1996 fantasy interviews with highly placed government decision-makers, "videologists," discussing the position and role of video under two differing scenarios of development.

"*Whither Video?*" is more a social/political document than a technical one. But then, how are decisions made where you are?

"*Whither Video? Commercial Commodity or Public Property*" can be obtained from TRU, Fack, S182 71, Stocksund, Sweden. Specifically request either the English translation/summary or the longer Swedish work ("Vad ska vi gora med video grammen? Handelsvara eller allman rikedom.")

■ **Scott Shuster, broadcaster and freelance writer, Washington, D.C.**

3 Those familiar with previous editions of the *Aspen Handbook on the Media* should respond enthusiastically to the expanded *1977-1979 Edition*. Others would do well to peruse this sourcebook, which provides its readers with a profile of American mass media research and of publications and institutions focusing on communication. In the early 1970s, the Aspen Institute Program on Communication and Society generated discussion on national communication issues and the policies needed to address these issues.

Thus, as editors William L. Rivers, Wallace Thompson, and Michael J. Nyhan point out, the *Aspen Handbook* concentrates on research publications, government agencies, and other institutions "particularly concerned with national policy issues in mass communications." However, they add in their preface, this most recent *Handbook* reflects the rapid growth and broadened scope of the communication field, listing new conceptual categories, humanistic questions, and technological considerations. (It is more than four times its original size of 97 pages.)

The increased number of Canadian institutions reflects an attempt to make the *Handbook* descriptive of English-speaking North America and not just the United States. Indeed, Canadian-American commonalities abound: the joint use of the CTS satellite is just one example. Certainly, in future editions, the international and overseas parts of the *Handbook* will have to grow to keep up with what is burgeoning in the communications field.

The Aspen Handbook on the Media does not attempt to profile the communications industry. That behemoth was tackled by Christopher H. Sterling and Timothy R. Haight in the recently published *The Mass Media: Aspen Guide to Communication Industry Trends*. Rather, the *Aspen Handbook* selectively provides comprehensive and current information on (1) universities with research programs and communication departments, (2) non-academic institutions conducting communication research, (3) organizations supporting communication research, (4) communication organizations of every sort, (5) media action groups, (6) U.S. and Canadian government communication policy-making bodies, (7) communication law courses, (8) international and overseas communication organizations, (9) special libraries and resources on communications, (10) communication periodicals and books, (11) communication bibliographies, (12) selected films on communications, and (13) an index to it all.

For those interested in applications of communication technology, a new section on film — films about television, radio, newspapers, and future technology — should hold particular interest.

Careful attention has been given to the descriptive annotations so that one who has spent some time with the *Handbook* should have a good sense of American communication trends and policies, and the editors have provided ample source names and addresses for further investigation.

The 1977 edition of the *Aspen Handbook on the Media* can be mail-ordered from Aspen's Publishing Program Office, P.O. Box 1652, 360 Bryant St., Palo Alto, CA 94302, U.S.A. for U.S. $6.95. ■ **J.M.**

4 *VTR Workshop: Small Format Video* by Lovetta J. Atienzu is a basic how-to manual for the communication field agent without technical training and with an interest in using portable video equipment.

The monograph describes half-inch portable video hardware and outlines steps for making tapes, editing, and setting up home-base and mobile facilities. The technical chapters are limited to coverage of half-inch "portapak" type equipment and are reminiscent of material in several video handbooks that appeared in the U.S. in the early 1970s. However, particular attention is paid to problems the development worker is likely to encounter with the equipment in the field.

Unfortunately, the applications or "why use it" section falls at the book's end. The apparent, but dubious, assumption is that the reader is already familiar with developmental applications of video.

VTR Workshop: Small Format Video one of the UNESCO series called Monographs in Communication Technology and Utilization, costs $3.00. It can be mail-ordered from UNESCO, 7 Place de Fontenoy, 75007, Paris, France.

■ **Heather Hudson, Academy for Educational Development**

5 Clearly, the aim of Rex Keating and the International Planned Parenthood Federation in publishing *Grass Roots Radio* was to demonstrate how to use radio as a development tool. To that end, they expect their audience to be fieldworking personnel in developing countries. Keating and IPPF hope that by showing how to use radio, its use will be expanded and integrated into the local communication structure.

The author goes into some detail about broadcasting operations, the inner workings of the tape recorder, the basics of interviewing, and script-writing. He also gives a number of case histories.

All this material is useful and accessible to the readers, however, only if they are comfortable with technology in general and have a fairly sophisticated command of English. As a consequence, the manual is, in effect, put out of the reach of those for whom it was intended.

Grass Roots Radio can be obtained for U.S. $5.00 from IPPF, 18-20 Lower Regent Street, London SW1Y 4PW ENGLAND. Prerecorded tape cassettes of examples of the use of radio in family-planning efforts around the world also cost $5.00 each. ■ **J.B.**

6 At the recent International Development Conference in Washington, Phillip Coombs reiterated a series of long-standing arguments (some as old as 25 years) for stressing local participation in the design and implementation of development programs. The new focus on "reaching the poorest of the poor" has, in fact, led some planners to believe that project design and implementation must actively involve the very "lowest" groups of society, not just country-government officials. This approach is often characterized as "bottom-up" or grassroots development.

Jeanne Moulton's doctoral dissertation, *Animation Rurale: Education for Rural Development*, makes a timely contribution to this discussion. Moulton takes an exhaustive look at the 18-year-old African experiment in *Animation Rurale*, focusing on its historical origins, its theoretical infrastructure, and its practical results in Senegal and Niger.

Animation Rurale, theoretically at least, is an attempt to carry local participation to one of its logical extremes. It emphasizes the practical preparation of rural people for economic development, stresses indigenous cultural values over colonial ones, focuses on the capacity of rural people to determine their own development destiny, reflects the belief that rural development is a social rather than an individual phenomenon, and proposes that the transformation of the people at the bottom necessarily involves the transformation of whole institutions.

Animation Rurale differs from its Anglo counterparts. As Moulton suggests, its French Catholic historical context makes it more hierarchical and authoritarian than the methods favored by many Anglo observers. But *Animation Rurale* does nevertheless appear to be a long-term, structured, and systematic attempt to achieve grassroots development.

In a creative review of four development theorists, Moulton leads the reader to conclude that *Animation Rurale* failed to achieve its principal objective, the involvement of rural people in the decision-making processes of development.

It is at this point that Moulton's argument loses power. Her suggestion for making *Animation* work amounts to little more than the reiteration of the shopping list of pre-conditions that planners have been demanding of developing countries for years: top-level support, decentralized decision-making, financial resources to support long-term training, political stability, etc. Not exactly the pre-conditions for development, these ingredients represent development itself. Indeed, if these conditions do represent the prerequisites of change, then grassroots development may be hopelessly impractical.

This study is compelling because it raises important and timely questions. If international agencies are focusing on the poorest of the poor, if grassroots dogma is again being dusted off, polished up, and publicly touted, then should we not ex-

amine programs like *Animation Rurale* closely and determine first if inherent flaws mar such proposals? Certainly other development projects have been weakened by the seemingly unavoidable conflict between the needs of ruling elites and the requirements of social development. Moulton demonstrates how the practical demands of power politics can take precedence over the needs of poor people, even in the presence of a supportive charismatic leader. What is there in our new proposals to suggest that idealistic motives will fare any better this time?

Much of the book is devoted to a description of how *Animation Rurale's* theoretical concepts were applied in Senegal and Niger. While the histories of the programs vary, their results are strikingly similar. In both cases, the theory was never fully implemented. More important, the original goals and processes of *Animation Rurale* were distorted, often beyond recognition, by the practical political needs of the ruling elites in both countries. While the Senegalese program enjoyed a three-year honeymoon during which time government officials supported the involvement of rural people in national decision-making, the demands of rural people ultimately became more an obstacle than a contribution to the maintenance of power. The Senegalese goals of 1960 centered on rural consciousness-raising; by 1968 they emphasized civic and moral training, and by 1971 they focused almost exclusively on technical training. As Moulton states:

> "Whereas animation did not lose the ideological support of those at the national level who had conceived it, pressures from various interest groups forced a conflict to be resolved on the national level which resulted in curtailment of the program. After 1962 the vigor of *Animation Rurale* began to dissipate."

The coercive influence of power politics on local participation was even clearer in Niger, where the absence of a national ideology similar to President Senghor's African Socialism confined the program to a scattering of patchwork projects and contributed to its domination by French experts whose presence made program goals less acceptable and less understandable to rural participants.

The results of this study are valuable because they call some strong and widely held beliefs about development into question. They constitute a reminder that fighting the results of poverty is probably more satisfying personally but ultimately less essential than entering political battles in the halls of power.

Animation Rurale: Education for Rural Development can be obtained for U.S. $5.00 from the Center for International Education, University of Massachusetts, Amherst, Massachusetts 01002, U.S.A.

■ **Bill Smith, Academy for Educational Development**

7 While far from breathtaking, the *Report on the Conference and Workshop on Nonformal Education and the Rural Poor* is livelier than many documents of its ilk. More questioning than declarative, it is occasionally airy but seldom windy. And — good news for the report-weary — its editor and the *rapporteurs* resisted the temptation to see every discussion as the stuff of which a consensus is made, so it packs a few surprises.

Less to its credit, the *Report* gives at its weakest seams. A few early sections embrace too much material. Others contain so many lists that the reader feels disposed to treat them as reference works and to browse rather than pay close attention.

More down-to-earth are the hundred or so pages devoted to reviews of specific projects. Chapter Four covers three rural development projects that use nonformal education principles. Chapter Five focuses on the use of nonformal education in nutrition, health delivery, and family-planning projects. Chapter Six explores consciousness-raising efforts in rural Ecuador, Guatemala, and Botswana. These project reports, shortened versions of papers delivered at the conference by project evaluators or managers, vary in length, focus, and degree of documentation, but all represent solid and easily assimilable research. Similarly, each leaves some scores unsettled, but all deserve to be considered part of the basic literature on education in development efforts.

This last point leads irresistibly to another, which is that much of the best material in this report is reprinted and abridged. Only the small-minded need blindly uphold the copyrighter's cause, but a reader cannot be blamed for preferring to lay hands on the real thing and for expecting a new book to offer what existing publications do not. True, the repetition is not irritatingly extensive, but the problem touches upon the fundamental question of audience identification: What sort of use will those for whom the book is intended make of six excerpts, even six such provocative excerpts?

Accounts of the panel discussions featured at the conference are easy enough to reckon with, though perhaps too brief to be of much practical value. In the summary of the forum on using media systematically in nonformal education, misconceptions (about the rural poor) that hamper successful communication planning are pinpointed, and the social and economic considerations that media designers must address before selecting a communication medium for a particular area and message are identified.

The resume of the panel called "Improving the Performance of Nonformal Educators" zeroes in on ways to develop fieldworkers' nonformal education skills. This panel discussion apparently echoed the theme of the whole conference, which was "not to probe the mysteries and complexities of rural development *per se*, but to explore on an 'interdevelopmental sector' basis . . . better ways of relating nonformal educational concepts and methodologies to the central needs of the rural poor."

Parallel to this last high-minded purpose is another — "to explore on an 'interdevelopmental sector' basis . . . better ways of relating nonformal education concepts and methodologies to the central needs" of those who would use them to help the rural poor. This book represents a fair stab at fulfilling both objectives.

Edited by Richard O. Niehoff, *Nonformal Education and the Rural Poor* can be obtained from the Institute of International Studies, The College of Education, Michigan State University, East Lansing, MI 48824, U.S.A. ■ **K.C.**

8 Appropriately enough, "Communicating with Pictures" is heavily illustrated. At the proverbial thousand words per picture, it speaks volumes in 28 pages. But the sparse text is essential, primarily because one of the main points made in the pamphlet is that, by themselves, pictures can rarely be counted upon to convey ideas precisely and forcefully.

This broadside contains the findings of a study carried out in 1976 and samples of the visual aids tested. It is the record in shorthand of a joint attempt by UNICEF and Nepal's National Development Service to answer three questions: 1) Can pictures alone communicate ideas and information to villagers? 2) What kinds of pictures do villagers find most meaningful? 3) Do different colors possess special meanings for villagers?

In brief, the team found that villagers need help in interpreting illustrations but that, once explained, pictures can effectively convey and keep alive important new ideas. It found that the visual imagination requires priming, that nonliterate villagers are most apt to "get the message" if it is borne by photographs doctored so that all inessential information is blocked out, and that colors, like words, have powerful culturally influenced connotations. It also made many other less general discoveries — all of which are taken into account in the researchers' recommendations.

Whether the specific findings of this study mean anything outside of Nepal is anybody's guess. But the general conclusions are well-reasoned and ought to be welcomed by a wide audience. As a bonus, this pamphlet helps readers identify their own preconceptions about the meaning of visual signs and lets them in for a few painless surprises.

"Communicating with Pictures" can be obtained from the National Developmer Service, Kirtipur Campus, Tribhuvan University, Kathmandu, Nepal. ■ **K.C.**

The editor welcomes disinterested reviews of new or neglected books on communication technologies, methods, or issues.

Next Time (Continued)

adequate for Ph.D.s, M.A.s, and college graduates. The greater need is for people who can be trained to work directly with farmers who are ready and able to adopt some simple practices that can increase production. I would recognize the need for para-agriculturists, akin to para-medics like the Chinese "barefoot doctors."

Go easy on equipment. I would be wary of buying too much modern sophisticated communication equipment. The desire to acquire more audio-visual and related equipment, especially when foreign funds are available, is hard to resist. But many audio-visual consultants have failed to carry through on use once the equipment has been acquired.

Decentralize and localize. I would localize operations to the greatest possible degree. A paragraph on what a local farmer does is worth more than pages of speeches by a faraway dignitary. Similarly, I would make sure that radio programs came from a source local enough to reflect local conditions.

Exhibits developed locally would be better than fancier but over-generalized ones from the state capital. I saw dramatic proof of the value of decentralization when a booster radio station in India was converted to broadcast live. When farm programs were localized and translated into the local dialect, farm listening jumped.

Maximize distribution. I would try to maximize the distribution of the available information. Typically, information workers in both developed and developing countries produce adequate information messages and materials, but fall short in distributing their product. In more positive terms, one of the most successful demonstration programs I saw in India featured a large number of field demonstration plots located within walking distance of the local farmers.

Keep track of research. I would encourage greater awareness among counterparts of current research and would promote application of new research as it becomes available.

Finally, I would recognize that the impact one consultant can have is, at best, miniscule. I would be resigned to making small gains and hope that they might outlast me. ■

Development Communication Report, published quarterly by the Clearinghouse on Development Communication, is distributed free to over 6000 development professionals.

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Readers are invited to submit typed manuscripts of no more than 1000 words and to send in photographs.

Highlights of the Fifth Pan-African Literacy Seminar

"Do-it-yourself" was the byword of the Fifth Biennial Pan-African Literacy Seminar, held in Nairobi, Kenya, from December 13 to December 22, 1977.

The overall task of the seminar, which was held in cooperation with the Ministry of Housing and Social Services of the Republic of Kenya and other Kenyan agencies, was to permit adult literacy workers, other extension educators, and journalists to examine the main approaches to adult literacy work used in Africa today. The simultaneous interpretation of most sessions permitted rich exchanges between Francophone, Anglophone, and Spanish-speaking delegates. Reflecting the theme of *Literacy Materials and Methods*, which occupied morning plenaries and seminar sessions, were two sub-themes discussed in smaller groups: the rural press and appropriate techniques for evaluating literacy materials and programs.

At daily plenary sessions, 130 delegates from 27 countries heard reports from Tanzania, Kenya, Botswana, Colombia, and Ghana on new methods of combatting adult illiteracy. The main purpose of these plenaries was to show how traditional skill-building techniques can be merged with psycho-social emphases on learner participation and on meeting learner needs in curriculum design.

Reports by Mary Eyakuze, Director of the Mwanza National Literacy Centre, Daniel Wabwire and Mary Opiyo of the National Christian Council of Kenya, and a team led by Ross Kidd and Lesetse Matshaba of Botswana Extension College covered the use of picture codes related to adult needs expressed by the learners and ways to develop literacy skills by using "generative terms."

Innovative efforts to involve pupils in preparing reading materials were presented by the director of the Laubach program in Colombia, Dr. Luis Londono. His stress on teacher-learner cooperation as a means of identifying pertinent themes and of involving new literates in the expression of their own ideas and knowledge in developing follow-up literature underscored the "do-it-yourself" emphasis.

The director of the Bureau of Ghana Languages, Mr. Felix Konu, spoke about the early impact of a local language strategy (applied in Ghana as long ago as 1951) on post-literacy materials and on the rural press. (The Ghanaian program featured rural newspapers in four major languages.)

A review of the reports suggests that the major difference in the production techniques discussed is between reliance upon photographs versus the heavy use of line art. The photos used in the Kenyan programs, for example, had been carefully selected, and shots with noncontrastive or crowded backgrounds were avoided. The Botswana program relied on line-drawings for its code pictures.

Delegates were free to attend one of two working groups in the afternoons. The workshops were devoted to practical presentations and discussions. The rural press workshop concentrated on the production of post-literacy newspapers or booklets at the village level, and on means of involving new readers in the preparation of materials and the choice of subjects.

Key duplicating and offset processes for producing rural newspapers were reviewed by N.E. Lingard of Gestetner of East Africa, Ltd., and by Mr. M. Kaboye of the National Literacy Centre in Niamey, who demonstrated the silk-screen duplicator (or "limographe") used in Niger. Here, too, the seminar participants were able to work on the production of newssheets at a "do-it-yourself" level.

The seminar workshop, led by M. Amadou Berthe, National Director of the Literacy Centre of the Republic of Mali, divided into Francophone and Anglophone task forces. Each one produced a duplicated rural-type newspaper. The Francophone version could have been done in any village, as the master copy on stencils was handwritten on twelve handsome two-column pages and included only line drawings. The Anglophone edition was a simulated village paper, though the materials were typed. It carried several well-executed line drawings that highlighted characteristics of the Biennial Seminar — the "village" at hand.

The evaluation workshop drew about half of all the seminar participants. For expediency's sake, it was also subdivided into two groups. One debated the larger subject of participatory versus external observer evaluation before discussing specific program components that require evaluatory techniques. The second, led by Dr. Dennis Lowry of Temple University's School of Communications and Theater in Philadelphia, studied specific "do-it-yourself" evaluatory techniques.

A new evaluatory procedure that won the approval of most of the participants for "do-it-yourself" use was the Cloze test. Dr. Lowry demonstrated the application of the Cloze test in self-made research designs for checking reader comprehension of reading materials used in class.

Both the final report of the Biennial Seminar and the participants themselves have recommended that follow-up seminars be organized on a regional basis to allow more people to benefit from them. Follow-up seminars on writing for new readers and on using screen-duplicator equipment are already planned.

A seminar report containing the main plenary presentations and including the final report of the seminar groups and the workshops will be produced by Afrolit Society for its members and published in July of 1978. Inquiries about the report and about the follow-up seminars can be addressed to Afrolit's General Secretary.

■ **Charles T. Hein, General Secretary, Afrolit Society, Box 72511, Nairobi, Kenya**

HOW I'D DO IT NEXT TIME: Reflections of an Agricultural Information Consultant

Readers expecting to find "Dilemma in Country X" here in its customary place need not despair. The following article represents the distillation of many dilemmas encountered over many years in many countries. It was written by Dr. R. Lyle Webster, whose long and eventful career in agricultural communication has included stints as the Director of Information of the U.S. Department of Agriculture, as a consultant on communications and agricultural information with the Ford Foundation in India, and as the first director of the East-West Communication Institute in Honolulu.

Dilemmas in Country X: Candid discussions about failures *will be featured again in the next issue. The editor invites readers to submit reports for this column and will upon request withhold authors' names — as well as those of the people, agencies, and countries involved in the projects described.*

After a lifetime of communication work, mostly in agriculture, I have a few firm ideas about how I would undertake another foreign consultancy. If I were to become a foreign agricultural communication consultant again, I would abide by certain basic commandments.

Understand the importance of attitude. My basic attitude would reflect tolerance and humility. I would recognize that not all knowledge resides in the country from which I come. I would keep in mind the fact that, largely as a result of development work of the last few decades, most poor countries have substantial numbers of people who have studied and trained abroad. I would believe that these people could achieve results when supported by the prestige and competence of a wise consultant. My resolve would be to keep a low profile, to listen more than talk. I would vow, above all, to avoid that self-defeating occupational disease — trying to do it myself rather than helping my counterpart perform the task at hand.

Capitalize on culture shock. I would brace myself for some "culture shock" when going to another country. But I would try to prepare for and to capitalize on it, knowing that I could really understand a culture only after living in it. Culture shock can bring about sympathetic understanding. But for some, I fear, the end result is in reality only a feeling of how different "they" are from "us" (and, all too often, a rather disdainful attitude toward the way "they" do things). I would never forget that my clients have a history and a culture and a way of living that has met many of the intellectual and spiritual needs of the people for centuries.

Appreciation of another culture is difficult, but one can cultivate it by reading and by contacting people who have had experience living in it. My two years at the East-West Communication Institute in Honolulu after my experience as a foreign consultant gave me a rich understanding of the importance of knowing the culture of a country in which one works. I often reflect on how much more effective I could have been as a consultant if my time at the East-West Center could have been put in at the beginning of my career.

Talk the language. My language would be that of the people I was working to aid. Despite all the arguments about studying a language that "we won't use again," my firm belief is that if consultants are able to communicate, no matter how badly, in the local language, they will be respected for trying.

I would hope to live simply and unostentatiously. Foreign consultants need not live in village huts, but living in luxury often offends the sensibilities of their co-workers from the host country.

Maintain close contacts. I would accept only those consultancies associated with programs that call for real continuing contact with farmers and that allow consultants to make actual contact. I also would want to be certain of my precise duties and responsibilities.

Look and listen. I would stress communication that can be absorbed by looking and listening. This means radio and visual means (but not necessarily a lot of audio-visual equipment). I cannot quarrel with *DCR's* "Reconsidering Print" issue: Print has its place. But I would remember that most people who need help are not literate enough to rely mainly on what they learn from the printed word.

I would, however, encourage the use of mass media to reach influentials. For example, the press should be used to reach the leaders in a country. A national newspaper will not print fertilizer-dosage recommendations (and most of its readers would not have use for them). But it is interested in economic progress, and the key people in the country's government — its legislators, business leaders, and academicians — all read.

Value in-service training. I would accord high priority to in-service training After six years in India, I concluded that greatly increased in-service training was the most urgent need in the communication component of agricultural development there.

Indeed, many countries now have enough trained professionals in most fields. What is needed is greater competence among a larger number of persons who work as liaisons between the professionals and the farmers. The supply line is

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Development Communication Report

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USING THEORY IN COMMUNICATION PLANNING

For many field professionals theory can be a dirty word, conjuring up images of egghead professors in musty offices scribbling out indecipherable mathematical equations and less understandable prose. And yet, these same field professionals use theory all the time, even if unwittingly. Whenever development professionals recommend a certain program, give advice, or prepare plans, they act on the basis of ideas about what will happen if certain things are done, in certain ways, in a certain order.

As we go about developing the field of communication planning, we draw on existing theory of a number of kinds, four of which are particularly relevant to communication planning. Three of these are reasonably well developed, though changing constantly: communication theory, planning theories, and development theory. The fourth, ever with us but too often overlooked, is the theory that each planner or group of planners evolves out of the experience of solving problems in a particular social, cultural, and organizational context.

Communication Theory

Communication theory deals with the process and effects of communication of all kinds. It is the kind of theory a planner uses, consciously or unconsciously, in selecting media, in designing messages and software, and in planning evaluations. Thus, it is a *theory in planning:* something planners use to help them choose from among an almost endless number of communication options in light of certain goals.

Plainly, no single communication theory will make the planner's job easy. The various theories that explain and predict the effects of different kinds or mixes of communication are related, but they are more or less helpful given different kinds of communication tasks, goals, and contexts. Information theory, for example, aids the planner designing mass campaigns intended to alter levels of information. But if the goal is to change attitudes or values, persuasion theory proves more useful.

(Continued on page 2)

ANOTHER LOOK AT KNOWLEDGE PRODUCTION AND UTILIZATION

Most communication planners have in mind some image of an information-communication system. This picture probably includes notions of how information is generated, formed into messages, and disseminated through channels to target or user audiences. The image may be of a well-defined and widely accepted model or of a highly experiential and personalized "style" of communication planning and communication. Either way, some implicit or explicit image of an information system guides the planner.

Those who plan what is labeled "development communication" often concern themselves especially with systems that attempt to communicate information on technology. Historically, relatively simple information-system models (an example of which is the "research, change-agent or linker, adopter model") have been employed. But numerous criticisms have been leveled at such systems, particularly at (1) the assumption that knowledge flows only linearly, from researchers through technology to users, (2) authoritarian, persuasive, or manipulative one-way communication (invariably "down" through the system), (3) the creation of dependent rather than collaborative relationships, (4) the assumption that only knowledge obtained through scientific research is relevant to problem-solving, (5) the assumption that technology can be *transferred*, which runs counter to the vitally important recognition that an interactive communication process can result in the development of adaptive, intermediate, or improved indigenous technology, (6) the fact that the responsibility placed on "linkers" is usually far greater than that placed upon the linked, (7) the lack of concern with how benefits from "trickle-down" communication are distributed, and, probably most important, (8) the ineffectiveness of many programs based on present information-communication system models. Indeed, only in the last two decades have the systematic conceptualization and study of knowledge

(Continued on page 3)

Communication Planning at the Regional Level

In the developing countries, problems posed by the need to *reorganize* existing complex communication systems are of course comparatively few, a state of affairs that gives rise to the expectation that introducing new media in such nations is comparatively easy. On the regional level, in particular, the trend is towards expecting too much of new telecommunication technologies on the assumption that they will improve the efficiency with which information is transmitted to the populace and will thus help assure the effectiveness of two-way communication.

To my mind, these assumptions and expectations pose some tough problems. We naturally think of communication as a means of diffusing information among the people and of transmitting information from the authorities to the people. We are also apt to think, further, that via such active diffusion of information populations become informed publics and that this transformation makes development programs bear fruit.

It is this kind of thinking that leads to a preference for electronic telecommunication media since such media are more capable than others of diffusing and transmitting information speedily and accurately over a wider range and are often cheaper on a per-target basis than others. The danger of basing a communication program on such technology is that the program can easily become a transmission-media program instead of a communication program.

Although information theory tells us that entropy on the receiving side should fall as highly developed communication media bring more information more quickly to the people, that is not the actual case. Often, as people find access to more information, their understanding of and involvement in the communication process deteriorates. This deterioration cannot be attributed solely to contradictions in the supplied information itself or to the low quality of information. It stems instead from the fact that some information-transmission systems using high-level technology are inherently incompatible with the structure and nature of people's

(Continued on page 7)

A publication of the Clearinghouse on Development Communication
Supported by the Development Support Bureau of the U.S. Agency for International Development

Like all theories, communication theory is changing and growing. Present interest in dialogue as a form of communication, for example, grows out of the recognition of the importance of egalitarian communication relationships in which participants in the communication process both give and receive information and in which all participants (including the "sender" or initiator of the dialogue) can expect to change.

In my view, planning is the application of theory to reality in order to reach decisions about what to do, when, and how. If this view is correct, then planners will have to have a reasonable command of various communication theories and will have to know how to use these theories effectively . . . which takes us to planning theory.

Planning Theory

Planning theorists seek to explain the process of planning. Put another way, the theory of planning helps planners decide how to organize themselves for effective action.

The several important varieties of planning theory are also changing and developing. Early theory, that most often at the base of national economic and development planning, is often called *rational-comprehensive*. A system with which most development planners are familiar in one form or another, rational-comprehensive theory incorporates situational and problem analysis, the setting of specific and measurable goals and objectives, the development of alternative strategies for action, the evaluation of alternatives, administrative-feasibility analysis, and operational planning. Common tools are cost-benefit analysis, feasibility studies, quantitative models of various kinds, forecasting techniques, systems analysis, PERT (Program Evaluation Review Technique), and so on.

Planning of this type rests on the assumption that the future can be predicted in considerable detail. It requires a great deal of data and even more faith in the technology of planning and the capabilities of planners. It also requires considerable formalized and centralized authority for implementation.

Rational-comprehensive planning has not led to notably successful development programs. It has come under considerable criticism because of its centralized, top-down authoritarian character. Thus, for pragmatic and ideological reasons, new theories of planning are emerging. Among the replacements are *innovative planning*, which emphasizes changes in the structure and capabilities of institutions so that problems may be solved, and blends planning with implementation. Another new option, *incremental planning*, is based on the notion of gradual change within relatively short periods, the extensive use of process-oriented feedback, learning from experience, and decentralization or localization of planning. *Participatory planning* emphasizes active roles for program clients in the planning process, while *radical planning* reflects the importance of learning from the process of identifying and solving problems.

These new planning theories can be combined. Like various communication theories, different planning theories are more or less useful in different contexts.

Development Theory

Development theory is also in flux. Economic-development theories that reflect the general goal of increasing production and consumption and that emphasize high levels of capital investment and technology, long time-frames, and the trickle-down of benefits are being abandoned as their negative effects become more widely understood. New theories of development stand as radical departures from this model. They emphasize quality of life as a goal and reflect a view of development that takes in more than increased GNP and consumption. They also take appropriate technology into account. Those who adopt these theories see the pernicious effects of the existing international system as causal factors in underdevelopment and are less ready than others to attribute failure to develop to "backwardness" or "resistance to change."

Development theory, like communication theory, is a theory in planning. To apply this theory is to set the framework within which planners identify problems and apply communication theories. In many ways, consciously or unconsciously, a planner's development theory serves as the touchstone for all professional action. It is at least partially bound to social, cultural, economic, political, and organizational contexts.

Experiential Theory

There is no shortage of books on how to communicate, how to achieve development, how to plan. At the same time, relatively few planning teams actually apply the rich resource of ideas in quite the way the theory-builders intended. And yet, things get done, often quite well. Individuals and groups make decisions, write plans, allocate resources, and manage programs — often in predictable ways. In fact, we can identify patterns in the planning that grows out of their accumulated experience in dealing with problems over time.

These patterns form what we might call *experiential theory*, the sum total of strategies that planners have evolved to cope with problems in certain contexts. Experiential theory guides both the process and substance of planning. It determines, for example, such things as who is involved in planning, as well as which media are chosen.

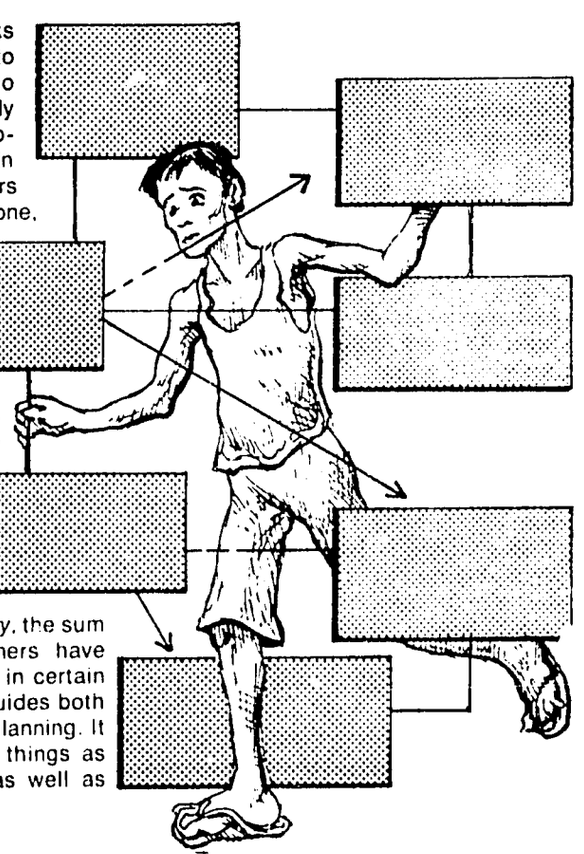
Experiential theory may turn out to be of considerable importance. At the very least, we should take stock of these theories before developing our own textbooks on communication planning since understanding experiential theory may enable us to utilize communication, planning, and development theory more wisely. Above all, this kind of theory can spark insights related to how communication planning can be done, or done better.

Conclusions

Even this brief review of theories in and of planning has important lessons for communication planners. First, we must accept the challenge posed by rapid change in various theory fields. Our research and development efforts must attempt to capture this movement and growth. Clearly, we should not base work in communication planning on theories that are being supplanted.

Second, the distinction between theories in planning and theories of planning can guide researchers and those who train planners. Effective communication planning will require (1) a thorough understanding of how theories of both kinds can be applied to the task of planning communication systems and activities and (2) trained planners competent in the use of both kinds of theories.

Third, critical to the effective use of theories for planning — a major goal — is the ability to select and combine theories to fit particular contexts. To choose theories and apply them effectively, planners will need to be familiar with a range of theories, be able to match them with different problems and contexts, and be equipped to analyze their own planning situation as a basis for theory choice



Thus, in our initial work on communication planning, we might do well to develop "design" principles, which help planners choose and use theories. One such principle, for example, might help planners relate organizational structures and sociocultural variables to different kinds of communication goals. Taken together, principles that cut across the theories of communication, development, experience, and planning may turn out to be a theory of communication planning.

A thorough grasp of experiential theories and their contexts could help planners link communication planning with new developments in theory fields, make practical use of the distinction between theories in planning and of planning, and develop principles for selecting and combining theories of various kinds. Grounded firmly in the reality of planning, research and development efforts will have a higher probability of being used. Steeped in experiential theory, they may be a rich source of original ideas as well.

■ *John Middleton, Assistant Director for Planning and Evaluation, East-West Center Communication Institute, Honolulu, Hawaii*

Knowledge (Continued)

production and of information-utilizing systems been emphasized.

Some recent research, conceptualization, and model-building does appear to hold up under some of the criticisms made of past systems. While nobody claims to have developed *the* system, a review of some of the ideas recent systems incorporate may trigger some new insights, provide communication planners with a modified framework within which to organize past communication and planning experiences, and sharpen the edges of the conceptualizations from which planners work.

A New Prototype

One such information system draws heavily on the work of Havelock, Guba and Clark, Rogers, Gideonse, and Rothman and Roling. This paradigm embraces six categories (or stages) of interrelated functions, activities, and processes that seem distinct enough to merit separate treatment. (For fuller details, see *Knowledge Production and Utilization: A General Model — Third Approximation* by Peter M. Meehan and George M. Beal, Sociology Report No. 138, Department of Sociology and Anthropology, July, 1977, Iowa State University, Ames, Iowa 50011.)

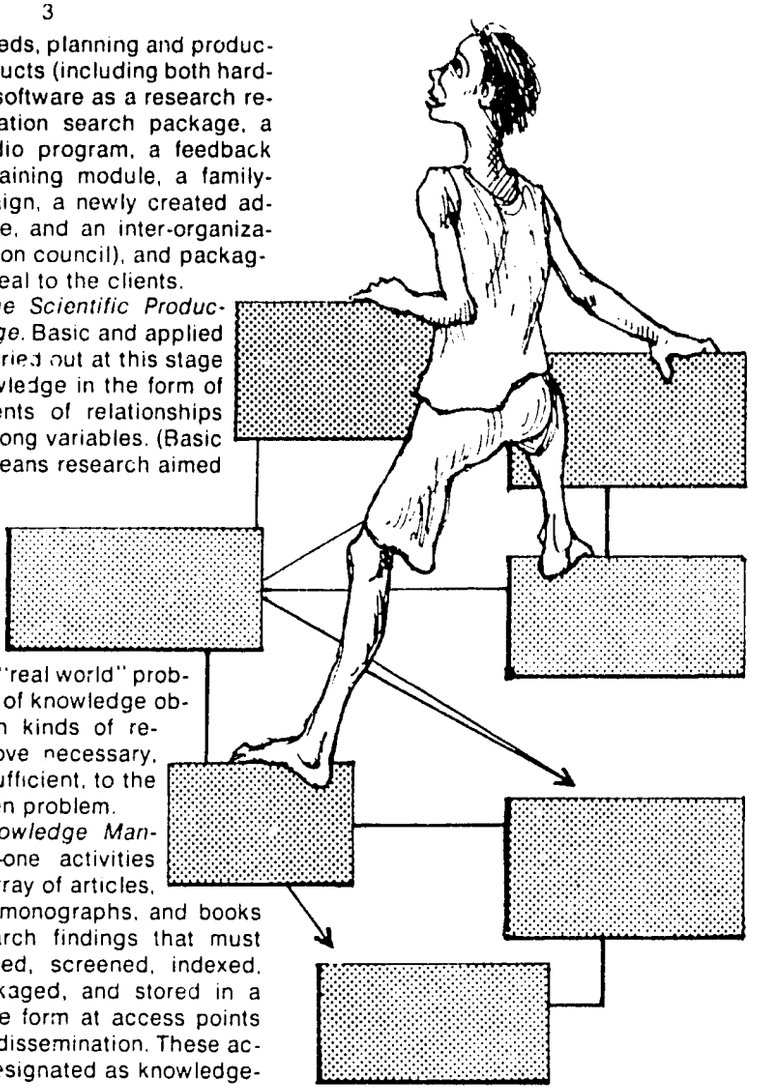
The linchpin of this paradigm is continual interactive communication. Actors in each stage must meet the needs of users in other stages if the needs of the ultimate users (the target audience) are to be fulfilled. Each of the stages between research and adoption/utilization represents in miniature the whole process of knowledge production and utilization. In each, the actors begin by identifying specific user needs, planning and producing needed products (including both hardware and such software as a research report, an information search package, a brochure, a radio program, a feedback procedure, a training module, a family-planning campaign, a newly created advisory committee, and an inter-organizational coordination council), and packaging them to appeal to the clients.

Stage One/The Scientific Production of Knowledge. Basic and applied research are carried out at this stage to produce knowledge in the form of verified statements of relationships between and among variables. (Basic research here means research aimed at producing knowledge for its own or discipline's sake, while applied research here means that aimed at solving "real world" problems.) The types of knowledge obtained from both kinds of research often prove necessary, but not always sufficient, to the solution of a given problem.

Stage Two/Knowledge Management. Stage-one activities result in a vast array of articles, reports, papers, monographs, and books presenting research findings that must next be monitored, screened, indexed, catalogued, packaged, and stored in a readily retrievable form at access points for later use and dissemination. These activities may be designated as knowledge-management.

Stage Three Knowledge Translation. Knowledge translation involves the synthesis and conversion of research findings into information that product developers can use to solve practical problems. At this stage — one of the "meeting points" of abstract, scientific knowledge on the one hand and practical knowledge and client problems on the other — highly skilled translators or linkers with a dual understanding of the scientific and practical conceptions of the same problem code and recode the clients' formulation of a problem and relevant descriptors of available scientific knowledge. Scientific research is synthesized, generalized, and brought to bear on clients' problems. Effort at this stage may produce papers, reports, presentations, or consultations on guidelines and other information on product development.

Stage Four/Product Development. At the product-development stage, "translated" scientific knowledge is combined with knowledge of existing or created user needs, and products with the presumed potential to meet these needs are developed. The orientations to product development vary here. Sometimes the emphasis is upon discovering the needs and wants of target audiences and developing goods and services to meet these needs; in other cases, the product is developed before its use is "promoted."



(Drawings by Tom Chalkley)

Product development of both software and hardware usually includes activities such as problem-formulating, determining the product function, developing performance and appeal specifications, inventing or designing alternative products, analyzing and assessing alternatives, selecting the best solution, designing prototypes, fabricating prototypes, testing and retesting prototypes, making and packaging marketable products, and transferring these packages to distributors.

Stage Five/Product-Dissemination. Once potential solutions to user needs or problems are developed, getting them to the clients becomes the goal. Activities at this stage usually include making sure the product and its uses are fully understood, designing dissemination and communication strategies, distributing the product, adapting and installing it, and monitoring product performance.

Stage Six/Product Adoption and Utilization. Product adoption and utilization is the process whereby users discover and diagnose problems, locate solutions, test solutions, adopt solutions, and effectively assimilate solutions.

If no answer to the need or problem is readily available, proponents of the model argue, that very lack will re-initiate a communication process that includes all the

Knowledge (Continued)

previously discussed steps. Eventually, adequate and appropriate knowledge is found, developed into a solution, packaged, and communicated back to the user for testing and possibly for adoption and utilization.

Implications of the Model

In the paradigm described above, knowledge production and utilization receives greater emphasis than research. It reflects the recognition that types of knowledge other than that developed and written by research scientists can contribute to problem-solving. It is posited on the belief that relevant knowledge can (and in some cases must) be provided by linkers, product developers, disseminators, and ultimate users.

This paradigm does not assume a one-way flow of knowledge from researchers to ultimate users. It is based upon the recognition that knowledge and communication move back and forth from one stage to the next, rather than flow smoothly from the beginning to the end of a utilization chain. Indeed, the often iterative process is marked by repetition and recurring action.

Finally, this model allows for the collaborative production and utilization of knowledge. Its use does not lead to relationships of dependency. Further, it facilitates the development of intermediate technology and appropriate technology while it fosters adaptive research and development, and user trials.

This paradigm is free of some of the flaws that rendered its predecessors of dubious worth — that much is clear. But the practical value of the paradigm has yet to be established. Can it provide background or otherwise serve communication planners? To this question, each planner must provide answers, even if doing so means sweeping away or revising some long-held, and therefore precious, mental images.

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Readers are invited to submit typed manuscripts of no more than 1000 words and to send in photographs.

Communication and the Global Economic Order

When we say the world has shrunk, we are talking in large part about recent fantastic advances in communication technology. Such innovations continue to affect the international economic system through their influence on trade flows, currency exchanges, and capital flows. In turn, these flows are generated or at least regulated by international organizations like the IMF, the World Bank, and the GATT; by regional customs unions like the EEC, the COMECON, and ASEAN; by multinational corporations; by cartels like OPEC, and by individuals with liquid resources.

Communication in Int'l Economics

The communication channels through which economic information flows are often maneuvered to give a special advantage to a particular country's trade balance and currency, as was the case in August of 1971 when the U.S. "untied" the dollar from gold and imposed a 10-percent surcharge on imports and again in 1973 when OPEC quadrupled oil prices. Information on these policy changes had been closely guarded, and the changes took the world by surprise.

When OPEC upped oil prices in 1973, trade and communication channels carried projections of oil supplies and prices so rapidly that oil-importing countries were quickly placed on the defensive. Telecommunication networks between major central banks helped Japan, West Germany, France, the U.K., and the U.S. forecast their oil import bills and formulate policies to combat the ensuing internal inflation. Meanwhile, oil-surplus funds gave a boost to the telecommunication industry, since international telephone, telex, and news-flow systems were kept buzzing with the latest consumer demands emerging from the Arab world.

In general, when international communications falter and when networks carry confused or self-contradictory information, currency crises arise and capital flows become erratic. Uncertainty grips governments and banks, and every rumor of devaluation of any of several major currencies leads to frenzied activity on "spot" and "forward" markets. In such cases, speculation by multinational corporations, resource-producing countries, and individuals has disastrous consequences on the balance of payments of Third World countries.

Int'l Communication & Development

Developing countries were the worst victims of the oil crisis and the currency upheavals. Not only did they lack resources to meet the rising cost of oil, but they faced rising prices of oil-based products, particularly fertilizers. Their economies simply lacked the resiliency needed to adjust to their growing trade deficits, and they received no help from existing international communication networks, which might have helped cushion the adverse effects of trade imbalances by presenting LDC goods and services as competitiv with developed-country products.

Granted, international trade policies have gradually begun to dismantle tariff barriers and quota restrictions that operate against LDCs, to move away from major reliance on import-substitution, and to promote the LDCs' goal of industrialization — even though the flow of capital and technology has yet to change course. But these changes are not adequate. What is needed is the systematic exploration by LDCs of international export markets. For example, multinational advertising agencies already operating in Third World countries could be used at reasonable cost for tapping European, American, and Japanese markets. But, faced with widespread poverty, low productivity, and high unemployment, LDCs are not in a position to invest in telecommunication services to assist in their drive to increase exports and to get tariffs and other trade barriers removed.

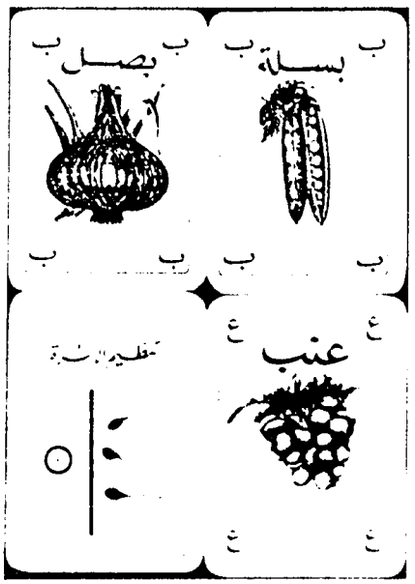
Just as Third World countries need to explore developed-country markets for their primary products and manufactures, advanced countries need to get their technical information goods and services to LDCs. Since the information sectors of the industrialized countries have alread reached saturation levels, exporting info mation products and technologies has become imperative. This saturation has reached crisis proportions and has spillover effects in developing countries, whose dilemma worsens as population-growth rates overtake the rate of capital formation.

Fortuitously, information systems are fast becoming more affordable. Computer-packet switching networks, for example, can be used to meet the needs of agricultural research centers, and multiple-access satellite systems like the U N AGRIS program can reduce service costs and give LDCs access to advanced technical-information bases. But the new international information order, which is being established to find answers to some of these problems, entails more than the transfer or creation of new information systems and must be considered the co-equal of the new international economic order.

The New International Economic Order

The essentials of the new international economic order are non-reciprocal preferential treatment of LDC exports, limitations on the scope of the activities of multinational corporations in developin countries, generation of reliable ways t transfer appropriate technology, and a reduction in the burden of debt-servicing. These policies are not new nor inconsistent with existing trends in world trade, though collective bargaining by the Third World is.

THE JOKER IS WILD!



These playing cards — one of many innovative teaching aids developed by Zahia Marzouk, Vice President of the Family Planning Association of Alexandria, Egypt — are used to impart basic literacy skills and to spread the family-planning message at the same time.

Suits are organized by sounds, numbers have been replaced by familiar objects (vegetables, clothing, etc.), and the jokers bear pictorial representations of contraception.

Women learn to play several traditional card games with these untraditional decks and take the cards home to teach the novel literacy games to their neighbors, husbands, and children.

If the new international economic order is to become a fact, then LDCs have to express their needs for a two-way flow of information goods and services, as well as of industrial goods and raw materials. Advances in communication systems will not only enable them to improve their health services, education services, and agricultural productivity, but will also help them to organize regional trade blocs and thereby increase their bargaining strength and the potential for a freer flow of goods. Under this new dispensation, the use of sophisticated communication hardware and software could reduce the probability of conflict and confrontation by making international communication faster and clearer.

The World Information Order

The convergence of the economic order and the information order — or more broadly, a communication order — occurs at the level of technology transfer and the investment it entails. In the realm of politics, a new worldwide communication order could reduce international tensions. After all, communication has been described as the key factor in solving world problems of hunger, poverty, disarmament, and peace-keeping.

The needs of different countries for communication systems vary, but essentially the free flow of information goods and information services is as vital as the free flow of industrial goods and services. Indeed, the output of the manufacturing sector depends upon communication research and design, business machines, legal services, accounting and managerial services, and other information goods and products — the use of which adds to the costs of non-information goods. In a wider context, information systems provide the basis for capital accumulation, since this accumulation is highly dependent upon effective and efficient information flows.

Convergence and Synthesis

Since in both the new international economic order and the new international communication order the need is for an even flow, a critical problem is the communication gap between the economist and the communication scientist, both of whom are interested in helping the Third World.

Common ground is not the problem. Both product flows and information flows are subject to the processes of production, exchange, and distribution. Both information and non-information goods are subject to opportunity-cost considerations and to investment analysis. And optimizing investment in either sector requires a full understanding of when and how technology transfers and of how economies of scale affect unit costs.

The two orders need to be envisaged as an integrated whole, instead of as isolated operations. If they were, Third World countries haunted by fears of technological domination by the industrialized world could relax their suspicions, and international relations would likely become more stable.

In the ultimate analysis, integrating the two orders will entail collaborative planning by international organizations and policy-makers at the national level. Their task will be to frame coordinated agreements for balanced trade and communication flows.

■ *Meheroo Jussawalla, East-West Communication Institute, Honolulu*

Planning for LDC Women

Four recently published documents offer project planners broad guidelines on how to identify and help meet the social and economic needs of Third World women. (*DCR's* editor welcomes accounts of fruitful or failed attempts to implement such guidelines at the project level.)

"Guidelines for the Integration of Women in Agricultural and Rural Development Projects," Document No. W.K6542, FAO, Rome, May 1977.

"Appendix Q" in *Communications Technology for Development: Guidelines for Consultants Working with the Agency for International Development*, Howard Leavitt and Peter Boynton, Academy for Educational Development, December 1976.

Peace Corps Program & Training Journal, Vol. IV, No. 6, 1977.

"Guidelines on the Integration of Women into Development," Document G3100-1, Programme Policy and Evaluation Division, UNDP, New York, February 1977.

CDC Publications

Copies of the following back issues of *Development Communication Report* and its forerunner, *Instructional Technology Report*, are available at no cost from the Clearinghouse.

No. 22. "To and From the Field: Communications and Agriculture," April 1978.

No. 21. "Reconsidering Print," January 1978.

No. 20. "The Nutrition Message & The Mass Media," September 1977.

No. 19. "Communications & Development: Two Views," June 1977.

No. 18. "Mobilizing Media for Development: A Question of Will," April 1977.

No. 17. "Telemedicine: Health Care for Isolated Areas," January 1977.

No. 16. "Communication and Integrated Rural Development," October 1976.

No. 15. "Health Education By Open Broadcast," July 1976.

No. 14. "Film in Development," April 1976.

No. 13. "Uncomfortable Issues in Instructional Technology," January 1976.

No. 12. "Folk Media in Development," September 1976.

No. 11. "Perspectives on Educational Technology," June 1975.

No. 10. "Technology and Educational Reform: The Case of Ivory Coast (Part 2)," January 1975.

No. 9. "Technology and Educational Reform: The Case of Ivory Coast (Part 1)," October 1974.

No. 8. "Technology is the Answer . . . But What Was the Question?" July-August 1974.

PLANNING DEVELOPMENT-COMMUNICATION SOFTWARE

LESSONS FROM SITE

In June 1976, a joint Indian Space Research Organization-National Aeronautics and Space Administration study found that a terrestrial-cum-satellite TV system would be the most cost-effective television system for India. A one-year long pilot project was proposed to provide insights on the configuration of such a TV system, its software, hardware, management, and costs. This was the SITE project, the Satellite Instructional TV Experiment, conducted in 2,338 villages in India from August 1975 to July 1976, using a NASA satellite.

The primary responsibility for message-making was with the specially set up TV Satellite Wing in AIR (All India Radio), in the Ministry of Information and Broadcasting. With only two years to the first day of transmission, this Wing had a lone Director, one typist, no budget and no staff — and a 1,300-odd hours transmission requirement for August 1975-July 1976! In July 1974, three studios came up.

The systems analysts and the specially-recruited summative evaluators felt that empirical data on village conditions, rather than only the opinions of overworked experts in government secretariats far from the village, should determine the objectives and curriculum. But whose job was it to prepare these? Shouldn't each development agency that wanted broadcasting support do its own study of communication needs in the villages, define instructional goals, and specify a content plan for each program that the creative genius of the broadcasters could then flesh out? A series of meetings was held at state and central government capitals, at which experts drew up a "list of topics" for the programming organization. Participants did try to supply scripts as often as they could, some ministries doing better than others, but coordinated scheduling of activities was always a problem in an inter-ministerial undertaking in which each agency had different priorities.

So, the summative evaluators in the space agency (which was located over a 1,000 miles from the producers), with academic training in anthropology, sociology, psychology and communications — who had never heard of terms like "formative evaluation" — decided they would try to provide TV producers with a picture of village life, village needs, and villagers' reactions to some pilot programs, and with input evaluation data. All this was to be in addition to the "product" evaluation they were hired to do, on which they were already behind schedule and understaffed.

Context evaluation provided profiles of life at the village level and an assessment of needs in the SITE instructional areas. Audience profiles were based on ethnographic data collection and secondary sources, and presented non-technical generalized pictures of dialects spoken, food habits, dress, religion and ritual, and a typical working day. The producers' reactions were that the reports were "too simple."

Needs were assessed by interviewing district, block, and village-level officials in agriculture, health, and education, since there was no time to study the villagers' perceptions directly. It was realized that there were big differences in the villagers' and officials' opinions, particularly on the causes of problems (one open-ended exploration of programming suggests that the content of the reports was not used). Of uneven quality, these assessments too were first attempts like many other things in SITE. Apart from being written documents, they came when producers were busy canning programs — when the time for planning content and formats had passed.

Input evaluation was supposed to consist of testing of the prototype programs in the village. With each producer canning one feature-length production a month from the word "Go," there were no specially designed prototypes to test. Whatever was made first was tested, and thus one of the two sessions proposed per state was completed. This was in the face of monstrous problems in obtaining portable VTRs for village playback and of engineers' reluctance to let studio equipment face dust storms, heat, and the Monsoon rains.

It was hoped that the findings from the audience profiles and the needs assessment would, along with the expertise from the specialists, help software planners define precise goals. The pretesting was to help finalize persuasive appeals and forms. But SITE software had gotten organized too late.

The marvellous thing about the SITE software project was not last-minute attempts at formative research or the fact that no formative research was planned. The miracle is that there was a passable program ready to go on the air every day, for four hours a day!

With so many SITE scars to learn from, it is little wonder that the one-time summative evaluators in the space agency actively advocated basing full-time formative researchers in each development-TV studio in the SITE Continuity Phase (1976-79). At least ten other lessons can be learned from SITE, too.

1. *Budget adequate time to breathe, to do formative research, and to produce materials and programs without going crazy.*

2. *Recruit artists, producers, and writers who are committed to the Development Cause rather than to art for its own sake.*

3. *Recruit researchers who are dedicated to the Development Cause rather than those who are monogamously wedded to Science for their own sakes, to research methodology for Fear's sake, and to publishing in academic journals for Increments' and Promotion's sake.*

4. *Recruit researchers who have a feel for the strengths and limitations of the medium used, be it chalk or the TV camera.*

5. *Recruit researchers who are sensitive interpersonal communicators and who can link the subject specialist, artist, and audience in order to develop a good "instructional design."*

6. *Recruit producers and researchers who are excited about creating a new method of collaborative program development.*

7. *Make sure that top organizers are in full and honest agreement on the superiority of the team method, and support it wholeheartedly despite deadlines and protests from both researchers and producers.*

8. *Be certain that you have a utilization plan and have a utilization staff in the field to follow up with post-program activities.*

9. *Remember that no single method of formative research is appropriate for all goals, all audiences, all media, all cultures, and all times. Local combinations and methods, be they quick and dirty, must be designed for local needs.*

10. *Be patient. Even if first attempts at formative research are not reflected in programming quality in the beginning, they could determine the shape of the fully evolved system, as they did in SITE.*

■ *Bella Mody, Stanford Institute for Communication Research*

On File at ERIC

Recent entries in the ERIC (Educational Resources Information Center) files include reports from two satellite television projects, one in India and one in northern Canada, and two guides for instructors in the field of broadcasting.

- Chander, Romesh and Kiran Karnik. *Planning for Satellite Broadcasting: The Instructional Television Experiment*. Paris: UNESCO, 1976. 72 p. (ED 146 898).

  This document covers the technical and programmatic planning stages of the Satellite Instructional Television Experiment (SITE), which was undertaken by India in 1975-76 and which utilized the first satellite capable of transmitting television programs directly to community receivers. Programmatic planning includes identifying program objectives, mastering the mechanics of programming, choosing content for adults and children, developing a multi-media package for in-service teacher training, and determining priorities in education, agriculture, health, nutrition, and population control. Technical planning includes village selection, the direct reception system, and evaluation. Extensive inter-disciplinary cooperation was demanded by the nature of the project. Available from UNIPUB, Box 433, Murray Hill Station, New York, NY 10016 for $2.65; available from EDRS in microfiche only for 83¢ plus postage.

- Coldevin, Gary O. *Development Effects of Television Via Satellite on Canadian Inuit Heads of Household*. 1977, 97 p. (ED 142 182).

  This research is concerned with the impact of television in an area where the majority of native adults originally had a limited understanding of the language or conventions of the medium. Responses to an open-ended questionnaire are compared with responses to the same questionnaire as administered 18 months earlier when the satellite broadcasting system was initiated in northern Quebec. Results indicate that 98 percent of the respondents have access to a television set and watch up to 7.4 hours a day; that favorite programs include such dramatic series as *Cannon* and *Police Story* and that the least favorite are "public affairs" shows; that radio listening has declined severely and newspaper reading increased slightly; that respondents felt television kept the children home and the family together; that respondents had gained a clearer understanding of international and national issues from TV; that children have developed aspirations for higher social and economic status; and that TV is nevertheless irrelevant to people's deep-rooted customs and environment. This study supports calls for programming relevant to viewers' lifestyles, culture, and language, and for the development of production centers in the north. The questionnaire and numerical responses to both surveys are included. Available from EDRS in microfiche for 83¢ or photocopy for $4.67, both prices plus postage.

- Deance, F.R. *Broadcast Training Techniques*. Paris: UNESCO, 1976. 122 p. (ED 132 635).

  This volume provides theory and guidelines for training in the field of broadcasting. It attempts to bridge the gap between knowledge of a subject area (whether it be production, technical matters, or creative writing) and the communication of that subject to others. Chapters address general aspects of training and instruction, the principles of learning, the instructor's qualities and role, course development, development of instruction, methods of instruction, the learning environment, and feedback. Available from UNESCO Press, 7 Place de Fontenoy, 75700 Paris, France. Not available from EDRS.

- Makridakis, Spyros. *The Management of Communication Resources: A Guidebook for Course Directors*. Paris: UNESCO, 1976. 116 p. (ED 142 193).

  This guidebook is designed to introduce management training into UNESCO's regional communication programs. The course material is intended for actual or potential managers of broadcasting and communication organizations. It presents relevant business-management concepts, methods, and practices. Addressed to trainers of communication managers, the manual contains a discussion on training methodologies; data for innovative course designing; and resources for study materials, supplementary texts, and educational aids. It can also be used for self-instruction, though the teacherless learner will be at a disadvantage in some course areas. The first of the two sets of courses is a four-week course in general management for middle managers. The second group is a set of one-week courses in specialized areas for those in middle and upper management positions. Available from EDRS in microfiche only for $.83.

Documents available from EDRS can be ordered from ERIC Document Reproduction Center, P.O. Box 190, Arlington, VA 22210. Order by ED number and enclose payment for the price plus postage. For information about ERIC, indexes to ERIC documents, and other services, write ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, New York 13210.

■ **Barbara B. Minor, Publications Coordinator, ERIC Clearinghouse on Information Resources**

Regional Planning (Continued)

everyday communication processes which in most developing countries are person to person.

As the media become more complicated and more efficient, the information they transmit becomes less personalized. And when transmission of depersonalized information increases one-sidedly, one of two things happens. Members of the target audience may begin to demand the right to respond to the information supplied — not merely to ask questions but also to refute the messages presented, present opposing views, and initiate new messages from their side. The more negative and more likely outcome, however, is that they will simply disregard the messages and retreat into skepticism.

While not necessarily easier to perceive at the regional level, the problems of disaffection and skepticism are both more acute and more amenable to solution at the regional level than at the national level. Naturally people are more skeptical of development directives that central authorities issue on regional problems than of centrally disseminated messages related to national problems. They are [illegible] a better point in that centralized authorities to assess regional problems and the [illegible] of [illegible] measures [illegible].

[illegible] the [illegible] components in planning the communication system of the regional-level development program need to be made. The first is that the meaning and role of communication in the program need to be analyzed with greater care. If the role is merely to transmit messages, for example, just how the information fits into the process of people's social communication must be studied in advance of program implementation. In this case, how far transmission of depersonalized information [illegible] under the mechanical system will fit into the communication life of the people of the region must be determined.

The second point is that during the design stage, the target audience's doubts, dissatisfaction, and possible rejection of the information supplied by the supplying system itself should be anticipated, and the program should be planned accordingly. Doing this will require surveying with utmost care the scale, structure, and nature of the communication activity of the people of a region — both before and after a new system is introduced.

If a problem now afoot in the industrialized nations is to be avoided, people's awareness of their own participation in the communication media system needs to be raised and monitored, and flexible principles for formulating a system matched to social realities need to be devised. The alternative is living with entrenched skepticism among viewers and listeners.

■ *Kazuhiko Goto, Senior Research Fellow, Japan Broadcasting Corporation (NHK)*

A Communicator's Checklist

1 Jean Marie Ackermann, media editor of *International Development Review*, pays to the language of film criticism the kind of rapt attention that is required if that language is not to become confused with the language (or "grammar") of the film itself. Her own prose kicks up dust but does not give the impression of having been written on horseback. Yet, a bit paradoxically, it actually bears some relation to the best films on development — which tend to do the same thing.

Ackermann wrote only six of the twenty essays in *Films of a Changing World — A Critical International Guide, Vol. II*, but the stamp of her judgment and her editing is upon all. Taken as a whole, the collection treats films as cultural artifacts, personal statements, technical achievements, politicizing tools, works of art, and sources of information. In the volume's preface, Ackermann begs *IDR's* editor for continued indulgence as a traveler on a "somewhat exotic byway in the [journal's] pages," but in view of the breadth of interest the essays exhibit, the remark comes off as a private joke.

Not every essay approaches film from all these angles. The well-rounded effect of the whole set stems instead from cross-references provided in Ackermann's prefaces and from a spirit of debate that the editor seems to look for when she picks articles for publication. Beyond this, many contributors have themselves had some filmmaking experience (a virtual guarantee that they won't write about film as a one-dimensional entity) and fully half of them live in the Third World (a fair indication that their perspectives on development have grounds in fact).

For every consensus in this book, expect a head-on collision. The essayists seem to agree at least tacitly, for instance, that a director has no more right to assume anonymity than to make a home movie in the name of development: both approaches are subversive because they are irresponsible. On particular films and filmmakers, though, opinions differ wildly. (For sport, compare film scholar Carrie Sembene's assessment of her husband Sembene Ousmane's work as "denouncing existing ills in his society" and dedicated to "social realism" with Bennetta Jules-Rosette's contention that Sembene's film *Mandabi* presents "a theatrical version of tradition and change that represents daily life in Africa much as American television situation comedies reflect the American social milieu.") Perhaps this kind of intellectual orbiting merely reflects the truism that principles are less amenable than tastes to attack. But a more positive construction is that development filmmakers have not yet become hidebound, have not yet mummified principles into formulas.

The only complaints about this volume that don't sound peevish are related. One is that the contributors' credentials (though seldom their ideas) tend to be hardline academic — more otherworldly than Third Worldly. The other is that too many essays focus on films that few will ever have a chance to see. Ackermann repeatedly laments this last fact and makes what amends she can by way of giving information on costs and availability. Then too, criticism itself ostensibly affords one means of bringing good films out of the closet. But the problem remains and makes the practical reader uneasy.

Full use of this book awaits free access and full use of the films discussed. But had Ackermann waited for more equitable film-pricing practices and film-distribution policies, the "baby" of development filmmaking would have suffered incalculable and unrecoupable losses for want of an important formative stimulus.

Films of a Changing World: A Critical International Guide, Vol. II, can be purchased from the Society for International Development, 1346 Connecticut Avenue, N.W., Washington, D.C. 20036, U.S.A. for U.S. $4.00. ■ *K.C.*

2 Suzanne Kindervatter's manual, *Learner-Centered Training for Learner-Centered Programs*, is useful to workshop planners interested in increasing learner participation in structured training activities. The author describes in detail an approach for applying learner-centered training techniques to a specific adult-training situation in Thailand. Emphasis is placed upon the processes used to involve participants actively in workshop planning and implementation. Issues such as sharing leadership, learning by doing, problem-posing rather than problem-solving, and developing materials-production skills are treated. Descriptions of human relations exercises that have been adapted creatively to meet Thai cultural needs are presented.

Most of the text describes in detail the workshop operation; but a thought-provoking introductory section puts forth the notion that while Thai culture may seem ill-suited to participatory learning activities, in fact a deeper analysis of Thai, and indeed Asian, values indicates that Western learner-centered approaches such as Freirean processes do find expression in Thai culture through such concepts as "khit pen" (which can be translated as critical or rational thinking). Unfortunately, this contention is not linked to the description of the workshop activities. The reader is left without guidance on how "khit pen" and critical consciousness are related.

Also misleading to individuals who know Freire's work in another context is the author's use of Freirean terminology to describe various phases of the workshop. Moreover, readers find out little about who participated, how participants were selected, or what happened after the training. A final flaw is the lack of evaluation evidence, which weakens the author's case for learner-centered approaches.

Those seeking ways to adapt traditional human relations techniques to different cultural settings and different educational goals will find this manual a useful reference. The workshop design and structure are sound, and the presentation is logical and coherent. If somewhat flawed as a "think piece," Kindervatter's work is most helpful as a checklist of workshop design concerns for learner-centered practitioners.

Learner-Centered Training for Learner-Centered Programs is available for $3.00 from the Center for International Education, University of Massachusetts, Amherst, Massachusetts 01002, U.S.A. ■ *W.S*

3 This 50-page booklet, "Audio Cassettes: The User Medium" by Sumanta Banergee, contains a brief history of the development of audio cassette technology, advice on operation and production, and a summary of a variety of developmental applications of cassettes. The monograph provides a useful overview of cassette uses and of the medium's particular advantages with respect to local production, feedback, and audience participation. Examples from Jamaica, Guatemala, the Philippines, Pakistan, East Africa, India, and Ecuador are cited.

Emphasis falls squarely on the use of cassettes in the field. More particularly, cassettes are now the basic tool of the radio reporter, according to Banergee, and have expanded greatly the possibilities of producing broadcast-quality programming in the field. This is particularly important in view of the logistical problems of duplicating and distributing multiple copies of cassettes.

One of the series of UNESCO Monographs on Communication Technology and Utilization, "Audio Cassettes: The User Medium" can be obtained for U.S. $3.00 from UNESCO, 7 Place de Fontenoy, 75007, Paris, France.

■ *Heather Hudson, Academy for Educational Development*

4 Sources of information are among the most prized possessions of persons involved in technology transfer. The Development Reference Service of the Society for International Development (SID-DRS) has produced a sourcebook that will surely occupy a favored reference spot on many shelves. *Information Sources for Development* is a commendable effort to identify the elements of what is called the "primary information network." The "bodies listed in the sourcebook have "agreed to answer requests for documentation or information submitted by *developing countries* [ital. mine], or on their behalf, without charging any fees."

By dividing the network into various sectors such as international, national, regional, and specialized institutions, the SID-DRS places emphasis on the open-ended aspect of this network, which they underscore by appealing for further sources of information. SID-DRS's intent is to foster a network within and for Third World countries, so Sources, make yourselves known to them!

Information Sources for Development (in English and French) may be obtained from the Society for International Development, Development Reference Service, 49 rue de la Glaciere, 75013 Paris, France. ■ *J.B.*

5 The East-West Culture Learning Institute at the East-West Center takes seriously its responsibility for examining the many facets of cross-culturalism. Representative of this continuing effort is the latest volume (number 5) in the series, *Topics in Culture Learning*, which is divided into one group of articles contributed by participants in the culture-learning process, and another that documents research in the field.

The wide variety of topics covered underscores the interdisciplinary approach now considered necessary to the cross-cultural social scientist. Problems of teaching, linguistics, historical imperialism, economic deprivation, and psychology are among those reviewed. Several articles discuss designing cross-cultural research projects and stress the value of coordinated international cooperation and collaboration despite severe budgetary restraints. While most of the articles are specifically oriented toward academia, several of them cross the academic-culture barrier to give the layman insights into such things as a Pacific journey using star compass navigation skills, American popular culture under cross-cultural attack, and the process whereby adult Israeli immigrants absorb each others' cultural pasts while together learning their way in a new cultural present.

Topics in Culture Learning (Volume 5, 1977) can be obtained from the East-West Center, East-West Culture Learning Institute, 1777 East-West Road, Honolulu, Hawaii 96848, U.S.A. ■ *J.B.*

6 In *Third World Mass Media and Their Search for Identity*, media analyst John Lent does for development communications something like what Martin Luther did for 16th-century Christianity. He publishes a list of grievances intended to be life-giving to the institution he cares most about. Lent's notions of reform are an academic's and his "articles" seem a bit rambling, but his heart is unquestionably in his work.

Lent takes as his twofold task the accumulation of data on the mass media in the Commonwealth Caribbean and the rangy analysis of that data in support of some self-evident truths and some speculation. His findings hold good to some extent for the whole developing world, he says, since the Commonwealth is fairly representative of other developing nations. On this count he may be right — but only in the sense that Cuba can be considered representative of communist countries, for to ignore what it means to have the United States next door is practically to hoist the "flat earth" banner. Lent almost harps on the subject of U.S. influence, though, so his argument merely wobbles where it might be expected to collapse.

What fascinates and annoys Lent is how far the Caribbean Commonwealth has been from the concerns of most communication analysts considering how close it lies to the world's biggest media laboratory, the United States. "Why," Lent lets fall in a line that only seems mock-serious, "have scholars not ventured into the study of the communicative capabilities of calypso, steeldrum bands, and political meetings?" Why, indeed? For those who doubt that finger-snapping tunes can spark social change or that calypso lives up to Trinidadian writer V.S. Naipaul's claim that it is "the ballad, the broadsheet, the *Punch*, and *New Yorker*" of his country, Lent offers this excerpted evidence from "Dan the Man," written in 1963 by the "Mighty Sparrow":

De lessons and de poems dey write an' send from England
Impress me they were trying to cultivate comedians.
Comic books make more sense,
You know it is fictitious without pretense,
C.O. Cutteridge wanted to keep me in ignorance.

His point made, Lent himself does not, however, devote much energy to the exegesis of comic books or calypso — much less to the *reggae* songs that have found such a steadfast following outside of Jamaica. In the long run, Lent's ear for music is less developed than his nose for news. His first love is journalism.

About print and broadcast journalism in the Commonwealth Caribbean, we learn from Lent some startling facts. The British West Indies didn't know local programming until 1934, when some impassioned cricket fans turned into sports commentators for an important match. Of the four major news agencies covering the Commonwealth, only Reuters operates its Caribbean Desk in the Caribbean. In Jamaica, local TV programs cost twenty times as much to produce as imported material does to run. Most island governments issue work permits to right-thinking journalists only and revoke necessary credentials to express displeasure. Sixty to 80 percent of all TV fare aired in the islands is foreign-made.

Statements like these and pages of documents and interviews coalesce into a familiar pattern with a double identity. The first resemblance is one that Lent might be stretching in his title, the story of media development in poor countries everywhere. To be sure, with the axes and cankers of government interference and without a lingua franca and adequate training and production facilities, the Caribbean looks for all the world like a microcosm of Third World media development.

But the Caribbean is also an exceptional case. Besides proximity to the U.S., an accurate picture of the Caribbean Commonwealth must show (as Lent's does) that some of the region's communication problems are peculiar to nations composed of islands. It must also show (as Lent's does) that the urban flavor of developing-world media content does not pose insuperable problems in the Caribbean, where the rural/urban distinction means little.

So, the analogy that matters ultimately is that between the Caribbean's own history as a colonized region and its present status as a force-fed consumer of foreign media products. Whether or not the specific charge of "media imperialism" is hurled and whether or not enslavement to a TV or radio set is comparable to colonial subjugation, all the factors that have made Caribbean politics a politics of crisis and celebrity rule, of bullying and foreign intervention, remain. And all are influencing the course of media development in the region.

Obviously distressed by the Caribbean media's need for help from foreign professionals and responsible local governments, Lent nevertheless manages to deliver full evidence and to approach the question of media sovereignty from several angles. Sometimes his logic does not match his concern, and sometimes his habit of relegating the latest and liveliest information to cumbrous footnotes tries patience. But Lent gets exercised only over the issues that really matter, seldom strays off course, and strikes a happy balance between anecdotal portraiture and systematic criticism. If his book does not itself work necessary changes in the evolution of communications, it is at least apt to beget others of its kind that eventually might.

Third World Mass Media and Their Search for Modernity is an Associated University Presses publication. It can be obtained for U.S. $22.50 from AUP, Cranbury, New Jersey 08512 or AUP, Magalen House, 136-148 Tooley Street, London SE1-2TT, England. ■ *K.C.*

Call For Copy

DCR's editor invites readers to submit case studies on communication projects and analytical or descriptive articles on topics of general interest to *DCR* readers. Particularly welcome are unpublished manuscripts on innovative literacy efforts, development-communication projects in urban settings, project evaluation criteria and techniques, the role of the interpersonal communicator in communication and education projects, community development programs, and health-information campaigns. Photographs and samples of learning aids will also be gratefully accepted. ■

FAO's YEARS IN RURAL DEVELOPMENT COMMUNICATION

FAO's experience with rural broadcasting goes back many years, but the organization's broader-based activities in development support communication began only in 1970 with the establishment, in that year, of a Development Support Communication Branch in the Information Division. From its inception, the Branch concentrated on action-oriented field programs, involving mainly illiterate or semi-literate rural audiences.

Some of FAO's experience may interest others engaged in practical communication work in the Third World. Since rural broadcasting was FAO's first sphere of development communication activity, let us begin there.

Rural Broadcasting

FAO has assisted numerous governments in projects designed to establish or to improve the quality of rural broadcasting. Benin, Togo, Central African Republic, Bangladesh, Laos, Afghanistan, Mauritania, and People's Republic of Congo are among the countries assisted. If we try to identify the overall lessons learned from those projects, several salient points emerge. First, in the past, too much emphasis was placed upon radio as a *teaching* medium. Carried away with optimism generated by radio's ability to reach the remotest corner of almost every developing country, we all — governments and FAO — expected too much from it. We now know clearly that radio can be a vital support for development activities, especially as a means of arousing interest about innovations among rural populations and of motivating them to seek further information. But FAO now discourages project proposals based on the precept that radio can fulfill the primary functions of an extension service.

Experience has proven the utility of radio as a means of horizontal communication among rural communities, provided that the program producers concentrate on recording and broadcasting material about local problems and successful solutions, and provided that this material is recounted by the rural people themselves. But herein lies a major problem: it is difficult to promote such a model of people-based broadcasting if broadcasters from Third World countries continue to receive their training in formalized, studio-based broadcasting operations in the industrialized countries, and if developing-country governments view radio and other mass media mainly as organs of manipulative propaganda.

With regard to organized listening clubs, we have for the most part abandoned the rather rigid "radio farm forum" approach. The boom in transistor radios has completely changed the pattern of radio ownership in most countries; and where radio ownership is still low, we prefer to promote collective listening in existing groups (such as cooperatives or farmers' associations) rather than establish a new series of listening clubs that, in our view, often become elitist.

Cassette Tapes

In countries with a single national broadcasting organization — usually the case where the French or the British influenced matters — the problem of topicality arises when broadcasting agricultural subject matter. Agricultural and ecological/climatic conditions are seldom homogeneous enough to allow a nationally aired message — for example, that it is time to apply nitrogen top dressing to wheat — to be timely and relevant to more than a small proportion of farmers.

In particular, this problem plagued an FAO-assisted project in Afghanistan. Consequently, a pilot experiment with pre-recorded cassette tapes was launched as a means of localizing information. Taped programs (on five topics of known interest to farmers) and cassette recorders were supplied to extension workers trained by FAO to lead discussions based on the taped material. A baseline survey and a second survey after a three-month experiment in two provinces showed that awareness of the five problems covered, and knowledge of their solutions, had increased from three to seven times. These results were so encouraging that FAO is now promoting pre-recorded cassette tapes as a useful, cheap, and reliable medium for use where a national broadcasting network without local stations makes topicality a problem.

Filmstrips

Another low cost medium FAO considers worthy of particular attention is the filmstrip or slideset. The advent of relatively cheap projectors that can be run off main electricity supplies or off a 12-volt car battery make the slideset or filmstrip an invaluable audio-visual medium for field use. This equipment is especially useful when accompanied by a printed booklet containing reproductions of the photographs of the strip or slideset and the narration for each frame. Such booklets become manuals in their own right and, provided the photographs are printed large enough, an extensionist can sit down with three or four farmers and go through a booklet with them should it be impossible to organize a projection.

In FAO's experience, two problems have emerged in connection with filmstrips. The first is getting the strips and the projectors to the people who can effectively use them and providing such people with the necessary training. The second problem is that, although FAO's production of filmstrips is meant to be a catalyst in getting similar production under way by Third World governments, the catalytic effect we aim for is seldom achieved.

The distribution and training program is basically internal to national administrations. But time and perseverance are working in our behalf. The extension and training success being achieved by projects that systematically use tailor-made filmstrips will have its impact; and, perhaps, the projectors and filmstrips gathering dust in carefully locked drawers in many parts of the world will be recognized as useful and brought into action.

The problem of filmstrip production by governments of developing countries can almost certainly be overcome with more in-service training. FAO thus routinely endeavors to involve national staff when filmstrips are being produced for use by FAO-assisted projects, but an even greater training effort is certainly required.

Cine-Film and Video

Apprised of some of the problems encountered with filmstrips, the reader will not require much imagination to realize how much greater the problems are with cine-film. The time required to make films, high costs, and the medium's lack of flexibility all militate against its use (except in rare circumstances). And as for the mobile film-projection units so often built into projects as a communication panacea by planners who give no thought as to which films will be projected, we find such vans expensive to buy, costly to run, and likely to break down before long. Commonly, such units lie idle or get used for general transportation more than they get used for their intended purposes.

Small-gauge video, on the other hand, is proving highly successful in farmer training under the agrarian reform program in Peru. After a slow start, a team of young Peruvians helped by three FAO specialists is now making videotaped programs on many aspects of agricultural production and taking the shows out to farmers. The VTRs and monitors are quite frequently carried in a rucksack or on the back of a horse or mule to heretofore inaccessible communities. So much in demand are the videotaped training courses (backed up by practical training, instructors' notes, pupils' guides, and evaluation questionnaires) that some cooperatives have offered to pay to have more of them. Video equipment is also being used by the same team in Peru for social research. Obviously, video is not a medium we would recommend in all developing countries, but the Peruvian experience bodes well.

Postscript

It is often said the success of technical assistance projects depends on the government support they receive. This is especially true for development communication projects. FAO's experience indicates that effective communication can only be carried out by nationals among their fellow countrymen — perhaps with external assistance in training, planning and policy, procuring equipment, etc. It also pointedly suggests that worthwhile achievements have been wrought only when governments have made available good national staff and have maintained the strong interest shown when the original project was requested.

■ *Colin Fraser, Chief, DSC Branch, FAO, Rome*

What Extension Educators and The Mass Media Can and Can't Do — A Nutrition Education Project in India

In 1977 and early 1978, CARE's office in Tamil Nadu, South India, developed a mass media communication package addressed to slum women. Under the Modified Special Nutrition Program administered by the Social Welfare Department and CARE, supplementary nutritional and medical services were to be given to about forty thousand women and children through specially set up Child Welfare Centers in Madras, Coimbatore, Madurai, and Pudukittai.

The Intervention

As part of this program, a take-home ration of 700 grams of uncooked balahar (comparable to fortified semolina) is given to each beneficiary under six years old whose parents have accepted family planning or have fewer than three children. Pregnant and lactating women are also enrolled in the program, as are other women motivated to limit their family's size.

CARE trained and employed 48 female extension educators in conjunction with this project. Themselves slum women with but a modicum of education, these married mothers turned social change agents were versed in the rudiments of nutrition, health, and child-care. The work cut out for them consisted largely of motivating mothers to bring themselves and their children to the centers to receive the food supplement and medical care. These young project workers learned how to conduct cooking demonstrations using the food supplement and other locally available, cheap, and nutritious foods. They were also trained to organize women's meetings at which topics of community interest were discussed.

The mass media package was specially designed to help the interpersonal communicator reinforce her message and regulate and control message delivery. It is aimed at illiterate or semiliterate female slum-dwellers with strong beliefs about foods, pregnancy, and illness.

Never forgetting the low socioeconomic status of the target group and the restraints this status places on these women's ability to act on new knowledge, the project designers shared five assumptions and goals. First, pregnant women must eat the best available foods. Second, they must be able to identify these foods and to want them. Third, mothers must not rely solely upon breast milk to feed babies over five months old. Fourth, mothers must know about and use maternal and child-health centers regularly. Fifth, they must understand the importance of limiting family size. In short, the program goal is to create a climate of security in which mothers can learn that infant and child morbidity and mortality can be reduced and that women need not bear several children to make sure that a few survive.

Since the problems of nutrition, health, and family planning are usually related, CARE decided to treat them as parts of the same problem. Accordingly, the workers who visit the families deal with all these problems and stress the connections of one problem to another.

Similarly, the messages carried by comic books, radio dramas, posters, films, calendars, filmstrips, and flipcharts overlap and recur. When nutrition is the subject, the audience learns that too many pregnancies undermine a woman's nutritional state. Sanitation is linked to worm infestation, and better health to the start of infant supplementary feeding.

A fictitious but representative slum family has been created for use in the project materials. The man, Munniswamy — who has been vasectomized — is a rickshaw driver. Munniswamy, his mother, wife, and two children star in a comic book series that deals with infant nutrition, sanitation, de-worming, supplementary nutrition, immunization, vitamin A, vasectomy, tubectomy, the treatment of child illness, and the introduction of infants to supplementary foods. The family of Munniswamy and his wife Nuniamma also forms the nucleus of a radio 'soap opera'.

In the production of all media, the extension educator was kept very much in mind. Artwork was shown to her and modified according to her comments. (This sort of informal pre-testing revealed a strong preference for bright colors, which were used lavishly in the posters and comics.) Similarly, the communicator's language, that of the slum dweller, became the language of the messages.

In this project, what one medium lacks in terms of reach and coverage is supplied by another. Posters are displayed only at the centers, but the films are shown in all the city's theaters. The comic books are distributed to the beneficiaries by the extension educators, while the radio dramas carry the stories to a far wider audience.

The extension educator herself works with CARE personnel, helps identify different kinds of greens (some of which grow wild), and works out diets that are both inexpensive and nutritionally sound. She shows mothers how the same amount of money may be spent profitably or unprofitably and how family size relates to nutritional intake. When she conducts cooking demonstrations in slum areas, she drives her points home with posters, flipcharts, and comic books.

Every extension educator received notes on how to use the media CARE put at her disposal. She was also given a training manual that contains answers in the simplest language to the questions encountered in the field.

The messages prepared by CARE (all of which use Tamil), and CARE's media selection are now being evaluated by the Social Welfare Department.

The Environment

On the whole, Indian slum women have proved receptive to the ideas of better nutrition and of the need to limit family size (as the large number of tubectomies and the women's ability to recount the better sources of nutrition attest). But the woman does *not* control the family income, and she does not make all the decisions related to her own or her family's health.

If the mass media were directed *at men* to acquaint them with the dangers of repeated childbirth, the need of the pregnant woman for as much food as a manual laborer, and the availability of vasectomy as a simple means of limiting family size, needed changes might be easier to bring forth. Men need to be asked: "If you were a woman, how many children would you have?" They need to be told, in turn, that "If you are a true man, you will do something about it."

Women's lack of control over their destinies is, however, only one aspect of the cluster of problems that besets the communicator and the educator. Another is the neglect of the daily trials of the poor rural or slum family on the grounds that these problems are not "controllable." For instance, filmstrips, flipcharts, and posters tell a mother that she must supplement the baby's diet after five months; they even tell her how to make such food digestible. And of course they tell her that hygienic preparation of foods is of the utmost importance. But how can mothers whose homes have neither bathrooms nor running water practice even the most elementary hygiene?

Another problem concerns the need to reeducate doctors so that their directives can be synchronized with those of the extension workers. Project materials stress the need to take sick babies to a doctor, as most slum parents do. The doctor normally recommends a diet of arrowroot and administers an injection. While the treatment may cure the diarrheal episode, it does not cure the problem *(recurring* diarrhea) and it does not reinforce the messages of the interpersonal communicator. If the extension educator recommends giving a child with a simple stomachache food and plenty of water, so should the doctor (or vice versa). Additionally, the doctor should be discouraged from giving expensive treatments and encouraged to become an informal educator — to explain in simple language the nature and cause of the problem being treated.

Regardless of what the final evaluation says about the CARE project's impact upon maternal and infant health status in the area, two incontrovertible facts must be taken into account. First, the communicator cannot hope to accomplish much where basic facilities (such as potable water and adequate sewerage) are lacking. Second, media projects intended to benefit only women can succeed only partially, if at all.

■ *Manorama S. Moss, CARE-Tamil Nadu, College Road, Madras 6, India*

An Interview With Father Antonio Cabezas, Director of Radio Santa Maria

Antonio Cabezas met with the members of the Clearinghouse staff and that of its parent organization, the Academy for Educational Development, on March 7 in Washington. He played tapes of RSM programming and participated in a question-and-answer session that lasted over two hours. Part of the transcript of that fast-moving meeting is here reproduced — as much for the flavor as the facts.

Staff: What attracts students to *Radio Santa Maria?*

Cabezas: Opportunity. Fewer than 10 percent of the Dominican Republic's primary schools in the countryside go through the sixth grade, while *RSM* offers grades seven and eight too. We give people educational benefits that other institutions can't.

Staff: How were you able to convince education officials to allow you to certify students who study outside the formal school system?

Cabezas: It wasn't easy. I appeared before the Minister of Education over and over to plead our case. Over ten years, Ministers came and went. Maybe 15 held office during that time. Some of those 15 listened, especially as *RSM's* reputation and connections grew. With requests for information on *RSM* streaming into the Ministry of Education, the Minister eventually had no choice but to accredit the radio school.

Staff: What turned out to be your most compelling arguments in your case for official acceptance?

Cabezas: One was statistics. The Ministry knew full well how few of the country's rural primary schools offered all eight grades, and we were one answer to a big problem. Second, we were offering quality education, not a second-rate substitute. We had good textbooks, excellent teachers with master's degrees, and a curriculum based on government specifications. We were following all the rules, so the question was not "why?" but "why not?"

Staff: Does the Ministry contribute anything to the program?

Cabezas: Yes. The most valuable help it gives is recognition, but we have also received funds amounting to about $8,000. The Ministry does not pay the *RSM* teachers' salaries, but it doesn't choose the teachers either.

Staff: Does following the formal curriculum limit your freedom to teach what you think is useful?

Cabezas: Not much. With the educational level so low in the Dominican Republic, almost anything we do is basic and therefore practical in a sense.

Staff: Are you in fact covering material and offering courses not specified in the curriculum?

Cabezas: Oh yes. We do everything that is demanded of us and more. In our certificate classes, the official curriculum forms the basis of the lessons, but to this basis we add practical information. And, you must remember, *RSM's* accredited courses account for only part of the broadcasts. Our nonformal education programs cover a wide range of subjects.

Staff: Are your students tested?

Cabezas: Yes. The Ministry of Education oversees our testing procedures and examines the results of the tests on the subject matter it specifies. We test the students on the unofficial curriculum ourselves.

Staff: Are the Ministry's test monitors the same people who visit and inspect *RSM* at other times?

Cabezas: Yes. Two of the three people who supervise each exam are local public school teachers designated by the Ministry to act as supervisors. The third is an *RSM* teacher.

Staff: How do *RSM* students feel about taking standardized tests?

Cabezas: The tests do cause some problems, some uneasiness. But *RSM* students fare at least as well as in-school learners on these tests . . . We had to have some common ground — between the official schools and ours, that is — and we knew the government was not going to change, so we changed.

Staff: How do you bring real-life concerns into the curriculum?

Cabezas: We unite all the courses and all the concepts by weaving a social theme into each week's lessons, one that is important and often timely but that will not upset the students.

Staff: If the theme flows through both the nonformal and the cultural aspects of the radio program, doesn't the emphasis become rather overwhelming?

Cabezas: No, because each theme has so many variations. Take the theme of "family," for example. It can be approached from any number of perspectives. We might develop broadcast segments on 20 aspects of family life. Each will differ from the rest, so students get a feeling of continuity, not of repetition. We examine the formal curriculum through the lens of our chosen topic and always come up with some interesting angles. We also use a variety of formats, many of them dramatic, to keep the programs from growing stale.

Staff: What kind of listener ratings does *RSM* get?

Cabezas: I don't have the figures. I doub if anyone in the Dominican Republic does. But I do know that the money we get from advertisers is twice what the commercial stations in our area get for the same amount of air time.

Staff: What sort of people hold the microphone when you make field recordings and who runs the tape recorders? Farmers and peasants? Co-op leaders? Media professionals?

Cabezas: We put our 20 portable tape recorders in the hands of people we think are going to be articulate and are going to bring back good material. That can mean just about any responsible person.

Staff: You've said that people can use the recorders in whatever way they choose, but that sounds too easy. Who decides what will be broadcast, what will be edited, and what will be discarded?

Cabezas: The director of each department at the station. If a person has a tape that he thinks is suitable for the Open University format, he will take it to the Open University Department and the members of the department will edit it and schedule it as they see fit.

Staff: What importance do you think *RSM's* relationship with the Catholic Church had in either motivating people to

Radio Santa Maria

Begun in 1964 under the auspices of the Catholic Church in the Dominican Republic, Radio Santa Maria (RSM) centered its initial educational efforts on a literacy program that helped to certify more than 25,000 adults over a period of six years. A needs assessment defined the focus it has taken since 1970 — programs leading to certificates at the primary and intermediate levels.

Modeled after ECCA (Emisora Cultural de Canarias), *the radiophonic school begun in Spain in 1965,* Radio Santa Maria *depends on three educational aids: workbooklet texts, radio broadcasts, and field teachers.* RSM *also attempts to integrate the principles of lifelong education — relating school learning to real-life needs — into the traditional school curricula. Thus, classes in mathematics, Spanish, and social studies are illustrated by weekly "central themes" that represent peasants' life situations; themes used in the past include human exploitation and dependence.*

While daytime and evening programming include music and nonformal education programs on agriculture, health, and family planning, the hours from 7:00 to 9:00 p.m. from Monday through Friday are reserved for graded lessons. During these hours, when five other commercial and religious radio stations extend the broadcast sphere, RSM's reach is nationwide. Four grade levels are broadcast each evening, with half an hour allotted to each grade. Four seven-minute lessons are spread over an hour's broadcast. The remaining interludes provide for active student involvement in study and the completion of worksheets. Most of the teaching is done by a male-female team; the teammates assume teacher-student roles, asking questions and pausing before answering so that the radio audience has time to come up with answers at home.

On Saturdays, students throughout the country congregate, usually in groups of 20, in local centers for two-hour sessions with a field teacher. Here, completed worksheets are collected (to be corrected and handed back the following week), students' questions are handled, and the central theme is discussed. In addition, each student buys the next week's packet of six to eight worksheets at a cost of U.S. 25 cents (of which the field teacher receives 15 cents).

— Excerpted from *"Radio Santa Maria,"* a CDC *Project Profile* available free upon request.

participate or convincing the government that you should be allowed to do somewhat unconventional things?

Cabezas: The Catholic Church in our particular region actually lets us do whatever we want to do. Of course, the backing of the Church helps tremendously because people in our region are deeply religious. When you say "I work for *Radio Santa Maria,*" all the doors open. A private citizen acting on his own would find most of those same doors closed . . . But, just as important as church support is the fact that the radio station broadcasts material that is in line with our nation's values.

Staff: The charisma of the founder often seems critical to the success of a development program, at least until that energy can be transferred. How do you intend to transfer your own enthusiasm and to keep *RSM* dynamic?

Cabezas: Our reputation helps perpetuate our work. *RSM* now has power in the eyes of politicians at election time. We also get invited to seminars and meetings with the Ministers of Agriculture and Education because we are well-known and have a large constituency.

As for the question about personal enthusiasm, I think the answer is that it is vital but also contagious. For example, the Peruvian government has employed many of *RSM's* methods successfully and without the help of the Church or religious leaders. I don't doubt that in another country or another region, another institution has the same potential. ■

Village-Level Organization — The Link Between Agricultural Research and Farmers' Fields

(Part I of this article appeared in DCR Issue 22.)

The efforts made so far to transfer newly developed technology from agricultural research centers to farmers' fields can be classified by approach as being either individual-oriented or community-based.

The individual-oriented approach depends upon the services of the extension agent, who is supposed to visit villages and contact individual farm families. Its successes can be credited to two variables: the efficiency of the system and to the cooperation of the farmers served by it. Its many failures at keeping farmers up-to-date on agricultural achievements made at research stations reflect an impractical resolve to reach every farmer and a basis in experience and ideas borrowed from western countries, the U.S.A. in particular.

Studies show that these services are strongly biased toward the needs of the more well-to-do and progressive, even entrepreneurial, farmers. Yet, since rich and educated people in developing countries tend to have their own sources of specialized information — an agricultural specialist, a commercial dealer, an educated child, etc. — they require the extension service only during emergencies.

The clientele of the extension service tends to be composed of farmers who are in least need of help, partly because extension agents tend to spend more time with people who can understand and thus appear receptive to new ideas. As Neils Roling and Joseph Ascroft report, fieldworkers they asked to recruit farmers to attend training courses invited primarily farmers with higher than average incomes — ostensibly because they knew these farmers best and because most of them were not adequately trained in either the subject matter or the means of transferring new information to farm families. A lack of mobility and an impossible workload can also worsen the problem.

The other approach to reaching farm families emphasizes working with organized groups at the village level to promote cognitive and behavioral changes. This approach is based on the assumption that people live and function in groups and that peer-group influence helps shape individual behavior. Meeting and working in groups tends to reduce individuals' anxiety, fear, and uncertainty — as is evident in a Jordanian program designed to transfer newly developed technology to farmers' fields.

A wheat-improvement project in Jordan is achieving significant results in convincing farmers to adopt new production practices by channeling its activities through village-level organizations, mainly agricultural cooperatives. Project workers recruit farmers with small land-holdings to form agricultural cooperatives through which members purchase inputs such as cleaned and treated high-yielding seeds, fertilizers, chemical weed-controls, and farm machinery needed for land preparation and harvesting. Farmers pay the cost of these services after the harvest, in produce if they like. If the crop fails, farmers may delay payment until the next harvest.

The communication component of the cooperatives has contributed significantly to their efforts to convince farmers to adopt new technology. The cooperatives have provided farmers with the chance to make contacts, meet, and (often) articulate and discuss their problems with each other's help and with that of government agricultural officials and of cooperative personnel. Besides providing the farmers with the opportunity to learn about new ideas, this system enables the farmer to adopt or reject an innovation on the basis of what he knows about the opinions and behavior of peers, friends, and relatives.

Before using a new technology, farmers with small farms want to weigh its costs and make sure that it produces enough gain or profit to justify abandoning the old and familiar method. Because few of them are able or willing to bear the risk individually, because most of them calculate and evaluate every conceivable implication before trying the new, and because adopting a new technology is adopting a new behavior that has social risks involved, the advantages of group learning and group activity need only be presented to be appreciated.

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Village-Made Educational Materials: Three Experiments That Worked

In the absence of two-way communication systems, in which materials-producers receive feedback from villagers, the development of irrelevant centrally-produced materials that advocate inappropriate solutions to development problems continues. Ironically, these materials perpetuate the myth that only the "experts" hold the key to social change. To deal that very myth a blow, we have tried to work out alternatives to "expert" and centralized materials production. The following sketches show how our methods worked in three development projects in Africa.

Cattle-Dip Management Program

To conquer tick-borne diseases, every cattle owner must dip all his stock regularly in a chemical bath. At the onset of the Cattle-Dip Management Program near Sotik, Kenya, however, the dipping facilities were not being kept in good condition and the dip was often too weak to work.

Moreover, some farmers did not dip their cattle at all, others did so only irregularly, and most dipped only upgraded animals (thereby leaving the disease-resistant indigenous Zebu livestock carrying infected ticks).

Discussions with local farmers and veterinary staff quickly revealed that many farmers did not fully understand how dipping livestock controls ticks. They also revealed that those farmers who understood the importance of dipping refused, logically enough, to pay dipping fees when the chemical was understrength and thus ineffective.

Veterinary extension personnel had been attempting to tackle these problems by meeting with cooperative staff and farmers. But because these local fieldworkers were not familiar with alternative approaches to adult education, education by exhortation had become the norm and the extension personnel's efforts were unsuccessful.

To facilitate learning activities with both cooperative personnel and farmers, we developed various audio-visual materials: three-dimensional models, chemical demonstrations, locally shot black-and-white photographs depicting improved animal-husbandry practices, and black-and-white photobooklets with Swahili captions and companion tapes in the local language.

These materials were most often used right at the dipping facilities so that farmers who dipped irregularly or who dipped only their upgraded stock could be reached. The materials were also used at farmers' meetings to encourage those who did not dip any of their cattle to join the communal dipping program, and at cooperative committee meetings called to address management problems.

During these learning activities, *Wazee* (Swahili term of respect for "elders") were encouraged to tell of past animal-husbandry practices so that all farmers could begin to reflect upon the changes that had taken place as well as fathom their implications. Questions were referred back to the group so that all the farmers were free to answer. At these meetings local information sources were identified by the program staff members, who refrained from introducing outside information until they knew for certain that this information would be appropriate.

Gradually, discussion and proposals that incorporated community knowledge gave birth to relevant solutions, many of which were later successfully implemented. Management of the dips became more efficient, greater emphasis was placed upon maintaining the correct chemical concentration in the dip tanks, an improved system of record-keeping was devised and put to use, and much-needed repairs to the dipping facilities were made. Consequently, the number of cattle deaths due to tick-borne diseases dropped significantly following the start of the program.

Chebilat Women's Group Program

In 1972, the Chebilat Women's Group was stumbling in its move toward self-management and total self-reliance. Although the group was organized on a cooperative and democratic basis, members were not participating in management and decision-making, the steering committee was diffident, and the day-to-day management was being handled by a young woman without adequate organizational and accounting skills. The group was losing money when it should have been turning a profit, the women were growing suspicious of each other and particularly of those in charge of funds, and group cooperation was becoming impossible.

Informal discussions with individual members revealed that many women deplored the situation and recognized the roots of the problems facing the group. Yet, because "top down" decision-making had become the norm, these women felt they could not speak out at meetings, and the early enthusiasm of group members had soured and turned to apathy.

Suspicion had to be tackled first. If women could read and write numbers, we reasoned, they could then check their own "credit cards" as well as assume more managerial responsibility. To eliminate suspicion, as well as to promote basic numeracy, we developed number games, taped exercises in the local language, devised calendars to help women read numbers and plan activities, and obtained blackboards and chalk

The women clearly enjoyed playing the games and using the cassette tape recorder. Those with some arithmetical skills acted as facilitators and led meetings, though all actively helped each other identify and write numbers. Attendance at meetings was sporadic, however, despite the keen interest of some members. Apparently, even though all took pleasure in learning through problem-solving, most women would not participate fully in the absence of well-defined and group-recognized needs. Consequently, we began to use the cassette tape recorder to facilitate dialogue among group members. We gave women who were reluctant to speak out during women's group meetings the chance to tape record their comments in private.

A cassette tape recorder and blank tapes were circulated among individual members, who were asked to record their opinions. In small groups, informal interviews and discussions were recorded. The tapes were then replayed for other women who, in turn, were asked to respond on a tape to what they heard. As more women expressed their dissatisfaction with the management of the group and as others listened to these tapes, women began to meet to discuss the group's problems and to forge solutions.

Their decisions, *all of which were implemented*, included the agreement to train three women in management and accounting techniques, to hold regular general meetings, to develop guidelines for management and decision-making, to establish a small-scale loan scheme, to institute strict rules governing payouts, to build an office, and to rent land for the communal production of cash crops.

Members of the Chebilat Women's Group have continued to move forward toward self-management and self-reliance. Although finding steady markets for their handicrafts remains a problem, returns on their communal farming activities have made the problem easier to bear. They built a crop storage bin in 1975, and they plan to increase their acreage.

The Local Production Program

We initiated the Local Production Program in 1976 to further explore the potential of small media in community development. In particular, we saw the need for both problem-posing and informative materials, and for teams of "producers" who live more or less permanently in the community. Trained in the various uses of simple media and in materials production, these producers would count on other villagers to help find information, serve as resource people, and help produce materials. At the very least, villagers would be involved in a new and creative experience. At most, these activities would facilitate social and economic development.

Equipment and Training Specifications. Although training focused mostly on the producers, other villagers were also encouraged to experiment with various pieces of equipment. Generally, the villagers were trained on the spot as a need to use a certain device arose.

We started activities with three cassette tape recorders, all of which had digital

counters, built-in microphones, fast-forward and review mechanisms, and the capability to use either electricity or 12-volt wet cells. We also had two fixed-lens cameras, and two portable slide-projectors.

Training consisted of hands-on operation. The average person learned how to operate and maintain a recorder in about two hours, and nobody found the task impossible. On the other hand, many older people could not take clear photographs simply because their eyesight was too poor, and all found mastering even basic photography more time-consuming than learning to use tape recorders.

Little money was available for film, so only two members of the production team were trained in black-and-white developing techniques. After we helped them develop two rolls of film, they were able to develop negatives on their own. When film was not developed properly, we had the producers retrace the steps they had taken in order to identify the problem. The procedure was simple and satisfying, so understanding came rapidly.

Photosketching, a process whereby a projected negative or picture is drawn onto paper, proved easy for the beginner to use to create informative and problem-posing posters. After one or two tries, people invariably began to see the importance of excluding irrelevant background details. (At times, in fact, the photosketched posters they made were clearer and easier to read than the negatives from which the photosketches were drawn.) Adults in training quickly learned to use two or more negatives to compose a picture and to move the projector closer or farther from the paper to enlarge or reduce images.

Materials Production. We began local production activities with five villagers. Four of them had previously worked with adults through the government extension services and one had taken part in the Chebilat Women's Group Program. All had been exposed to centrally produced materials, and three had used these materials with groups of local villagers.

At first, topics for the information materials were chosen on the basis of the availability of resource people. Later, when the team was more experienced, we encouraged its members to seek out information of interest to them.

The first series of materials were, of course, not technically perfect. At first, as much time was spent introducing the resource person as conveying the information. Then too, commentaries tended to be long, rambling, and full of irrelevant details since illiterate resource people could not use scripts.

But, with experience, most villagers could produce excellent informative materials. The tapes they made were equal in quality to the centrally produced tapes we had used, if not better. The producers learned to use sound-dubbing procedures to create mixed tapes of recorded discussions, interviews, commentaries, music, and sound effects. Photoessays proved more difficult to produce, but with practice and the constructive criticisms of resource people and other villagers, the producers developed clear and concise examples of the medium.

Problem-Posing Materials Production. The production of problem-posing material was not begun until the producers knew how to use simple media to convey information. Nevertheless, far more time had to be spent and a different approach had to be used to help villagers produce problem-solving materials. Prior to production, community problems were identified by means of a four-week listening survey. While going about their daily business, the producers and others simply took note of people's complaints. They based the materials on the problems mentioned most often.

Most villagers initially involved in production activities were themselves experiencing the problems to be depicted in the codes and thus found it difficult to distance themselves enough to portray community life. We consequently found ourselves deeply involved in all aspects of production — instead of on the sidelines as we had been. We helped villagers identify problems and needs and initiated discussion on how best to present the effects of problems. This process did help people analyze their own situations, but when we withdrew our active support, production halted.

The production standstill forced us to change our approach. Instead of attempting to involve many villagers as we had done in developing informative materials, we narrowed our focus to the production team. We reasoned that if the production team could be trained to produce effective problem-posing materials, they could then use these materials with other groups of villagers. The objective, analytical dialogue, would occur in each case — within the production team as a result of developing codes and in group discussions during which the codes would be used.

To acquaint the team with our purpose and with production techniques, we prepared a script for a taped socio-drama. We asked team participants to take parts in this drama, discussed their particular roles, and then tape-recorded the performance "ad-lib" for later replay. In the discussion that followed the replay, we focused on the problem portrayed and then examined the group dynamics involved in problem-solving. This activity plus a little more experience equipped three of the five participants to develop effective problem-posing materials unaided.

Facilitators. Two different groups of facilitators took part in the Local Production Program. One was organized by us as a production team, and the other emerged by virtue of its voluntary involvement. The created group trained other villagers in the use of equipment, organized activities, and encouraged villagers to act as resource people, as well as to help produce materials. This group used many of the finished materials in their work with groups of local villagers. They also attended a brief seminar during which problem identification, leadership, discussion methods, and the best uses of various materials were discussed. All but one of these facilitators expected payment for their time and effort.

The second group of facilitators emerged unexpectedly. These villagers were proud of their accomplishments in production activities and wanted to show others the materials they had developed. For members of this group, personal satisfaction was payment enough.

Program Effectiveness. Observation and discussions with the participants at all levels were the evaluative tools. Together both validated several conclusions. First, the act of producing materials itself gave rise to analytical dialogue. Second, by interacting with nonformally educated adults in a mutual learning experience, the producers came to realize that problem-solving need not be left to experts. Third, exposure to different kinds of locally available information prompted the producers to take constructive action — planting trees, setting up a chicken project, using contraceptives, etc.

For the resource people — average villagers — a new self-respect and confidence grew out of their involvement in materials production. Yet, only when the production of problem-posing materials began, when information was sought and materials developed that addressed the real problems of the majority of villagers, did the whole village begin to feel the effects of the project.

Conclusion

Educational strategies that leave villagers passive, unmotivated, resistant to change, and unproductive are those that bid villagers to implement solutions that have been determined for them. In contrast, adult education approaches that involve villagers in a total process — reflection, dialogue, and action — are those that respect and take seriously the vast accumulated experience and knowledge villagers possess. These latter approaches invite villagers to identify and analyze their problems, to reflect upon their experience, and to recognize that truly liberating change must begin with the villagers themselves.

The impact of the Local Production Program on the producers, the resource people, and the community — the increased levels of awareness, the changes in attitudes, and the action taken — has convinced us that small media can play a leading role in adult education. If our conclusion is not novel, our evidence is nevertheless compelling.

■ *Bruce and Alisa Lundeen, Arusha Appropriate Technology Project, Box 768, Arusha, Tanzania (Copies of a longer report on these projects can be obtained from James Hoxeng, DSB/ED/AID, Rosslyn Plaza C311, Washington, D.C. 20523 U.S.A.)*

Dilemmas in Country X: Candid discussions about failures

The following dilemma was submitted anonymously by a frustrated nutritionist. More a case study than a story, it is the analytical exploration of a development effort that stalled because stated institutional goals and the beliefs of those assigned to carry the goals forward were out of kilter.

(The editor invites readers to submit reports for this column. Authors' names — as well as those of the people, agencies, and countries involved in the projects — will be withheld upon request.)

The Brazilian educator Paulo Freire and some of his colleagues spent the 1950s and 1960s developing a now famous pedagogy that would liberate rather than domesticate disadvantaged people. Of late, Freire's ideas have found expression in more concrete terms as researchers have devised ways to code people's behavior on the basis of writing samples and speech. But Freire's contention that social and political consciousness develops in three stages still provides insights into the development process. He says, in brief, that people who possess *critical-stage consciousness* of their world are concerned with transforming the social system, that people who possess a *naive-stage consciousness* are concerned with reforming individuals (who are seen as the true cause of injustice), and that people who possess *magical-stage consciousness* fatalistically accept things as they find them.

I am oversimplifying these terms to lay the groundwork for a problem that has been bothering me since my return from a stay as a nutrition consultant in Country X. The problem is really a question: Can a development project whose planning documents reflect critical-stage consciousness be successfully implemented by people whose behavior reflects magical-stage and naive-stage thinking?

Two years before I arrived in Country X, its health ministry had conducted a sector analysis that revealed, among other problems, discrimination against provincial and local health officials (mostly medical technicians and educators) by central office bureaucrats (mostly doctors). One year before I arrived, the Ministry of Health had hooked up with an international organization willing to fund needed changes. Shortly before I arrived, a task force composed of four high-level urban bureaucrats within the Ministry and six consultants supplied by the international agency had been formed to revamp the Ministry. The task force had no rural or provincial members, although it did interview rural people to get disease histories, assess living conditions, and size up local attitudes toward certain foods. The project documents drawn up by the task force heavily stressed changing the Ministry's norms, administrative procedures, regulations, and laws. In particular, a new series of guidelines prepared under its direction spelled out in detail how offices and individuals were to cooperate. These guidelines also redefined the decision-making process, delegating unprecedented power to middle-level administrators. Other documents specified that the lion's share of the total health-sector investment was to be used on nutrition projects at the provincial level. None of the plans took interpersonal concerns into account and all focused on systems, principles, and procedures — an indication that the task force possessed a critical-stage consciousness.

The 15-member group within the Health Ministry that was charged with implementing the 10-site project, in contrast to the task force, consisted primarily of middle-level health planners, nutritionists dieticians, and administrators. Most of the group had urban backgrounds, and those who had attended rural schools played down the fact. Hence, it soon became painfully clear that the goals that the Ministry of Health had embraced as an institution were not in accord with the priorities and beliefs of the Ministry's middle-level personnel. In a bind, team members resorted to blaming authorities, avoiding action, and attacking each other whenever a problem came up. They resorted, that is, to the kind of behavior characteristic of those with naive-stage or magical-stage consciousness.

Not surprisingly, this project's goals have been seriously compromised, and the nutritional status of the rural poor in Country X has not improved materially. Yet, the implementation team is not solely at fault. While project documents seemed to reflect critical-stage thinking, the failure of project planners to include rural and provincial people in the task force shows an utter lack of good sense. It also shows that critical consciousness is not a mental exercise but a mental state born of experience and maybe even of physical suffering: perhaps only those who have shared the problems (diseases and inadequate diets in this case) of the disadvantaged themselves possess the potential to acquire critical consciousness. At any rate, outsiders cannot expect to solve the problems of the rural poor by collaborating with the urban elite. If they do, the contradictions between the goals they put on paper and the force of ingrained bureaucratic traditions may be counted upon to paralyze those caught in the middle. ■

Development Communication Report

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PROFILS DE PROJETS

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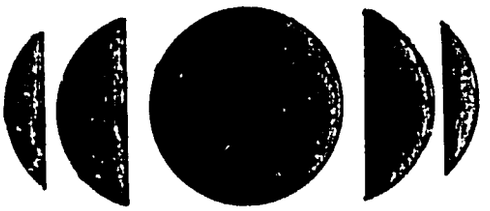

Préparé par

CLEARINGHOUSE ON DEVELOPMENT COMMUNICATIONS
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RADIO-MESSAGES

Equateur

POPULATION VISEE:	Les Equatoriens adultes ruraux
OBJECTIF:	Instruire les adultes ruraux illettrés par l'intermédiaire de programmes de radio éducative conçus par et pour leurs pairs
MOYENS DE COMMUNICATION:	Radio et magnétophones à cassettes
SUBVENTIONS/ PATRONAGE:	Projet d'Education Nonformelle de l'Université du Massachussets avec l'aide financière de l'Agence des Etats-Unis pour le Développement International
DUREE:	En cours, a commencé en août 1972
LIAISON:	Padre Isaias Barriga, Directeur, Radio-Message, Tabacundo, Equateur

DESCRIPTION:

Des émissions enregistrées sur bande magnétique produites par les petits paysans (Campesino) furent incorporées aux retransmissions d'une petite station régionale, Radio-Message, à la fin de l'année 1972 pour atteindre une large proportion des 44.000 adultes illettrés dans la région de Tabacundo,(Equateur). Le projet fut conçu de façon à rallier la masse des auditeurs par une retransmission libre et de charger ensuite les auditeurs eux-mêmes de la programmation et de la retransmission. Les objectifs immédiats du projet étaient de découvrir si des émissions radiophoniques d'un niveau très simple, intéresseraient les auditeurs et s'ils seraient capables de retransmettre à la communauté les informations fournies dans leur propre langage. Les buts à long terme étaient (1) d'intensifier les sentiments d'amour-propre des auditeurs, (2) de stimuler le développement communautaire et (3) d'améliorer l'alphabétisation des auditeurs et leurs connaissances en calcul.

Grâce à une modeste subvention pour les appareils, octroyée par l'Université du Massachussets, le projet rassembla 40 magnétophones et de nombreuses bandes. Le matériel fut distribué et des assistants d'enseignement, tous volontaires, purent se familiariser avec le matériel dans 40 centres de radio scolaire. Chaque auxiliaire utilise à présent ce matériel pour enregistrer des bandes que l'on passe chaque semaine au cours de deux émissions d'une demi-heure.

Les émissions "Message Campesino" (Message pour les Paysans) révèlent que les paysans sont si intéressés à s'entendre à la radio que ce type de programmation attire un grand nombre d'auditeurs. Tandis que les auxiliaires se chargent d'enregistrer les bandes et de les fournir aux stations, les retransmissions ne sont même plus transcrites, encore moins présentées sous une forme bien définie. Les programmes contiennent des conseils, des poèmes, des chansons, des lectures, des dramatisations de problèmes communautaires, des témoignages, des leçons de lecture et de mathématiques (retransmises en conjonction avec les émissions de radio scolaire déjà existantes).

RESULTATS:

Un questionnaire distribué en 1971, 1972 et aussi 1973 révéla que le nombre des paysans qui se contentaient de dépendre uniquement de "l'aide de Dieu" pour les questions de développement de la communauté était tombé de 80 à 50 pour-cent en un an dans la région de Tabacundo. En même temps, le nombre de ceux qui voulaient utiliser des techniques de production experimentales passa de 56 à 84 pour-cent. Cependant le questionnaire ne révéla aucune augmentation d'amour-propre des paysans. Des observateurs notèrent que néanmoins des changements d'attitude notables avaient pris place. Le Père Isaias Barriga, directeur de la station, croit que l'utilisation des enregistrements a montré aux paysans "qu'un certain pouvoir dans le monde" leur est accessible et que les buts et les satisfactions de la vie à la campagne sont uniques et valables.

Les progrès concernant les deux autres buts du projet sont relativement faciles à mesurer et ont été très marqués;les réponses correctes à un questionnaire sur le développement communautaire passèrent de 50 à 61,5 pour-cent de 1972 à 1973. Le nombre de ceux qui pensaient que l'érosion était une "chose fâcheuse" monta de 26 à 58 pour-cent des personnes interrogées. De même, le nombre de personnes obtenant une note élevée (environ 55) à un test de langues et de mathématiques, donné entre 1971 et 1973, s'accrut sensiblement. Le nombre de ceux qui abandonnèrent le programme passa de 26 pour-cent en 1971-1972 à 45 pour-cent l'année suivante mais ce déclin reflète probablement des facteurs externes (mauvaises récoltes et migration pour chercher du travail - qui fut facilitée par une nouvelle route qui diminua de moitié le temps pour se rendre à Quito).

REMARQUES:

- Laissés à eux-mêmes après avoir reçu des renseignements pendant une demi-heure sur le mode d'emploi des magnétophones, les auxiliaires apprirent vite à les utiliser correctement et d'une manière créative.

- Un groupe rural sans magnétophone loua une voiture pour venir au studio de la station de radio de façon à ce que ses membres puissent produire une "démonstration en direct."

- Des remarques de caractère très technique faites par un agronome bien intentionné, mais un peu en dehors du contexte d'opération, furent "traduites" par un paysan de manière à ce que le groupe les comprenne plus facilement.

- Une communauté enregistra le discours d'un fonctionnaire responsable de programmes de développement et garda l'enregistrement comme documentation des promesses qu'il avait faites au peuple.

REFERENCES:

"Programming by the People: An Ecuadorian Experiment," James Hoxeng, Educational Broadcasting International, Vol. 10, No. 1, Mars 1977.

"Tabacundo: Battery-Powered Dialog," James Hoxeng, Valerie Ickis, and Alberto Ochoa, Technical Notes on Nonformal Education, Center for International Education, University of Massachussets, Amherst, Massachussets, 1976.

Clearinghouse on Development Communication
Juin 1977

LAEDZA BATANANI

Botswana

POPULATION VISEE:	Les villageois de la région Nord-Est du District Central de Botswana
OBJECTIF:	Encourager la participation de la communauté à des efforts de développement, identifier la perception que les villageois ont de leurs propres problèmes et obtenir leur soutien pour les projects sous l'égide gouvernementale
MOYENS DE COMMUNICATION:	Théâtre populaire, drame, marionnettes, danse, chant, poésie accompagnée par battements de tambours
SUBVENTIONS/ PATRONAGE:	La Division de Services Extra-Muraux du Collège Communautaire de Tutume, le Groupe de Services de Vulgarisation du Sous-District de Tutume et le Collège d'Extension de Botswana
DUREE:	Commencé en 1974; en cours
LIAISON:	Ross Kidd, Botswana Extension College, Private Bag 0043, Gaborone, Botswana; Martin Byram, Tutume Community College, P/O/ Tutume, Via Francistown, Botswana; Frank Youngman, UBS/DEMS, Private Bag 0022, Gaborone, Botswana

DESCRIPTION:

Laedza Batanani (ce qui signifie "le Soleil est déjà Levé, donc Viens et Travaillons Ensemble") est un projet d'éveil de conscience commencé en 1974, pour encourager les participants à s'entraider et à tirer profit de tous les projets de développement patronnés par le gouvernement. Organisé avec l'aide de dirigeants locaux et de travailleurs des services de vulgarisation et du gouvernement, la campagne "éveil de la communauté" se présente comme une série de fêtes du village annuelles.

Le projet eut d'abord pour but de montrer l'utilisation possible du théâtre populaire par les travailleurs des services de vulgarisation et il conserve encore un caractère empirique; à l'époque de sa mise en oeuvre, la communauté visée était très apathique - résultat direct de la dispersion de l'habitat, de la négligence des hommes travaillant en dehors de la région et du caractère faible de l'autorité traditionnelle. Donc, lors d'une conférence sur des problèmes de développement qui eut lieu dans un village, quand des dirigeants répondirent avec enthousiasme à des études de cas dramatisées et recommendèrent que l'on donnât suite au programme, les organisateurs décidèrent de répondre par une campagne mobile incorporant le théâtre aux autres moyens de communication. Le premier festival eut beaucoup de succès et les participants demandèrent qu'il devienne un événement annuel.

Chaque festival est organisé en projet d'éducation intégrée, sans structure fixe. Chaque travailleur des services de vulgarisation de la région devient organisateur régional et membre de l'équipe mobile d'acteurs-animateurs. Chaque campagne constitue aussi un effort communautaire: les représentants de la communauté participent à une séance de travail avant la campagne ,au cours de laquelle les problèmes majeurs sont identifiés. Ils organisent le festival et participent directement aux spectacles des fêtes de village.

Chaque année l'équipe de la campagne visite les cinq villages les plus importants

de la région et présente un spectacle de 90 minutes qui comprend théâtre, marionnettes, danse, chant et poésie ponctuée de battements de tambour. Après chaque spectacle, les acteurs et les travailleurs des services de vulgarisation divisent l'assistance en groupes pour discuter les problèmes présentés. Une innovation récente est un programme après la campagne où il y a des démonstrations pratiques et d'autres activités (par exemple, distribution de graine) de façon à aider l'assistance à passer de la discussion à l'acti

Le moyen de communication essentiel de chaque festival est "le théâtre populaire," qui repose sur l'improvisation plutôt que sur un texte écrit et dépend plus de la grande familiarité qu'ont les acteurs avec les problèmes soulevés que de séances de répétitions. L'usage des mots est minime et le thème est répété continuellement pour aider ceux qui arrivent en retard. L'action continue sert à captiver l'attention des spectateurs et la participation du public est vivement encouragée. D'autres moyens de communication (marionnettes, chant, danse et poésie) sont utilisés pour renforcer les messages transmis par le théâtre.

RESULTATS:

"Laedza Batanani" attire un grand nombre de personnes, dont beaucoup n'avaient jamais participé à des programmes de développement. Les fêtes du village présentent des problèmes locaux de façon attrayante et donnent aux villageois la possibilité de formuler leurs griefs de façon informelle mais dans un contexte personnel. Ces spectacles sont des divertissements excellents et stimulent l'activité culturelle de la région.

Plusieurs changements positifs résultèrent directement de "Laedza Batanani": en particulier, la participation à des rencontres de discussion sur les problèmes de développement augmenta, le nombre de porteurs de maladies vénériennes qui signalèrent leur maladie et se présentèrent pour recevoir un traitement augmenta et les habitants créèrent p de jardins autour de leurs maisons. De plus, le succès du projet encouragea trois autres districts du Botswana à utiliser la même tactique de campagne d'éducation intégrée.

REMARQUES:

- Dans "les petites pièces" les personnages représentant des "problèmes" sont nommés par leurs vices et font déjà partie du patrimoine du village.

- L'utilisation des danses traditionnelles et de la poésie ponctuée de battements de tambour comme moyens de communication au cours des festivals s'est avérée extrêmement populaire et a démontré le potentiel du folklore et des artistes pour communiquer des messages d'actualité liés aux questions de développement.

- L'usage du théâtre populaire comme "miroir" qui permet aux membres de la communauté de considérer leurs préoccupations journalières, puis de les discuter collectivement, a montré l'efficacité de Laedza Batanani.

REFERENCES:

"Laedza Batanani: Folk Media and Development: A Botswana Case Study," Ross Kidd et Martin Byram, Botswana Extension College, Gaborone, Botswana, Juin 1976.

"Popular Theater and Development," Ross Kidd et Martin Byram, to be published in Convergence in late 1977.

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PROJECT DU YUKON INFERIEUR (SKYRIVER)

U. S. A.

POPULATION VISEE:	Esquimaux d'Alaska et fonctionnaires du gouvernement
OBJECTIF:	Développer un processus par lequel les Esquimaux pourraient identifier leurs besoins et leur problèmes, se mettre d'accord sur des actions appropriées et puis trouver des solutions
MOYENS DE COMMUNICATION:	Film et video
SUBVENTIONS/ PATRONAGE:	L'Office des États-Unis pour le Développement Economique
DUREE:	De 1970 à 1972
LIAISON:	Tim Kennedy, Department of Communication Arts, Cornell University, 640 Stewart Ave., Ithaca, New York 14853, U.S.A.

DESCRIPTION:

Grâce à des fonds de l'Office des États-Unis pour le Développement Economique, le "Projet Skyriver" débuta en 1970 avec tout juste une équipe de cinéastes travaillant à Emmonak, village de la basse région du Yukon. Le projet fut organisé comme une expérience d'utilisation du cinéma pour organiser les communautés.

En premier lieu les habitants d'un village désigné sélectionnèrent un organisateur de projet parmi eux. Au cours de rencontres, les habitants identifièrent des meneurs de la communauté et des problèmes urgents (par exemple manque d'écoles dans la région ou mauvaises constructions). Ces meneurs furent encouragés a` discuter et présenter des solutions aux problèmes de leurs villages devant la caméra, en utilisant la langue, le cadre et la présentation de leur choix. Après une projection privée durant laquelle la personne interrogée pouvait à son gré retrancher ou ajouter des renseignements, le film ou la bande enregistrée était soumis à l'approbation de l'organisateur du projet, ainsi que de la communauté afin de stimuler plus de discussions et de clarifier certains problèmes. Entre temps, l'équipe de Skyriver fournit des renseignements tels que les noms des agences du gouvernement qui s'occupaient des problèmes donnés ou les noms de ceux qui prenaient les décisions finales. Graduellement, un film émergeait qui reflétait le consensus de la communauté.

Le film achevé fut projeté a` Juneau pour les fonctionnaires du gouvernement et autres groupes intéressés par les questions de bien-être social. L'équipe du "Projet Skyriver" enregistra les réponses des personnes interviewées en video et les bandes furent renvoyées a` la communauté filmée. Les mêmes films furent aussi envoyés a` d'autres villages pour promouvoir le concept d'utilisation de rencontres filmées en video

Les films ne traitent pas tous de problèmes urgents. Certains montraient des aspects plus positifs du mode de vie des Esquimaux et avaient pour but de divertir et d'éduquer des personnes d'autres cultures.

RESULTATS:

Les films utilisés dans le "Projet Skyriver" amenèrent des changements majeurs dans la politique gouvernementale. Un film où les Esquimaux se plaignaient d'avoir à envoyer leurs enfants dans des pensionnats (parce qu'il n'y avait pas d'écoles aux alentours) encouragea le Département de l'Education de l'Alaska à repenser sa stratégie de développement scolaire; maintenant des lycées ont été bâtis dans les petits villages. Un autre film montrant la dureté de la vie dans les logements pour personnes à petits revenus, eut pour résultat le licenciement d'un ingénieur de planification en construction et changea la démarche de l'Etat en ce qui concerne les projets pour les personnes à petits revenus.

D'autres résultats du Projet Skyriver sont plus difficiles à mesurer. Les Esquimaux se rendirent compte de ce que le gouvernement pouvait ou ne pouvait pas faire pour eux. Ils devinrent moins isolés étant davantage au courant des problèmes de leurs voisins immédiats et des gens du village voisin. Cette connaissance les aida à protéger leur culture contre les incursions des institutions occidentales. En même temps, les fonctionnaires de l'Etat reçurent des témoignages directs sur la dureté de la vie rurale, provenant de personnes qu'ils n'auraient pas eu normalement l'occasion de rencontrer.

Finalement, en regardant les films faits par les Esquimaux eux-mêmes d'autres Américains apprirent à mieux connaître le caractère particulier de cette culture et ses efforts pour sauvegarder son identité.

REMARQUES:

- Skyriver eut des difficultés à trouver des cinéastes et des opérateurs de video qui pouvaient travailler dans le cadre particulier du projet - où la transcription, la distribution et le contenu des films étaient contrôlés par les sujets eux-mêmes plutôt que par l'équipe.

- Pour son deuxième film,l'équipe de Skyriver fut composée de deux Esquimaux. M. Kennedy, le Directeur du Projet admit qu'ils réussirent à obtenir des informations qu'une équipe venant de l'extérieur n'aurait jamais pu obtenir.

- Après avoir vu des films non édités, les villageois votaient pour savoir si un film donné représentait véritablement les sentiments de la communauté et leur consensus.

- Parfois, le film était préférable à l'enregistrement par video pour les entrevues. Les quelques semaines nécessaires au développement des films donnaient aux sujets l'occasion de réfléchir sur ce qu'ils avaient déclaré et au besoin de faire des modifications. En général, on peut dire que le film et la video ont chacun leurs inconvénients et leurs avantages.

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"The Skyriver Project: The Story of a Process," Tim Kennedy, Access, No. 12, National Film Board of Canada, Mars 1974.

"Videotaping: Process in Community Development Discussed by Tim Kennedy at Center Seminars," Instructional Technology Report, Washington, D.C., Juillet-Août 1974.

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L'ACTION CULTURELLE POPULAIRE (ACPO)

Colombie

POPULATION VISEE:	Les petits fermiers de Colombie
OBJECTIF:	Donner aux petits fermiers une éducation de base
MOYENS DE COMMUNICATION:	Radio, matériel imprimé, communications interpersonnelles (avec aide de diapositives et de films)
SUBVENTIONS/ PATRONAGE:	L'ACPO est virtuellement indépendante du point de vue financier; 7 pour-cent de son capital provient de sources gouvernementales ou de programmes d'aide financière ou technique octroyés par l'Assistance Internationale pour la Planification Familiale et par l'Education dans le monde
DUREE:	Fondé en 1974; en cours
LIAISON:	Monseigneur José Joaquin Salcedo, Action Culturelle Populaire, Apdos. Aéreo 7170, Nal. 3262, Calle 20, No. 9-45, Bogota, Colombie

DESCRIPTION:

L'Action Culturelle Populaire débuta en 1947. Elle est l'oeuvre d'un membre du clergé catholique de 25 ans, José Joaquin Salcedo. En essayant de donner aux petits fermiers des connaissances indispensables pouvant aider leur développement personnel et celui de leur communauté, ACPO commença à émettre de la station de Sutatenza.

Ce qui fut au début une expérimentation devint par la suite une institution. L'Action Culturelle Populaire transmet à présent des cours d'éducation de base, d'alphabétisation, de calcul, de santé, de construction, d'hygiène, d'économie et de développement personnel. Elle a un programme de formation pour son personnel: 900 personnes s'occupent de communications et de travail de développement. Elle organise un service de correspondance; publie un hebdomadaire et gère une imprimerie; elle offre un choix de cours brefs, d'intérêt immédiat ou local. Elle vend des centaines de milliers de livres chaque année, à prix coûtant, aux petits fermiers; elle envoie dans les campagnes des camionnettes avec du matériel éducatif et récréatif pour montrer des films et distribuer du matériel imprimé. Elle développe aussi régulièrement de nouvelles techniques d'aide audio-visuelle et de nouveaux programmes. En ce moment, ACPO fait aussi sa propre analyse et s'occupe d'une campagne pour la planification familiale appelée "Etre un Parent Responsable."

L'élément central de l'ACPO, la radio scolaire, touche 22,000 groupes d'étude. Les groupes de Radio de Sutatenza sont organisés par les petits fermiers locaux qui décident l'horaire des rencontres, préparent des comptes rendus, dirigent les discussions et conseillent d'autres membres des groupes. Les cellules d'apprentissage utilisent six manuels gratuits qui servent à documenter de façon permanente le contenu des retransmissions. Ces textes simples aident les élèves à acquérir le langage et le calcul de base et ils les renseignent sur les problèmes de développement de façon pratique.

RESULTATS:

Une évaluation de l'ACPO par l'organisation elle-même, effectuée en 1976, montra que 23 pour-cent des paysans interrogés dans cinq communautés types participaient à l'école par radio, que ceux qui avaient été contactés par Radio Sutatenza la préféraient à toutes les autres stations et que les améliorations dans la communauté correspondaient dans beaucoup de cas au nombre des auditeurs de la radio scolaire. Elle indiqua aussi, entre autres, qu'il y avait plus d'auditeurs terminant les cours de base qu'il n'y en avait recevant des certificats.

Les indices plus révélateurs du succès de l'ACPO sont cependant sa survie pendant 30 ans, son indépendence financière et sa croissance. Radio Sutatenza atteint à présent 140.00 paysans qui envoient entre 75.000 et 80.000 lettres et demandes à la station chaque année. Plus de 11.000 organisateurs de la communauté sont passés par les instituts et sont retournés chez eux pour combattre la pauvreté, la maladie, l'érosion, la croissance démographique excessive, le manque d'hygiène et d'alphabétisation. De plus, au moins 15 pays hispaniques ont utilisé le prototype colombien pour leur propres programmes éducationnels par radio.

REMARQUES:

- Dans la Colombie rurale, la circulation du journal "El Campesino" (environ 70.000 lecteurs) est plus grande que celle de n'importe quel autre journal.
- El Campesino inclut régulièrement en suppléments d'information des dépliants sur la planification familiale et l'éducation. Ces dépliants peuvent être affichés ou pliés comme brochures.
- Des livres de la Bibliothèque des paysans, à l'usage de ceux qui viennent d'apprendre à lire leur coûtent environ 13 cents U.S. chacun. Depuis 1963, plu d'un million de titres - le plus populaire s'intitulant Mère et Enfant - se trouvent dans les foyers ruraux.
- Les vingt employés de l'ACPO répondent environ à 200 lettres par jour. Ce service donne aux auditeurs l'occasion de poser des questions sur les retransmissions et d'utiliser leurs connaissances linguistiques. Il donne aussi au personnel de l'ACPO des renseignements très importants sur la réaction des paysans.
- L'ACPO maintient son autonomie financière en partageant sa station radiophonique, son studio d'enregistrement et son imprimerie avec des firmes commerciales.

REFERENCES:

"Family Planning Education in Action: Some Community-Centered Approaches," Judy El-Bushra et Susan Perl, International Extension College and International planned Parenthood Federation, Londres, Angleterre, Mars 1976.

"Communicación, Educación No Formal y Desarrollo Nacional: Las Radio Escuelas Colombianas," Juan Braun, Education Fundamental Integral, No. 1, Bogota, Colombie, Août 1976.

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ECOLE-SUR-LES-ONDES

Inde

POPULATION VISEE:	Fermiers indiens
OBJECTIF:	La transmission systématique de connaissances en agronomie aux fermiers auditeurs par l'intermédiaire de la radio-diffusion
MOYENS DE COMMUNICATION:	Radio plus correspondance
SUBVENTION/ PATRONAGE:	All India Radio
DUREE:	Projet mis en route en août 1975; en cours actuellement
LIAISON:	Dr. Pradip K. Dey (Directeur de Projet), Farm Radio Officer, All India Radio, Calcutta, Inde

DESCRIPTION:

En 1975 All India Radio conçu une stratégie pour s'occuper du problème complexe de la transmission rapide d'informations agricoles par des systèmes adaptés à la population agricole rurale du Bengale de l'ouest. La station de radio choisit comme auditeurs des fermiers lettrés et leur transmit une série d'émissions d'information sur l'agronomie, le principe étant que si des connaissances agronomiques étaient données de façon systématique a` ces fermiers, ils pourraient devenir des "fermiers-liaison" et enseigner les nouvelles méthodes d'agriculture aux villageois incapables de comprendre, ou n'ayant pas accès aux informations traitant de l'agriculture moderne.

L'École-sur-les-Ondes pour les fermiers transmit six cours entre la fin de l'année 1975 et le début de l'année 1976. Chaque cours comprenait cinq leçons d'une demi-heure. Le programme fut établi avec l'aide du Département Agricole du gouvernement du Bengale de l'ouest qui sélectionna aussi les enseignants pour les émissions.

Les instructeurs préparèrent les leçons et les lirent à la radio chaque dimanche entre 19 heures et 19 heures 30. La lecture était lente afin que les fermiers puissents prendre des notes. Les points importants et les chiffres furent répétés plusieurs fois au cours de la transmission. A la fin de chaque émission, des questions étaient posées. Avant que les auditeurs n'envoient leurs réponses à la station, on répondit à leurs demandes de clarification sur certains points des émissions. Chaque devoir était noté, et à la fin de l'année, chaque auditeur reçut un certificat avec ses notes.

RESULTATS:

Bien que All India Radio pense qu'un nombre important de fermiers ait bénéficié des transmissions radiophoniques, seules 114 personnes participèrent de façon active au cours par correspondance de la "1ère année scolaire." Celles-ci furent interrogées à la fin de chaque séance d'entrainement de façon à découvrir leurs intérêts et buts, et leur potentiel pour devenir des fermiers-liaison. La plupart des participants avaient entre 20 et 29 ans, avaient reçu une éducation secondaire et jouissaient d'un status social moyen. A peu près 53 pour-cent étaient cultivateurs tandis que 35 pour-cent étaient étudiants ou enseignants. La plupart déclarèrent qu'ils écoutaient les leçons sur leurs propres postes de radio et ils montrèrent une participation sociale accrue après avoir écouté les émissions.

Les participants suivirent une moyenne de trois cours sur les six offerts pendant la période d'apprentissage. La majorite des auditeurs s'intéressa plus particulièrement aux cours sur la culture du blé et du riz, les deux récoltes d'hiver les plus répandues et les plus rémunératrices du Bengale de l'ouest. Ils déclarèrent que leur motivation première pour participer au cours avait été d'améliorer leurs connaissances en agronomie mais que le désir de réaliser des bénéfices venait en second.

Après le dépouillement des résultats de la 1ère année par les membres du Département de l'Agriculture du Bengale de l'ouest, le programme de l'Ecole-sur-les-Ondes 1976-77 fut modifié de façon à renforcer les thèmes les plus populaires et l'horaire des transmissions fut changé. En conséquence, les programmes 1976-77 attirèrent un plus grand nombre de participants actifs (155 a~ 180, selon le cours). Selon le directeur du projet, l'évaluation montra que les meilleurs participants pour les Cours sur les Ondes à l'avenir seraient les encadreurs agricoles - les fermiers de liaison potentiel

REMARQUES:

- Pour évaluer le potentiel des auditeurs à devenir des fermiers de liaison, les enquêteurs comparèrent les caractéristiques socio-personnelles des participants avec celles reconnues chez les fermiers plus avancés.

- Les études ne démontrent pas qu'une réponse des auditeurs ait changé les émissions suivantes ni que les encadreurs des émissions aient demandé directement aux auditeurs de mettre les nouvelles informations radiodiffusées à la disposition des fermiers désavantagés.

- Alors qu'au début les fermiers signalaient le gain monétaire comme la seconde raison de l'écoute des émissions, une enquête subséquente montra que cette espérance de profits disparaissait pendant ou après le cours.

REFERENCES:

"Agricultural Broadcasting: A Novel Approach in Calcutta," Pradip K. Dey, Combroad, No. 34, Janvier-Mars 1977.

"Identification of Participants of the School-on-the-Air for Farmers," Indian Agriculture, Vol. 20, No. 2, 1976.

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RADIO-MATHEMATIQUES

Nicaragua

POPULATION VISEE:	Les enfants de l'école primaire au Nicaragua
OBJECTIF:	Développer un système prototype pour l'enseignement élémentaire du calcul.
MOYENS DE COMMUNICATION:	Radio, renforcée par des cours et une documentation écrite
SUBVENTIONS/ PATRONAGE:	Le Bureau d'Assistance Technique de l'Agence des Etats-Unis pour le Développement International; le Gouvernement du Nicaragua
DUREE:	Commencé en juillet 1973; en cours jusqu'en juin 1979
LIAISON:	Ms. Jamesine Friend, Apdos, 122, Masaya, Nicaragua; Dr. Barbara Searle, Institute for Mathematical Studies in the Social Sciences, Ventura Hall, Stanford University, Stanford, CA, 94505, U.S.A.

DESCRIPTION:

Le Projet Radio-Mathématiques est une tentative de programmer et de transmettre des leçons de mathématiques élémentaires qui captivent l'intérêt des enfants. Une partie du projet est l'élaboration du programme. Un autre aspect consiste en la création d'un système d'évaluation du rendement du programme de façon à réviser et améliorer les leçons. Une troisième aspect est l'analyse des concepts mathématiques enseignés par les leçons. Commun aux trois activités est le développement de l'utilisation de la radio comme moyen d'enseignement.

Ce projet démarra en juillet 1973. Une fois que le personnel eut choisi l'endroit, il prépara un plan de recherches détaillé et testa des leçons-type dans certaines écoles de Californie. Au milieu de l'année 1974, le bureau nicaraguayen fut organisé et prépara une série d'étapes pour le programme et des tests. En 1975, 150 leçons commencèrent à être utilisées dans 16 classes expérimentales. Plus de 85 écoliers des premier et deuxième niveaux bénéficièrent des leçons de mathématiques pendant l'été 1976.

Chaque leçon de mathématiques comprend une partie enregistrée d'une durée de 30 minutes et une partie après-enregistrement enseignée par un instituteur aidé d'un guide de deux ou trois pages. Une leçon-type consiste en plusieurs segments d'instruction et de divertissements, presque tous exigeant des élèves environ quatre réponses actives par minute (réponse écrite, réponse orale, chant). Les leçons demandent peu d'explications directes,couvrent beaucoup de sujets et exigent des enfants plusieurs genres de réponses. Les activités après-enregistement prennent jusqu'à 30 minutes et demandent l'utilisation du tableau noir. Jusqu'en 1975, des feuilles d'exercices faisaient aussi partie de chaque leçon.

RESULTATS:

Un test donné à la fin de l'année en 1975 indiqua que les enfants des classes qui avaient écouté la série des programmes de mathématiques à radio avaient un taux de succès de 21 pour-cent plus élevé que ceux qui avaient étudié les mathématiques de façon plus traditionnelle. L'évaluation lors de la deuxième année révéla qu'il y avait une différence encore plus grande. Les écoliers de premier niveau avaient un rendement de 60 pour-cent plus élevé que ceux du groupe-contrôle tandis que les écoliers du second niveau avaient pris une avance de 29 pour-cent.

A la fin de l'année scolaire 1975, 73 pour-cent des instituteurs participant dirent que les enfants du programme Radio-Mathématiques apprenaient plus qu'ils ne l'auraient fait dans des classes; 92 pour-cent déclarèrent souhaiter que le programme continue.

Grâce à l'aide de l'USAID, le Projet Radio-Mathématiques va être continué jusqu'en juin 1979. Des efforts sont en cours portant sur la révision des programmes, sur l'expérimentation de l'enseignement par la radio sans feuilles d'exercices pour réduire les frais, et aussi sur l'élargissement du projet de façon à atteindre les élèves des niveaux plus élevés.

REMARQUES:

- Une des leçons dans la série Radio-Mathématiques reçut le Prix Japon à l'occasion du Concours International de Programmes Educatifs; 92 organisations du monde entier avaient soumis leurs projets pour ce concours.
- Le Projet Radio-Mathématiques fut élargi à la demande du Ministère de l'Education du Nicaragua pour répandre la radio scolaire dans trois départements du pays.
- Les élèves doivent répondre activement au moins une fois par minute et durant chaque programme.
- On utilisa pendant les classes des capsules de bouteilles et d'autres objets faciles à trouver et gratuits pour aider à apprendre à compter.

REFERENCES:

"The Radio Mathematics Project: Nicaragua 1974-1975," Barbara Searle, Jamesine Friend et Patrick Suppes, Institute for Mathematical Studies in the Social Sciences, Stanford University, Stanford, Californie, 1976.

"Evaluation of the Radio Mathematics Project," Barbara Searle, Paul Matthews, Jamesine Friend et Patrick Suppes, non publié, Octobre 1976.

Clearinghouse on Development Communication
Juin 1977

LA TELEVISION EDUCATIVE ET LA REFORME DE L'ENSEIGNEMENT

El Salvador

POPULATION VISEE:	Elèves de 13 à 15 ans d'El Salvador
OBJECTIF:	Donner une éducation publique à tous les jeunes de 13 à 15 ans de façon à augmenter la main-d'oeuvre de niveau intermédiaire au Salvador
MOYENS DE COMMUNICATION:	Télévision et brochures supplémentaires imprimées
SUBVENTIONS/ PATRONAGE:	Le Gouvernement du Salvador (avec l'aide de l'Agence des Etats-Unis pour le Développement International, l'UNESCO, d'autres agences d'aide internationale et les Gouvernements mexicain et japonais)
DUREE:	Une période de plusieurs années. Débuté à la fin des années 1960. A présent en expansion de façon à atteindre les premiers niveaux. On s'attend à ce que le programme aille du niveau un à neuf en 1980
LIAISON:	Ms. Ana Maria Merino de Manzano, ETV-EL Salvador, Ministère de l'Education, San Salvador, Salvador; Dr. Robert C. Hornik, Institut pour la Recherche de la Communication, Cypress Hall, Stanford University, Stanford, CA 94305, U.S.A., Dr. Henry T. Ingle, 7938 Bayberry Drive, Alexandria, Va. 22306, U.S.A.

DESCRIPTION:

Le projet d'instruction par la télévision au Salvador,mis en oeuvre à la fin des années 1960,faisait partie d'un programme majeur de l'éducation. Initiée par le Président Fidel Sánchez Hernández, la réforme avait pour but de donner à chaque habitant du San Salvador la possibilité de bénéficier de ses droits à 9 ans d'éducation gratuite, d'accroître la main-d'oeuvre semi-qualifiée et d'améliorer le système scolaire.

Quand le programme d'instruction par la télévision fut introduit, on changea aussi plusieurs autres éléments qui modifièrent l'impact de la télévision. Le Ministère de l'Education fut réorganisé et eut une autorité centrale plus forte. D'autre part il fut élargi de façon à contenir un bureau de planification. En même temps, le système de supervision des écoles et les programmes d'enseignement furent révisés. Les enseignants du troisième cycle--septième, huitième, et neuvième niveaux--reçurent des congés payés d'un an de façon à pouvoir participer à des activités de recyclage intensif. Les frais scolaires furent abolis, des doubles séances furent introduites, et on établit aussi un système beaucoup plus libéral de promotion, de notation des examens et d'évaluation des étudiants. Tous ces changements encouragèrent ou permirent un accroissement considérable du nombre d'élèves dans les classes.

La télévision transmit l'essentiel des programmes révisés et ainsi contribua de façon majeure à alléger le fardeau des enseignants à partir de février 1969 quand le nouveau système fut initialement utilisé dans 32 classes pilotes du septième niveau. Après cela, de deux à quatre programmes de 20 minutes furent retransmis chaque semaine couvrant cinq matières; espagnol, sciences sociales, sciences naturelles, mathématiques et anglais. Chaque leçon à la télévision fut précédée d'une séance de motivation de 10 minutes conduite par l'enseignant et suivie par une séance de renforcement conduite aussi par un enseignant et durant environ 20 minutes. Les guides pour les instructeurs et les cahiers d'exercices pour les étudiants furent utilisés pour compléter les leçons télévisées.

RESULTATS:

Les comptes rendus du succès de l'utilisation de la télévision comme moyen d'instruction au Salvador varient, bien que le projet soit encore très actif. Une analyse quantitative montra que les connaissances de base des étudiants des classes avec TV augmentèrent de 15 à 25 pour-cent par rapport à celles de leurs camarades qui avaient étudié dans des classes traditionnelles ou réformées mais sans TV. Les indices qualitatifs sont aussi positifs: les élèves (surtout ceux qui sont désavantagés et lents à apprendre) et les enseignants donnèrent leur appui au projet et furent enthousiastes pour l'utilisation de la TV dans les salles de classe. Bien que l'enthousiasme ait un peu baissé après que la nouveauté de la TV soit passée (à peu près quatre ans après son introduction), les programmes les plus vivants restent populaires.

Certains enseignants et évaluateurs du projet de TV au Salvador croient que tout le potentiel du programme n'a pas encore été réalisé. Les plaintes les plus fréquentes des enseignants sont que la qualité des leçons est inégale. Une évaluateur déclara que le projet du Salvador prouvait la croyance qu'il vaut mieux utiliser la télévision pour présenter de l'information car le professeur ne peut le faire lui-même aussi bien (face à la concurrence de la télévision, certains enseignants l'utilisent comme "garde-enfants" tandis que d'autres décident de ne pas l'utiliser du tout). Finalement, certains évaluateurs déclarent que cette réforme éducative n'a pas été assez bien incorporée au plan de développement général du Salvador, que les élèves dans le programme ne peuvent pas trouver de travail ou de place au niveau d'éducation supérieure - le "Bachillerato Diversificado."

REMARQUES:

- La réceptivité des élèves pour l'instruction par la télévision fut plus grande en anglais et en sciences sociales qu'en mathématiques et en sciences naturelles. Cependant, les résultats en mathématiques furent meilleurs qu'en sciences naturelles et sociales.

- Opposés au principe de la dépendance sur des experts étrangers pour monter leur nouveau programme de TV, les dirigeants du Salvador insistèrent pour que la population locale ait une responsabilité majeure dès le début.

- En juillet 1971, les enseignants du Salvador se mirent en grève. Quoique l'augmentation du travail due en partie à l'utilisation de la télévision dans les classes ne fut pas un élément du conflit, certains enseignants prenant part à la grève mentionnèrent ce fait.

REFERENCES:

"Reform and Investment Priorities for Formal Education in El Salvador, Arthur K. Burditt III, Princeton University, Princeton New Jersey, 1976 (non-publie).

"Reconsidering the Use of Television for Educational Reform: The Case of El Salvador," Henry T. Ingle, Educational Television: A Policy Critique and Guide for Developing Countries, Robert Arnove, Editeur, Praeger Publishers, New York, New York, 1976.

"Educational Reform with Television: The El Salvador Experience," John K. Mayo, Robert C. Hornik et Emile G. McAnany, Stanford University Press, Stanford, California, 1976.

Clearinghouse on Development Communication
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EDUCATION DE BASE DANS LES VILLAGES

Guatemala

POPULATION VISEE:	Les fermiers indiens et ladinos au Guatemala
OBJECTIF:	Modifier les pratiques agricoles et accroître la production par l'utilisation efficace des méthodes de communication
MOYENS DE COMMUNICATION:	Communications interpersonnelles, Radio-Club, matériels graphiques
SUBVENTIONS/ PATRONAGE:	Le Bureau pour l'Amérique Latine de l'Agence des Etats-Unis pour le Développement International et les Ministères de l'Education et de l'Agriculture du Guatemala
DUREE:	Lancé en 1973; en cours
LIAISON:	Prof. Mario R. Dardon, Directeur de Projet, Programme d'Education de Base dans les villages, 2a. Avenida 8-53, Zona 1, Guatemala city, Guatemala; Dr. Howard Lusk, responsable de l'Education de la Science et de la Technologie, Bureau de l'Amérique Latine, U.S. AID, Rm.2245, New State, Washington, D.C. 20523, U.S.A.

DESCRIPTION:

Le Projet d'Education de Base dans les villages est une entreprise de cinq ans qui a pour but d'utiliser des moyens de communication pour familiariser les fermiers du Guatemala avec les pratiques modernes de l'agriculture. Son but secondaire est d'accroître l'efficacité des encadreurs de façon à ce qu'ils puissent aider à résoudre les problèmes agricoles et régionaux. Le plan de tester la rentabilité de divers "dosages"de moyens de communication fut conçu par "l'Academy for Educational Development" sous contrat de l'Agence des Etats-Unis pour le Développement International (dont la contribution au projet finira par être de l'ordre de 1.650.000 dollars (soit 8,250,000 francs) à la fin du projet. Le plan primitif prévoyait d'abord trois puis quatre types de moyens de communication différents représentant des niveaux de contact accrus avec les familles rurales "dans deux milieux très différents de par leur géographie et leur culture."

En 1973, le projet fut mis en oeuvre chez les Ladinos parlant l'espagnol (Metis) dans la région du sud-est du Guatemala. Environ 18 mois plus tard, l'entreprise fut élargie de façon à englober les régions montagneuses de l'ouest pour atteindre le segment indien de la population parlant Quiché. Un étude faite par le personnel du projet en 1974 démontra que le taux d'analphabètes atteignait 64 pour-cent dans la vallée Yupiltepeque du sud-est du Guatemala et 66 pour-cent dans les communautés rurales près de Momostenango dans les régions montagneuses.

La radio fut choisie comme moyen principal pour faire connaître les nouvelles techniques agricoles et pour changer les attitudes. Deux stations de radio transmettent huit heures par jour, de cinq à neuf heures et de seize à vingt heures, du lundi au samedi. Pour attirer et conserver un nombre important d'auditeurs, le personnel du projet chargé des programmes introduit dans à peu près 80 pour-cent du temps imparti, de la musique, des émissions de variété et d'autres programmes sans rapport avec l'agriculture. Les heures qui restent sont consacrées à des discussions sur l'agriculture. Le programme agricole principal inclut un "Journal Agricole" de 30 minutes, des feuilletons radiophoniques, une période de questions et réponses avec un agronome et de 30 à 40 annonces ayant trait à l'agriculture.

Le premier des quatre moyens de communication différents consiste en des messages

transmis seulement par la radio. Le second ajoute le "moniteur" de village - sélectionné et entraîné sur place pendant environ un mois - qui se rend chaque semaine à quatre ou cinq villages d'environ 200 familles et qui organise des radio-clubs en fin d'après-midi au cours desquels on écoute les messages enregistrés sur magnétophone. Le moniteur utilise des feuillets volants et des affiches pour stimuler les discussions, il distribue des feuillets à emporter chez soi et fait parfois des démonstrations d'agriculture. Une troisième approche fournit l'assistance technique d'agronomes, qui s'occupent chacun d'environ 600 familles. L'agronome délégué du projet travaille avec les moniteurs dans les villages, fait des démonstrations, aide à identifier les problèmes locaux concernant certaines récoltes et donne des conseils aux fermiers. Il supervise et encadre aussi les moniteurs et joue un rôle important dans la transmission des réactions des villageois. La quatrième approche, ajoutée en 1975, emploie des moniteurs seuls, dans les régions inaccessibles aux programmes radiophoniques.

RESULTATS:

Contrairement à ce qu'on attendait et probablement à cause du fait que les programmes avaient été élaborés en fonction des besoins locaux, la radio seule semble avoir eu le plus grand effet sur le comportement des fermiers. Ce système particulier créa, selon certains, un ensemble élargi de communications entre les personnes plutôt que le résultat plus traditionnel et impersonnel des émissions. Aussi, moniteurs et agronomes semblent avoir renforcé l'efficacité des émissions radiophoniques.

Les radio-clubs attirèrent les fermiers déjà disposés à adopter des pratiques agricoles plus modernes. Mais certains fermiers qui n'y vinrent pas changèrent aussi leurs méthodes agricoles. Un changement essentiel fut lassélection d'une semence de maïs plus saine et l'utilisation d'engrais pendant la floraison et les semailles. L'utilisation d'insecticides augmenta aussi chez beaucoup de fermiers locaux de façon moins évidente.

REMARQUES:

- En 1976, l'effet du manque de pluie sur les récoltes fut accru par une sécheresse pendant la période critique de juillet à septembre.
- Le projet fut interrompu par le tremblement de terre de février 1976. Pendant un mois, les ressources du projet furent utilisées presque exclusivement pour des activités de secours.
- L'introduction de la sériographie en 1976 produisit des graphiques de meilleure qualité, éliminant l'ennuyeuse méthode de copie à la main et donna aux artistes plus de temps pour intégrer les concepts reçus par les réponses aux nouveaux matériels illustrés.

REFERENCES:

"The Basic Village Education Project: Third Interim Report, Field Operations," June 1975-1976, Academy for Educational Development, Washington, D.C., 1976.

"The Basic Village Education Project: Third Interim Report, Evaluation Component University of Florida, July 1976," Academy for Educational Development, Washington, D.C. 1976.

Clearinghouse on Development Communication
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CAMPAGNE POUR L'ALLAITEMENT NATUREL

Trinidad et Tobago

POPULATION VISEE:	Les mères de nouveaux-nés et les femmes enceintes à Trinidad et Tobago
OBJECTIF:	Faire connaître au public les rapports entre l'allaitement naturel, les principes de bonne nutrition et le niveau de vie
MOYENS DE COMMUNICATION:	Radio, télévision, affiches, journaux, périodiques, films
SUBVENTIONS/ PATRONAGE:	L'Association des Ménagères de Trinidad et Tobago (HATT), l'Association de Agences Publicitaires de Trinidad et Tobago avec le support du Ministère de la Santé, l'Institut d'Alimentation et de Nutrition des Caraïbes(CFNI) et l'Association Médicale de Trinidad et Tobago
DUREE:	Projet conçu et mis en oeuvre en 1974; prévu à nouveau pour la fin de 1977
LIAISON:	Alison White, diététicienne, 13 Santa Anna Gardens, Maingot Street, Tunapuna, Trinidad

DESCRIPTION:

La Campagne pour l'Allaitement Naturel à Trinidad et Tobago a nécessité la coopération de plusieurs agences privées et gouvernementales afin de pouvoir utiliser les moyens de communications de masse nationaux pour promouvoir l'allaitement au sein. Coordonnée par HATT avec l'aide des Agences Publicitaires de Trinidad et Tobago, la campagne fut conçue au début de l'année 1974 et officiellement mise en oeuvre en mai.

On envoya aux employés des agences publicitaires mentionnées ci-dessus une brochure de trois pages montrant les aspects nutritionnels et économiques de l'allaitement naturel pour les convaincre de la valeur commerciale d'une telle pratique. Dès que les textes publicitaires et le travail graphique pour la campagne furent prêts le personnel des cliniques et d'autres responsables dans le domaine de la santé furent informés du projet et des récents bénéfices découverts concernant l'allaitement naturel.

Des messages radiophoniques et télévisuels reprirent le contenu des messages publiés par les journaux, les affiches et les prospectus. La campagne fut menée par des professionnels de la communication qui coordonnèrent neuf émissions de télévision et une série de transmissions radiophoniques journalières de cinq minutes chacune (intitulées "Se tenir au courant de l'histoire de l'homme");le tout fut couvert par la presse. Des discussions entre écoliers et groupes communautaires furent organisées ainsi que des expositions dans les bibliothèques et les centres de prêt mobiles.

Un élément clef pour le succès du projet d'allaitement naturel fut le don en temps et expertise des agences publicitaires, départements du gouvernement, media, agences commerciales et individus du secteur privé. Des tarifs réduits et d'autres avantages s'ajoutèrent à ces dons.

RESULTATS:

L'évaluation du projet par la CFNI eut lieu en deux temps et porta sur cinq object (1) se rendre compte de la proportion de l'auditoire visé qui avait vraiment été touché; (2) déterminer l'influence des messages sur les auditeurs; (3) se rendre compte si les femmes ayant reçu les messages étaient d'accord avec leur contenu; (4) découvrir si les femmes allaitant leurs bébés avaient modifié leurs pratiques d'allaitement; (5) obtenir plus d'information sur les pratiques d'allaitement naturel des femmes de Trinidad.

Le personnel du CFNI conclut au succès du project, selon l'évaluation qui fut la contribution majeure du CFNI au projet. Le personnel conclut que les éléments de la campagne publicitaire devraient devenir permanents dans un programme d'éducation sur la nutrition à Trinidad. Il approuva aussi l'approche multi-média. L'équipe recommenda également que plus de temps et d'espace soient consacrés par les moyens de communication de masse à ce problème vital.

REMARQUES:

- La femme du Premier Ministre de la Jamaïque, Manley, donna son appui à la campagne pour l'allaitement naturel dans une conversation enregistrée avec le président du HATT. Cet appui fut utilisé ultérieurement sur les ondes pour lancer la campagne.

- A l'occasion de la Fête des Pères, les pères des nourrissons furent invités à une cérémonie au cours de laquelle ils furent invités à discuter des mérites de l'allaitement au sein.

- De courts films montrant les mères et les infirmières dans les cliniques montrèrent la valeur de l'allaitement naturel du point de vue de la nutrition.

- La campagne publicitaire pour l'allaitement naturel à Trinidad et Tobago sera présentée dans un livre (qui paraîtra prochainement), traitant de l'importance du lait maternel dans le monde moderne. L'ouvrage a pour auteurs le Dr. Derrick, B. Jelliffe et E. F. Patrice Jelliffe.

- Les stations de radio donnèrent plus de temps aux flashes qu'elles n'avaient promis en premier lieu.

REFERENCES:

"The Trinidad and Tobago Breastfeeding Campaign," Alison White, projet présenté à la neuvième rencontre du Groupe Technique de l'Institut d'Aliment de Nutrition, Kingston, Jamaïque, Septembre 1976.

Clearinghouse on Development Communication
Juin 1977

PROJET D'EXPERIMENTATION EN NUTRITION

Brésil

POPULATION VISEE:	Les villageois de la région du nord-est du Brésil
OBJECTIF:	Etablir avec la communauté un dialogue au sujet de la nutrition, 1ère étape pour des actions communautaires
MOYENS DE COMMUNICATION:	Affiches, photographies et tableaux de feutre.
SUBVENTIONS/ PATRONAGE:	Le Département des Sciences Nutritionnelles de l'Université Cornell
DUREE:	Commencé et achevé en 1974
LIAISON:	Thérèse Drummond, Directeur pour la Nutrition et l'Education de la Communauté Rurale, Missions Agricoles, Inc., 475 Riverside Drive, Room 624, New York, New York 10027, U.S.A.

DESCRIPTION:

Ce projet fut conçu pour tester la réceptivité de la population dans des villages ayant plusieurs genres d'organisation communautaire à la méthode Paulo Freire pour l'éducation nutritive. Cette expérience qui eut lieu en 1974 avait pour but d'attirer l'attention des villageois illettrés ou semi-éduqués sur les problèmes de la malnutrition, et de mettre en oeuvre des moyens simples pour remédier à certains aspects de la malnutrition chez les jeunes enfants.

Les cinq premières semaines du programme furent consacrées à la visite d'approximativement 120 maisons dans les quatre villages choisis. Sans formulaires ni questionnaires, Madame Drummond bavarda avec les villageois pour découvrir leurs idées sur la façon de nourrir leurs enfants. Elle s'informa plus particulièrement sur les maladies les plus communes, la mortalité parmi les jeunes enfants et sur le nombre d'enfants de moins de quatre ans trop maigres. Elle releva noms, dates de naissance, sur l'allaitement naturel, distribution par âge et pratiques nutritives, utilisant des cahiers qui étaient familiers aux villageois.

Dans les réunions après les visites, des affiches furent utilisées pour stimuler des discussions. Par exemple, la photo d'un cercueil d'enfant transporté au cimetière, spectacle commun dans la région, permit de considérer le fait que les bébés meurent souvent et de discuter ce fait de façon critique, plutôt que de l'accepter de manière fataliste. D'autres affiches montraient une mère allaitant son nourrisson, une mère donnant à son enfant de la nourriture de supplément ou un enfant souffrant d'un état avancé de malnutrition.

RESULTATS:

La transcription des enregistrements faits dans plusieurs réunions de village montre que les participants furent très actifs pendant toutes les délibérations. Leurs commentaires et questions montrent que les villageois commencèrent à questionner le fatalisme si profondément ancré dans leur esprit, et à considerer leur pouvoir d'améliorer leur vie. Le relevé d'information des groupes de discussion suggère aussi que les réunions qui eurent lieu dans des villages non organisés auparavant n'étaient pas influencées par les expériences précédentes d'intéraction de groupe des participants.

Un résultat direct de ces réunions fut que les villages sélectionnèrent une personne pour 10 foyers pour assumer la responsabilité d'une bonne nutrition des enfants. Des plans pour parer à plusieurs urgences médicales furent initiés. Cependant, on ne se préoccupa pas de déterminer si les participants des projets de nutrition veillèrent à ce que leurs enfants continuent à avoir assez de protéines et à ce qu'ils soient vaccinés contre les maladies de l'enfance.

REMARQUES:

- Lors d'une réunion durant laquelle on demanda si "une étude" des enfants pouvait être faite, les villageois - qui associent l'étude avec l'école - eurent l'impression que la diététicienne voulait ouvrir une nouvelle école dans la région

- Un panneau d'affichage, reproduisant la courbe de poids de Morely fut utilisé afin d'indiquer la marge de sécurité en ce qui concerne le poids des jeunes enfants. Quand les parents comprirent le principe, appelé "Caminho de Saude," ou "Route de la Santé" on leur en donna une copie.

- Les affiches utilisées pour les discussions étaient soit des photographies, soit des peintures faites à partir de photographies. L'arrière-plan en était effacé pour qu'il ne soit gênant. Les illustrations furent choisies de façon à ce que leur contenu ne soit ni trop limité ni incompréhensible.

- Une enquêteuse feignant d'avoir mauvaise mémoire dessina presque tout ce qu'elle vit. Ces dessins mettaient les villageois à l'aise et sollicitaient leur participation; leur usage simplifia ainsi la tâche consistant à accumuler les renseignements sur la santé et la démographie.

- Durant une réunion, un pêcheur annonça que les réunions étaient une bonne idée. Durant les huit ans qu'il avait vécu dans le village étudié, les habitants ne s'étaient jamais rencontrés pour partager et résoudre leurs problèmes.

REFERENCES:

"Using the Method of Paulo Freire in Nutrition: An Exprimental Plan for Community Action in Northeast Brazil," Therese Drummond, Cornell International Nutrition Monograph Series, No. 3, Cornell University, Ithaca, New York, 1975.

Clearinghouse on Development Communication
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APPROCHE COMPARATIVE ENTRE DES PRINCIPES D'AGRICULTURE ET LA PLANIFICATION FAMILIALE

Philippines

POPULATION VISEE:	Les habitants ruraux des Philippines
OBJECTIF:	Introduction de la planification familiale dans les milieux ruraux sans utilisation de termes techniques peu connus.
MOYENS DE COMMUNICATION:	Feuillets volants, bandes illustrées, communications interpersonnelles
SUBVENTIONS/ PATRONAGE:	L'Institut International Pour la Reconstruction Rurale (IIRR) avec des capitaux venant de "SCAIFE Charitable Family Trusts," la Fondation pour les Communications en Asie (CFA) et l'Assistance Internationale pour la Planification Familiale (FPIA)
DUREE:	Projet commencé au début de l'année 1974; évaluation en cours
LIAISON:	Dr. Juan Flavier, Institut International pour la Reconstruction Rurale, Silang, Cavite, Philippines; Dr. Hans Groot, IIRR

DESCRIPTION:

L'Institut International pour la Reconstruction Rurale et la Fondation pour les Communications en Asie décidèrent d'utiliser les fonds de la FPIA pour développer et produire conjointement du matériel imprimé pouvant servir à la planification familiale. En 1974 ces organismes décidèrent de produire des feuillets volants et des bandes dessinées utilisant le concept d'analogie entre l'agriculture et la planification familiale. Ils se mirent d'accord plus particulièrement pour créer et pré-tester une série de 12 bandes dessinées et de quatre feuillets volants pour encourager l'emploi de la méthode d'enseignement utilisant le concept d'analogie avec l'agriculture.

Cette méthode fut développée il y a quelques années par le Dr. Juan Flavier de l'IIRR avec des fonds de SCAIFE, pour familiariser la population rurale avec de nouveaux concepts sans avoir à introduire des termes dont elle n'avait jamais entendu parler. Les idées essentielles reposent sur l'utilisation de parallélismes ou d'analogies dérivées de l'agriculture pour expliquer de nouvelles idées, sur la dépendance des fermiers eux-mêmes pour la création de ces analogies car ils forment le support des groupes de discussion: ces groupes comprennent de sept à dix membres; ils montrent l'importance de la responsabilité personnelle vis à vis de la communauté.

Le matériel en couleur preparé pour le projet met l'accent sur le "pourquoi" de la planification familiale avant de mentionner le "comment." Publiées mensuellement, les 16 bandes dessinées contenaient chacune deux histoires sur un thème agricole et un dépliant illustré liant ce thème à la planification familiale. Les feuillets volants montraient un ensemble de deux images, l'une liée à une activité de planification familiale et l'autre à une activité agricole, unies par une seule légende. Les analogies spécifiques et les thèmes furent sélectionnés soigneusement après que l'équipe du projet ait passé une semaine à vivre parmi les fermiers et les pêcheurs que l'on visait.

Une fois le matériel préparé et pré-testé, il fut distribué par approximativement 20 centres ruraux pour la santé dans la province de Cavite. 50.000 copies de chaque numéro des bandes dessinées et 200 feuillets volants en 15 parties furent distribués afin de tester le principe que les communications de masse pouvaient élargir la

sphère d'influence d'un spécialiste en planification familiale. Aussi d'intérêt pour les responsables était la réceptivité des populations aux communications familières, au langage et aux exemples a` utiliser pour présenter une information étrangère.

RESULTATS:

Selon les rapports préliminaires de l'IIRR, le taux de fécondité parmi les femmes de Cavite diminua grâce à l'expérimentation utilisant les analogies entre l'agriculture et les connaissances actuelles sur la planification familiale. La fertilité baissa aussi parmi les femmes contactées par les spécialistes en planification familiale employant des méthodes plus conventionnelles, mais de façon moindre que dans le groupe expérimental.

Les moyens de communication utilisés dans la campagne furent évalués par diverses agences. La compagnie J. Walter Thompson, agence publicitaire commerciale, conduisit trois séries d'interviews dans quatre villages de Cavite afin de définir la portée des bandes dessinées. Elle découvrit que les bandes dessinées transmettaient de manière appropriée les données concernant le "quoi" et le "comment" de la planification familiale mais avaient peu d'influence quant aux attitudes pratiques des mères. Elle découvrit aussi, bien que les bandes dessinées transmettaient bien les messages sur la planification familiale, leur valeur aurait été accrue s'il y avait eu également des discussions sur les effets secondaires des diverses méthodes de contrôle des naissances. En analysant les feuillets volants, l'Université des Philippines découvrit que les tableaux étaient plus efficaces que les moyens d'instruction traditionnels pour éveiller l'intérêt d'un public rural et accroître ses connaissances sur la planification familiale.

REMARQUES:

- Les tentatives précédentes pour enseigner la planification familiale aux Philippines utilisaient un anglais mélangé d'espagnol et de mots inventés, ce qui confondait et aliénait les populations visées.

- L'utilisation de sous-titres en vers sur les feuillets volants flattait le penchant qu'ont les Philippins pour le "balagtasan" (dialogue en vers) et les "duplo" (couplets), deux formes d'expression populaires folkloriques.

- "L'Approche Agricole" fut suggérée au début par une vieille villageoise dans une conversation avec le Dr. Flavier. "Vous mentionnez ovaire, ovum, uterus, et à vrai dire, pour moi, ça ne veut rien dire" me dit-elle, "mais je peux bien les comprendre en termes d'haricots dont les graines sont extraites et poussent dans des champs fertiles."

- Les analogies furent dérivées de quatre catégories: plantes, animaux, articles de maison et croyances.

REFERENCES:

"Agricultural Approach to Family Planning," Demetrio, M. Maglalang, Communication Foundation for Asia, Manila, Philippines, 1976.

Clearinghouse on Development Communication
Juin 1977

CAMPAGNE DE PLANIFICATION FAMILIALE SUR LE THEME "AYEZ BON COEUR"

Jamaïque

POPULATION VISEE:	Les hommes et femmes de la Jamaïque en âge de procréer
OBJECTIF:	Convaincre la population de l'impact de la planification familiale sur la qualité de la vie et éliminer la croyance que fertilité est synonyme de virilité ou de féminité
MOYENS DE COMMUNICATION:	Radio et journaux
SUBVENTIONS/ PATRONAGE:	Le Conseil National de Planification Familiale
DUREE:	Commencé en 1975; en cours
LIAISON:	Norma Soas, Conseil National sur la Planification Familiale, 5 Sylvan Avenu, P/O/ Box 287, Kingston 5, Jamaïque

DESCRIPTION:

La campagne de Planification Familiale sur le thème "Ayez bon coeur" débuta quand le Gouvernement de la Jamaïque réalisa la nécessité de renforcer son programme de planification familiale s'il voulait parer au manque de nourriture, à la surpopulation, au sous-emploi et au chômage. Le projet était l'aboutissement d'une série d'efforts gouvernementaux commencés en 1970 dans le but d'accroître l'intérêt et la réceptivité des Jamaïcains aux moyens prophylactiques. Tandis que les campagnes précédentes avaient eu pour thème "Planifiez votre famille, Améliorez votre vie" et "Jeunes Filles, vous n'avez pas besoin d'être enceintes" et insistaient sur les bénéfices de la planification familiale pour l'individu, le projet "Ayez bon coeur" mettait l'accent sur des notions de considération pour les autres et de préoccupation pour l'avenir autant que sur l'intérêt individuel.

La phase d'information publique de la campagne "Ayez bon coeur" débuta en 1975 par des annonces à la radio et dans les journaux afin de familiariser les Jamaïcains avec bon nombre de méthodes contraceptives et d'encourager plus particulièrement l'utilisation de la pilule et de la capote anglaise et de créer une prise de conscience quant au rôle de la planification familiale dans le développement personnel et national. Une série de 34 émissions radiophoniques sur l'Education Familiale, d'une durée de cinq minutes chacune, traita des rôles et des structures dans les familles, de la nutrition, l'importance de l'intimité au sein du foyer et d'une douzaine d'autres sujets liés à la taille de la famille.

Plus tard des émissions radiophoniques traitèrent de la sexualité et de la planification familiale de façon plus explicite. Entre autres, elles donnèrent des conseils sur la façon de choisir une méthode de contraception, la manière d'expliquer la reproduction et la conception aux enfants, comment le bébé se développe dans le ventre de la mère, comment avoir des consultations et comment éviter les maladies vénériennes.

La phase actuelle du projet "Ayez bon coeur" comprend essentiellement des messages publicitaires d'une page entière dans les journaux. Les images et le texte renforcent des messages communiqués auparavant, élargissant le champ de discussion sur la planification familiale vers des sujets tels que le mauvais traitement d'enfants, la physiologie de la reproduction humaine, et provoquent des demandes d'information par milliers.

RESULTATS:

Dans les neuf mois suivant le démarrage de la campagne, un système commercial pour la distribution de préservatifs a été mis en place de façon à atteindre les Jamaïcains qui ne l'avaient pas été jusque là. Non seulement les produits recommandés et distribués pendant la campagne "Ayez bon coeur" se vendirent bien mais les ventes des produits de contraception montèrent en flèche. De plus, comme résultat direct de la campagne un Bureau de Conseils (auquel le public peut écrire, téléphoner ou venir pour des consultations) fut établi par le Conseil National pour la Planification Familiale.

L'utilisation des communications de masse dans la campagne "Ayez bon coeur" eut un tel succès que les activités du Conseil National pour la Planification Familiale prévues jusqu'en 1980 suivront une même démarche poussant l'approche encore plus loin de façon à inclure une utilisation encore plus grande des réseaux de communication dans la communauté.

REMARQUES:

- Les préservatifs furent mis en vente sous le nom de "Panthère" tandis que l'on appela les pilules "Perle." L'emballage des deux produits était esthétique et faisait appel aux idées traditionnelles des rôles féminins et masculins.

- Des méthodes publicitaires typiques furent introduites en conjonction avec des annonces à la radio et du matériel imprimé, le tout avec discussions et réponses.

- Pour rendre la dissémination de l'information plus facile, l'équipe de la campagne identifia quatre groupes de base: "La nouvelle génération," "La Génération mal informée","ceux qui forment les opinions"et"les écoliers." Chaque groupe fut contacté individuellement.

- Plus de 75 pour-cent des personnes contactées récemment par l'Institut des Communications de Masse de l'Université des Antilles disent accepter le concept de planification familiale comme élément positif dans le développement de la Jamaïque.

REFERENCES:

"Jamaica's Family Planning Communication Program Now Based on Have a Heart." IEC Newsletter, No. 25/26, East-West Center, Honolulu, Hawaii, 1977.

"Use of Community Media Resources in a Communication Enterprise," Norma Soas, Caribbean Food and Nutrition Institute, Mimeo J-113-76, Trinidad, Septembre 1976.

Clearinghouse on Development Communication
Juin 1977

DEMONSTRATION DE PLANIFICATION FAMILIALE A ISPAHAN

Iran

POPULATION VISEE:	Les femmes iraniennes dans les zones urbaines et rurales
OBJECTIF:	Accroître l'acceptation par les femmes des méthodes de contraception et stimuler leur usage continu parmi celles participant déjà à des programmes de planification familiale
MOYENS DE COMMUNICATION:	Banderoles, matériel envoyé par la poste, films, radio, télévision, affiches, expositions
SUBVENTIONS/ PATRONAGE:	"Iran Population and Family Planning," le Ministère de la Santé en Iran
DUREE:	La phase de démonstration dura de juin 1972 à juin 1974; des projets semblables sont introduits a présent ailleurs en Iran
LIAISON:	Dr. Mehdi Loghmani, Directeur Adjoint, Ministère de la Santé, 212 Abbas Abad St., Isfahan, Iran; Roy C. Treadway, Illinois State University, Normal, IL 61761, U.S.A.; Robert Gillespie, Directeur, Population Communications, 295 West Green Street, Pasadena, CA 91105, U.S.A.

DESCRIPTION:

La démonstration de planification familiale à Ispahan constitue un exemple d'approche intégrée. Réalisé en Iran de juin 1972 à juin 1974, ce projet utilisa de façon simultanée cinq moyens pour atteindre la population visée: (1) cliniques publiques et privées; (2) pharmacies locales et fournisseurs; (3) médecins à temps complet et personnel para-médical, tous spécialistes en planning familial; (4) organisateurs communautaires, à mi-temps; et (5) réseaux de communications de masse. Tous les aspects du programme avaient été testés au préalable à Najafabad et Shahreza et indiquaient divers degrés d'acceptation de planification familiale. Les responsables du projet souhaitaient formuler une approche intégrant les différents éléments du projet.

Le Programme National Iranien pour la Planification Familiale commencé en 1967, et le Projet de Communications d'Ispahan, en août 1970, montrèrent la voie pour un Projet Modèle. La section de communications du projet de planification familiale, qui exista huit mois, utilisa la radio, les films, la publicité envoyée par la poste, ainsi que des pamphlets, des banderoles, et des dépliants insérés dans les journaux et périodiques; une camionnette d'information servit pour solliciter de nouvelles demandes de planification familiale. En même temps, le project "General Functionary" aida à atteindre les buts du projet de communication en éduquant certains membres du groupe visé dans cette étude dans les aspects socio-économiques de la croissance de la population, aux avantages de la planification familiale et à l'utilisation des moyens de contraception.

Des représentants de certaines agences gouvernementales ou semi-gouvernementales (le Lion Rouge et l'Association Soleil, l'Organisation Impériale des Services Sociaux et autres) travaillèrent étroitement avec le personnel du Projet Modèle pour l'installation de près de 20 centres d'insertion de stérilet et 49 centres d'approvisonnement en pilules et capotes dans 41 villages.

RESULTATS:

En gros, le Projet Modèle de Planification Familiale fut un succès: le nombre de femmes mariées entre 15 et 44 ans utilisant la contraception passa de 6 à 21 pour cent entre juin 1972 et juin 1974. Les taux de cessation (23 pour-cent pour les utilisateurs du stérilet et 20 pour-cent les utilisateurs de la pilule) furent assez élevés mais les aspects de motivation et d'impact éducatif du projet semblent aussi avoir été appréciables. Presque toutes les femmes étudiées (96 pour-cent) connaissent l'existence et les façons de se procurer des moyens contraceptifs, et 48 pour-cent d'entre elles ont essayé au moins une méthode.

Les évaluateurs signalèrent le fait que le personnel médical et para-médical avait le plus grand impact sur la réceptivité des femmes envers la contraception. Le rôle que les c mmunications de masse jouèrent en renforçant la communication inter-personnelle - messages reçus par amis et familles qui, à leur tour, les livrèrent aux femmes, reste une variable d'importance peu connue, mais capitale. Les études qui suivirent n'eurent pas pour but d'évaluer l'efficacité des films, pamphlets, annonces radiophoniques, et dépliants des journaux et magazines pour renforcer le projet modèle ou le message lui-même.

REMARQUES:

- On enrola la coopération des membres de la communauté locale - enseignants chefs de villages, sages-femmes, encadreurs d'agriculture, coiffeurs, travailleurs du Corps d'Alphabétisation et chauffeurs de taxis - pour augmenter le nombre de personnes acceptant pilules, capotes et stérilets. Ces agents de liaison, pour la plupart volontaires, ne recrutèrent que 20 pour-cent des nouveaux adeptes mais on jugea que le support et la confiance qu'ils donnèrent au projet furent essentiels.

- Les messages des communications se concentraient sur deux questions: "Qu'est ce qui vaut mieux, deux ou trois enfants" et "Quelle est la meilleure méthode, stérilet, pilule ou stérilisation?"

- Durant la campagne des communications de masse, une équipe de cinéastes tourna un film pour le compte de l'UNESCO, "Communications de Masse et Encadreurs sur le Terrain" pour montrer comment les communications de masse forcent la communication inter-personnelle. Ce film peut s'obtenir au Département pour le Développement de la Communication Appliquée, UNESCO, 7 Place de Fontenoy, 75700 Paris, France.

REFERENCES:

"The Model Family Planning Project in Isfahan, Iran," Roy C. Treadway, Robert W. Gillespie, et Medhi Laghmani, "Studies in Family Planning," Volume 7, No. 11, New York, New York, November 1976.

Clearinghouse on Development Communication
juin 1977

L'HOMME EST LA SANTE (MTU NI AFYA)

Tanzanie

POPULATION VISEE:	Environ un million de villageois adultes
OBJECTIF:	Donner aux villageois des informations élémentaires sur les maladies, les moyens de les contrôler et les rapports entre l'environnement et la santé
MOYENS DE COMMUNICATION:	Radio, magnétophones, matériel imprimé, communications interpersonnelles, feuillets volants, affiches
SUBVENTIONS/ PATRONAGE:	Le Gouvernement de Tanzanie avec le support de l'Agence Suédoise pour le Développement International
DUREE:	Conçu en 1971, développé en 1972; mis en oeuvre en 1973
LIAISON:	C. Zikambona, Département de Planification et de Recherche, Institut d'Education pour Adultes, Université de Dar es Salaam, Dar es Salaam, Tanzanie; Budd L. Hall, Conseil International pour l'Education des adultes, Institut pour les Etudes sur l'Education, 252 Bloor St. West, Toronto, Ontario, Canada M5S IV6

DESCRIPTION:

Le projet "L'Homme est la Santé" fut conçu à la fin de l'année 1971 comme une campagne à grand rayon d'action en vue d'éduquer les villageois sur les symptômes, la prévalence et les origines de cinq maladies communes pouvant être contrôlées. L'objectif secondaire des créateurs du projet était de donner aux personnes récemment alphabétisées une occasion d'améliorer l'emploi de leur langage. Sous les auspices des Ministères de la Santé, de l'Education et du Développement Rural de la Tanzanie, cette campagne représentait une tentative de développement d'ensemble.

Le projet fut approuvé et mis en oeuvre par le seul parti politique de la Tanzanie "L'Union Nationale Africaine de Tanzanie" (TANU), l'Institut d'Education pour Adultes, une demi-douzaine d'agences du gouvernement et Radio Tanzanie. Des fonctionnaires à tous les niveaux furent instruits de l'importance du projet et de ses divers aspects; des représentants de l'industrie furent contactés pour mettre sur le marché des vêtements imprimés avec l'estampe du projet; le personnel de la télévision et les journalistes furent chargés d'informer le public sur tout ce qui avait affaire avec la campagne.

Dix-huit mois d'élaboration, d'organisation et d'entraînement aboutirent en mai 1973 à une recrudescence d'activités éducationnelles et de développement dans la communauté. Chaque semaine pendant 10 semaines tous les groupes d'étude allant de 15 à 60 personnes se rencontrèrent en présence d'un animateur, écoutèrent des annonces radiophoniques et discutèrent le contenu de documents simples fournis par le gouvernement. De ces discussions sur la santé et la sanitation émergèrent des projets de travaux communautaires qui furent conçus et mis en oeuvre par les groupes d'étude dans leurs propres villages.

RESULTATS:

Environ deux millions d'habitants adultes de la Tanzanie, soit le double de ce que les officiels avaient compté atteindre, participèrent au projet "Homme signifie Santé." De plus, le taux de participation parmi ceux qui participèrent dès le début fut de 63 pour-cent, succès sans précédent pour une campagne de cette ampleur. Un troisième élément indicatif du succès a un intérêt statistique: la campagne eut une portée si évidente que les évaluateurs du projet durent reclasser certains groupes de contrôle comme groupes d'expérimentation.

La campagne eut ses critiques. Certains pensent qu'elle aurait dû intégrer les services de santé présents dans son "programme." D'autres encore pensent que l'enseignement était superficiel. Cependant, partout on peut constater des preuves concrètes des effets de la campagne sur la qualité de la vie dans les villages. En particulier, des centaines de milliers de latrines furent installées par les personnes ayant écouté les émissions de radio; la vente des moustiquaires s'accrut remarquablement dans certains endroits, et les habitants des régions côtières assainirent de nombreux fossés marécageux où les insectes amenant les maladies se multiplient après les pluies abondantes.

REMARQUES:

- Chaque groupe d'étude laissa au moins "un monument" a` la campagne "L'Homme est la Santé," tel que le creusement de puits ou le déblayage de régions où la végétation offrait refuge aux insectes.

- Certains groupes d'étude continuèrent à se rencontrer pendant plusieurs mois après la fin de la campagne.

- La dépendance sur les dirigeants de cellules dans plusieurs régions renforça le système d'une cellule de dix foyers comme moyen de stimuler la participation au développement.

- Les textes et guides d'étude furent imprimés sur les presses pour les journaux. Un million d'exemplaires fut distribué; beaucoup furent partagés.

- Le réseau des chefs de groupes d'études établi pendant la campagne de santé fut réactivé pour la campagne nationale de nutrition, "l'Alimentation est la Vie," qui débuta en juin 1975.

REFERENCES:

"Mtu Ni Afya: An Evaluation," Budd L. Hall et C. Zikambona, Institute for Adult Education, No. 12, Dar es Salaam, 1974.

"Radio for Education and Development: Case Studies," Volume Two, Peter L. Spain, Dean T. Jamison et Emile G. McAnany, Eds. Département de l'Education, Banque Mondiale, Washington, D.C., Mai 1977.

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لمحات عن المشروعات

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اعداد

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وضعه اصحاب المشروع نصب اعينهم فقد ركز على توفير الفرص المناسبة امام المستجدّين في تعلّم القراءة والكتابة على ممارسة مهارتهم اللغوية المكتسبة. وجاءت الحملة التي كانت تحت رعاية وزارات الصحة والتعليم والتنمية الريفية كمحاولة في التنمية المتكاملة.

وقد ساندت بعض الهيئات الرسمية هذا المشروع ومنها تنظيم البلاد السياسي "تانو" (الاتحاد الوطني الافريقي لتانزانيا) ومعهد تعليم الكبار كما ساندته عدد من الهيئات الحكومية والاذاعة التانزانية. وقد تم توعية العاملين على مختلف مستوياتهم بأهمية المشروع ونواحيه المختلفة كما طلب من الشركات الصناعية اعداد الملابس التي تحمل شعار المشروع مع تكليف الاذاعيين والصحفيين بتوعية الجمهور على الدوام بجميع نشاطات ومفاهيم المشروع.

وقد انتهت مرحلة تخطيط وتدريب استغرقت حوالي سنة ونصف في مايو/أيار ١٩٧٣ الى فورة من النشاط التربوى والانمائي. فخلال مدة عشرة اسابيع التقت مجموعة عمل للدراسة قوامها ما بين ١٥ و ٦٠ فردا، التقت اسبوعيا في ندوات ودية بقيادة منظم للمناقشات مدرّب وذلك للاستماع الى برامج مذاعة ولمناقشة نصوص اضافية قامت باعدادها وتوفيرها السلطات الحكومية.

وقد نبع من هذه المناقشات التي دارت حول الشؤون الصحية واساليب الطب الوقائي وتوخي وسائل الصرف السليمة، مشاريع عمل جماعي مستمدة من الدراسات التي قام بها القرويون ونفذوها في مواطنهم.

النتائج

لقد اشترك ما تم تقديرهم بحوالي مليوني من اهالي تانزانيا في مشروع "الانسان في صحته" ويزيد هذا العدد عن ضعف ما كان يستهدفهم الخبراء، اضف الى ذلك ان

نسبة المواظبة من اول البرنامج حتى نهايته بلغت ٦٣ ٪ وهي نسبة ليست لها سابقة في مشروع يتسع الى مثل تلك الابعاد . وثالث مؤشرات النجاح مؤشر احصائي . لقد توغل وقع المشروع الصحي الى درجة جعلت العاملين على تقييم المشروع ان يعيدوا تصنيف بعض مجموعاتهم الرقابية كي تصبح مجموعات تجريبية .

هناك من ينتقد الحملة . فلقد شعر البعض بأنها فشلت في ادماج الخدمات الصحية القائمة في منهاج المشروع ، كما شكى البعض من عراقيل في توزيع النصوص والمعوّنات . ثم هناك من شعر بان النشاط التدريبي جاء سطحيا للغاية . ومهما كان من حال فان قرائن وقع الحملة على نوعية حياة القرويين تبدو واضحة في كل مكان . فقد قام المستمعون الى البرامج ببناء المئات من الآلاف من المراحيض ، كما قفزت مبيعات الستائر المانعة للناموس في بعض المناطق . وقام سكان المناطق الساحلية بردم منخفضات المستنقعات التي تتوالد فيها الحشرات المقلّة للمرض بمجرد انتهاء موسم الامطار .

<u>ويلاحظ انه</u>

- لقد تركت كل مجموعة دراسية ما لا يقل عن " أثرا " ملموسا واحدا من آثار حملة " الانسان في صحته " ومنها حفر الآبار أو ازالة المواطن الحرشية التي تتوالد فيها الحشرات .

- استمرت بعض المجموعات الدراسية في الاجتماع حتى بعد انتهاء الحملة الصحية .

- لقد ادى الاعتماد على قادة الخلايا في بعض المراكز الى تدعيم نظام خلايا المساكن العشر كوسيلة لتنشيط التنمية .

- تم طبع النصوص والمراجع الدراسية في المطابع الصحفية وقد تم توزيع حوالي مليون نسخة، واشترك العديدون في الاطلاع على كل نسخة.

- جاء ان بعض المجموعات استطاعت تشخيص عدة امراض تعرّض لها عدد من اعضائها وحوّلت أولئك الى المستشفيات التي اكّدت طبيعة هذه الامراض وقامت بعلاج المرضى.

- تم الرجوع الى القيادات الجماعية التي اشتركت في الحملة الصحية عند شن حملة "الغذاء والحياة" التي بدأت في شهر يونيو/حزيران من عام ١٩٧٥.

<u>المراجع :</u>

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التعليم الاساسي في القرى

غواتيمـــالا

المجموعة المستهدفة:	المزارعون من اصل هندى ولادينو في غواتيمالا
الهـــدف :	تغيير اساليب الفلاحة وزيادة الانتاج باستخدام وسائل الاعلام بكفاءة
وسائل الاتصال :	الاتصالات الشخصية والاذاعة والندوات والمادة المصورة
تحت رعاية واشراف :	مكتب امريكا اللاتينية التابع للوكالة الامريكية للتنمية الدولية ووزارتي التعليم والزراعة في غواتيمالا
مدة المشروع :	بدأ تنفيذ المشروع عام ١٩٧٣ وما زال تحت التنفيذ
هيئة الاتصال :	Prof. Mario R. Dardon, Project Director, Programa de Educación Basica Rural, 2a. Avenida 8 - 53, Zona 1, Guatemala City, Guatemala; Dr. Howard Lusk, Chief of Education, Science, and Technology, Latin America Bureau, U.S. AID, Rm. 2245 New State, Washington, D.C. 20523, U.S.A.

وصف المشروع

ان مشروع التعليم الاساسي في القرى يمثل تجربة تستغرق خمس سنوات تهدف الى استخدام وسائل الاتصال والاعلام لتعريف المزارعين في غواتيمالا باساليب الفلاحة الحديثة ، كما ان للمشروع هدف ثانوى وهو زيادة فعالية العاملين في ميدان الارشاد الزراعي كي يستطيعوا

حل المشاكل الزراعية الفردية والاقليمية. وقد قامت اكاديمية تطوير التعليم بتنفيذ خطة اختبار فعالية تكاليف تركيب متنوع من وسائل الاعلام المختلفة بموجب عقد ابرم مع وكالة التنمية الدولية (التي ستبلغ اجمالي مساهماتها الى المشروع ما لا يقل عن ٠٠٠ر٠٥٠ر١ دولار). وقد تم اعداد الخطة اصلا لتجربة تركيبات ثلاث من مختلف وسائل الاعلام زيدت فيما بعد الى اربع، وتمثل هذه التركيبات درجة متزايدة من الاتصال مع العائلات الريفية في بيئتين ثقافيتين وجغرافيتين تختلف الواحدة عن الاخرى اختلافا بيّنا.

وقد بدء بتنفيذ المشروع بين الاهالي من اصل مختلط، وهم اهالي اللادينو (من اصل هندى واسباني) المتحدثين باللغة الاسبانية في المنطقة الجنوبية الشرقية من غواتيمالا. وقد تم توسيع المشروع بعد ذلك بسنة ونصف تقريبا كي يشمل المرتفعات الغربية وسكانها الهنود المتحدثين باللغة "الجيشيه". وقد اثبت مسح قام به موظفو مشروع التعليم الاساسي في القرى عام ١٩٧٤ ان نسبة الامية بين اهالي وادى "يوبلتييك" في جنوب شرق غواتيمالا بلغت ٦٤٪ بينما كانت حوالي ٦٦٪ في المجتمعات الريفية بقرب "موموستينانجو" في منطقة المرتفعات.

وقد اختيرت الاذاعة كالوسيلة الاساسية لنشر المعلومات الخاصة بالزراعة وللحث على تغيير الانماط السلوكية. وقد قامت محطتان للاذاعة ببث برامج تستغرق ثماني ساعات يوميا وذلك على فترتين احداهما صباحية من الساعة الخامسة حتى التاسعة، والثانية مسائية من الرابعة حتى الثامنة وذلك يوميا فيما عدا يوم الاحد. وكي يجتذب المشروع عددا وفيرا من المستمعين ويحافظ على اهتمامهم تتضمن البرامج الحفلات الموسيقية وبرامج ترفيهية ومادة لا علاقة لها بالزراعة تستغل حوالي ٨٠٪ من الفترة الاذاعية. اما باقي الفترة فتستغل في

مناقشة المواضيع الفلاحية. وتشمل البرامج الزراعية "مجلة الزراعة" التي تستغرق ٣٠ دقيقة والقصص المذاعة واحاديث مع احد الاقتصاديين الزراعيين مبنية على اسلوب الاسئلة والاجابات، وما بين ٣٠ و ٤٠ مقتطف يتضمن رسائل متعلقة بالزراعة.

ان اولى الطرق الاربع لمعالجة وسائل الاتصال تتركز على رسائل مذاعة، اما الثانية فتشمل احد الاهالي المحليين يتم اختياره وتدريبه كي يقوم بمهمة "الاستماع" لمدة حوالي شهر، والذى يقوم بزيارة اربع أو خمس قرى تضم حوالي مائتي عائلة، وهو يعقد الندوات خلال فترة ما بعد الظهر ويقوم باذاعة رسائل مسجلة على "كاسيت". ويستغل "المستمع" بعض الرسومات والمعلقات لتنشيط المناقشات ويوزع نشرات خاصة ويقوم في بعض الحالات بفلاحة عدد من الحقول التجريبية على سبيل عرض النماذج الفلاحية المختلفة. وفي النمط الثالث يقوم عدد من اقتصاديي الزراعة بتوفير المعونة الفنية المتواضعة يعمل كل منهم مع حوالي ٦٠٠ عائلة. ويشترك الاقتصادى الزراعي الذى يعمل مع المشروع مع "المستمع" المحلي في القرية بعرض الاساليب الفلاحية عمليا، كما يقوم بالتعرف على مشاكل انتاج المحصولات المحلية ويقدم المشورة للمزارعين. وهو يعتبر مشرفا على "المستمع" المحلي ويقوم بتدريبه على العمل المطلوب منه كما انه يعتبر عاملا هاما لاسترجاع المعلومات المطلوبة من مناطق المشروع. اما الطريقة الرابعة التي تم اضافتها عام ١٩٧٥ فهي تعتمد على "المستمع" وحده في المناطق التي لا تستطيع استقبال البرامج الاذاعية.

النتائج

على عكس ما كان متوقعا، يبدو ان الاذاعة وحدها هي الوسيلة التي لها اكثر وقع ذو مغزى على الانماط السلوكية للمزارعين، وربما يرجع ذلك الى ان البرامج معدة بدقة كي

تفي بالاحتياجات المحلية. ويقول البعض ان هذا التصميم الاذاعي بالذات قد خلق اتصالا شخصيا يختلف عن الاتصال التقليدى الموضوعي للبرامج الاذاعية ويبدو كذلك ان "المستمعين" واقتصاديي الزراعة يقومون بتدعيم البرامج بكفاءة.

اما الندوات الفلاحية فهي تجتذب المزارعين الذين يميلون الى تبنّي اساليب الفلاحة الحديثة، الا ان بعض المزارعين الذين لم يحضروا تلك الندوات قاموا ايضا بتعديل الاساليب الزراعية التي كانوا يستعملونها. ومن اهم التغييرات التي حدثت اختيار المزارعين السلالات من تقاوى الذرة ذات خواص اكثر نشاطا، واللجوء الى استعمال الاسمدة خلال فترات ظهور الزهور، وبث البذور، كما زادت نسبة استعمال المبيدات الفطرية ولكن بدرجة اقل.

<u>ويلاحظ أنه :</u>

- لقد تفاقمت خلال عام ١٩٧٦ الآثار السلبية على غلة المحاصيل الناتجة عن قلة الامطار العادية بسبب قحط خلال الفترة الحرجة التي تمتد من يوليو/تموز حتى آخر سبتمبر/ايلول.

- لقد عطل الزلزال الذى حدث في فبراير/شباط ١٩٧٦ تنفيذ المشروع، فقد استغلت جميع موارده تقريبا في عمليات الاغاثة.

- لقد ادى اتخاذ نظام الطباعة خلال النماذج الحريرية (السلك سكرين) الى رفع المستوى الفني للمادة المصورة وتوفير الوقت الذى كان يستغرق في نقل المصورات، واستفاد الرسامون من هذا الوقت المتوفر في ادماج بعض الافكار والمفاهيم التي تم استرجاعها من المجموعات المستهدفة في لوحات جديدة.

<u>المراجع :</u>

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بسم الله الرحمن الرحيم

التنمية المتكامله

مشروع لتكافؤ الفرص فى تعليم النساء والبنات
الصغيرات بفولتا العليا .....

المستمع : البنات والسيدات الريفيات فى ثلاث مناطق فى فولتا العليا

الاهداف : تقديم تربية عملية كوسيله لتحسين مستوى المعيشه ومكانة المرأة فى المجتمع .

الوسيله : الراديو ـ الشرائح المصوره ـ الافلام ـ التمثيل ـ النشرات الاتصالات الشخصيه .

تحت رعاية واشراف: حكومة فولتا العليا ووزارة التربيه والثقافه ، منظمات اخرى فى فولتا العليا تضم ١١ منظمه من منظمات التنميه الريفيه ، اليونسكو برنامج هيئة الامم المتحده للتنمية ، منظمة العمل الدوليه ، المنظمه الدوليه للزراعه والتغذيه وغير ذلك من المنظمات الدوليه الحكوميه وغير الحكوميه .

مدة المشروع : بدأ المشروع ونفذ فى سنة ١٩٦٧ وسوف يستمر الى عام ١٩٨١ على الاقل .

هيئة الاتصال : Madame Scholastique Kompaore, Project Manager, Project d'Egalited d' Acces des Femmes et des Jeunes Fills a l'Education ,B.P.111 Ouagadougou, Upper Volta; Mary Lynn Hanley. Information officer, UNDP, one United Nation Plaza, NewYork, U.S.A. Brenda McSweeney, UNDP. B.P. 575, Ouagadougou, Upper Volta.

الوصف :

لقد نفذت حكومة فولتا العليا بمساعدة اليونسكو مشروع تكافؤ الفرص فى التربيه للبنات والنساء فى عام ١٩٦٧ وذلك من اجل تحسين مستوى المعيشه فى ٨٣ قريه ومن اجل رفع مستوى المرأه ولكى يوضع الاساس من اجل الاصلاح الشامل فان المشرفين على المشروع قد حددوا الاهداف القريبه بوضوح ، وقد بدءوا بدراسات اجتماعيه بهدف التعرف على المشاكل التى تحول بين المرأة وبين اتاحة الفرصه متكافئة لها فى التعليم وقد قاموا بحملات لمحو الاميه بين الريفيات وقد موا حلقات تدريبيه للمدرسين وقيادات البرامج النسائيه ، كما اشرفت الحكومه ووضعت تحت رعايتها المواد الاساسيه التعليميه الخاصه بالتغذيه والزراعه والتدبير المنزلى والرعاية الصحيه كما انها اهتمت بانشاء كثير من الصناعات الصغيره والجمعيات الصناعيه الريفيه .

لقد بدأت الدراسه الوصفيه على مستوى الدوله فى عام ١٩٦٧ وذلك للتعرف على حاجات المجتمع وتقويمها ، وقد اختيرت ثلاث مناطق مختلفه من حيث الثقافه واللغة والمستوى الاقتصادى وذلك باجراء الدراسه التمهيديه عليها وهذه المناطق هى كونجوزى ، بانفوراوبو •

وحيث ان المرأة فى فولتا العليا مشغوله دائما من طلوع الشمس حتى غروبها فان أول مرحلة من مراحل المشروع بدأت بتقديم الآلات التى تختصر ساعات العمل وذلك مثل تزويدهن بآبار جديده للمياه ، ماكينات لطحن الحبوب ، عربات النقل وعيادات طبيه للولاده ، كما انها قدمت اليهن وسائل للحفاظ على الحياه والصحه مثل برامج صحيه وقائيه وبرامج للتغذيه الصحيحه وكل ما من شأنه ان يخفف الاعباء النفسيه والبدنيه عن المرأة •

وحيث ان المشاريع التمهيديه الثلاثه لم تبدأ جميعها فى وقت واحد فان ذلك لم يشكل عبئا على المشتركات فى البرامج من حيث المجهود ومن حيث الوقت مما سمح لهن بالاشتراك فى برامج محو الاميه وبرامج التربيه المهنيه ابتداء من عام ١٩٧٠ الى ١٩٧٥م •

ومهما يكن من امر فان اجهزة الراديو قد وزعت على المشتركات ومجاميع المستمعات قد كونت بادئ الامر ، وتركز ذلك فى حملات التنمية الزراعيه وتطوير القريه ، وهكذا اصبح الراديو وسيله رئيسيه للتعليم بجانب البرامج المدرسيه من اجل البنات •

ان البرامج عادة وكقاعده عامه تعد كل اسبوع باللغات المحليه وتشتمل على مناقشات حول الانشطه الناجحه وحول المشاكل التى تؤثر على هذه الانشطه ، وكذلك تشتمل على كل مايهم نساء القريه وعلى آراء المرأة فى العديد من الموضوعات وكذلك تشتمل على الاغانى المحليه التى تدور حول المشروع •

وفى مرحلة التدريب تقوم القيادات النسائيه باعداد برامج مسرحيه بسيطه تشترك فيها المرأة الريفيه لتعبر فيها عن خلفيتها الثقافيه وعن الروايات والمسرحيات التى تسود قريتها وهذه وسيله تقليديه فى افريقيا لنشر الاخبار أو النقد الاجتماعى •

وبالاضافه الى ماتقدم فانه تعرض الافلام المناسبه والشرائح المصوره المعده محليا والتى يعقب عرضها مناقشات مفيده •

وهذا التبادل الثقافى بين القرى الداخليه والمناطق المحليه والمدن يقويه توزيع الجرائد باللغات المحليه فى هذه المناطق •

النتائج :-

لقد قوم مشروع تكافؤ الفرص لتعليم البنات والنساء فى عام ١٩٧٤ بواسطة هيئة مكونة من ممثلين لحكومة فولتا العليا ، وممثلين لبرنامج هيئة الامم المتحده للتنميه وممثلين لليونسكو وقد وجدوا ان العقبات الرئيسيه التى قامت دون تحقيق اهداف المشروع هى : سوء المواصلات ، قلة وسائل الاعلام ، الاتصال ، ضآلة الانتاج ، سوء توزيع وسائل وأدوات مشاريع محو الاميه ، النقص الواضح فى المدرسين والقاده اللازمين لبرنامج محو الاميه ولتنمية المجتمع .

وفى نفس الوقت فان اللجنة اوصت بأن برامج محو الاميه يجب ان تشمل الرجال والنساء على السواء وذلك لضمان نجاحها ، حيث ان الرجال الاميين لا يميلون الى تشجيع زوجاتهم وبناتهم للاستفاده من اغتنام فرصة محو الاميه وذلك لانهم انفسهم لا يقرءون ولا يكتبون .

ان اصعب المشكلات هى مشكلة عدم وجود فرصه عمل امام النساء اللائى تعلمن واكتسبن مهاره مهنيه وطبقا لاحدث تقارير اليونسكو ان تدريب المرأه قد اثبت انه غير مناسب حيث ان اصحاب الاعمال يستمرون فى التحير ضدها ولا يتيحون امامها فرص العمل .

ان الانشطه المختلفه التى نفذت منذ ١٩٦٧ هى محل تقويم الآن ، وكثير من الاهتمام قد وجه بصفه خاصه على التكنولوجيا واثرها على وقت المرأه وانتاجها .

ان الدراسات الاحصائيه التى تمت ١٩٦٧ توضح ان ١٠٩٠٤٢ قروية قد اشتركن فى المشروع على مدى عشر سنوات ، ولقد تم تدريب ١٠٠ قابله ، وتم انشاء ٤٢٧ دورة مياه وتكونت ٨٥ مجموعه استماع للراديو ، واقامت ٤٢ اخصائيه اجتماعيه فى ٤٢ قريه ، وفى الوقت الحالى فان مشروع تكافو الفرص لتعليم النساء والبنات قد امتد وتطور ليغطى الدوله كلها وسوف تشرف وزارة التربيه القوميه والثقافه على تنفيذ انشطه المشروع وذلك بالتعاون مع وزارة التنميه الريفيه ووزاره الصحه ووزاره الشئون الاجتماعيه ووزاره شئون البيئه ووزارة العمل

ملاحظات :-

فى السنوات الاولى للمشروع قد اختير المدرسون من المدارس الابتدائيه والثانويه وقد حصل بعضهم على منح دراسيه للدراسه فى الخارج وذلك لدراسة الطرق المختلفه لتعليم الكبار .

ان الاخصائيات الاجتماعيات اللاتى يعشن فى القرى يقمن بالعمل كحلقة اتصال بين القيادات النسائيه للقروبات والقابلات وبين قيادات المشروع على مستوى الاقليم .

ان اجهزة الراديو التى وزعت على القروبات وماكينات الطحين تتعطل كثيرا ومن اجل ذلك فقد اهتم المشروع باعداد وحده فنيه لاصلاح تلك الاجهزه وفى نفس الوقت لدراسة واجراء تجارب مختلفه بهدف مساعدة المرأة فى اداء عملها بسرعة وباتقان •

ان فولتا العليا احدى الدول الاقل نموا اقتصاديا فى العالم وتصل نسبة الريفيين من سكانها الى ٩٥٪•

ان اللجنة القوميه بالتعاون مع ثلاث منظمات اقليميه يقومون باعداد البرامج وتنسيق الانشطه الخاصه بالمشروع على مستوى الدوله •

ان مكانة المرأه فى فولتا العليا اقل من مكانة الرجل عموما ومع ذلك فان مكانة المرأة تختلف من اقليم الى آخر وهذا الاختلاف فى مكانة المرأة قد اضطر القائمين والمنظمين للمشروع بأن يعدو مواد دراسيه للقراءة وانشطة فى برامج محو الاميه تتناسب مع حاجات المرأة والاقليم الذى تعيش فيه •

المراجع :-

" Project Experimental : Egalite d'Acces des Femmes et des Jeunes Filles a l'Education" report of the Upper Volta national Commission for UNESCO, Ouagadougou, May 1974.

" A New Chance for Rural Women, " Mary Lynn Hanley, Action UNDP, January - February1975.

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Clearinghouse on Development Communication January 1973.

بسم الله الرحمن الرحيم

التربيه والمصادر الانسانيه

تعليم الرياضيات بالراديو
نيكاراجـوا

المستمع المقصود : تلاميذ المدرسه الابتدائيه فى نيكاراجـــــــــو

الهدف : اعداد طريقه نموذجيه لتعليم الرياضيات لتلاميذ المدارس الابتدائيه •

رعاية واشـراف : مكتب المساعده الفنيه للمنظمه الامريكيه للتنميه الدوليه وحكومة نيكاراجوا

مدة المشـروع : يوليه ١٩٧٣ الى آخر يونيه ١٩٧٩

هيئة الاتصـال : MS. Janesine Friend. Apodos 122, Masaya Nicaragua; Dr. Barbara Seale, Institutefor Mathenatical Studies in the Social Science Ventura Hall, Stanford University. Stanford CA 94505, U.S.A

الوصـــــف :

ان مشروع تعليم الرياضيات بالراديو هو محاولة لتنظيم واذاعة دروس الحســاب الابتدائى التى تسترعى اهتمام التلاميذ ، ان جزءا من المشروع يهتم بتنمية المنهـج وتطويره والجزء الثانى يهتم بابتكار طريقة لاستخدام المعلومات عن استجابـــات التلاميذ ، وذلك بهدف مراجعة الدروس وتحسينها والجزء الثالث من المشـــروع يهتم بتحليل المهارات والمفاهيم الرياضيه التى تعلمها التلاميذ فى الدروس السابقـه وكل هذه الانشطه تقوم على اساس استخدام الراديو كوسيله تعليميه •

لقد بدأ المشروع فى يوليه عام ١٩٧٣ وذلك باختيار المشرفين للمكان واعـــداد مشروع البحث بالتفصيل واجراء اختبارات على نماذج من الدروس المختاره فـــى مدارس كاليفورنيا •

وفى منتصف عام ١٩٧٤ انشىء مكتب نيكاراجوا الذى قام باعداد اختبارات التحصيل والوسائل اللازمه للمشروع •

وفى عام ١٩٧٥ نجح المشروع فى استعمال ١٥٠ درسا فى ١٦ فصـلا تجريبيـــا وفى صيف ١٩٧٦ كان هناك اكثر من ٨٥ فصلا من السنوات الاولى والثانيـــــه

الابتدائيه تستعمل دروس الرياضيات بالراديو •

ان كل درس من دروس الرياضيات بالراديو يشتمل على جـــزء مسجل لمدة ثلاثين دقيقه وكذلك على جزء آخر يذاع بعد الجزء الاول بواسطة المدرس الذى يستعـــين بقائمه الارشاد والتوجيه والتى تكون من صفحتين الى ثلاث صفحات •

ان الدرس العادى يشتمل على اجزاء تعليميه وترفيهيه كثيره ومختلفه وجميـــع هذه الاجزاء الا القليل منها يتطلب فى المتوسط اربع استجابات من التلميذ فـــى الدقيقه الواحده سواء بالكتابه تحريريا او شفهيا جهريا أو بالغناء •

ان الدروس قليلا ما تحتاج الى التفسير المباشر وهى تغطى موضوعات كثيره ، وتتميز بأنها تثير فى التلاميذ انواعا متعدده من الاستجابات •

والانشطه التى تلى الاذاعه تستغرق ثلاثين دقيقه على الاقل ، تستعمل فيهـــا السبوره وحتى عام ١٩٧٥ كانت صفحات التمارين والعمل تشكل جزءا من كل درس •

الدتائج :

ان امتحان قياس التحصيل فى آخر العام الذى اعطى للتلاميذ فى عام ١٩٧٥ أظهر بوضوح ان تلاميذ الفصول الذين درسوا الرياضيات عن طريق الراديو حصلوا علـــى درجات اعلى بنسبة ٢١٪ من التلاميذ الذين درسوا بالرياضيات بالطريق التقليدى •

وكذلك اثبت التقويم فى العام الثانى فروقا اعلى من ذلك بكثير فمثلا تلاميذ الســنه الاولى حصلوا على درجات اعلى بنسبة ٦٠٪ من زملائهم الذين درسوا بالطريق التقليـدى هذا بينما حصل تلاميذ السنة الثانيه على درجات اعلى بنسبة ٢٩٪ من زملائهم الذيـــن يتعلمون بالطريق العادى •

وفى ختام عام ١٩٧٥ الدراسى قرر ٧٣٪ من المدرسين المشتركين فى المشروع ان التلاميذ الذين درسوا الرياضيات بالراديو قد استفادوا كثيرا عما لو درسوا الرياضيـــات بطريق الفصل الدراسى التقليدى •

لقد عبر ٩٢٪ من المدرسين عن رغبتهم واملهم فى ان يستمر برنامج تعليم الرياضيـــات بالراديو ، هذا وسوف يستمر مشروع تعليم الرياضيات بالراديو الى يونيه عام ١٩٧٩ وذلـك بفضل هيئة التنمية الدوليه •

ان الجهود الحاليه تدور حول مراجعة منهج البرنامج والتجريب على امكانية استعمـال التعليم بالراديو بدون الحاجه الى صفحات التمارين والعمل وذلك اختصارا للنفقـــات وكذلك تدور الجهود الان على ان يشمل البرنامج الصفوف الاعلى .

ملاحظات :ـ

لقد حصل درس من دروس تعليم الرياضيات بالراديو على جائزه يابانيه ، وذلك فى المؤتمر الدولى الحادى عشر ، الذى يقام كل عامين للمسابقه بين البرامج التربويه والذى اشترك فيه ٩٢ منظمه من مختلف بلاد العالم •

- لقد قررت وزارة التربيه فى نيكاراجوا ادخال نظام تعليم الرياضيات بالراديو فى ثلاثة اقاليم مختلفه فى نيكاراجوا •
- فى كل درس من دروس تعليم الرياضيات بالراديو يشجع التلاميذ على الاستجابه النشطه لما يسمعون مرة واحده فى الدقيقه على الاقل •
- ان أغطية الزجاجات أو الاشياء المحليه غير المكلفه تستعمل فى الفصول الدراسيه كوسيله مساعده للعد والحساب •

المراجع :ـ

"The Radio Mathematics Project: Nicaragua 1974-1975," Barbara Searle, Jamesine Friend, and Patrick Suppes, Institute for Mathematical Studies in the Social Sciences, Stanford University, Stanford, California, 1976.

"Evaluation of the Radio Mathematics Project," Barbara Searle, Paul Matthews, Jamesine Friend, and Patrick Suppes, unpublished, October 1976.

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June 1977

لمحات عن المشروعات

دراسات وكالة التنمية الدولية

تكنولوجية التعليم

والاعلام للتنمية

Office of Education
Development Support Bureau
US Agency for International Development
Washington D.C. 20523 USA
Tel. (703) 235-9063

اعداد

CLEARINGHOUSE ON DEVELOPMENT COMMUNICATION
1414 22nd St. N.W. / Washington D.C. 20037

ان الانسـان فى صحتـه

تـانزانيـــــا

المجموعة المستهدفة :	حوالي مليون من القرويين البالغين
الهـــدف :	امداد القرويين بالمعلومات الاساسية عن المرض ومكافحة الامـراض والعلاقة بين البيئة والصحة .
وسائل الاتصال :	الاذاعة وسجلات الصوت (الكاسيت) ، المطبوعات ، الاتصـال الشخصي المباشر والرسومات البيانية والملصقات
تحت رعاية واشراف :	الحكومة التانزانية بمساندة الهيئة السويدية الدولية للتنمية
المـدة :	بدأ التفكير في المشروع عام ١٩٧١ وتم الاعداد له خلال عام ١٩٧٢ ، ثم جاء التنفيذ عام ١٩٧٤
هيئة الاتصال :	C. Zikambona, Planning and Research Department, Institute of Adult Education, University of Dar es Salaam, Dar es Salaam, Tanzania; Budd L. Hall, International Council for Adult Education, The Ontario Institute for Studies in Education, 252 Bloor St. West, Toronto, Canada M5S IV6

وصف المشروع

جاءت بوادر مشروع " الانسان في صحته " في اواخر عام ١٩٧١ على هيئة حملة مكثفة تهدف اساسا الى تعليم القرويين على التعرف باعراض الامراض الخمس واسعة الانتشار ، والتي يمكن مكافحتها واعطاء المعلومات الخاصة بانتشارها ومصادرها . أما الهدف الثانوى الـذى

وضعه اصحاب المشروع نصب اعينهم فقد ركز على توفير الفرص المناسبة امام المستجدّين في تعلّم القراءة والكتابة على ممارسة مهارتهم اللغوية المكتسبة. وجاءت الحملة التي كانت تحت رعاية وزارات الصحة والتعليم والتنمية الريفية كمحاولة في التنمية المتكاملة.

وقد ساندت بعض الهيئات الرسمية هذا المشروع ومنها تنظيم البلاد السياسي "تانو" (الاتحاد الوطني الافريقي لتانزانيا) ومعهد تعليم الكبار كما ساندته عدد من الهيئات الحكومية والاذاعة التانزانية. وقد تم توعية العاملين على مختلف مستوياتهم بأهمية المشروع ونواحيه المختلفة كما طلب من الشركات الصناعية اعداد الملابس التي تحمل شعار المشروع مع تكليف الاذاعيين والصحفيين بتوعية الجمهور على الدوام بجميع نشاطات ومفاهيم المشروع.

وقد انتهت مرحلة تخطيط وتدريب استغرقت حوالي سنة ونصف في مايو/أيار ١٩٧٣ الى فورة من النشاط التربوى والانمائي. فخلال مدة عشرة اسابيع التقت مجموعة عمل للدراسة قوامها ما بين ١٥ و ٦٠ فردا، التقت اسبوعيا في ندوات ودية بقيادة منظم للمناقشات مدرّب وذلك للاستماع الى برامج مذاعة ولمناقشة نصوص اضافية قامت باعدادها وتوفيرها السلطات الحكومية.

وقد نبع من هذه المناقشات التي دارت حول الشؤون الصحية واساليب الطب الوقائي وتوخي وسائل الصرف السليمة، مشاريع عمل جماعي مستمدة من الدراسات التي قام بها القرويون ونفذوها في مواطنهم.

النتائج

لقد اشترك ما تم تقديرهم بحوالي مليوني من اهالي تانزانيا في مشروع "الانسان في صحته" ويزيد هذا العدد عن ضعف ما كان يستهدفهم الخبراء، اضف الى ذلك ان

نسبة المواظبة من اول البرنامج حتى نهايته بلغت ٦٣ ٪ وهي نسبة ليست لها سابقة في مشروع يتسع الى مثل تلك الابعاد . وثالث مؤشرات النجاح مؤشر احصائي . لقد توغل وقع المشروع الصحي الى درجة جعلت العاملين على تقييم المشروع ان يعيدوا تصنيف بعض مجموعاتهم الرقابية كي تصبح مجموعات تجريبية .

هناك من ينتقد الحملة . فلقد شعر البعض بأنها فشلت في ادماج الخدمات الصحية القائمة في منهاج المشروع ، كما شكى البعض من عراقيل في توزيع النصوص والمعوّنات . ثم هناك من شعر بان النشاط التدريبي جاء سطحيا للغاية . ومهما كان من حال فان قرائن وقع الحملة على نوعية حياة القرويين تبدو واضحة في كل مكان . فقد قام المستمعون الى البرامج ببناء المئات من الآلاف من المراحيض ، كما قفزت مبيعات الستائر المانعة للناموس في بعض المناطق . وقام سكان المناطق الساحلية بردم منخفضات المستنقعات التي تتوالد فيها الحشرات المقلّة للمرض بمجرد انتهاء موسم الامطار .

<u>ويلاحظ انه</u>

- لقد تركت كل مجموعة دراسية ما لا يقل عن " أثرا " ملموسا واحدا من آثار حملة " الانسان في صحته " ومنها حفر الآبار أو ازالة المواطن الحرشية التي تتوالد فيها الحشرات .

- استمرت بعض المجموعات الدراسية في الاجتماع حتى بعد انتهاء الحملة الصحية .

- لقد ادى الاعتماد على قادة الخلايا في بعض المراكز الى تدعيم نظام خلايا المساكن العشر كوسيلة لتنشيط التنمية .

- تم طبع النصوص والمراجع الدراسية في المطابع الصحفية وقد تم توزيع حوالي مليون نسخة، واشترك المدينون في الاطلاع على كل نسخة.

- جاء ان بعض المجموعات استطاعت تشخيص عدة امراض تعرّض لها عدد من اعضائها وحوّلت أولئك الى المستشفيات التي اكدت طبيعة هذه الامراض وقامت بعلاج المرضى.

- تم الرجوع الى القيادات الجماعية التي اشتركت في الحملة الصحية عند شن حملة "الغذاء والحياة" التي بدأت في شهر يونيو/حزيران من عام ١٩٧٥.

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"Radio for Education and Development: Case Studies," Vol. Two, Peter L. Spain, Dean T. Jamison, and Emile G. McAnany, eds., The Dept. of Education, The World Bank, Washington, D.C., May 1977.

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June 1977

التعليم الاساسي في القرى

غواتيمـــالا

المجموعة المستهدفة :	المزارعون من اصل هندى ولادينو في غواتيمالا
الهـدف :	تغيير اساليب الفلاحة وزيادة الانتاج باستخدام وسائل الاعلام بكفاءة
وسائل الاتصال :	الاتصالات الشخصية والاذاعة والندوات والمادة المصورة
تحت رعاية واشراف :	مكتب امريكا اللاتينية التابع للوكالة الامريكية للتنمية الدولية ووزارتي التعليم والزراعة في غواتيمالا
مدة المشروع :	بدأ تنفيذ المشروع عام ١٩٧٣ وما زال تحت التنفيذ
هيئة الاتصال :	Prof. Mario R. Dardon, Project Director, Programa de Educación Basica Rural, 2a. Avenida 8 - 53, Zona 1, Guatemala City, Guatemala; Dr. Howard Lusk, Chief of Education, Science, and Technology, Latin America Bureau, U.S. AID, Rm. 2245 New State, Washington, D.C. 20523, U.S.A.

وصف المشروع

ان مشروع التعليم الاساسي في القرى يمثل تجربة تستغرق خمس سنوات تهدف الى استخدام وسائل الاتصال والاعلام لتعريف المزارعين في غواتيمالا باساليب الفلاحة الحديثة ، كما ان للمشروع هدف ثانوى وهو زيادة فعالية العاملين في ميدان الارشاد الزراعي كي يستطيعوا

حل المشاكل الزراعية الفردية والاقليمية . وقد قامت اكاديمية تطوير التعليم بتنفيذ خطة اختبار فعالية تكاليف تركيب متنوع من وسائل الاعلام المختلفة بموجب عقد ابرم مع وكالة التنمية الدولية (التي ستبلغ اجمالي مساهماتها الى المشروع ما لا يقل عن ٠٠٠ر٠٥٠ر١ دولار) . وقد تم اعداد الخطة اصلا لتجربة تركيبات ثلاث من مختلف وسائل الاعلام زيدت فيما بعد الى اربع ، وتمثل هذه التركيبات درجة متزايدة من الاتصال مع العائلات الريفية في بيئتين ثقافيتين وجغرافيتين تختلف الواحدة عن الاخرى اختلافا بيّنا .

وقد بدء بتنفيذ المشروع بين الاهالي من اصل مختلط ، وهم اهالي اللادينو (من اصل هندي واسباني) المتحدثين باللغة الاسبانية في المنطقة الجنوبية الشرقية من غواتيمالا . وقد تم توسيع المشروع بعد ذلك بسنة ونصف تقريبا كي يشمل المرتفعات الغربية وسكانها الهنود المتحدثين باللغة "الجيشيه" . وقد اثبت مسح قام به موظفو مشروع التعليم الاساسي في القرى عام ١٩٧٤ ان نسبة الامية بين اهالي وادي "يوبلتيبك" في جنوب شرق غواتيمالا بلغت ٦٤٪ بينما كانت حوالي ٦٦٪ في المجتمعات الريفية بقرب "موموستينانجو" في منطقة المرتفعات .

وقد اختيرت الاذاعة كالوسيلة الاساسية لنشر المعلومات الخاصة بالزراعة وللحث على تغيير الانماط السلوكية . وقد قامت محطتان للاذاعة ببث برامج تستغرق ثماني ساعات يوميا وذلك على فترتين احداهما صباحية من الساعة الخامسة حتى التاسعة ، والثانية مسائية من الرابعة حتى الثامنة وذلك يوميا فيما عدا يوم الاحد . وكي يجتذب المشروع عددا وفيرا من المستمعين ويحافظ على اهتمامهم تتضمن البرامج الحفلات الموسيقية وبرامج ترفيهية ومادة لا علاقة لها بالزراعة تستغل حوالي ٨٠٪ من الفترة الاذاعية . اما باقي الفترة فتستغل في

مناقشة المواضيع الفلاحية. وتشمل البرامج الزراعية "مجلة الزراعة" التي تستغرق ٣٠ دقيقة والقصص المذاعة واحاديث مع احد الاقتصاديين الزراعيين مبنية على اسلوب الاسئلة والاجابات، وما بين ٣٠ و ٤٠ مقتطف يتضمن رسائل متعلقة بالزراعة.

ان اولى الطرق الاربع لمعالجة وسائل الاتصال تتركز على رسائل مذاعة، اما الثانية فتشمل احد الاهالي المحليين يتم اختياره وتدريبه كي يقوم بمهمة "الاستماع" لمدة حوالي شهر، والذى يقوم بزيارة اربع أو خمس قرى تضم حوالي مائتي عائلة، وهو يعقد الندوات خلال فترة ما بعد الظهر ويقوم باذاعة رسائل مسجلة على "كاسيت". ويستغل "المستمع" بعض الرسومات والمعلقات لتنشيط المناقشات ويوزع نشرات خاصة ويقوم في بعض الحالات بفلاحة عدد من الحقول التجريبية على سبيل عرض النماذج الفلاحية المختلفة. وفي النمط الثالث يقوم عدد من اقتصاديي الزراعة بتوفير المعونة الفنية المتواضعة يعمل كل منهم مع حوالي ٦٠٠ عائلة. ويشترك الاقتصادى الزراعي الذى يعمل مع المشروع مع "المستمع" المحلي في القرية بعرض الاساليب الفلاحية عمليا، كما يقوم بالتعرف على مشاكل انتاج المحصولات المحلية ويقدم المشورة للمزارعين. وهو يعتبر مشرفا على "المستمع" المحلي ويقوم بتدريبه على العمل المطلوب منه كما انه يعتبر عاملا هاما لاسترجاع المعلومات المطلوبة من مناطق المشروع. اما الطريقة الرابعة التي تم اضافتها عام ١٩٧٥ فهي تعتمد على "المستمع" وحده في المناطق التي لا تستطيع استقبال البرامج الاذاعية.

النتائج

على عكس ما كان متوقعا، يبدو ان الاذاعة وحدها هي الوسيلة التي لها اكثر وقع ذو مغزى على الانماط السلوكية للمزارعين، وربما يرجع ذلك الى ان البرامج معدة بدقة كي

تفي بالاحتياجات المحلية. ويقول البعض ان هذا التصميم الاذاعي بالذات قد خلق اتصالا شخصيا يختلف عن الاتصال التقليدي الموضوعي للبرامج الاذاعية ويبدو كذلك ان "المستمعين" واقتصاديي الزراعة يقومون بتدعيم البرامج بكفاءة.

اما الندوات الفلاحية فهي تجتذب المزارعين الذين يميلون الى تبنّي اساليب الفلاحة الحديثة، الا ان بعض المزارعين الذين لم يحضروا تلك الندوات قاموا ايضا بتعديل الاساليب الزراعية التي كانوا يستعملونها. ومن اهم التغييرات التي حدثت اختيار المزارعين السلالات من تقاوى الذرة ذات خواص اكثر نشاطا، واللجوء الى استعمال الاسمدة خلال فترات ظهور الزهور، وبث البذور، كما زادت نسبة استعمال المبيدات الفطرية ولكن بدرجة اقل.

<u>ويلاحظ أنه :</u>

- لقد تفاقمت خلال عام ١٩٧٦ الآثار السلبية على غلة المحاصيل الناتجة عن قلة الامطار العادية بسبب قحط خلال الفترة الحرجة التي تمتد من يوليو/تموز حتى آخر سبتمبر/ايلول.

- لقد عطل الزلزال الذى حدث في فبراير/شباط ١٩٧٦ تنفيذ المشروع، فقد استغلت جميع موارده تقريبا في عمليات الاغاثة.

- لقد ادى اتخاذ نظام الطباعة خلال النماذج الحريرية (السلك سكرين) الى رفع المستوى الفني للمادة المصورة وتوفير الوقت الذى كان يستغرق في نقل الصورات، واستفاد الرسامون من هذا الوقت المتوفر في ادماج بعض الافكار والمفاهيم التي تم استرجاعها من المجموعات المستهدفة في لوحات جديدة.

<u>المراجع :</u>

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بسم الله الرحمن الرحيم

التنمية المتكامله

مشروع لتكافؤ الفرص فى تعليم النساء والبنات الصغيرات بفولتا العليا .....

المستمع : البنات والسيدات الريفيات فى ثلاث مناطق فى فولتا العليا

الاهداف : تقديم تربية عملية كوسيله لتحسين مستوى المعيشه ومكانة المرأة فى المجتمع .

الوسيله : الراديو ـ الشرائح المصوره ـ الافلام ـ التمثيل ـ النشرات الاتصالات الشخصيه .

تحت رعاية واشراف: حكومة فولتا العليا ووزارة التربيه والثقافه ، منظمات اخرى فى فولتا العليا تضم ١١ منظمه من منظمات التنميه الريفيه ، اليونسكو برنامج هيئة الامم المتحده للتنمية ، منظمة العمل الدوليه ، المنظمه الدوليه للزراعه والتغذيه وغير ذلك من المنظمات الدوليه الحكوميه وغير الحكوميه .

مدة المشروع : بدأ المشروع ونفذ فى سنة ١٩٦٧ وسوف يستمر الى عام ١٩٨١ على الاقل .

هيئة الاتصال : Madame Scholastique Kompaore, Project Manager, Project d'Egalited d' Acces des Femmes et des Jeunes Fills a l'Education ,B.P.111 Ouagadougou,Upper Volta; Mary Lynn Hanley.Information officer, UNDP,one United Nation Plaza, NewYork, U.S.A. Brenda McSweeney, UNDP. B.P. 575, Ouagadougou, Upper Volta.

الوصف :

لقد نفذت حكومة فولتا العليا بمساعدة اليونسكو مشروع تكافؤ الفرص فى التربيه للبنات والنساء فى عام ١٩٦٧ وذلك من اجل تحسين مستوى المعيشه فى ٨٣ قريه ومن اجل رفع مستوى المرأه ولكى يوضح الاساس من اجل الاصلاح الشامل فان المشرفين على المشروع قد حددوا الاهداف التربيه بوضوح ، وقد بدءوا بدراسات اجتماعيه بهدف التعرف على المشاكل التى تحول بين المرأة وبين اتاحة الفرصه متكافئة لها فى التعليم وقد قاموا بحملات لمحو الاميه بين الريفيات وقدموا حلقات تدريبيه للمدرسين وقيادات البرامج النسائيه ، كما اشرفت الحكومه ووضعت تحت رعايتها المواد الاساسيه التعليميه الخاصه بالتغذيه والزراعه والتدبير المنزلى والرعاية الصحيه كما انها اهتمت بانشاء كثير من الصناعات الصغيره والجمعيات الصناعيه الريفيه .

لقد بدأت الدراسه الوصفيه على مستوى الدوله فى عام ١٩٦٧ وذلك للتعرف على حاجات المجتمع وتقويمها ، وقد اختيرت ثلاث مناطق مختلفه من حيث الثقافه واللغة والمستوى الاقتصادى وذلك باجراء الدراسه التمهيديه عليها وهذه المناطق هى كونجوزى ، بانغوراوو •

وحيث ان المرأة فى قولنا العليا مشغوله دائما من طلوع الشمس حتى غروبها فان أول مرحلة من مراحل المشروع بدأت بتقديم الآلات التى تختصر ساعات العمل وذلك مثل تزويدهن بآبار جديده للمياه ، ماكينات لطحن الحبوب ، عربات النقل وعيادات طبيه للاولاده ، كما انها قدمت اليهن وسائل للحفاظ على الحياه والصحه مثل برامج صحيه وقائيه وبرامج التغذيه الصحيحه وكل ما من شأنه ان يخفف الاعباء النفسيه والبدنيه عن المرأة •

وحيث ان المشاريع التمهيديه الثلاثه لم تبدأ جميعها فى وقت واحد فان ذلك لم يشكل عبئا على المشتركات فى البرامج من حيث المجهود ومن حيث الزمن ما سمح لهن بالاشتراك فى برامج محو الاميه وبرامج التربيه المهنيه ابتداء من عام ١٩٧٠ الى ١٩٧٥م •

ومهما يكن من امر فان اجهزة الراديو قد وزعت على المشتركات وبرامج المستمعات قد كونت بادئ الامر ، وتركز ذلك فى حملات التنمية الزراعيه وتطوير القريه ، وهكذا اصبح الراديو وسيله رئيسيه للتعليم بجانب البرامج المدرسيه من اجل البنات •

ان البرامج عادة وكقاعده عامه تعد كل اسبوع باللغات المحليه وتشتمل على مناقشات حول الانشطه الناجحه وحول المشاكل التى تؤثر على هذه الانشطه ، وكذلك تشتمل على كسل ما يهم نساء القريه وعلى آراء المرأة فى العديد من الموضوعات وكذلك تشتمل على الاغانى المحليه التى تدور حول المشروع •

وفى مرحلة التدريب تقوم القيادات النسائيه باعداد برامج مسرحيه بسيطه تشترك فيها المرأة الريفيه لتعبر فيها عن خلفيتها الثقافيه وعن الروايات والمسرحيات التى تسود قريتها وهذه وسيله تقليديه فى افريقيا لنشر الاخبار أو النقد الاجتماعى •

وبالاضافه الى ما تقدم فانه تعرض الافلام المناسبه والشرائح المصوره المعده محليا والتى يعقب عرضها مناقشات مفيده •

وهذا التبادل الثقافى بين القرى الداخليه والمناطق المحليه والمدن يقويه توزيع الجرائد باللغات المحليه فى هذه المناطق •

النتائج :-

لقد قوم مشروع تكافؤ الفرص لتعليم البنات والنساء فى عام ١٩٧٤ بواسطة هيئة مكونة من ممثلين لحكومة فولتا العليا ، وممثلين لبرنامج هيئة الامم المتحده للتنميه وممثلين لليونسكو وقد وجدوا ان العقبات الرئيسيه التى قامت دون تحقيق اهداف المشروع هى : سوء المواصلات ، قلة وسائل الاعلام ، الاتصال ، ضآلة الانتاج ، سوء توزيع وسائل وأدوات مشاريع محو الاميه ، النقص الواضح فى المدرسين والقاده اللازمين لبرنامج محو الاميه ولتنمية المجتمع •

وفى نفس الوقت فان اللجنة اوصت بأن برامج محو الاميه يجب ان تشمل الرجال والنساء على السواء وذلك لضمان نجاحها ، حيث ان الرجال الاميين لا يميلون الى تشجيع زوجاتهم وبناتهم للاستفاده من اغتنام فرصة محو الاميه وذلك لانهم انفسهم لا يقرءون ولا يكتبون •

ان اصعب المشكلات هى مشكلة عدم وجود فرصه عمل امام النساء اللائى تعلمن واكتسبن مهاره مهنيه وطبقا لاحدث تقارير اليونسكو ان تدريب المرأه قد اثبت انه غير مناسب حيث ان اصحاب الاعمال يستمرون فى التحيز ضدها ولا يتيحون امامها فرص العمل •

ان الانشطه المختلفه التى نفذت منذ ١٩٦٧ هى محل تقويم الآن ، وكثير من الاهتمام قد وجه بصفه خاصه على التكنولوجيا واثرها على وقت المرأه وانتاجها •

ان الدراسات الاحصائيه التى تمت ١٩٦٧ توضح ان ١٠٩٠٤٢ قروية قد اشتركن فى المشروع على مدى عشر سنوات ، ولقد تم تدريب ١٠٠ قابله ، وتم انشاء ٤٢٧ دورة مياه وتكونت ٨٥ مجموعه استماع للراديو ، واقامت ٤٢ اخصائيه اجتماعيه فى ٤٢ قريه ، وفى الوقت الحالى فان مشروع تكافؤ الفرص لتعليم النساء والبنات قد امتد وتطور ليغطى الدوله كلها وسوف تشرف وزارة التربيه القوميه والثقافه على تنفيذ انشطه المشروع وذلك بالتعاون مع وزارة التنميه الريفيه ووزاره الصحه ووزاره الشئون الاجتماعيه ووزاره شئون البيئه ووزارة العمل

ملاحظات :-

فى السنوات الاولى للمشروع قد اختير المدرسون من المدارس الابتدائيه والثانويه وقد حصل بعضهم على منح دراسيه للدراسه فى الخارج وذلك لدراسة الطرق المختلفه لتعليم الكبار •

ان الاخصائيات الاجتماعيات اللاتى يعشن فى القرى يقمن بالعمل كحلقة اتصال بين القيادات النسائيه للقريات والقابلات وبين قيادات المشروع على مستوى الاقليم •

ان اجهزة الراديو التى وزعت على القريات وماكينات الطحين تتعطل كثيرا ومن اجل ذلك فقد اهتم المشروع باعداد وحده فنيه لاصلاح تلك الاجهزه وفى نفس الوقت لدراسة واجراء تجارب مختلفه بهدف مساعدة المرأة فى اداء عملها بسرعة وباتقان •

ان فولتا العليا احدى الدول الاقل نموا اقتصاديا فى العالم وتصل نسبة الريفيين من سكانها الى ٩٥٪•

ان اللجنة القوميه بالتعاون مع ثلاث منظمات اقليميه يقومون باعداد البرامج وتنسيق الانشطه الخاصه بالمشروع على مستوى الدوله •

ان مكانة المرأه فى فولتا العليا اقل من مكانة الرجل عموما ومع ذلك فان مكانة المرأة تختلف من اقليم الى آخر وهذا الاختلاف فى مكانة المرأة قد اضطر القائمين والمنظمين للمشروع بأن يعدو مواد دراسيه للقراءة والانشطة فى برامج محو الاميه تتناسب مع حاجات المرأة والاقليم الذى تعيش فيه •

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بسم الله الرحمن الرحيم

التربيه والمصادر الانسانيه

تعليم الرياضيات بالراديو
نيكاراجوا

المستمع المقصود : تلاميذ المدرسه الابتدائيه فى نيكاراجـــــــــــو

الهدف : اعداد طريقه نموذجيه لتعليم الرياضيات لتلاميذ المدارس الابتدائيه •

رعاية واشراف : مكتب المساعده الفنيه للمنظمه الامريكيه للتنميه الدوليه وحكومة نيكاراجوا

مدة المشروع : يوليه ١٩٧٣ الى آخر يونيه ١٩٧٩

هيئة الاتصال : MS. Janesine Friend. Apodos 122, Masaya Nicaragua; Dr. Barbara Seale, Institutefor Mathematical Studies in the Social Science Ventura Hall, Stanford University. Stanford CA 94505, U.S.A

الوصـــــف :

ان مشروع تعليم الرياضيات بالراديو هو محاولة لتنظيم واذاعة دروس الحساب الابتدائى التى تسترعى اهتمام التلاميذ ، ان جزءا من المشروع يهتم بتنمية المنهج وتطويره والجزء الثانى يهتم بابتكار طريقة لاستخدام المعلومات عن استجابات التلاميذ ، وذلك بهدف مراجعة الدروس وتحسينها والجزء الثالث من المشروع يهتم بتحليل المهارات والمفاهيم الرياضيه التى تعلمها التلاميذ فى الدروس السابقه وكل هذه الانشطه تقوم على اساس استخدام الراديو كوسيله تعليميه •

لقد بدأ المشروع فى يوليه عام ١٩٧٣ وذلك باختيار المشرفين للمكان واعداد مشروع البحث بالتفصيل واجراء اختبارات على نماذج من الدروس المختاره فى مدارس كاليفورنيا •

وفى منتصف عام ١٩٧٤ انشىء مكتب نيكاراجوا الذى قام باعداد اختبارات التحصيل والوسائل اللازمه للمشروع •

وفى عام ١٩٧٥ نجح المشروع فى استعمال ١٥٠ درسا فى ١٦ فصلا تجريبيا وفى صيف ١٩٧٦ كان هناك اكثر من ٨٥ فصلا من السنوات الاولى والثانيه

الابتدائيه تستعمل دروس الرياضيات بالراديو •

ان كل درس من دروس الرياضيات بالراديو يشتمل على جـــزء مسجل لمدة ثلاثين دقيقه وكذلك على جزء آخر يذاع بعد الجزء الاول بواسطة المدرس الذى يستعـــين بقائمه الارشاد والتوجيه والتى تكون من صفحتين الى ثلاث صفحات •

ان الدرس العادى يشتمل على اجزاء تعليميه وترفيهيه كثيره ومختلفه وجميـــع هذه الاجزاء الا القليل منها يتطلب فى المتوسط اربع استجابات من التلاميذ فـــى الدقيقه الواحده سواء بالكتابه تحريريا او شفويا جهريا أو بالغناء •

ان الدروس قليلا ما تحتاج الى التفسير المباشر وهى تغطى موضوعات كثيره ، وتتميز بأنها تثير فى التلاميذ انواعا متعدده من الاستجابات •

والانشطه التى تلى الاذاعه تستغرق ثلاثين دقيقه على الاقل ، تستعمل فيهـــا السبوره وحتى عام ١٩٧٥ كانت صفحات التمارين والعمل تشكل جزءا من كل درس •

النتائج :

ان امتحان قياس التحصيل فى آخر العام الذى اعطى للتلاميذ فى عام ١٩٧٥ أظهر بوضوح ان تلاميذ الفصول الذين درسوا الرياضيات عن طريق الراديو حصلوا علـــى درجات اعلى بنسبة ٢١٪ من التلاميذ الذين درسوا بالرياضيات بالطريق التقليدى •

وكذلك اثبت التقويم فى العام الثانى فروقا اعلى من ذلك بكثير فمثلا تلاميذ السنه الاولى حصلوا على درجات اعلى بنسبة ٦٠٪ من زملائهم الذين درسوا بالطريق التقليدى هذا بينما حصل تلاميذ السنة الثانيه على درجات اعلى بنسبة ٢٩٪ من زملائهم الذيـــن يتعلمون بالطريق العادى •

وفى ختام عام ١٩٧٥ الدراسى قرر ٧٣٪ من المدرسين المشتركين فى المشروع ان التلاميذ الذين درسوا الرياضيات بالراديو قد استفادوا كثيرا عما لو درسوا الرياضيـــات بطريق الفصل الدراسى التقليدى •

لقد عبر ٩٢٪ من المدرسين عن رغبتهم واملهم فى ان يستمر برنامج تعليم الرياضيـــات بالراديو ، هذا وسوف يستمر مشروع تعليم الرياضيات بالراديو الى يونيه عام ١٩٧٦ وذلـــك بفضل هيئة التنمية الدوليه •

ان الجهود الحاليه تدور حول مراجعة منهج البرنامج والتجريب على امكانية استعمـــال التعليم بالراديو بدون الحاجه الى صفحات التمارين والعمل وذلك اختصارا للنفقـــات وكذلك تدور الجهود الان على ان يشمل البرنامج الصفوف الاعلى .

ملاحظات :-

لقد حصل درس من دروس تعليم الرياضيات بالراديو على جائزه يابانيه ، وذلك فى المؤتمر الدولى الحادى عشر ، الذى يقام كل عامين للمسابقه بين البرامج التربويه والذى اشترك فيه ٩٢ منظمه من مختلف بلاد العالم •

- لقد قررت وزارة التربيه فى نيكاراجوا ادخال نظام تعليم الرياضيات بالراديو فى ثلاثة اقاليم مختلفه فى نيكاراجوا •
- فى كل درس من دروس تعليم الرياضيات بالراديو يشجع التلاميذ على الاستجابه النشطه لما يسمعون مرة واحده فى الدقيقه على الاقل •
- ان أغلبية الزجاجات أو الاشياء المحليه غير المكلفه تستعمل فى الفصول الدراسيه كوسيله مساعده للعد والحساب •

المراجع :-

"The Radio Mathematics Project: Nicaragua 1974-1975," Barbara Searle, Jamesine Friend, and Patrick Suppes, Institute for Mathematical Studies in the Social Sciences, Stanford University, Stanford, California, 1976.

"Evaluation of the Radio Mathematics Project," Barbara Searle, Paul Matthews, Jamesine Friend, and Patrick Suppes, unpublished, October 1976.

Clearinghouse on Development Communication
June 1977

PROJECT - CLEARINGHOUSE [illegible] to [illegible] Date: July 5, 1978	BUDGET	VOUCHERED TO DATE	CUR. MONTH (Estimate)	EXP. TO DATE	AVAILABLE FUNDS
Salaries and Wages	[illegible]	[illegible]	[illegible]	125,923	35,5[illegible]
Level of Effort					
Fringe Benefits	[illegible]	[illegible]	[illegible]	21,[illegible]	[illegible]
Consultants	[illegible]	[illegible]	- [illegible] -	2,[illegible]	[illegible]
Level of Effort					
Travel & Transportation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Utilities	-	-	-	-	-
Other Direct Costs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Indirect Costs	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Subcontracts	-	-	-	-	-
Equipment	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]