Six issues of the newsletter "Development Communication Report" focus primarily on the use of communication technologies in developing nations to educate their people. The issues included in this collection are: (1) Summer 1985, which highlights agricultural, health, and educational projects that have proven successful; (2) Autumn 1985, which concentrates on health communications; (3) Winter 1986, which focuses on the purpose of visuals, how to use them in training, and how people's understanding can be improved through appropriate exposure to and use of such materials; (4) Spring 1986, which discusses development communication projects in developing nations, including the People's Republic of China, South and Central America, Swaziland, Puerto Rico, India, the Gambia, Malaysia, and Bolivia; (5) Summer 1986, which focuses on broadcast technologies, including communication satellites and radio; and (6) Autumn 1986, which features articles on the innovative use of well-planned, well-integrated, and well-tested print materials in developing nations, including photonovels, rural newspapers, and posters. Reviews of recent publications, announcements of development-related conferences and courses, and a subject index of past issues are also provided. (RP)
DEVELOPMENT COMMUNICATION REPORT

No. 50-55

Summer 1985-Autumn 1986

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Communications Strategies for Agriculture: Hybrids of a Different Kind

by William Smith and Howard Ray

Two decades of experimentation have enriched our understanding of how to organize and use communication to support agricultural development in a wide range of settings and conditions. Many of the old principles of good communication have proven true; others have been expanded and made even more effective. Particularly the Basic Village Education project in Guatemala and the Masagana 99 project in the Philippines, have demonstrated to us how ideas borrowed from fields such as advertising and marketing can be effectively added to large scale programs of agricultural development. The key change has been a shift away from media-specific planning, toward a systems approach to communication, which uses radio, print, and other channels as part of an interconnected network of inputs targeted at specific changes and driven by a farmer orientation.

These three elements—a farmer orientation, targeted change, and an integrated media network—are the fundamental organizing principles around a growing set of hybrid communication strategies.

Farmer Orientation

The farmer is not a receptacle into which new agricultural technologies are poured, but an active catalyst whose needs, constraints, attitudes, and vocabulary orient and drive the communication component. Communication is not a link to the farmer, it is a link between the farmer, researcher, planner, and extensionist.

Our tools for understanding the farmer’s perspective are growing. Our dependence on formal survey research and anecdotal information is giving way to smaller, behavioral studies. Concept testing, focus group interviews, behavioral trials, and intercept interviews are specialized names for a new genre of sound village research techniques. These behavioral studies help to identify hidden constraints a farmer may encounter in trying a new innovation, and to help understand less visible incentives which inhibit or promote adoption. They help us select vocabulary which the farmer will understand, and integrate the new innovation into the farmer’s own view of his problems and needs. They help us ask not only “How good is the new idea?” but “How good will the farmer think the new idea is?”

We know for example that there are five basic reasons why any new idea might not be accepted: (1) a farmer may not have the skills or knowledge to use it; (2) he may not have the tools or materials to apply it; (3) he may see no benefit from using the new idea; (4) he may receive benefit from doing something quite different; or (5) he may perceive the new idea not only as having no benefit, but as punishing in some way—more work, more costly, less status, etc.

Traditionally, the job of agricultural communication has been to motivate the farmer to “want” to use a new idea and then to teach him the skills or knowledge to apply it. Behavioral studies help us explore what “want” really means and to help determine how to best teach the new skills. What benefits will the farmer experience? How can we describe the relative costs and benefits to the farmer in the most (continued on page 2)

A Health Campaign in Zaire

by lain McLellan

In the central African country of Zaire a government department, several international aid organizations, and church-sponsored groups have coordinated their development support communications (DSC) campaigns to better disseminate health information. This interorganizational cooperation will enable participating groups to learn from each other’s experiences in DSC, and to avoid costly duplication efforts.

Sante pour Tous, the nucleus of this coordinated effort, is a primary health care and preventive medicine project that is sponsored by Zaire’s Department of Health, and the U.S. Agency for International Development (A.I.D.), and administered by l’Eglise du Christ du Zaire.

In addition to its main focus—improved primary health care—under the umbrella of Sante pour Tous is a vaccination campaign, a family planning project, and a nutrition and agricultural promotion project. Each has a different organizational structure and separate funding sources, but to facilitate coordination of DSC activities, representatives from these organizations sit on each others’ boards.

Sante pour Tous centers are located in 50 rural health zones across Zaire. Each health zone has a central hospital and field office. These offices are equipped with battery-powered film and slide projectors used to train nurses, birth attendants, and village health workers in primary health care and DSC techniques.

Sharing Communication Materials

These same materials are also used by other organizations participating in the Sante pour Tous project for their village-based DSC activities. Additionally, Community Development Committees, comprised of health professionals and village leaders have been established in many rural health zone villages to coordinate campaigns and projects at the local level. A village committee first decides upon a health issue that concerns village residents, then they (continued on page 10)
persuasive way possible? What costs will the farmer pay for giving up what he is already doing?

While these questions seem, and in fact are, simple, they are rarely asked in a systematic way. Our focus has often been on the innovation rather than on the farmer. We describe the benefit of a new seed variety or new pesticide from our perspective ignoring costs, often of a social nature, which the farmer considers too high.

A second major area of improvement has been our recognition that all farmers are not alike. Our mass media broadcasts have tended to lump farmers together, focusing more on their similarities than on their differences. We have too often allowed our view of mass media as a big audience medium to dictate what we say and to whom we address our messages. But we now know how to segment broadcasts and direct them to special farmer groups. We can develop differentiated message strategies for different groups of farmers and can use techniques such as message tone, characterization, and scheduling to reach important subgroups with more relevant and persuasive information.

Targeted Change

The second basic principle which is changing our view of agricultural communication is a focus on selecting and assigning a priority to the content of agricultural messages; targeting areas of opportunity rather than using a hit-or-miss approach to information diffusion. Concretely we know that effective agricultural communication is responsive to seasonal variation in the farmer's needs.

We also know that a new behavior to become routine, people need to do it many times, to get support from several places, and to have the support (or reward) as close to the new behavior as possible. This presents a real problem in agriculture. A new seed variety doesn't yield its better results for weeks, or even months. The reward in improved yields is affected by many things outside the control of the seed developer or the farmer. Drought, flooding, unexpected rises in fertilizer costs, and a lack of credit can obliterate the most carefully applied new practice. We have also learned that disseminating simple media messages about the wonders of a new seed variety will produce only frustrated and incredulous farmers. Clearly, the messages we decide to present must be analyzed from this perspective and carefully selected to ensure that observable outcomes are perceived as rewarding for the farmer. This means planning a comprehensive communication strategy which helps the farmer deal with seasonal problems as they are encountered. Farming is not like taking medicine—you do not get better after taking two tablets. It is an integrated and cumulative process which is necessarily reactive to unpredictable events. But we cannot teach everything at once, so we must carefully decide what is needed now and focus on that advice as a dry target.

Media Network

Finally, no single media channel is powerful enough to accomplish the job. Dozens of studies were carried out in the 1950s and 1960s to determine "What is better—radio, TV, print, or the extensionist?" The answer is now clear. "What is better?" is the wrong question. The right question is "What is better for what purpose?" And some clear answers are emerging.

Broadcast media is better at reaching a lot of people quickly with fairly simple ideas. Print media is best at providing a timely reminder of information we cannot expect someone to remember without reinforcement. And, interpersonal communication, including extensionists, group meetings, community organization, and demonstrations, are clearly the best way to teach and develop credibility.

Perhaps a more important finding is that we need all three of these components to make an effective program. We need to reach many people quickly; they have to have some reminder of what we have told them; and they have to believe in us if they are going to take our advice. Effective communication is like a three-legged stool. If you are missing one leg you have an unstable foundation.

A new set of questions has resulted from these findings. How do we best orchestrate various inputs to maximize their impact and minimize our costs? We cannot use all channels all the time, because using all channels would be too expensive. We have to carefully select elements from each of the media groups and then integrate them so that they multiply the importance of each other.

We need what communication specialists call a channel strategy. Channel strategies are situation specific. They grow from an understanding of a particular country, a particular program, and a particular audience. They are based upon preprogram research into questions like: "Who listens to what?" "Who reads?" "What are the costs of each media channel?" "How complicated is the advice we have to give?" "How accustomed to or/and tired of radio or print messages is our audience?" "Whom does our audience trust for advice on a given topic?" and many others.

Suppose we have a country where farmers do not read very well; indeed, they are not used to printed instructions of any kind. We want to tell farmers that there is a pest problem, and that we have a pesticide solution. We want to teach them to mix the new solution—and it is very important that they mix it in exactly the right amount water and apply it at the right time. Our extension network is spread too thin, they simply cannot reach enough farmers in time to control the pest problem. A communication strategy is put together in which a simple printed flyer with the mixing instructions is designed and distributed in large numbers to local stores, extensionists, and other field workers. First, we use short radio broadcasts (spot announcements) to tell farmers we have a pest problem, a pesticide solution, and that the flyer is available at local stores. At the same time, extensionists are training small groups of farmers dispersed throughout the region, in how to mix and use the solution. Each trained farmer receives a colorful flag to fly over his house as an identifying marker that he is one of the "expert mixers" of the new pesticide. A second set of radio programs not only tells farmers how to mix the pesticide properly, but informs them that the "flag farmers" in their community have been trained and are sources of advice on how to apply the pesticide properly. Each "flag farmer" is given dozens of the flyers to distribute to neighboring farmers as reminders of how to mix and apply the pesticide. Special radio programs are produced to teach farmers in isolated areas how to use the flyer, and to remind them of what they have learned from their neighbors.

This simple example illustrates how each of the media channels—print, radio, and interpersonal interact cumulatively. It is drawn from a concrete experience in West Africa. The Ministry of Health of The Gambia wanted to popularize a new medicine for diarrhea, and within a five-week period managed to teach almost 60 percent of the women in the country to prepare and give the new medicine using the approach described above.

Many agricultural problems are more complicated and long term than our pesticide example. Other channel strategies would be necessary and are possible. The key new insight is that we even need a channel strategy—a specific, systematic way of ensuring that our priority messages, directed at selected audiences, are going to interact with each other to promote change.

(continued on page 10)
Radio and the Educational Needs of Africa

by Alex T. Quarmyne

Radio in Africa can thus be said in practical terms to be a high-access medium from the point of view both of distribution and reception. No other medium, channel, or technology offers so feasible a promise for the democratization of education. Apart from individual capacity for learning, nothing need constrain the radio listener from benefiting from an educational program—not age, not sex, not the lack of certifies or transport or clean clothes, and all the other barriers that effectively select who may benefit from traditional modes of education.

As Wilbur Schramm points out and today we are able to concede: "... of course students can learn effectively from the media, from ANY medium .... and what the media can do, they can do as well as a classroom teacher, sometimes better."

Certainly, we cannot afford not to heed common sense or to listen to reason. A question often raised is that of cost-effectiveness. It is relatively simple and straightforward to apply the criterion of cost-effectiveness to situations in industry. In education, however, it is not that straightforward; and in considerations leading to the choice of one communication medium over others for educational application, it is even more complex.

From the results of many educational radio projects around the world and other studies, it is now generally accepted that, particularly in situations such as we have in Africa where educational radio does not imply the creation of separate networks of production and transmission facilities, much higher cost-effectiveness over traditional classroom teaching can be guaranteed. It is also clearly established that the cost-effectiveness of radio in education can be as high as five times that of television.

Here then is a wonderful scenario for radio as the ultimate tool for the democratization and renovation of education in Africa. The only thing missing is the action. To say that there has been no action may appear not to do justice to the work of the hundreds of men and women who have over the years worked with dedication in some form of educational broadcasting. They would be the first to lament with me, however, that their efforts have not led anywhere near democratizing and renovating education.

Going through a list of some 23 projects which have been labeled as educational radio projects in Africa over the past two decades, there are only five which I am able to identify as having successfully fulfilled their objectives or as being in the process of doing so. Five out of 23 is certainly not an impressive score.

A Few Success Stories

There was a time when the popular belief was that as an instructional tool, radio as a stand-alone system was a poor performer. However, there have been successful attempts to counter this argument. Among them, Tanzania where educational radio was part of a focused national campaign supported by a strong political organization. Another was in Mauritius, where the Mauritius College of the Air successfully used radio, TV, and correspondence material in its educational programming. Again, this was a product of the highest level of national commitment. Both also exemplified involvement at the grassroots and operational levels from the beginning, and were supported by formative research.

Today, in the light of dwindling human and financial resources in most of Africa, the use of educational radio as a stand-alone system seems to present a feasible strategy. The use of radio as a stand-alone system, however, requires creative compensation for interpersonal and other support inputs. Such compensation must necessarily be based on sound pedagogical principles. It therefore demands the most intimate collaboration between broadcasters, stretching their craft to the limit, and educators, testing the validity of their teaching skills. This is what the Language Arts Project in Kenya has so impressively demonstrated.

Our experiences with the few truly successful projects we have had so far tend to indicate that it is not only a particular type of approach which works. One major feature which is common to all successful projects is the use of specialists, who employed sound educational and communication research techniques for the design of the projects, for the development of the programs, and for the measurement of their effectiveness.

(continued on page 4)
Radio seriously for education, these have been undercut by the entry of its more glamorous actually listen to. you are even lucky if you find a program you can probably actually retrogressing. In most cases labeled "educational" on any African radio service.

But are these findings really new? I submit that they are not. They have been with us and demonstrated to us many times over. We now have all the answers.

Why the Failure of Radio in Education?

Strictly speaking, educational radio in Africa cannot be said to have failed. The fact is, there has been very little serious educational radio effort in Africa. There have been and are a number of educational radio projects and programs, but many have been short-lived, short-sighted or both. Often they have been mere reproductions of the traditional classroom formats. In no way could these be said to be contributing to the democratization and renovation of education. A number of other projects have been planned and executed purely as experiments or research ventures. Nevertheless, there are a multitude of reports of countless seminars with the ever-present title "The Role of Broadcasting in Education" which assert that educational radio has failed because of budgetary constraints on program production, the lack of listening facilities, or the shortage of trained personnel. Year after year, this same list of "problems" surfaces and nothing ever seems to be an adequate solution—not the use of low-cost portable production equipment, not the provision by government of free receivers, not even the increase in the number of communication graduates.

"The use of radio as a stand-alone system... requires creative compensation for interpersonal and other support inputs."

All one has to do is to listen to any program labeled "educational" on any African radio service and to reflect on the teaching and learning processes, and one is bound to come to the conclusion that we are not only stagnating but probably actually retrogressing. In most cases you are even lucky if you find a program you can actually listen to.

Where attempts might have been made to use radio seriously for education, these have been undercut by the entry of its more glamorous sibling, television. Following patterns established elsewhere, both educators and broadcasters in Africa started looking to television for solutions to educational problems. These were of course not practicable as the Ivory Coast experience has so painfully finally driven home to us. But the magic of television lingers on, to the disadvantage of radio. As one African Director of Broadcasting put it, "I am not yet able to run radio and they are asking me to submit proposals for television."

The Task Ahead

Radio has been proposed in the discussion as the optimum medium or technology to achieve the dual goals of educational democratization and renovation in Africa. But is educational radio in Africa in its present form ready to accept this challenge? My answer is no. There are obviously more fundamental reasons for our failures than those we have traditionally presented at many conferences and seminars. I would like to submit two of these reasons for your consideration at this conference.

The first problem is with the human factor—the educator and the broadcaster. The educator will not give an inch from his arena of classroom teaching to facilitate wider learning; the broadcaster will not share the mystique of the craft to put it to substantive use. Each displays a degree of inflexibility which suggests a lack of understanding of the purposes of his or her individual discipline, however he or she may have mastered its form.

We require a renovation of the broadcaster and the educator themselves. From the broadcaster we require a commitment to, and a change of attitude towards education. Similarly, from the educator, we require a commitment to, and a change of attitude towards radio.

Secondly, we require democratization of radio itself. Democratization of educational radio will require the decentralization of production and transmission facilities. It will require opportunities for citizens to have closer access to the program-building machinery and to help ensure that programming reflects their concerns and their communities' educational needs.

Unfortunately, in this regard our continent still has a major problem. The truth is that most of the time broadcasters themselves do not study educational radio, its potential and its implications adequately enough to be able to make convincing proposals to their governments.

The underutilization of radio to date would seem finally to indicate that we have allowed ourselves to be awed by its potential. But let us remember that in the same manner that we have so far limited this potential, we also have it within our power to harness it to our ends. To continue to steer the now-familiar old course and attempt piecemeal remedies along the way will never get us there. Africa has not yet truly discovered educational radio. Let this be the start of that discovery.
Commercial Cinema: A Medium for Development Communication

by John Riber and Steven Smith

Commercial cinema, with its well-established distribution network of cinema halls in many developing countries offers an exciting opportunity to present potentially sensitive development issues. In Bangladesh, the commercial cinema is very popular. The country's thriving film industry annually produces about 40 feature films which are distributed to more than 250 cinema halls across the country. Historically, cinema in Bangladesh has been strictly an entertainment medium, sharing a tradition with the Indian film industry. The formula film dominates—overflowing with melodrama, heroes, heroines, villains, and extravagant love-songs-and-dance routines. As in other countries, cinema in Bangladesh transcends the boundaries of local social mores, and even the poorest villagers can escape into a world where events occur that would not be tolerated in real life.

In 1982, Worldview International Foundation (WIF), an international voluntary organization whose activities focus on practical participation in the information process, established a media center in Dhaka, Bangladesh in order to use the film medium to disseminate development messages.

WIF first worked with the Ministry of Education (MOE) to promote literacy. They collaborated in making a short film, It Is Dawn; Open the Door (Bhor Holo, Do Kolo), for cinema hall viewing. To ensure that the literacy film had the same appeal as the feature attraction it would precede, entertainment was fully integrated into the production. Following the typical commercial film formula, a love story, with dancing, singing, and fighting, paralleled 'he developing social message—that those who achieve literacy will be rewarded.

Social Marketing in Films

Using the social marketing approach to promote a development theme, the producers were able to plug into a commercially successful network that assured them of reaching a large, attentive audience for a very low cost. An estimated eight million Bangladeshis have seen this literacy film in cinema halls, mobile film projection vans, and on TV. Evaluation of the project showed that 95 percent of the surveyed audience enjoyed the film and understood the intended message. Furthermore, the film was so popular that it was submitted as the Bangladesh entry at the Worldview Film Festival in Moscow.

WIF's next project was considerably more challenging. Population Services International asked WIF to produce another film, for the Social Marketing Project (a AID-funded family planning communication project), this time with planning theme as the social development messages. Although family planning is not encouraged in this Islamic nation, by using the commercial cinema medium where sexual themes are commonly featured, the possibility of introducing the controversial topic of family planning could even add to the film's popularity.

The script was developed from research conducted by Manoff International Inc., an American social marketing agency who worked closely with MRCB, a Bangladeshi market research agency. They identified the target audiences and the constraints against using contraceptive methods in Bangladesh. Then messages were designed to address these issues. One constraint was the hesitancy of husbands and wives to discuss family planning with each other. Research suggested that contraceptive methods might be used more frequently if this constraint could be overcome, so the decision was made to use this issue as the film's theme.

A love story entitled Together (Amra Dujon), was developed. The social message revolves around a newlywed couple; both are hesitant to immediately start a family, but neither feels comfortable discussing his/her feelings on the subject with the other because of strong cultural taboos against such a delay. As the story develops, the barriers are surmounted and this "model couple" begins to discuss the issue—using singing and dancing to express their concerns about family planning. Although the contraceptive method they have selected is not revealed (this would not be accepted even in a commercial film), it is made clear they are resolved to practice family planning.

Meanwhile, a parallel plot develops as a villain, an evil moneylender who resents this marriage because of his own desire for the heroine, interprets the couple's failure to produce a child as impotency on the part of the hero. The villain's continued pursuit of the heroine leads to action-packed fighting, a house burning, and ultimately to his comical humiliation, all key ingredients of a traditionally successful Bangladeshi commercial film.

Understanding audience expectations in a commercial cinema context is the key to successfully adapting this medium for social development messages. Although some foreign technical assistance was provided, the success of the two films described above depended on how their themes were adapted to the traditional feature film format. Alamgir Kabir, a leading film director in Bangladesh selected popular stars for the films, and in keeping with expected, though seemingly conflicting messages, dressed the village heroine in elegant clothing and jewelry. This reinforced her role as the stereotypical heroine of the film.

Viewers in developed countries who have been exposed to documentary films can appreciate them as a medium for learning. In developing countries, on the other hand, few people are exposed to the documentary film format. Movie-goers have paid their hard-earned money to be entertained, not educated. For this reason, a documentary-type film, lacking the escape and excitement viewers expect will not succeed in a commercial environment.

To date, commercial cinema has been an underutilized medium for development messages. WIF's experiences demonstrate how effective, well-conceived social messages can be presented in a commercial cinema context. It is

Standard commercial cinema filming techniques are used to produce movies with social messages in Bangladesh.
On File at ERIC

by Barbara Minor

Documents on agriculture and health education in developing nations that have been recently entered in the ERIC (Educational Resources Information Center) files focus on agricultural extension service and basic education, agricultural marketing principles, and several facets of health education. All five of these documents are available in microfiche and four in paper copy from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22304. U.S.A. Be sure to include the ED number and payment in U.S. dollars for the price listed plus shipping.


The five papers in this collection examine the methods, costs, and effects of traditional agricultural extension services and basic education and present three case studies illustrating different approaches to using mass media for rural education. The first paper reviews the literature on the effectiveness of agricultural extension, and reports that extension agents' studies of internal efficiency have been generally critical, while evaluators of external efficiency (mainly economists) show much more positive results. It suggested that extension agents often have irrelevant evaluation criteria and economists generally overestimate the specific impact of extension services. The literature on the comparative value of mass media and traditional approaches is reviewed in the second paper, which emphasizes ways in which mass media have been used for agricultural extension and for basic education, ways in which mass media have been linked with group and individual study, and the costs of using mass media as compared with other approaches. The remaining three papers present case studies of mass media use by a government department, the Extension Aids Service of the Ministry of Agriculture of Malawi; a nongovernmental organization, INADES, in West Africa; and a semigovernmental agency, the Lesotho Distance Teaching Center. Available from World Bank Publications, P.O. Box 37525, Washington, D.C. 20013, U.S.A. for US$15.00; or from EDRS in microfiche only for 97 cents.


This module contains basic materials to enable the workshop facilitator to teach concepts in agricultural marketing to Peace Corps volunteers. Introductory materials include general suggestions for the facilitator, a checklist, and a suggested timetable for a two-week workshop. The course is organized by 11 concepts: needs assessment, market familiarization, basic terms and concepts, marketing in action, the production-marketing-consumption system approach to agricultural commodities, characteristics of commodity systems, behavior of market participants, simulation of a marketing system, identification of alternatives in previously identified marketing situations, role of Peace Corps volunteers in agricultural marketing, and sharing resources and plans for action. The module provides objectives, teaching techniques, materials needed, suggestions to the facilitator, handouts, worksheets, and visual aids for each concept. Lectures are modular; content is presented primarily through learning experiences. An appendix contains additional visual aids, a bibliography, and supporting materials. Available from EDRS in microfiche for 97 cents or in paper copy for $12.65.


This book presents 43 health, nutrition, and sanitation lesson plans originally developed by Peace Corps volunteers in Niger and recently translated from French by Graeme Frelick for use in The Gambia. These lessons can be used in a variety of ways, in home visits, pre-postnatal consultations, well-baby clinics, and primary schools. Unlike most traditional health lesson plans which emphasize the lecture method, these plans stimulate and encourage full client participation. Although designed in 1971 for Sahelian countries, these lessons can be adapted and modified, as appropriate, to serve as guides for health programs and materials development in other countries. Included are sections on antenatal care, childbirth, home visits, and maternal and child health clinic visits. Appendices provide sample recipes for weaning foods, a nutrition lexicon, and information about complementary proteins. Available from EDRS in microfiche for 97 cents or in paper copy for $9.15.


This manual was developed by Peace Corps for those interested in promoting change to improve health conditions in their communities. Parts I and II focus on fundamental health education processes and discuss techniques and approaches for working with community members to plan and develop programs that are responsive to the community's expressed needs and goals. Part III presents another aspect of educational programs, that of transmitting information about health topics. This section includes specific reference materials on selected health topics relevant to developing countries, and it also discusses methods and aids for presenting such information to individuals or groups. Part IV deals with four common community health problems: nutrition, maternal and child health, control of communicable diseases, and accident

(Continued from page 5)
Mass Media in Peru Promotes "Responsible Parenthood"

by Judy Brace and Reynaldo Pareja

Peru is currently embarked on a mass media campaign under the auspices of the Ministry of Health (MOH), to promote a variety of health-related activities to raise the level of consciousness and knowledge of low-income parents about family planning, immunization and oral rehydration. A joint effort between the Ministry, the U.S. Agency for International Development (A.I.D.), and a private advertising agency has resulted in a series of TV spots, and a graphics package, grouped under the umbrella theme of "Responsible Parenthood," to encourage a thoughtful approach to the bearing and raising of children.

Because television spots are not as frequently used as radio spots for social service messages, our readers might be interested in the development of these spots.

The National Population Council (CNP) strongly advocated adoption of an overall theme of "Responsible Parenthood," and the MOH concurred. The elements that would be covered by this theme and reflect this responsibility would be family planning, oral rehydration, and immunization. That is, responsible parents decide on the number of children they can raise properly, they vaccinate their children, and they give oral rehydration solution to a child with diarrhea.

The mass media campaign activity was based on the results of fairly extensive audience research that established knowledge and beliefs in the areas of family planning, immunization, and oral rehydration. With these data, message designers, working with a communications consultant, were able to develop media themes, test and correct them, and finally to air them.

Since responsible parenthood was to be the umbrella theme for all the spots, an introductory spot was designed to enunciate the components of responsible parenthood, and to establish a song and some recognizable phrases that would carry through to all the other spots. The elements of responsibility included adequate food, good education, health care, appropriate clothes, adequate housing, and much love. The overall song phrase adopted was "...loving and caring for the children that the couple decides to have."

The audience research identified two appropriate audiences at which to aim the family planning messages: those who want no more children and those who are using traditional contraceptive methods. For the first audience, TV spots were designed to reach 1) the woman, 2) the man, and 3) the couple. For the second audience, the spots were designed to reach the couple with an emphasis on either the male or female role. In each case the free services of the health centers were promoted.

The campaign was based on findings from both quantitative audience surveys and from focus group surveys. (In a focus group, six to 12 participants guided by a moderator, discuss topics relevant to the investigation underway.) The participants are selected from representatives of the target audience on which the investigation is focused. Usually the findings from several groups are necessary for adequate research coverage.

The Peruvian focus groups revealed information about contraceptive habits, male attitudes toward their wives' use of contraceptive methods, that there is a folk vocabulary for family planning activities (to incorporate into the spots to make them acceptable), that the spots to make them acceptable), that the messages to be considered in June 1983.

The conference is sponsored by the U.S. Agency for International Development in cooperation with the International Centre for Diarrhoeal Disease Research/Bangladesh, the United Nations Children's Fund, the UNDP, the World Bank, and WHO.

For registration material please contact: Ms. Linda Ladislau, ICORT II Conference Staff, Creative Associates, Inc., 3201 New Mexico N.W., Suite 270, Washington, D.C.

Oral Rehydration Therapy Conference

The second International Conference on Oral Rehydration Therapy (ICORT II) will be held December 10-13, 1985, at the Hyatt Regency Washington in Washington, D.C. More than 90 countries are expected to be represented at this meeting, which will focus on implementing ORT programs, and report on the progress and new developments in ORT since the first conference in June 1983.

Topics for discussion at the conference include: communications and social marketing; distribution and logistics; health personnel training; supervision and monitoring; evaluation and cost issues; and integrating ORT with other health activities.

Simultaneous translation will be available in French, English, Spanish, and Arabic. There is no attendance fee.

The conference is sponsored by the U.S. Agency for International Development in cooperation with the International Centre for Diarrhoeal Disease Research/Bangladesh, the United Nations Children's Fund, the UNDP, the World Bank, and WHO.

For registration material please contact: Ms. Linda Ladislau, ICORT II Conference Staff, Creative Associates, Inc., 3201 New Mexico N.W., Suite 270, Washington, D.C.
A Communicator's Checklist

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This book is the result of an international conference on New World Information/Communications Order (NWICO) issues held in May 1980. It is important to note the date because it marked the high point of NWICO debate in UNESCO. At that time the release of the MacBride Report was imminent and the UNESCO Belgrade conference promised some important changes in the information order. Western nations seemed about to make concessions to the Third World demands for better balance in information flow and faster transfer of technology.

It is unfortunate that the production process of almost four years (the book was published only in 1984) makes much of the material seem outdated in the light of subsequent events: few changes in either world orders of economy or information, the U.S. withdrawal from UNESCO, a world recession especially dramatic in the Third World, and a proliferation of technology but without special concessions for the Third World.

The book suffers from a second drawback. It contains 54 chapters in the 485 pages of text, or an average of nine pages per chapter including references. There are few chapters that can afford to give the detail to make sense of the many important and complex issues they tackle. For example, it is dubious that anyone who is not already well versed on the subject can get anything from the six-page chapter in which Agrawal valiantly attempts to summarize the vast Indian Satellite Instructional Television (SITE) project. Or what can be gotten from the four- and-one-half pages by Gorove who attempts to summarize the legal and political issues of the 1979 WARC (World Administrative Radio Conference) where NWICO issues were discussed on the technical level? There are many other examples, but these illustrate the basic problem.

There is a positive side to the book. First, the comprehensive nature of the contributions, which are placed in five sections, gives the reader a guide through important NWICO issues of the time. These sections are: 1) Global Perspectives on Information; 2) Transnational Communications: the Flow of News and Images; 3) Telecommunications: Satellites and Computers; 4) Mass Communications: Development within National Contexts; and 5) Intergovernmental Systems: Toward International Policies. The editors make an effort to provide a set of chapters within these sections, here are a number that seem out of place.

Also, there are obviously weaker chapters that must be put somewhere but their inclusion hurts the overall quality. The editors must be complimented on the technical quality of their editing, the useful appendices (especially the glossary of confusing United Nations acronyms and the esoteric terms of high technology), and the relatively successful effort to make so many chapters fit some reasonable framework without long introductions.

It would be impossible to summarize the vast array of topics, but let me give a list of some chapters that I believe are still useful in this post-information age. Many of the NWICO debate chapters and those dealing with the MacBride Report are of historical interest, but not as relevant to 1985 as some had hoped five years ago. In section one, the Cruise-O'Brien chapter on information in North-South negotiations is still important even though it has yet to be widely implemented. Also, the Amunugama chapter detailing the cultural issues of the information order debate remains in focus today. The work on news (mostly content analysis) in section two contains some useful empirical data, but it seems repetitious in the light of other studies that have shown the imbalances in news coverage. The proof of imbalance is clear enough by now; what is needed are some policy suggestions as to how best overcome the problem. Unfortunately no chapter in this section really addresses this policy issue. Section three on telecommunications is about technology changes, and the Hamelink, Dordick, Melody, and Rice and Parker chapters all contain useful insight and data very relevant today. Section four on mass communications and national development should be the most relevant to practical communicators in the Third World, but unfortunately it is not. There are a number of reprints in this section (Hornik and Atwood and Mattos come to mind) or simply chapters of marginal quality. The chapters by White and Motta which begin and end the section make the most sense in their theoretical frameworks and the policy implications they draw from them. Finally, section five on intergovernmental systems has much on NWICO and UNESCO issues as well as the 1979 WARC, but much of the writing seems now out of focus. However, Pelton's chapter is perceptive about INTELSAT in foreseeing the problems it is now facing with increasing international competition from the private sector, especially in the U.S. Levin's observations about contradictions in U.S. internal and external communications' policies are useful reminders that the International Telecommunications Union (ITU) sessions of WARC are still ongoing and that U.S. policies are still suffering from these shortcomings. Block's chapter on the International Program for the Development of Communication (IPDC) that was created in UNESCO as a more pragmatic way for Western nations to help solve information order problems now seems overly optimistic. IPDC has not received nearly the level of aid promised by beleaguered Western nations when it was created. It suggests that once NWICO pressure was off, things returned to normal.

This book would be a useful library reference and in this sense may be correctly labeled a "handbook." Although there are some useful and even important chapters, the brevity of treatment means that readers who wish to get a deeper knowledge of an issue will have to go elsewhere.

Available for $34.95 from Longman, Inc., 95 Church Street, White Plains, New York, New York, 10061, USA.

Reviewed by Emile G. McAnany, Professor of International Communications at the University of Texas, Austin, Texas. He has written extensively on the effects and uses of communication technologies in developing countries.

2


This book may finally be the pill that cures severe cases of technophobia and technophilia —and that happy balance alone is worth a good bit. But there is more: Bibliotech is visually appealing, extraordinarily well written, and "humanizes" the computer revolution by setting examples of the style and tone of the book: "Ada, the programming language, is named for Augusta Ada, Countess of Lovelace...the assistant of Charles Babbage, inventor of an analog calculating machine that is sometimes considered the first computer. Ada's mother was a nonconformist, and encouraged all of Ada's intellectual interests, including...mechanics and mathematics. In 1834, a 19, Ada married William King, later the First Earl of Lovelace, and eventually bore him three children. "Ada's work, however, was not harnessed excessively by motherhood. Introduced to Babbage, she translated his treat-
tise on the analytical machine into French, adding her own notes that were the first description of what in the 20th century is called computer programming.

"Like many mathematicians, Ada was fascinated by gambling, and carried on a passionate correspondence with Babbage in an effort to work out a foolproof method of betting on horses, evidently without success. In her 30s, Ada gambled heavily, borrowing from her mother to hide her losses from her husband. She died young, at age 36, in 1852, a hundred years before her time."

Ada, the programming language, made its public debut as the darling of the Defense Department in 1980.

This little bit of computer bobbish gives credence to the claim that this book is "the classic informal encyclopedia of personal computing." It is organized alphabetically by topics such as "bubble memory," "database managers," "the handicapped," "Japanese computers," "software piracy," "robots," "video disks," and "word processing."

For each of the 100-plus entries, there is a discussion of the role played by the computer, amply illustrated with appropriate references (including software), and a description of related technology. The six-page section on spreadsheets includes a list of Visi-Cal commands, a glossary of spreadsheet terms, and a description of the Lotus 1-2-3 program that is slowly but surely nudging Visi-Cal (and its relatives) out of first place.

As an "introductory text" to the world of microcomputers, this may be among the finest books I have come across, especially for the person whose background or interests are not highly technical.

\[\text{A French edition will soon be published by Hachette Informatique, 79 Boulevard St. Germain, F75006, Paris, France.}
\]
\[\text{Available in English for US$14.95 from Quantum Press, Doubleday, 245 Park Avenue, New York, NY 10167, USA.}
\]

Reviewed by Patti Lowery who has written and edited in the fields of health care, training, and international development. She was the former editor of Micros in Management, a newsletter devoted to microcomputer applications in developing countries.


Lionberger and Gwin have produced a well-written, clear summary of the U.S. extension model with a perspective adapted to the Third World setting. They provide a good explanation of the extension system from research and development (both pure and applied) through dissemination and integration of innovations.

Their book contains chapters on: 1) Assessing Change Variables in Local Communities; 2) Development and Delivery of Science Based Information the New Way; 3) Applications from Diffusion Research; 4) Problems in the Linking (i.e., the Extension System); 5) Interpersonal Communication; 6) Mass Media Channels as Communication Assists; 7) Planning Communication with Small and Mass Audiences; and 8) Selecting Change Strategies and Going to Work. Each chapter features a summary of recommendations for change agents and a list of references for further reading.

Communication Strategies is well-illustrated with both diagrams and drawings from Third World rural settings. One of its best features is a "Highlights" section at the beginning of the book with summaries of the main points from each chapter. There is also a welcome ten-page Glossary at the end.

The book's stated objectives are "(1) to develop an understanding of change processes and conditions as they apply to agriculture; and (2) to formulate strategies for implementing planned change that will help agricultural advisors with their mission to improve world food production and perhaps most of all help farmers achieve their own objectives." All in all, Lionberger and Gwin have done a good job of making communication, extension, and social change research relevant and accessible to the practitioner.

But it is a particular kind of practitioner. The book is aimed at "agricultural change agents, such as extension agents, farm advisors or county agents, agricultural missionaries, and others who are dedicated to developing world food supplies and helping people in other ways."

However, the agricultural change agents the authors seem to have in mind are college educated. Despite the fact that this book is relatively free from social science jargon, it is still for the more sophisticated reader. The typical agricultural extension agent in much of the Third World, with 6 to 12 years of schooling and a limited vocabulary, will likely find this book too demanding. Indeed, a colleague who recently conducted a course on application and diffusion for Third World extension administrators reported that the book was too complex for his trainees and was used as background reading, a role in which it served very well. He also reported that it was useful to the trainers in reviewing theory and practice and in preparing training activities which translated this theory and practice into terms relevant to the Third World trainee.

The authors mention many of the critiques of the U.S. extension model and discuss the necessity of adapting the model to the realities of the Third World setting where infrastructure may be weak, necessary inputs nonexistent, research not relevant to farmer needs, mass media limited, and extension agents poorly trained and supported. However, they do not seem to ask themselves if this model is appropriate under such circumstances. Many authors have argued that utilization of the extension model results in a knowledge gap. The wealthier, better educated farmers are better able to try and to adopt innovations, the result being the rich get richer, the powerful more powerful, and the poor and powerless more so. Another argument against the extension model is that its top-down approach reinforces the subservient and dependent role of the subsistence farmer. These results weigh against the utilization of the extension model, critics say, and for the use of communication models more relevant and responsive to the realities of Third World rural development.

Lionberger and Gwin clearly believe that the U.S. extension model is appropriate for developing countries and that it can be adapted to the specific conditions in the Third World. For example, they recommend gearing research toward the development of technologies that benefit the "littles" more than the "hogs," to use their terminology, with appropriate support services like small farmer credit and communication programs aimed specifically at subsistence farmers. They make a point of saying that "change strategies must be selected in the context of what is locally available, possible, and feasible." They discuss, for example, alternative strategies for the selection, training, and coordination of extension agents and for the utilization of media, depending on local conditions. One strategy which Lionberger and Gwin suggest for successfully meeting the needs of farmers is the participation of those farmers in helping determine research and information needs, and in helping the researchers and advisors communicate the new information appropriately. The authors make a concerted and well-reasoned effort to draw lessons from the mistakes of past attempts at too rigid an application of the extension model. The communication specialist who agrees that the extension model is appropriate for, and can be adapted to, Third World agriculture development will find many helpful hints for doing so.

Based on the assumption that the U.S. extension model can be adapted to the developing country setting, Communication Strategies offers a clear explanation of how this model works, ideas for adapting it to local conditions, and discussion of problems inherent in the evolving extension programs of Third World countries. This Guide for Agricultural Change Agents is a useful resource for technical assistance personnel and Third World professionals attempting to facilitate the growth of extension programs in developing countries.
Low-Cost Telecommunications on the Way

Earlier this year a transmission was relayed that represents a breakthrough in the use of low orbiting satellites for worldwide communication: Using amateur radio frequencies, inexpensive transmitters and receivers, and a personal computer, a team of technical volunteers from the U.S. and Canada sent messages from Hawaii to the University of Surrey in Guildford, England via a tiny satellite orbiting the earth over the poles at an altitude of 429 miles (690 km).

The messages—digitized "packets" of information—were stored in the satellite's on-board computer. A few hours later, as the satellite passed over Guildford, the letter-perfect messages were downloaded and printed out automatically by the Surrey ground station's small personal computer.

The system, called PACSAT, will offer telecommunications networking at a fraction of the cost of conventional telexes once it becomes operational. Ground station equipment costing not more than $2,000 and capable of operating on batteries or solar power, can be carried in a briefcase. The first full-service PACSAT satellite is scheduled for launch in early 1987.

Volunteers from Volunteers in Technical Assistance (VITA), a private voluntary development agency in Washington, D.C., Radio Amateur Satellite Corp. (AMSAT), an international association of "ham" radio operators, and Interpares, a private Canadian agency engaged in community-based development cooperated in design and launch efforts.

Armored with the feedback from the pretesting phase, actual live videotaping with actors began and nine spots were prepared: four on family planning, three on oral rehydration and two on immunization. These are currently being aired nationwide in Peru, on three TV channels, with funds provided by the MOH and A.I.D. for running the project. These messages have been adapted for the local culture and distributed to the various field centers. For example, a flip chart on prenatal care developed by a Peace Corps Volunteer for one health center was reproduced and distributed to all 50 rural health-zone field offices. Slides show, flannelgraphs, and filmstrips are similarly duplicated and distributed.

Special care is taken to ensure that the materials are timely and relevant to the villagers' needs. Each item is pretested by communication specialists to see how the message is interpreted at the village level. Copies of a poster showing a man holding a baby were widely distributed only after pretesting found that this unconventional image was culturally acceptable, and that it effectively conveyed the desired message that fathers, too, are responsible for monitoring and maintaining their children's health.

Among the many types of PACSAT materials used, flipcharts and flash cards have been the most widely distributed. Approximately 60 percent of the village-level nurses use these regularly. Slide shows are frequently used as well. Always popular in the villages, they can be geared to particular village needs, and can be paced to encourage discussion during the slide show.

Traditional forms of communication also have been used to disseminate Santé pour Tous messages. For instance, plays, songs, and role-playing have been integrated into health practitioner training programs because trainers know from experience that modern communication devices, although effective, can break down—whereas songs and plays require only human participation to get the message across, and can easily be adapted to particular village needs.

Participants in the Santé pour Tous project believe that with continued improvements in the system, their efforts to encourage grass-root participation will outlast existing support structures, because the necessary framework will have been established at the village level for mobilizing local residents who then go on to share their experiences with others.

Iain McLellan is a freelance journalist currently with Radio Canada International and a research fellow with the International Development Research Centre in Canada.
A New Source of Information on Latin American Education

by Ernesto Schefelbein

The expansion of a cooperative abstracting network now provides greater access to a large number of biographical references on Latin American education for people working to improve that region's educational system. This classification project was undertaken by REDUC (Red Latinoamericana de Documentación en Educación), an educational research and development network for Latin America and the Caribbean. It is a private nonprofit system covering 15 countries and 20 associated centers. More than 6,000 reports on educational topics have been abstracted and are now available.

Abstracts are published at each of the national centers for distribution among their national universities and libraries. Participating countries include Argentina, Bolivia, Chile, Costa Rica, the Dominican Republic, Ecuador, Nicaragua, Panama, Paraguay, Peru, and Venezuela. Both the ongoing search for relevant Latin American educational materials, and support for broader use of the centers are encouraged at National Research Meetings (ENI-Encuentros Nacionales Investigadores); through preparation and diffusion of relevant state-of-the-art reports; and by supporting specialized networks. Each country has one or more centers that perform these functions in association with REDUC, which are in turn coordinated regionally by CIDE (Centro de Investigación y Desarrollo de la Educación) in Santiago, Chile.

As well as being responsible for Chile's center, CIDE's role is also to integrate the entire system; introducing a common index by topics, education levels, and authors, and diffusing this index throughout Latin America. Additionally, CIDE is to act as technical support to the other national centers and to make certain that CIDE norms are maintained in processing and retrieving information.

Among CIDE’s key supporters are the United States Agency for International Development (A.I.D) and Canada's International Development Research Center (IDRC). A.I.D. support for the network began in 1981 with a grant to CIDE to assist in establishing six centers. With this support, CIDE also established a central microfiche file/database and carried out a series of regional and subregional meetings. Under a follow-on grant, A.I.D. will support the expansion of the network to four new countries, increase REDUC's database, provide assistance to members' centers in installing microcomputers and in training center personnel to carry out computer searches, and provide assistance in extending educational research information to decision makers.

Network Organization

The purpose of the national centers is to make available locally the findings of educational research in Latin America, and to provide an overview of the educational situation in the region. However, the centers' existence and development alone is not enough to create a network. There must be an active exchange of information among these centers as well.

REDUC has both active and passive centers. Fifteen active centers collect papers and produce abstracts and bibliographies. The five passive centers collect educational materials and send them to CIDE where they are processed and published.

It is expected that national networks, similar to REDUC's regional network, will eventually be created. The experience of Peru could serve as a model. Peru is already operating an internal educational information network with five national centers that are integrated into CIDE, and several other provincial centers that are supported exclusively by internal funds. These national networks will contribute to a system-wide distribution of all REDUC materials.

Each national center has put onto microfiche the available references from national education reports published during the last decade. The bibliographies are indexed by 37 topics as well as by authors and educational levels for ease of retrieval, and to identify where further research is needed.

Press clippings represent the main source of information about current educational policies in Latin America, because there are few formal reports available on this issue. Most research centers and libraries have press clipping files but without a topical index, retrieval would be impossible. Seven countries have classified their press clippings using the above-mentioned topical classification system. Over 10,000 press items clipped from 23 newspapers in seven Latin American countries are now accessible through the system.

Analytical Abstracts and Indexes

Each 400-word abstract includes a brief description of the document, the sources used, the method (or contents); and the main conclusions. Sometimes it may be too expensive to keep copies of important documents, so if a copy is not available at the center, the abstract indicates where one can be obtained.

CIDE publishes an annual Latin American Index of all Educational Analytical Abstracts prepared by the network for the entire region. The Index lists each abstract, classified by author and topic, enabling a researcher to identify suitable materials and to locate abstracted materials by the number and name of the center that produced the abstract.

National Education Research Meetings

With REDUC's assistance, participating countries' Ministries of Education have successfully sponsored nine National Educational Research Meetings between 1980 and 1983. As a result, there is greater visibility of ongoing educational research in Latin America and the Caribbean. In the future, there will be biannual National Educational Research meetings in participating countries to continue this exchange among the research community.

The success of the educational information network depends on the ability of decision makers, documentalists, and researchers to communicate with each other. National meetings play a key role in bringing these groups together.

Papers presented at these meetings are published in their entirety by a few of the national centers, but most centers cannot afford to do this. Instead, they prepare abridged versions of their countries' papers and make these available at a lower cost, encouraging wider dissemination of this information.

REDUC has not only stimulated the diffusion of educational research, it has also stimulated its development. A solid infrastructure for research is now available based on a large body of historical and current materials available to participating countries.

The REDUC project represents better dissemination of important educational information, and contributes to the improvement of educational systems in Latin America.

Ernesto Schefelbein is an educational economist who works at the World Bank. He writes on educational planning and finance.

World Congress on Education and Technology

From May 22-25, 1986, the World Congress on Education and Technology will meet in Vancouver, Canada to consider the issues related to technology and our changing world. Participants from around the world will discuss the impact of new technology on education systems, on world cultures, and on global society in general.

As part of the "Innovations and Applications" theme, the Congress will feature an exhibit of high technology equipment and services relating to education and culture from around the world.

Questions concerning this conference can be sent to: Congress Coordinator, British Columbia School Trustees Association, 1155 West 8th Avenue, Vancouver, British Columbia, Canada.
Briefly Noted

by Judy Brace

Readers will recall previous references to materials produced by the Bangkok office of UNDP. We have received a number of new publications from the Development Training and Communication Planning (DTCP) unit that should prove valuable to many of you. These publications are intended to share the DTCP experiences so as to strengthen national and regional communication and training capabilities for rural development programs.

Guidelines for Planning Extension Programmes sets forth basic principles and planning steps of extension programs in a clear fashion, concentrating on objectives and the process to achieve them whether it is for an agricultural, health, or family planning program.

Making Rural-Based Development Projects More Effective is a brief paper that draws on the research findings of DTCP over the past five years. In answer to the question, "What makes rural development projects succeed or fail?" DTCP's findings are that there must be adequate government or private services at the village level (technology, supplies, information, field-workers, etc.), and there must be participation on the part of villagers in the development effort. Without both of these contributions a project will fail. "More projects fail because of inadequate services...at the village level than for any other single reason." This paper does not indicate how to make projects more effective, it simply points the direction to take.

The first in what appears to be a series on Training for Rural-Based Development Projects poses a number of questions about training and its effectiveness in development. It calls for a new look at the results of large investments in training and asks if, in fact, these results justify the expenditures. The paper looks at training as a very expensive form of communication, requiring "physical facilities, teachers, and a great deal of time on the part of both the students and teachers." Perhaps there are other, more efficient alternatives. One is proposed here—a human resource development model—in a simple outline form. Future papers will address individual steps of that model.

A case study documents The Evolution of the Vietnam Audiovisual Centre and how it developed from a media production unit for UNFPA in 1981 to a national audiovisual center for the entire country by 1984. The materials produced and the training courses offered are listed. Those readers who would like a guide to preparing a training workshop will appreciate the report, Workshop for Subject Matter Specialists to Strengthen Fortnightly Training, that documents the training of trainers for Nepal's Agricultural Assistants. The trainer's were taken through the planning, preparation, and presentation of a two-week training session which they would subsequently conduct. The process was divided into 11 steps which can be followed to design training for any type of content specialist.

In an attempt to clarify the issues inherent in any discussion about microcomputers, DTCP shares its own experience with micros for improving its management capabilities. Their report, Microcomputer Primer: 1st Edition, a Layman's Guide for Selection and Use of Microcomputers in Developing Countries, addresses the various uses of micros, the hardware components, kinds of software programs, as well as whether to buy a micro, what to buy, and "getting started." There are a number of reassuring comments and suggestions, and a shared spirit of adventure that should encourage all potential users.

For all of the above publications, and for a copy of their publications list, contact: Publications Editor, UNDP/DTCP, P.O. Box 2-147, Bangkok 10200, Thailand.

Press Fellowships Available

Applications for the Alfred Friendly Press Fellowship Program are now being taken for 1986 awards. Friendly, a Pulitzer Prize-winning journalist, devoted his life to good writing, honest reporting, and maintaining a free press. This fellowship for practicing journalists, provides a working visit of six months in the U.S. and covers all normal costs including round-trip and U.S. travel, and a monthly stipend. Fellows will work directly with media organizations throughout the U.S. as contributing reporters. Applicants should have six years of reporting experience, and must currently be employed as a print or broadcast journalist in an independent media organization. Journalists from developing countries are encouraged to apply.

For further information and application forms contact: APFP Program Office, c/o Institute of International Education, 1400 K Street, N.W., Washington, D.C., 20005, U.S.A.

The price is US$10.00. Non-commercial organizations and individuals from developing countries can request a complimentary copy. Write to I.R.C., P.O. Box 5500, 2280 HM Rijswijk, The Netherlands.

(ERIC continued from page 6)
Addressing Health Communication in Africa

Several workshops held in Anglophone and Francophone Africa in recent months exemplified a unique collaboration between the media and health sectors in these two regions. Jointly, they identified a unique collaboration between the media Francophone Africa in recent months exemplified a unique collaboration between the media

radio and television as a valuable tool for health communication. The workshops included the development of programs designed to educate and inform the public about family planning as a contribution to good family health.

The workshops were organized as part of the Family Health Broadcasting Project of The Johns Hopkins University's Population Communication Services (JHU/PCS), launched in July 1984 with the Union of National Radio and Television Organizations of Africa (URTNA). This project comprises a number of activities designed to increase radio and television coverage of family planning and population issues in Africa including the two workshops mentioned above; a newsletter, Family Planning Broadcast Bulletins, containing broadcast-ready information; funds and technical assistance for radio programs; and distribution of innovative radio programs to member countries throughout Africa.

The purpose of the workshops was to acquaint regional broadcasters and family planning experts with the JHU/PCS/URTNA project. Anglophone URTNA members met in Nairobi, Kenya, Nov. 19-23, 1984 and Francophone members met in Dakar, Senegal, Feb. 11-22, 1985. Participants in both workshops included radio and TV producers responsible for health education programs; family health experts in ministries, public health institutions, family planning associations; and special resource persons in the fields of media and family health. Among the organizations contributing either technical or financial assistance were JHU/PCS, the Ford Foundation, the Academy for Educational Development, the Pathfinder Fund, and Family Planning International Assistance. Overall, organizational responsibility was assumed by URTNA/Program Exchange Center in Nairobi, and URTNA's main office in Dakar, Senegal.

Objectives

The objectives of the workshops were to:

- examine the priority family health issues in Africa and the technologies available to deal with them;
- review previous experience in using radio and TV to educate about health and family planning;
- discuss the use of radio broadcast bulletins on health;
- develop preliminary proposals for the use of radio in family health and family planning programs.

For most of the broadcasters, the workshops represented their first exposure to information about the health benefits of family planning. For a few of the countries this was the first time family health experts and radio experts had worked together. Few of the countries have established working links between the health and information ministries.

The material presented about family planning and radio techniques focused on the particular needs of African countries and was presented primarily by African experts. Many of the participants brought tapes of radio and TV material on family planning to share with other broadcasters and health-sector participants. Significant program production ideas were generated by sharing these productions.

Another important outcome of the workshops was the opportunity it presented for participants to become familiar with the financial and technical assistance available through JHU/PCS, A.I.D., and the other major donors active in the population sector.

Conference Results

Both workshops were highly successful in generating enthusiasm among broadcasters about the possibility of expanding programming on family health. The 13 Anglophone country representatives each developed concrete plans to improve existing or to initiate new programs. As a result, new radio activities are underway. A number of countries including Kenya, where a male-responsibility radio campaign was incorporated into the A.I.D.-funded family planning program; Nigeria where a mini-URTNA workshop is being planned for radio and health experts; and in Liberia where a radio drama series on family planning is being planned. Many of the other proposals presented in Nairobi are being followed up by JHU/PCS and URTNA.

Eleven Francophone countries participated in the Dakar Family Health Broadcast Workshop with equally successful results. The historically conservative position of most Francophone countries regarding family planning and population policies did not prevent them from sending very senior-level officials to represent their broadcast organizations and family health programs.

As was the case in Nairobi, many of the plans that were conceived in Dakar are now being followed up, and official proposals are being prepared in Burkina Faso, Mali, and the Ivory Coast.

There was considerable exchange of information and experience among the countries which proved very beneficial in stimulating lively discussions about family planning policies and programs. Countries that have put family planning information on the air provided orientation to help broadcasters gauge the kinds of radio and educational efforts that might be acceptable in their own countries. Most encouraging was the general climate of opinion in Dakar indicating that the potential for expanding radio/television coverage is far greater than anticipated. Although at the present time nearly all of the countries give some kind of radio coverage to family planning and sex education topics, this is not yet done on a regular basis in a majority of Francophone countries. The broadcasting of even occasional programs is an indication of major changes in attitudes about the subject.

Future URTNA Family Health Activities

Actions stimulated by the two Family Health Broadcast Workshops range from recognition of the need for regularly produced Family Health Broadcast Bulletins, to providing adequate follow-up to the many project requests emanating from the workshops. New staff will be taken on by URTNA to initiate and monitor radio initiatives in URTNA-member countries and to provide technical assistance to help improve the quality of family health broadcasts.

For more information about the two workshops contact: Population Communication Services, Population Information Program, The Johns Hopkins University, 624 North Broadway, Baltimore, Maryland 21205, U.S.A. or URTNA, Boite Postal 327, Dakar, Senegal.

Microcomputer Update

In our continuing response to your requests for more information about microcomputer applications in developing countries, DCR is passing along information gathered from several sources.

Agriculture

According to Micros in Management, the former Microcomputer Clearinghouse newsletter, a highly recommended publication from Michigan State University (MSU) is: "Microcomputer Statistical Packages for Agricultural Research," Working Paper #17 by Thomas Stilwell. This 23-page paper is one of many from the MSU series, International Development Papers. Nine statistical packages expressly designed for agricultural research are described therein. Single copies are free for AID personnel and Third World requesters, US$3/copy for others. It can be ordered from: MSU International Development Papers, Dept. of Agriculture Economics, 7 Agriculture Hall, Michigan State University, East Lansing, Michigan, USA, 48824.

A low-cost microcomputer program designed by scientists from MSU and the Agricultural University of Norway, supported by A.I.D.'s Alternative Rural Development Strategies Project, is now helping African scientists to design, manage, and analyze agricultural research experiments. With only brief training, MSTAT can be used by persons with no previous microcomputer experience, and can be run on most microcomputers. Training and software materials are available in English, Spanish, and French. For a brochure on the technical and general features of this program contact: Russell

(continued on page 14)
Freed, Institute of International Agriculture, 101 Agriculture Hall, Michigan State University, East Lansing, Michigan 48824. (517/355-0174)

Health

A software package called "Clinical Microcomputer Applications for Developing Countries," has recently come to our attention. The package is written especially for use in areas where medical services are often provided by paramedic personnel, and offers:

- diagnosis and treatment information for prevalent and difficult-to-diagnose diseases;
- family planning, high-risk pregnancy, immunization and nutrition information; incidence and prevalence reports for epidemiological surveillance; recordkeeping of medical and supply inventories for management decision making, for resupplying, and for use monitoring.

The package was developed as a collaborative effort between National Capitol Systems and Medical Logic International, using an interdisciplinary team of physicians, nurses, health system analysts, and computer programmers. The modules are being translated into Arabic, French, and Spanish.

For further information contact Douglas Mackintosh at (703)671-3360 or write to: National Capitol Systems Inc, 5203 Leesburg Pike, Suite 1601, Falls Church, Virginia, 22041, U.S.A.

Computers Donated


Under a new agreement between Apple Computers and PACT, the New York-based consortium of development agencies, 150 microcomputers will become available to nonprofit, nongovernmental organizations (NGOs) over the next three years.

While Apple will donate 150 of its popular IIc computers, PACT will administer the project, determine which organizations are eligible to receive the systems, and provide whatever support and training is needed by those selected.

As a condition of eligibility for the computer aid, PACT requires that NGOs, or consortia of NGOs, must have active projects in developing countries. They must be able to demonstrate that they have needs which a personal computer can help fulfill. Even though the [computer] systems are given free of charge, the NGO must also show that it has the resources to operate and maintain an Apple computer. Further, the grants are aimed at development organizations whose activities involve direct grassroots participation by project beneficiaries.

The computer system will include the Apple IIe, two disk drives, monochrome monitor, printer, telephone modem, diskettes, and printer software accompanying the system will include: wordprocessing, an electronic spreadsheet for budgeting and planning, database management for the storage and retrieval of information, and communications software for use with the telephone modem.

Application guidelines and additional information may be obtained by writing to: PACT, 777 United Nations Plaza, New York, NY 10017, U.S.A. Telephone (212)697-6222.

Computer News Connections

For our readers interested in keeping up with microcomputer applications in developing countries, the final issue of Micros in Management newsletter listed several widely circulated publications to refer to for up-to-date micro information. Among those listed:

- Microsystems Monitor, UN Industrial Development Organization, P.O. Box 300, A-1400, Vienna, Austria.
- IBI Newsletter, Intergovernmental Bureau for Informatics, Viale Civita del Lavoro 23, 00144 Rome, Italy.

(PANA continued from page 16)

Research Findings

Analysis of the data showed that there was a heavy concentration of political news from the national news agencies, international organizations, the NA-Pool and from the PANA headquarters. Considering the number of stories that dealt with visits of heads of state and ministers as well as with meetings and conferences, it appears that a conscious effort is being made to show that there is considerable interaction and cooperation between and among African and other Third World countries.

The NA-Pool contributed the largest percentage of political news with 68.4% of its total coverage. The Pool acted as a link between PANA and other Third World countries with most of its stories datelined outside Africa. It also reported stories of African relations with other Third World countries. Only 42% of UNESCO-, FAO-, and ILO-transmitted material was of a political nature; whereas 48.7% of their coverage was economic and 21.4% was social.

Given that one of PANA's objectives is to gear information toward the promotion of development, one would have expected to see a large proportion of news falling into the economic and social categories. However, PANA contributed only 21.2% in these two categories. If, in terms of promoting African political solidarity PANA does quite well, in terms of social and economic information, it does poorly.

The expectation was that there would be less unfavorable news in PANA copy than, say, AFP (Agence France Presse) or AP (Associated Press) copy. However, neutral stories constituted the bulk of the output of all contributing agencies, ranging from 42.9% to 53.4%.

PANA's Contribution

Because of its regular link with the NA-Pool, PANA is making a modest but significant contribution to the development of Third World or South-South information flow. If, in the past, less news about Africans saw each other through the eyes of the transnational news agencies, they now possess an agency that enables them to see each other more directly. This, in itself, is a considerable achievement.

However, the fact that less than a quarter of the members of the Organization for African Unity (OAU) contribute stories to PANA should be a matter of some concern. As PANA itself has pointed out, some countries do not have adequate or appropriate transmission or reception facilities and therefore cannot take full advantage of the services provided by PANA. A much more important factor is that of tariffs. Many news agencies use teleex for transmitting and receiving news, and do not enjoy special tariffs from their Posts and Telecommunications departments. However, this is being worked on at the present time.

Fe<- stories were datelined Addis Ababa, the headquarters of both the OAU and the UN Economic Commission for Africa (ECA), two very important organs for the political evolution and economic development of Africa. One would have expected the OAU secretariat or information office to have been one of the major contributors to PANA, but this is not the case. This is cause for concern since PANA is a creation of the OAU and the first place.

PANA's Impact

One cannot accurately measure the impact of PANA on its clients after its first year of operation because no such evaluation has been undertaken by PANA or by any other agency. It is recommended that PANA undertake a commission a study to determine what its clients think of PANA's performance. This might provide better insight into the factors that have resulted in disappointing contributions, and help to determine how well PANA is fulfilling the expectations of the publics that it is intended to serve.

As noted, a large percentage of PANA's output was in the political category. Some stories dealt with political issues which were of such local interest that they were not likely to be picked up by other national news agencies to be re-transmitted to their clients. Similarly, most of the stories in the cultural category were about sports contests, which were not likely to be of much interest to users of PANA copy elsewhere. It may be necessary for PANA to establish guidelines for contributing news agencies concerning the type of news that will be of interest to their wider audience.

Currently, PANA transmits in either French or English, but not both. If PANA would transmit all of its copy in both languages, greater use might be made of its wire copy.

Further Research Needs

This study set out to establish a preliminary profile of PANA after one year of operation.

(continued on page 15)
Resources for Infant and Maternal Nutrition

Some helpful tips and information resources on infant and maternal nutrition that may be of interest to our readers in health communication recently appeared in a two-part series “Improving Infant and Maternal Nutrition” by Gayle Gibbons in Mothers and Children, a bulletin from the Clearinghouse on Infant Feeding and Maternal Nutrition.

Assessing Information Needs

Identifying some ways to organize and distribute information, the Clearinghouse focused on techniques that have proven effective in disseminating messages at the local, regional, and national levels. The following suggestions will help you assess your information needs and plan your nutrition communication strategy:

- identify your target audience;
- determine what kinds of information the target audience needs;
- examine sources of information currently available to the target audience;
- look at different options for reaching your target audience;
- use other information activities/channels to expand your audience;
- begin your information activities on a small scale;
- scale your activities to the staff and available budget;
- identify information activities of other organizations and government ministries to use in planning your own activities.

Information From the Field

According to Mothers and Children, "A vast amount of information exists on infant and maternal nutrition that people in the field need but do not have access to. . . . [Outlets] for previously unpublished information should be identified. . . . to help nutrition workers monitor new research and to profit from the experiences of related projects."

The list that follows contains a wide variety of information sources, including newsletters, that can serve as useful models for those undertaking health and nutrition information activities.

- Appropriate Health Resources & Technologies Action Group (AHRTAG), 85 Marylebone High Street, London W1M 3DE, United Kingdom

AHRTAG publishes a quarterly newsletter, Dialogue on Diarrhea, in English, Fr. ach, and Arabic. Free to Third World subscribers. The newsletter focuses on issues of diarrheal disease control.

- The Breastfeeding Information Group, P.O. Box 59436, Nairobi, Kenya

This breastfeeding support group publishes a bimonthly newsletter in English. (No price given) They also have published materials on how to start a breastfeeding support group.

- Caribbean Food and Nutrition Institute (CFNI), P.O. Box 140, Mona, Kingston 7, Jamaica

CFNI publishes Cajanus, an English quarterly, free to developing countries, others US$12/year. They have a library and produce and distribute materials on infant feeding to the 17 Caribbean member-countries. A catalog of their materials is available.


APHA publishes Mothers and Children 3 times yearly, in English, French, and Spanish. It is free to developing countries, others US$5.00/year. The Clearinghouse is an international center for information and materials on all aspects of infant feeding and maternal nutrition. It provides bibliographies, documents, and referrals.

- The Foundation for the Peoples of the South Pacific (FFPSP) P.O. Box 1493, Suva, Fiji

FFPSP publishes an English quarterly, SupaMINN. (No price given) It covers regional maternal and infant nutrition activities, information sources, training activities, and new publications aimed at health professionals and women's groups.

- International Children's Center, Chateau de Longchamp, Bois de Boulogne, F75016 Paris, France

The ICC publishes Children in the Tropics, a bi-monthly English, French, and Spanish newsletter. A yearly subscription is US$17.00. Th: Center encourages the study of all problems concerning childhood and the training and education of persons involved in work with children, emphasizing developing countries. They maintain a library and provide information.

- International Centre for Diarrhoeal Disease Research (ICDDR) G.P.O. Box 128, Dhaka 2, Bangladesh

ICDDR publishes a bimonthly English-language newsletter, Glimpse, which features articles on new research and program activities on diarrheal disease primarily in Bangladesh and Asia. (No price given) Issues contain abstracts of recent journal articles, summaries of ongoing research projects and conferences, and descriptions of programs.

- The Institute of Nutrition of Central America and Panama (INCAP), Apartado Postal 1188, Guatemala City, Guatemala

Suplemento Solve Nutricion Materno-Infantil, Lactancia y Destete is INCAP’s thrice yearly newsletter, published in Spanish only. (No price given) It covers Central American regional breastfeeding and maternal nutrition activities and issues. The newsletter is part of a larger information project run by INCAP. Information requests accepted.

- Teaching Aids at Low Cost (TALC), Institute of Child Health, 30 Guildford St., London WC1N 1EH, United Kingdom

TALC is an important source of books, slide sets, and flannelgraphs on nutrition and child health. The materials are designed for use in developing countries and are available at cost. They also publish an occasional newsletter that reviews other materials aimed at field practitioners. A catalog of TALC materials is available.

- Voluntary Health Association of India, C-14, Community Center, Safdarjung Development Area, New Delhi, 110 016, India

VHAI publishes a bimonthly English-language newsletter, Health for the Millions. (No price given) This is a broad primary health care publication, intended for rural health and development practitioners. Issues are thematic, but also contain information about program activities in the regions of India VHAI is a large publisher of educational materials on many primary health care subjects. A catalog of print and audiovisual materials is available.

- World Neighbors, 5115 North Portland Ave., Oklahoma City, Oklahoma 73112, U.S.A.

World Neighbors has prepared a number of overseas development materials including filmstrips, flipcharts, and booklets. Many of the filmstrips have been adapted for different regions of the world and are available in other languages. A catalog of print and film materials is available.

The Clearinghouse on Infant Feeding and Maternal Nutrition would like to hear more about other newsletters and information activities. Readers are encouraged to send samples of their newsletter or other materials to:

The Clearinghouse, c/o APHA, 1015 15th Street, Washington, D.C. 20005, U.S.A.

(PANA continued from page 14)

Given this specific objective, the scope was rather limited. Further studies might include:

- studying populations covered by PANA to determine if focus is balanced between the social elite and other population groups;
- comparing capital city/urban coverage with members and types of rural stories carried;
- measuring the amount of space PANA wire copy gives to continuing crises and to other "negative" news, with the space allocated by transnational news agencies to the same crises;
- comparing PANA's output for designated periods with a Westem transnational news agencies (AP or AFP) to determine if the two follow fundamentally different philosophies, ideologies, or value systems.

Paul A.V. Amaah is director of the School of Journalism and Communications, University of Ghana. He recently worked on a research project on communication policies in Africa.
The Pan-African News Agency: A Preliminary Assessment

by Paul Ansah

This article examines the performance of the Pan-African News Agency (PANA) in the context of the role it intends to play towards establishing a more authentic voice for Africa, in accord with the values of the New World Information and Communication Order (NWICO). This article (somewhat longer) originally appeared in Media Development, 4/1984.

The major objective of PANA is "to promote an effective exchange of political, economic, social, and cultural information among member states and to resolutely gear it towards the promotion of development." (From the Preamble of the PANA Convention.)

The Pan-African News Agency was established in May 1983 to voice African interests and aspirations, and correct the "distorted image" of Africa, its countries and peoples, resulting from partial and negative information published by foreign news agencies.

It was also felt that the flow of news that went in a north-south direction compelled the developing countries of the South to see each other through the perspectives of the powerful transnational news agencies whose interests and value systems did not coincide with those of the people in the Third World.

The purpose of our study was to establish a profile of PANA one year after it began operation. This should help to determine what PANA has done to provide the type of information that will balance the "partial and negative" image of Africa, its countries and peoples, resulting from partial and negative information published by foreign news agencies.

This article examines the performance of the Pan-African News Agency: A Preliminary Assessment on the occasion of its first anniversary.

The purpose of our study was to establish a profile of PANA one year after it began operation. This should help to determine what PANA has done to provide the type of information that will balance the "partial and negative" image of Africa, its countries and peoples, resulting from partial and negative information published by foreign news agencies.

PANA's Self Assessment

On the occasion of its first anniversary, PANA released a publication which was a balance sheet of its operations during the first year. This publication sums up the position of PANA thus: 'In the past, news coverage of Africa has tended to concentrate very heavily on the sensational—disasters, wars, assassinations. Seen through this prism, Africa appears a threatening and irrational place. PANA can help straighten this distorted image by providing detailed and continuous coverage of all aspects of life on the continent. Only this type of coverage can begin to make sense of Africa.'

According to this feature PANA had grown from its maiden transmission of 25 stories totaling 5,460 words from five national news agencies, to over 20,000 words a day from 15 national news agencies who transmit a total of 80 stories daily. Stories are also received from 40 other countries on an irregular basis.

Not only does PANA receive and transmit stories from national news agencies, it also transmits news from the information departments of the SWAPO and the ANC liberation movements as well as from international organizations such as Unesco, FAO, ILO, and the European Economic Community (EEC). In addition, it transmits about 1,500 words a day from the Non-Aligned News Agencies Pool (NA-Pool). PANA can increase the volume of its daily transmissions, but it can transmit for only eight hours a day.

PANA depends on journalists seconded to its headquarters from about ten national news agencies. These journalists produce features and provide special coverage of major political, economic, and cultural events. Currently PANA transmits only in the languages in which stories are originally sent to it—either French or English, although many of PANA's own features and some international agency contributions are transmitted in both languages. Because most national news agencies do not have translation facilities of their own, they can only use copy that comes to them in a locally understood language. This may be one of the reasons there has been limited use of PANA copy.

PANA itself is unable to assess how much of its material gets into the African mass media, because many African publications and radio stations do not cite their sources. PANA plans to add a photo service and to establish a data bank. It also plans to add Arabic as a transmitting language, and to increase its daily output to 30,000 words.

Methodology of the Study

PANA wire copy from April, May, and June 1984 were selected for this study. The Ghana News Agency made wire copy available to us that was received from PANA, namely the news releases for 64 out of the 91 days during that three-month period.

The material was then coded in terms of source, length, content, language, category, direction, and frequency. The two transmission languages were coded to find out in which language a greater volume of material was transmitted. The material was classified into four broad categories based on those used by PANA in its self-assessment: political, economic, social, and cultural.

The material was also coded in terms of direction: favorable, unfavorable, and neutral. Favorable stories reflected harmony within and between nations—cooperation, development, economic growth, easing of tension. Within the unfavorable category were included all stories which depicted or suggested conflict, misunderstanding, crises, border disputes, human or natural disasters, poverty, and disease. What did not fall into either of these categories was classified as neutral.

(continued on page 14)
In this issue we return to an earlier DCR tradition. We are focusing on a single development sector—health. In an upcoming edition we will look specifically at communication in agriculture. In both these sectors, new development approaches are underway, approaches which we feel are both worthy of special attention and applicable to other sectors as well.

A shift in donor agencies (AID, WHO, UNICEF) towards health programs for oral rehydration, immunization, breastfeeding, and infant nutrition has caused health professionals in many countries to think more seriously about communicating with mothers. Social marketing, behavioral studies, village health practices, and ethnographic research are being applied. These programs have had dramatic results. In Egypt, health professionals have been trained to deliver health services. These programs have been used in health services improvement projects in many countries, yet it is estimated that less than 50 percent of the target age group in infectious diseases. In part, due to poor acceptance of vaccines. A measure of this in areas where vaccines are available, after the first of the three doses of DTP vaccines are administered. Resistance to immunization from a limited understanding of the effect of vaccines.

Communication for Primary Health Services

by Dr. Robert E. Black

In recent years, primary health care programs in developing countries have emphasized the utilization of simple techniques to assure child survival. These techniques include immunizations against tetanus, oral rehydration therapy (ORT) for diarrhea, and growth monitoring to prevent malnutrition. Each of these techniques is known to be efficacious, with benefits demonstrated in trials and pilot studies. However, the effectiveness of these techniques in health programs depends not only on the development of efficacious interventions, but also on optimal use by the target group.

System Constraints

Large investments directed at increasing the availability of these techniques through primary health care have often failed to accomplish the coverage necessary to have a substantial impact on child survival or nutritional status. Large investments directed at increasing the availability of these techniques through primary health care have often failed to accomplish the coverage necessary to have a substantial impact on child survival or nutritional status. Large investments directed at increasing the availability of these techniques through primary health care have often failed to accomplish the coverage necessary to have a substantial impact on child survival or nutritional status.

I am pleased that this issue of Development Communication Report is dedicated to Health Communications. Today there are so many new health technologies that can save the lives of millions of small children—oral rehydration therapy, immunization, improved infant feeding, and related child survival practices. More research needs to be done, but clearly the technologies we now have need to be rapidly adopted by health systems throughout the world. Communication is a fundamental part of this technology transfer.

Experiences from Honduras, The Gambia, Egypt, Bangladesh, Colombia, Indonesia, and Swaziland demonstrate that mass media, social marketing, and strategies for behavioral change work when well integrated into health delivery systems. This issue, timed to coincide with the second International Conference on Oral Rehydration Therapy, ICORT II, presents promising new findings in this field.

I hope that readers will be encouraged to apply some of the successes outlined here in their own programs.

M. Peter McPherson, Administrator
Agency for International Development
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Communicating for Acceptance

Health education and communication efforts are critical elements in improving individual acceptance of vaccines and of community participation in immunization programs. In particular, communication efforts are needed to involve informal groups, especially women's groups, schoolteachers, and community leaders in promoting preventive health initiatives. (See Colombian Crusade in this issue.)

Oral rehydration therapy has demonstrated efficacy in correcting dehydration and is felt to be an important household intervention to prevent dehydration, malnutrition and death. Recognition of the usefulness of this simple, inexpensive technology has led to its incorporation into national health care programs in most developing countries of the world. In spite of this recognized importance for the last decade, ORT was estimated by the World Health Organization to be appropriately used for only 4 percent of diarrheal episodes in children of developing countries in 1983. It is obvious, from evaluations of some ORT programs, that information on proper treatment of diarrhea is not being conveyed adequately to the public. Furthermore, this lack of knowledge is often abetted by the ignorance of the health workers, who are often themselves not treating diarrhea correctly.

The communication of the ORT message to the public and to health workers at all levels is of increasing importance. The ORT message offers even greater challenges than the immunization message (primarily motivation to accept vaccination.) The ORT message must not only motivate individuals to use the "new" treatment but also must teach them how to use it. The message must be reinforced by health workers and community leaders, who must themselves be educated in the indications for and use of ORT. Furthermore, ORT must be used for every diarrheal episode, as many as eight per year in developing country children, not only on a few occasions as with immunizations. It is necessary that the new behavior become routine to the user, further accentuating the need for continuous communication of a consistent message and reinforcement of appropriate behavior.

Communicating Education

Some health programs can be cited for their successful use of communications techniques to achieve greater use of ORT. The Oral Therapy Extension Program of the Bangladesh Rural Advancement Committee was initiated five years ago. This program is built around oral rehydration workers who receive training in a five-day course, three days in class and two in the field, and further training in teaching methods and communication skills to enable them to effectively deliver their ORT messages. These workers visit each household within their area and incorporate selected important points about ORT into their conversations with community residents. As they explain how to prepare the oral rehydration mixture, they actually prepare it in the home and then supervise the mothers in its preparation. The project's built-in evaluation system has demonstrated that 98 percent of households were able to make a safe, effective oral rehydration solution and that mothers remembered the key ORT messages as well after six months as after one month.

Effective Mass Communication Strategies

Mass communication has also been used successfully in ORT programs. The Honduras Project Medica and Health Practices Project, implemented by the Academy for Educational Development, used a combination of radio, printed material, and interpersonal communication through health workers to popularize use of a new ORS product, Litrosol. In an Egyptian project, developed jointly by the government and the John Snow Health Group, ORT use rose dramatically as a result of sophisticated communication techniques.

Conclusion

These interventions illustrate several important steps in communication of health messages, namely: 1) analysis of the local vocabulary and beliefs, in the initial stages, to enable optimal message design and implementation, 2) pretesting as many messages, materials, and methods as possible; 3) focusing on carefully selected sets of objectives and behaviors, and 4) monitoring and improving the campaign while it is in progress.

Experience has shown that an understanding of cultural values and inclusion of health education and communications is essential to the delivery of basic health services. A WHO Expert Committee in 1983 concluded that "health, science, and technology can make a real impact only if the people themselves become full partners in health protection and promotion," and that health education must be integrated into health programs at all stages.

Dr. Black is Professor and Chairman, Department of International Health, The Johns Hopkins University School of Hygiene and Public Health. His work and research focuses on vaccine development, diarrheal disease control, epidemiology, and infectious diseases.

Vaccine Development Agreement

In September 1985, AID signed an agreement with the U.S. Public Health Service to develop new and improved vaccines for preventable diseases that plague developing countries. The first two vaccines to be tested under this program are an aerosolized measles vaccine, developed by Dr. Albert Sabin, which is expected to protect children as young as six months, and a vaccine against rotavirus diarrhea, the single most common cause of serious diarrhea in infants in most parts of the world.
Communication Works Across Cultures: Hard Data on ORT

by Anthony Meyer, Dennis Foote, and William Smith*

The Gambia and Honduras are extremely different countries. Yet from 1980 through 1984 the same communication and marketing strategy was applied to teaching oral rehydration therapy (ORT) and related child survival practices in both countries. Within that strategy, each country developed campaigns that had their own character, peculiarities, and challenges. Nevertheless, data bridging three years and the two cultures show almost identical results, including sustained adoption of ORT and significant improvement in nutritional practices. This article will report on the most interesting similarities, differences, and data from the two countries, based on recently published longitudinal studies conducted by Stanford University and Applied Communication Technology.

The Setting

West Africa and Central America have a tremendous common problem: infant mortality. In both Honduras and The Gambia, diarrhea dehydrations is the leading cause of death. Yet teaching about ORT to prevent dehydration due to diarrhea has major local constraints. There is a 3 percent female literacy rate in The Gambia, along with severe difficulty among 48 percent of females in interpreting two-dimensional pictures or drawings without assistance, a difficulty sometimes called "pictorial illiteracy." In both countries, the practice of purging and withholding food during diarrhea was common. In almost everything else relevant to an educational campaign, the countries were different. Spanish language and culture contrasted with The Gambian Wolof and Mandinga languages and tribal customs. Nuclear family dwellings of six to ten members in Honduras contrasted with extended family compounds of up to 100 members, including multiple wives, in The Gambia. Numerous private radio stations and publications in Honduras contrasted with one national station and relatively few print materials in The Gambia. In Honduras, locally packaged oral rehydration salts (ORS) were promoted under the product name of Limisol. In The Gambia, a water/sugar/salt (WSS) home-mix solution was promoted, while World Health Organization ORS packets were reserved for clinic use.

The Campaigns

The educational interventions in Honduras and The Gambia to teach ORT and related practices can be characterized as "campaigns" in the sense that highly specific objectives were pursued and multiple channels—radio, print materials, direct contact—were coordinated to support these objectives. Yet the interventions in Honduras and The Gambia differed from usual campaign practices because of their extended vision. Although emphasis was shifted among topics for limited periods of time during the interventions, the key communication methods and procedures for conducting the interventions would not end abruptly but become an ongoing part of the public health education process and the health care delivery system.

What methods and procedures were applied? The interventions in Honduras and The Gambia adapted lessons learned from past experiences, drawing on the disciplines of social marketing, development communications, anthropology, and behavioral analysis in addition to the history of clinical experiences related to each objective. The methodological sequence was as follows:

1. Village-level investigations were conducted to understand the local behavior, concepts, and vocabulary related to campaign objectives and to develop an audience profile. Focus groups, direct observations of practices in households, and in-depth interviews of local health personnel were used.
2. Educational objectives were ranked in terms of what the audience needed to know and do; how feasible and costly the recommended practices were; how the recommended practices related to already prevalent practices, and what would reinforce trial and adoption of the recommended practices.
3. Messages were developed and prototype materials were pretested on the basis of audience and product analyses.
4. Multiple channels—media, print, face-to-face—were coordinated to carry simple, noncontradictory messages that relied on the functional strengths of each channel.
5. Extensive monitoring of all systems permitted adaptation over time.

The Evaluation

Stratified, random panels of approximately 750 to 1,000 households with posttest controls, were surveyed in each country—nationwide in The Gambia (600,000 population) and in Health Region I of Honduras (400,000 population)—in repeated waves over a three-year period. In Honduras, a mortality study in Health Region I and additional surveys to assess campaigns to support other health intervention activities were also conducted.

The overall evaluation plan examined sequential model of changes, recognizing that changes in any individual does not necessarily follow the same pattern:

1. Exposure—Was the audience involved in the campaign and how?
2. Knowledge—Did the audience learn the campaign information from its exposure?
3. Behavior—What did the audience do differently subsequent to their exposure?
4. Health Status—What were the health outcomes?

The strength of an evaluation of this nature and the attributed impact of an intervention does not rest on one indicator alone, such as increased learning about ORT. Rather, the power of such an evaluation is in the convergence of all indicators.
The campaign in Health Region I of Honduras emphasizing ORT and related diarrheal control and infant feeding practices lasted two years, then expanded to the national level and to other topics during the third year—immunizations, malaria control, and compliance with tuberculosis treatment. The same method of village investigation, behavioral analysis, pretesting, integrated use of multiple channels, and monitoring were applied in developing and implementing a sustained, phased, public health communications intervention.

Honduran mothers also learned and changed their practices significantly—and fewer of their children died of dehydration due to diarrhea.

ORS Usage. Litrosol was a newly introduced product, so there was no awareness of it before the campaign. Within six months of starting the campaign, however, half the mothers could recall the product name. The percent of mothers who could recall the name Litrosol leveled off at about three-quarters of all women during the campaign's second year.

At the beginning of the campaign none of the Health Region I mothers had used Litrosol, but within six months more than one third (37 percent) of all surveyed mothers had tried it. By the end of the campaign over 60 percent of mothers had used Litrosol. Notably, not only had most mothers tried it, but the case treatment level with Litrosol rose to over 35 percent of all cases within two years. Data from evaluation of follow-up efforts after the initial campaign indicate that at the end of three years, use rates were still at an impressive 30 percent of all cases.

Mortality Dips. Tracing changes in mortality in developing-country settings with limited resources was the greatest challenge to evaluation. Although tracing mortality could not be done adequately in The Gambia, in Honduras there were regional mortality statistics of sufficient reliability, covering an adequate time period, whereby a significant impact on mortality could be documented. Widespread use of Litrosol appears to have reduced diarrhea-related mortality by a substantial amount. The proportion of deaths involving diarrhea among children younger than five fell from 40 percent in the two years prior to the campaign to 24 percent two years later. Total mortality also dropped by a slightly smaller amount.

The campaign methodology has subsequently been applied to tuberculosis, malaria, and immunizations as well as diarrhea. These campaigns also achieved high levels of exposure and knowledge change. For example, in the malaria campaign, knowledge that the reason for having one's house sprayed was to kill mosquitoes nearly doubled, from 49 percent before the campaign to 94 percent afterwards.

Program Expansion
The project has been expanded into the new AID initiative, HEALTHCOM, which will use experience gained here and work in up to ten new countries, broadening the focus on ORT to include immunization, infant nutrition, breastfeeding, vector control, and other child survival technologies.

Reports on the Mass Media and Health Practices Project intervention and evaluation are available by writing to HEALTHCOM, c/o AGR.
Two-Way Radio for Rural Health Care Delivery

by Michelle Fryer, Stanley Burns, and Heather Hudson

Over the past six years, the MEDEX* two-way radio network has emerged as the most effective and reliable system of its kind in Guyana. Originally designed to ease the communication difficulties of medical personnel in the field, this two-way radio system is now fully incorporated into the administration of primary health care.

System Design
Site-to-site and site-to-headquarters distances range from 48 km to in excess of 400 km. Topographical constraints and extremes of distances coupled with acceptable reliability requirements, dictated the choice of a high-frequency, single-sideband two-way radio system.

During the first phase of the project, portable generators were used at some sites and solar panels at others to provide the system's power. After a year it was found that fuel for the generators was expensive and difficult to obtain, and that some generators had broken down. No problems were encountered with the solar panels, so generator-run units were replaced with the more efficient solar installations.

Each site is equipped with a fully transistorized 25-watt Soter SSB-40A transceiver, a three-element dipole antenna, a 12-volt automobile battery, a five-watt solar panel for trickle-charging the battery, and a set of hand tools.

A Communication Strategy to Improve Nutrition in Indonesia

by Marcia Griffiths and Elizabeth Nobbe

The ability to meet the health needs and provide the essential health services to a community is both a promise and an expectation of a primary health care (PHC) project. Another important goal, establishing community-supported health care services, does not necessarily result in measurable or easily documented benefits that national governments may demand before assisting a local health service. Social marketing offers a way out of this dilemma. It helps to develop programs based on the needs and resources of the families that health programs serve, and at the same time it identifies types of behavior change that can be documented.

As an experimental project, the Nutrition Communication and Behavior Change Component (NCBC) of the Indonesian Nutrition Development Program (UPGK) showed how social marketing could further the national program's goal of significantly improving the nutrition of Indonesia's young children and pregnant and nursing women.

The UPGK, begun in 1974, popularized community nutrition. Its clear, easily communicated and measured goal—the monthly increase in weight by each child under five—is promoted by a trained corps of volunteer nutrition workers, kaders, through a monthly weighing program.

NCBC Project Development
Between 1977 and 1979 Dr. I.B. Manra, NCBC Director, established administrative and community infrastructures modeled after UPGK in five culturally diverse areas in Indonesia.

In mid-1979, with technical assistance from Manoff International, the project departed from the approach of the national plan and embarked upon an unprecedented course with the formative evaluation of educational messages and a communication strategy. The success of the NCBC Component was to be judged by whether education—as the sole intervention—could produce significant improvements in the nutritional status of children and the improved nutrient intake of pregnant and lactating women in project communities.

The first step was to design and execute qualitative research on the health and nutritional problems of children under three and pregnant and nursing women, consisting of in-depth household interviews, concept testing with mothers, and focus group interviews with leaders and community opinion leaders.

(continued on page 14)
Social marketing (SM) is neither magical nor mystical. It is merely the application of commercial marketing principles to advance a social cause, issue, behavior, product, or service. SM has added a framework to social efforts that heretofore lacked organization and has inspired projects that otherwise might never have been undertaken.

In the United States, SM techniques have been particularly successful in the health field. The National Cancer Institute used marketing techniques to change the behaviors of U.S. women and health professionals regarding breast cancer detection. The National High Blood Pressure Education Program, using these same marketing techniques, has increased patient compliance with antihypertensive regimens. Likewise, the American Cancer Society developed a sound marketing program to convey the benefits of giving up smoking, especially for teenage girls.

Although advertising and other communications are central to social marketing, the discipline also depends upon other elements of what is called the marketing mix: product, price, place, and promotion. Social marketing is a cyclical process involving six steps: analysis, planning, development, testing, and refining elements of the plan, implementation, assessment of in-market effectiveness, and feedback.

Developing Country Applications

In developing countries, health has similarly been the greatest beneficiary to date of applied social marketing techniques. Family planning programs and oral rehydration therapy (ORT) projects have used SM techniques effectively in numerous Third World countries. For instance, in Honduras oral rehydration salts (ORS) were first marketed in 1980 under the brand name Litrosol. Litrosol was heavily advertised on television and radio, and widely distributed through the existing health care system and by local village volunteers. By the end of the first year of the ORT campaign, 49 percent of the mothers had actually used Litrosol and 71 percent could recite the radio jingle composed for this campaign. More importantly, during the two-year campaign period, diarrhea-related mortality in children under the age of five dropped from 48 percent to 25 percent. Similar ORS marketing results have been achieved in Egypt and The Gambia. About 50 percent of Egyptian mothers had used ORT after one year of the program and over 50 percent of cases for the second year of the campaign in The Gambia used ORT.

These successful ORT efforts have attracted the interest of other international organizations involved in child survival, and social marketing is being integrated into their overall strategy. Last year UNICEF and the CRS Company, Ltd. in Nepal signed a contract to market their own oral rehydration salts under the brand name Jeevan Jali.

Social Marketing for Contraception

Social marketing has been even more widely applied in the sale of contraceptives in developing countries. Contraceptive social marketing (CSM) programs are well-established in Bangladesh, Sri Lanka, India, Thailand, Nepal, Colombia, El Salvador, Jamaica, Mexico, and Egypt. More recently, programs have been established in Honduras, Guatemala, Barbados, St. Vincent, and St. Lucia. SOMARC (Social Marketing for Change) is a project funded by the US Agency for International Development (AID). It is working with existing CSM programs and also helping to launch new CSM programs in the Dominican Republic, Ghana, Indonesia, Kenya, Tunisia, Costa Rica, and other countries. Other health topics such as immunization, breastfeeding programs, and disease prevention efforts may also benefit from a marketing perspective.

Market research is an essential aspect of the marketing process. Research may be conducted to help make marketing decisions on brand names, pricing, target audience, product preferences, awareness attitudes, etc. For the most part, local private-sector market research firms are hired to conduct contraceptive social marketing research.

Contraceptive products are often distributed through AID, although they also are available through other sources such as the International Planned Parenthood Federation or directly from manufacturers.

Local distributors and wholesalers are often used to channel products to hospitals, clinics, and retail outlets. Some programs, like Egypt's Family of the Future (FOF) developed its own distribution system and a staff of medical representatives to administer the program. Contraceptive social marketing programs in Nepal and Bangladesh have their own sales forces as well as local advertising agencies who promote, publicize, and advertise contraceptive products. Thus, CSM programs are successfully functioning as legitimate marketing organizations in developing countries, and are using local private sector resources in the process.

The results of these programs are encouraging. In Egypt, 31.2 percent of contraceptive-age women and men use Family of the Future products. More importantly, FOF's aggressive promotion of its products has expanded the public's consciousness about family planning. This promotion, almost certainly, has greatly contributed to the increased use of all contraceptives in Egypt. The National Family Planning Board in Jamaica, which produces Panther condoms and Perle oral contraceptives, has about 80 percent and 50 percent of their respective contraceptive markets. Profamilia, the contraceptive social marketing program in Colombia, has a 31-percent share of that contraceptive market. In all these countries, birth rates are declining.

Conclusion

Social marketing has proven successful despite significant obstacles like cultural and religious resistance, lack of knowledge about the topic, illiteracy, and pricing constraints. But SM is no shortcut for success; it requires both experience and sensitivity to local conditions. Fortunately, many developing countries now have their own marketing resources. Local private-sector advertising and marketing agencies are helping public and private sector programs. In countries where local resources are scarce, AID has created several programs to provide technical assistance in social marketing. These include SOMARC, PRUTECH, and HEALTHCOM. Contact the Clearinghouse on Development Communication, or your local USAID Mission for further information on any of these assistance programs.

Edward Lucaire is a Senior Associate with Needham Porter Novelli, a U.S. marketing communications firm that provides assistance and technical advice to developing countries in sectors such as health and family planning.

Child Survival Management Course

A six-week child survival management course, including a two-week field practicum in Haiti is being offered by Boston University School of Medicine and School of Public Health from March 1 - April 15, 1986. This is an integrated course with enrollment limited to 25, intended for participants from countries with limited resources. It provides training in essentials of child survival: introduction to health economics, management methods for health services; microcomputer applications; integrating health facility and program design; community participation; and field study techniques.

Applicants should have completed the equivalent of a bachelor's degree or other comparable technical or professional training after high school. Applications must be received by January 15, 1986. For application information write to: Management for Child Survival Course, Office of Special Projects, Room A-310, Boston University School of Public Health, 80 East Concord Street, Boston, Massachusetts 02118, USA. Telephone (617) 247-6018. Telex: 200191BUHPI
A Focus on Behavior: The Role of Health Practices Studies

by Paul Touchette

Most health education programs use knowledge and attitude change as the primary measure of success, but knowledge is often a poor predictor of either use or proper use. Ninety percent of women in the Bangladesh Rural Advancement Committee (BRAC) rehydration therapy program learned the Seven Points to Remember about oral rehydration salts (ORS), but only eight percent of women in some locations of the program area actually used ORS to treat diarrhea. These results are common among development programs—it is often easier to teach facts, even change attitudes or beliefs than to alter behavior. This realization has led planners to focus on the specifics of a particular behavior, trying to assess not only what a mother must learn to improve her family's health, but how she already behaves and why she might not want to change.

Within the context of child survival, the mother is faced with numerous decisions such as:

• Why should I give up an old remedy for a new medicine?
• Why should I take a healthy child to a clinic to be stuck with a needle and then be fearful all night?
• How do I remember the correct ingredients in a home-made ORS solution?
• How do I determine whether my child is malnourished or just small?
• When do I introduce weaning foods and how do I determine which ones are best?
• How do I discuss having fewer children with my husband when he wants to have another male child?

Each question suggests a complex set of behavioral responses. New health practices require new responses, many of which are not well understood, believed in, or practiced. The role of behavioral analysis within this context is to probe the reason why a given practice continues, how a new health practice might be best introduced, and how such a practice can be designed, presented, and used to ensure that it is maintained over time.

Why Behavior Does Not Change

The experimental analysis of behavior suggests six circumstances that may contribute to the absence of desirable behavior, either singly or in combination:

1) Necessary skills or knowledge may be absent. For example, rural mothers often know that it is good to boil water, but they do not understand that boiling the water actually kills the parasites they fear.
2) The ability to identify when to alter the behavior may be undeveloped. Mothers know that some foods make their children ill, but do not know that the longer the food sits after preparation the more likely it is to cause illness when fed to their children.
3) Necessary materials or implements may be unavailable. ORS packets, for example, are often out of stock.
4) There may be negative consequences for engaging in the behavior. Most preventive behavior, for example, produces no immediate results, but is beneficial in the long run.
5) There may be positive consequences for engaging in incompatible behavior, such as fasting during diarrhea. Fasting does cause the child's stool volume to decrease—a goal mothers want to achieve.
6) There may be punishing consequences which discourage the desired behavior pattern. During rehydration, for example, a child may vomit, or the diarrhea may appear to increase.

(continued on page 8)

Reaching Mothers in Swaziland: Preliminary Findings of a Child Survival Program

by Robert Hornik and Pamela Sankar

(This is a brief summary of the results from a still ongoing evaluation of the Swaziland Communication for Child Survival Project (HEALTHCOM). A final report will be published shortly with details that could not be incorporated into this version. It will be available from the authors.)

The Swaziland Diarrheal Disease Control campaign was a collaboration of the Ministry of Health of Swaziland, The Combating Childhood Communicable Diseases project, and the AIDS Communication for Child Survival Project (HEALTHCOM). It was based on earlier work in Swaziland as well as the previous Health Communications programs in Honduras and, in particular, in The Gambia. As in the other programs, it relied on a combination of mass media and face-to-face channels in an attempt to change practices related to the treatment of diarrheal disease.

Campaign Preparation

The preparatory phase of the campaign began in April 1984, with the formal campaign running from September 1984 through March 1985. The coordinator of diarrheal disease control activities, Gladys Matselula, two health educators from the Public Health Unit of the Ministry of Health, Alfred Mndzebele and Bongani Magongo, and a technical advisor from the Academy for Educational Development, Dale Huntington, planned a three-pronged campaign: 1) radio programs to be developed in an intensive radio workshop and broadcast on current development programs carried on the national radio system; 2) printed materials including a flyer with mixing instructions and posters for display at health clinics and elsewhere; and 3) workshops to train the health staff, other Extension personnel, and local volunteers in treatment of diarrheal diseases. The campaign was carried out in the capital, in Swaziland and in rural areas, where volunteers in information dissemination were given yellow flags to display outside their homes to indicate they knew how to administer ORT. Eighteen staff training workshops covering about one-third of the country were held during the first months of the campaign; 88 radio programs and spot announcements were produced, and 260,000 mixing flyers and 7,500 posters were printed and distributed.

The campaign focused on a few objectives, specifically:
1) acceptance of a home-made water/sugar/salt (WSS) solution as a treatment for diarrheal dehydration,
2) continued feeding during episodes of diarrhea,
3) feeding with special foods after diarrheal episodes.

The campaign particularly emphasized the introduction of a new formula for mixing the solution—one liter of water, eight soda bottle capsfuls of sugar, and 1/2 capful of salt. This new formula replaced a previous one that contained one capful of salt which project medical advisors believed was too toxic.

Campaign Evaluation

The evaluation, conducted by the Annenberg School of Communications at the University of Pennsylvania, reveals preliminary results suggesting that the campaign achieved noteworthy success, particularly in rates of adoption of recommended practices. Data sources included before- and after-campaign (continued on page 8)
(Behavior continued from page 7)

What the Behaviorist Does

Behavioral analysis is designed to identify the relevance of each of the above six categories within the context of a specific culture, behavior, and individual. The behaviorist observes, questions, and tests behaviors, looking for:

- cost to the individual of engaging in new practices,
- compatibility of new practices with existing patterns of behavior and cultural expectations,
- complexity of new practices,
- perceived and actual antecedents of a given practice,
- perceived and actual consequences of the practice, and
- observability of the target practice or its direct by-product.

How Behavioral Analysis Helps

During an immunization program in Honduras, behavioral observation and in-depth interviews in rural clinics revealed that many mothers were bringing in children who had already completed their vaccination series. Mothers could not read the complicated vaccination card; they did not know the number of doses needed to complete each series, so did not know when their child had finished the vaccination series. Mothers did, however, recognize the type of vaccine when it was applied because they observed where it was being applied on the child’s body: orally, orally, deep in the arm, tuberculin — superficially in the arm, and DPT — in the hip. Nurses were chastising mothers, who frequently had walked miles to the clinic, because they had brought in a child who had already been immunized. Consequently, these mothers often advised neighbors not to go for needed vaccinations in the series.

Analysis of this behavior led to the development of a strategy that focused on designing an immunization card that mothers could understand, and that also served as positive reinforcement for completing the immunization series. The card graphically depicts each immunization and the number of shots needed to complete the series. The card functions as an educational tool for the health worker, a reminder for the mothers, and a reward device health workers use to praise mothers.

Another example comes from The Gambia, where the original design of a national “Happy Baby Lottery” was to be a standard promotional gimmick—the contest was to be announced on radio; numbered tickets with pictures of ORS mixing instructions were to be distributed; and a random drawing of lottery numbers would select the winners. Instead, an imaginative, behaviorally-inspired twist was added and successfully executed. Gambian women had to correctly mix an ORS solution in public. They learned to mix the solution through special radio broadcasts that explained the mixing pictures on a flyer that was distributed throughout the country. Actual mixing contests were then held in villages throughout the country. Local women demonstrated their ORS mixing proficiency before a judge and become eligible for a grand prize drawing. The “Happy Baby Lottery” moved beyond a simple promotional activity to being an exciting and effective vehicle for helping mothers to actually practice the new behavior on a massive scale.

Some Useful Principles

These two examples help demonstrate how behavioral approaches such as careful observation and informal incentives can be applied to field programs. Some of the most salient principles emerging from recent behavioral studies include:

- Observation of behavior within the broad context of the culture in which it is found
- Skillful arrangement of events so that reinforcement follows the desired behavior. Behaviorists argue that individuals can do a great deal to reinforce their own behavior.
- Individual recordkeeping or monitoring of behavior, for example, is of extreme importance. Graphs, visuals, and other concrete representations of progress can be important reminders and reinforcers for individuals adopting difficult new behaviors.
- Decisions of when and how to end a behavior change program should be systematic to ensure continued maintenance of the new practice. Fading of reinforcement, the gradual withdrawal of accompanying behaviors, the search for opportunities to practice new behaviors in the general environment, and the use of intermittent reinforcement should all be considered.

The practice of behavioral analysis does not substitute for the insights or methodologies of other disciplines, many different fields contribute, and a deeper understanding of human behavior. Communications, sociology, anthropology, and economics provide important points of view. In fact, behavioral analysis can help to enhance the contributions of other disciplines and sources of information by highlighting the contributions they have to offer.

Behavioral analysis is not covert manipulation. It is, instead, a powerful way to keep our focus on the primary goal—widespread adoption of critical new child survival practices. ■

Dr Touchette is Principal Psychologist and Associate Professor of Pediatrics at the University of California, Irvine where his research focuses on normal and abnormal attention patterns as they influence learning.

Swaziland (continued from page 7)

surveys, each with 450 rural mothers chosen through national random sampling procedures. A diarrheal disease registry kept by 20 clinics which listed more than 10,000 children during the course of the campaign.

Exposure. Nine of every ten mothers reported having had contact with at least one of the selected campaign channels. Three out of four rural Swazi households have working radios, and of those more than 80 percent reported having listened to the programs that carried the messages. The flyers, the only widely distributed printed materials, were recognized by three out of five mothers and were owned by one in five mothers. As many as one-half of the mothers in areas where workshop training had taken place, reported some recent interaction with either clinic staff or local yellow flag volunteers about oral rehydration therapy. About one-fourth of the mothers in other areas reported having had recent contact.

Knowledge. After the first six months of the campaign, more than one in five rural women had learned and could repeat the correct formula—a substantial accomplishment considering that a previous formula, already known by some women, was being replaced with a new one. It appears in fact, that some sources must still have been diffusing the old formula. Knowledge of either the old or the new formula was counted as correct, the proportion knowing all three ingredients of the formula increased from 20 percent before to 50 percent after the campaign.

Other campaign messages encouraged feeding during diarrheal episodes, and advocated special feeding afterwards. Although acceptance of feeding during diarrhea was little affected by the campaign (42 percent before and 53 percent afterwards), the perceived need for after-diarrhea feeding was substantially affected by the campaign (16 percent before versus 44 percent afterward). It has been suggested that there might have been conflicting messages from different sources about feeding during diarrhea—such as clinic staff and common-sense rejection of the notion that a child with diarrhea would be able to eat.

Practice. By the third month of the campaign, 60 percent of the children had been treated with WSS or ORS—a level sustained over the remainder of the campaign. The effects of the campaign on actual practice were evaluated by examining two subsamples of women 1) those who reported they currently or within the past month had a child sick with diarrhea, and 2) those mothers who had brought their children into clinics for diarrheal treatment. Among the first group, 45 percent of the women said they had treated their child at home with WSS before the campaign; after the campaign 57 percent reported they had done so. This gain is more striking if one combines this report of use with the report of measured knowledge of the correct formula for mixing WSS. Counting either the old or new formula as correct, only 16 percent used WSS and knew the correct formula before the campaign, whereas 32 percent used WSS and knew the correct formula after the campaign. A second indicator, fundamentally consistent, gives a more optimistic picture: of the children coming to clinics at the start of the campaign, about 43 percent had been treated with oral rehydration therapy before coming to the clinic according to those bringing in children.

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Formative Research: Pretesting, Revising, and More Pretesting

by Margot Zimmerman and Lena Steckel

Formative research is defined as evaluation activities that occur during a project to determine if the objectives are being met and, if not, to modify the project’s direction to ensure that they are. Thorough and extensive pretesting is the formative research technique that the Program for the Introduction and Adaptation of Contraceptive Technology (PIACT) and its sister organization, the Program for Appropriate Technology in Health (PATH), rely on to develop well-understood and culturally appropriate print materials.

Pretesting should be done while the materials are still in an unfinished state so audience-representatives of the target population to determine if the intended message is being conveyed and if it is clear and acceptable to them. Pretesting should be done while the materials are still in an unfinished state so audience-generated alterations can easily be made. Revised materials should likewise be tested until they communicate the information as intended.

Since PIACT/PATH work with countries where large percentages of the population are nonliterate, its motivational and instructional materials rely on pictures (drawings, photographs, or a combination) to convey the message. Often, pictures are augmented by a line or two of simple text in the local language. This text also requires careful pretesting, for vocabulary selected by health workers or program managers may be too sophisticated for their clients.

The following examples from the field demonstrate the importance of pretesting to assure that print materials are appropriate to the group for whom they are being developed. Details that may at first appear unimportant can render a material useless and even offensive to the target audience.

Symbols. While designing illustrations for the message “During pregnancy, take only medicine prescribed by a doctor,” researchers pretested a photograph from existing material that showed several medicine bottles with a red “X” superimposed over them. Pretesting results indicated that the illustration did not convey the message that patients should use only medications prescribed by a doctor. Many respondents did not even see the “X.” Others did not know it symbolized “don’t,” “no,” or “danger,” and, in fact felt that the message encouraged the use of medications.

Positive messages. The audience’s negative reaction to the photograph described above prompted project staff to test two alternative pictures. The first photograph showed a doctor gesturing to a woman and telling her in simple words not to take a pill that had not been prescribed to her; the second photograph (see illustration adapted from the photograph) showed a doctor giving a pregnant woman some pills. Results of pretests showed that comprehension was higher with both of these photographs which were accompanied by simple texts, but a majority of women preferred the second photograph because it represented a positive message.

Use of common objects. Project staff in Pakistan, producing materials on prenatal care for rural women, thought a drawing of a health worker using a pointer to indicate proper foods on a wall chart would be interpreted as a message explaining the importance of a healthy diet during pregnancy. When the drawing was pretested, it was misinterpreted as a health worker shooting a gun. Obviously, these women had never seen anyone using a pointer while giving a demonstration! The illustration they chose depicts the food groups above the head of the health worker (see illustration).

A Health Audio/Video Series

The Food and Nutrition Program of the Faculty of Interdisciplinary Studies of the Pontificia Universidad Javeriana in Bogotá, Colombia, under the auspices of the United Nations University, has recently produced an audio and video series, “The Road to Health.” The development of these programs included research and evaluation steps with the target audience, the results of which gave the necessary guidelines for health education needs, and appropriate communication channels.

The object of these programs is to educate low-income mothers about actions they can take to help the health and nutrition of children under five years of age.

The educational series, in Spanish, consists of 12 programs on (betamax) videotape of approximately 15 minutes each, and 17 programs on audiotape of approximately 10 minutes each.

The series is designed for use in educational discussions with groups of mothers, couples, or families, and to train extension workers in issues of health and nutrition.

For information on how to obtain this series contact: Patricia Avila de Halls, Facultad de Estudios Interdisciplinarios, Pontificia Universidad Javeriana, Carrera 10, No.65-48, Bogotá, Colombia.
The Fireworks Syndrome: WHO

by Jack Ling, Director
Division of Public Information
and Education for Health

[The following piece has been adapted from a speech presented at the first ICORT Conference held in Washington, D.C., June 1983 We would like to thank Jack Ling for permitting us to reprint a portion of it in the DCRJ]

There is traditionally a world of difference between information and education. The task of the former has consisted of collecting information and presenting it in an interesting way, often through the media, to different audiences. The information officer’s responsibility is traditionally perceived to end there. Education, on the other hand, has been a more important dialogue between the educator and the learner. In a broader sense, and certainly in recent years, the two have converged.

Two WHO meetings, “New Approaches in Health Education for Primary Health Care,” and “New Policies in Primary Health Care,” strongly endorsed an integrated strategy using both interpersonal and mediated communication in the planning and delivery of primary health care. To use media without links to the existing health care services and face-to-face contact would create what might be called a “fireworks syndrome,” by analogy with a display of attractive fireworks which fizzle out after a few seconds in a darkened sky. On the other hand, person-to-person work, while recognized as the most effective method of teaching and learning materials for use by community leaders, mounting large-scale dramas for young audiences on teenage pregnancy issues, marketing one or two highly specific nutrition interventions nationally and in defined geographic areas, communicating by radio with volunteer workers, preparing teaching and learning materials for use by community leaders, mounting large-scale multimedia national campaigns maintained over long periods, and producing print materials for non-literate for mass distribution.

The role of the media in the education of the public, as seen by WHO, can be summarized as follows:

- to help strengthen political will by appealing to policymakers;
- to raise general health consciousness and clarify options concerning actions that have a strong bearing on health;
- to inform decision-makers and the public about the latest developments in health sciences and publicize relevant experiences;
- to help deliver technical messages;
- to encourage dialogue and facilitate feedback from communities.

The two WHO meetings urged that health education workers should be learner-facilitators as well as teachers and participants who must work to stimulate community involvement. Health education is seen as the means to encourage and enable communities to identify their health problems and translate them into simple and realistic goals that they can monitor themselves.

It is important for us to learn from past experiences; the painful lessons of the 1950s and 1960s showed us that apparently successful technical programs were no more than “fireworks” in a dark sky. Only if attention was paid to building up the health system infrastructure so that the gain made by the specific program could be sustained, consolidated, and enlarged was there a chance of turning the fireworks into a permanent light.

The World Bank Addresses Health

by Margaret Valdivia, Project Officer
Population, Health, and Nutrition

The World Bank began allocating and distributing funds directly for health-related projects in 1980. Promotion of appropriate health behaviors is now a component of most population, health, and nutrition projects financed partly by the Bank.

Development Support Communication activities supported by the Population, Health, and Nutrition Department encompass public education, personal counseling, patient education and the promotion of behavioral, consumer, and attitudinal change in specific target groups, as well as traditional health education and community mobilization. The criteria used for selecting the approach and methodology to be applied in a particular program are technical feasibility, cost effectiveness, and appropriateness to the context of the program. The scope of a project can be national, local, or highly specific.

Among the activities the World Bank has supported are: making films for sensitization and training of health personnel, making film and TV documentaries and documentary dramas for young audiences on teenage pregnancy issues, marketing one or two highly specific nutrition interventions nationally and in defined geographic areas; communicating by radio with volunteer workers, preparing teaching and learning materials for use by community leaders, mounting large-scale multimedia national campaigns maintained over long periods, and producing print materials for non-literate for mass distribution.

UNICEF: The Potential of Social Marketing

by James Grant, Executive Director

[The following is taken from UNICEF’s The State of the World’s Children 1985]

Today, the resources of the mass media—and the techniques of social marketing—are beginning to be used to put the techniques of a child survival revolution at the disposal of millions of parents: In Brazil, the equivalent of US$1 million a year in radio and television advertising time has been put behind a nationwide campaign to promote breastfeeding. In India, child survival messages are being proclaimed by advertisements on buses and billboards.

The potential of social marketing is just beginning to be explored. But already, there is a body of experience available to guide future efforts. First, it is clear that people’s lives and behavior cannot be transformed simply by waving the magic wand of social marketing. Mass media messages about the need to boil water or to breastfeed or to feed a child more frequently cannot solve the problems of firewood shortage or maternity leave or give a mother more hours in the day.

Secondly, it has proved important to recognize the differences as well as the similarities between commercial and social marketing. Because social marketing campaigns usually seek a more important change in behavior and attitudes than a change in loyalties to a particular brand name, mass media messages in ourselves are usually not enough. In the promotion of a more complex process such as oral rehydration therapy for example, mass media campaigns can be an important complement to but not an adequate substitute for practical face-to-face demonstrations by health workers or trained volunteers.

So far, the most common mistake of social marketing campaigns seems to be a concentration on the superficial aspects of commercial marketing techniques at the expense of its deeper disciplines. Research into how a target audience perceives its own problems and needs, into what sources of information have credibility, into what kinds of presentation are acceptable and what kinds of information are practicable, are all essential to camps which seek to bring about complex changes in human behavior. In developing such campaigns, considerable resources of time, money, and creativity need to be invested in message selection, media planning, analysis of message resistance, and monitoring of message response. A lack of professionalism in any one of these disciplines can easily diminish the effectiveness of a social marketing campaign.

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A Communicator’s Checklist


The literature on social marketing has received an important addition with Social Marketing: New Imperative for Public Health by Richard Manoff. For the book not only provides time-tested, experience-based lessons on the fundamentals of designing and implementing a social marketing program, it also shares with the reader many valuable insights which, in total, create a treatise on the subject.

Not without a moral foundation, Manoff’s book convincingly lays out a caring, compelling appeal to treat social marketing as a true imperative to public health advancement.

Manoff’s writings expose the reader not only to the “how” of social marketing but also to the “why.” Lending further importance to the message, we develop a sense of what the prospects for future health care will be if we don’t take full advantage of the potential of social marketing.

A well-crafted social marketing message designed for the mass media, this book reflects all the important steps required for penetrating, effective communication. It has a keen awareness of the target audience (in this case health promoters and communication planners worldwide); the problems requiring resolution are well defined; opposing viewpoints are recognized and addressed; benefits of following the suggested course of action are clear, the viewpoint is made more convincing through examples; and the ever-important “call to action” is in sharp focus throughout the communication.

A major theme in Manoff’s book deals with the enormous opportunity to help right some of today’s health care imbalances, especially those that befall the poor. While the gap can be closed by better health service delivery, so too, he argues, can it be shortened by smartly applying traditional marketing techniques to social development issues.

Seeking to increase support for social marketing, Manoff directly, yet sensitively, confronts the questioning of mass media’s role in social development. Rightly so, he challenges the thinking that failure to find conclusive, positive results in many social marketing programs calls into question the effectiveness of mass media for social causes. “How about the content of the messages in these ‘failed’ programs?” he asks. “Have we looked carefully at media delivery? “Are we being truly persuasive in our appeals?” The role of mass media in influencing attitudes and decisions is undeniable. At its most basic level, there is no

reason to think that well-conceived social development messages delivered via radio or TV should, in most cases, be without strong influence.

Manoff states “it is specious to argue that health and nutrition objectives are far more complicated than those in the commercial world...”. A second Manoff theme ringing true is his call for a greater level of skill and aggressiveness in social marketing campaigns. He points out that “though marketing has demonstrated its usefulness for social goals, it is rarely carried out with the skill and thoroughness characteristic of the commercial world.” He challenges the practitioners of social marketing to advance their level of expertise and insight and reap from social marketing all of its inherent potential.

The world’s social development efforts are demanding that social marketers of today and tomorrow be more creative. Manoff calls for them to push their thinking and steer clear of doing things “the expected way.” In a loud voice, he calls for new energy.

Complementing his call for action, Manoff devotes considerable attention to detailing the entire process of a well-conceived social marketing effort. Problem identification, objective and strategy setting, developmental research, message design, testing, media planning, coordination of forces, and tracking of results. Each step is framed with a view on “how it’s done” in commercial marketing, yet is focused on the particular circumstances of the social marketer in the developing world. At times though, the reader may find his critique of the developed world’s marketing techniques to be paternalistic and somewhat unfair. Examples from around the world, including four extensive case histories, are illuminating and help the reader to recognize the advantage in following the identified path.

One particularly valuable section deals with designing the social marketing message. Here, Manoff addresses what this reviewer believes to be one of the major factors in social marketing program failure—media messages that are poorly planned and lacking sensitivity to the target’s human condition. The reader is exposed to content, design, persuasion, and memorability factors that make the difference between a message that persuades and one that rings hollow. In light of the critical nature of this component of social marketing, it would have been better to have devoted even more space to the discussion of message ben...

(continued on page 19)
Extraneous detail. A government agency in Botswana, which had developed a booklet on the oral contraceptive, recently made changes in a few illustrations because in-depth field tests conducted after they printed and distributed small numbers of the booklet revealed a detail unnoticed during earlier interviews. Respondents were distracted by an image of the back of a man sitting in the clinic window which appeared in each of the pictures showing the clinic. The same illustration of the clinic was used throughout the booklet. When the booklet was reprinted for widespread distribution, the man was removed from the window to eliminate the distraction. This illustrates the importance of thorough field testing of a small run of a booklet or flier prior to mass printing.

Time. Messages about time are often difficult to communicate, especially to non- and semiliterate audiences. Groups with whom PIACT/PATH has worked have developed a variety of symbols to show the passage of days, weeks, months, and years. An illustration showing a woman tearing off a calendar page was well understood by Ecuadorian audiences to mean that one month had passed. But in many areas of Sierra Leone or in the Sudan, respondents did not recognize the Western calendar. Consequently other symbols were tested in these countries. Moons in Sierra Leone and moons and stars in the Sudan were identified as the symbols most widely understood to represent months.

In a contraceptive instructional booklet developed in Bangladesh, it was important to convey the message you must "wait 5-10 minutes" after using the foaming tablet. Since most Bangladeshis could not tell time, the artist first depicted the passing of time by showing water boiling. When this was not understood, project staff observed villagers' routines to see if they could find an activity that took 5-10 minutes to complete. They finally tested a drawing of a man and woman sitting on their bed with the man smoking a cigarette. Almost every respondent understood that the man was smoking and waiting. They did not necessarily know why the man was waiting, but they knew that he should wait as long as it took to finish a cigarette.

Text. The same word can have several meanings, and pretesting will reveal when a selected word interferes with message comprehension. When preparing materials to promote breastfeeding in a large New York City hospital, text was tested informing women that, if they know they will be away from home during feeding time, they can "express" their own milk into a clean cup. Although the visual illustration of this process was already understood, when respondents in a pretest were asked to recall the texts, some became confused, thinking that the written message had something to do with breastfeeding in the subway (express train) system. When substitute words were used, "you can take breast milk out by hand," the text reinforced the illustration and the message was clear to respondents.

Through pretesting, PIACT/PATH has learned that there can be a large discrepancy between what materials developers intend to convey and what the audience understands. Pretesting is an essential formative technique that builds upon information gathered during the materials development process, ensuring the message designer that the materials will effectively address the needs of the target audience.

Maggie Zimmerman is Director of the PIACT/PATH Information, Education and Communications office in Washington, D.C. Lena Stuckel is an Assistant Program Officer in PIACT/PATH's Washington, D.C. office.


Environmental Communication Conference

The Department of Natural Resources and Environmental Quality Board of Puerto Rico are co-sponsoring and hosting the "First Conference on Mass Communications and Environmental Protection in the Caribbean Region."

The three-day meeting will be held in Old San Juan, Puerto Rico from February 3-5, 1986. The dual purposes are to assess the current uses of mass media in this area, and to explore future applications for incorporating mass media into overall planning strategies for environmental management and protection.

Those interested in attending the conference, displaying environmental media materials or audiovisuals, or receiving published proceedings should contact Victoria Dompka, Conference Coordinator, Department of Natural Resources, P.O. Box 5887, Puerta de Tierra, Puerto Rico 00906. Telephone (809) 722-5501.

A Selected Bibliography of Health Communications Materials


**Pretesting in Health Communications Methods, Examples, and Resources for Improving Health Messages and Materials** Bethesda, Maryland: Office of Communications, National Cancer Institute, 1982.


Saving Children’s Lives:
A Communication Campaign in Egypt

By Dr. Norbert Hirschhorn

Diarrheal disease is the remaining major cause of death in Egyptian infants and toddlers under the age of three, accounting for over 60 percent of deaths in those age groups. As late as 1980 it was estimated that close to 150,000 deaths were associated with diarrhea. Studies showed that the great majority of these deaths were due to simple dehydration, "simple"—in the sense that death could have been prevented by proper oral rehydration therapy. Intravenous fluids were available but not to all children, especially in rural areas. Also, mothers were not aware of the dangers of dehydration and brought children into clinics too late. A pilot study proved conclusively that oral rehydration therapy (ORT), promoted by rural health clinics and at home, could reduce diarrhea-related deaths by 50 percent.

It was on the basis of this pilot study that the National Control of Diarrheal Diseases Project (NCDDP) was developed through a program agreement between the Government of the Arab Republic of Egypt and the US Agency for International Development. Signed in late 1982, the five-year project aimed to reduce child mortality from diarrhea by at least 25 percent. Work began in 1983 with the arrival of the technical assistance team from the John Snow Public Health Group (JSI).

Project Description

There are two features of this project that are central to its effective management: 1) the NCDDP enjoys a certain degree of autonomy to the extent that it can reach beyond the Ministry of Health to bring in specialists through grants and contracts, and it has the power to manage its own budget and personnel; 2) the NCDDP is not a group of separate program elements, but an integration of elements in time and concept: training of health workers; production, distribution and marketing of oral rehydration salts (ORS); monitoring and evaluation of the project; and education and promotion via television, radio, and other public media. These aspects are all concurrently active and all are maintained and coordinated through the Secretariat, the technical arm of NCDDP.

The goal of the communications element, the focus of this article, is to teach, persuade, and change the behaviors of (a) all Egyptian mothers of children under three, and (b) other specific target groups, especially health personnel, pharmacists, mass media reporters, and decision-makers involved with the management of diarrhea and dehydration programs.

Planning for Communication

Data acquired through target audience research provides program planners with the most useful and valid information upon which to build a communication campaign. This holds true whether the activity is to select an appropriate logo to call attention to the campaign, or to determine the most effective channels through which to communicate social messages. Following elements of the NCDDP project were those that required considerable audience research and testing before being integrated into the ORT campaign throughout Egypt.

Logo. Four designs were selected from among ten submitted by independent artists and advertising agencies. Focus groups and brief interviews in public places on these four logos were carried out to determine audience response. The most popular design was again taken out and tested with other focus groups for more specific comments. Changes resulting from this final feedback were the color of the mother’s dress from black to white—for cultural reasons; a wedding band drawn onto the mother’s finger; a larger spoon; and a smile added to the mother’s face (see logo illustration). While responses were being collected on mothers’ reactions to the proposed logo, numerous subjective feelings were also being shared with the staff about illness, health care, and the mothers’ devotion to children—all useful information for upcoming message design purposes.

Materials Design. Questioning the mothers who participated in focus groups helped project staff determine what amount of fluid a mother would find believable to give to a child with diarrhea. In addition, surveys showed that a 200cc packet of salts would be the most practical size for home use. A plastic cup and spoon were also developed for distribution with the packet.

Naming the Solution. Field research showed that mothers favored simple names that either convey a warm feeling or that describe the purpose of the solution. An Arabic word meaning “for cure” (a common blessing upon taking a medicine) was selected, responding to mothers’ voiced preference. However, doctors and pharmacists took exception to this name noting it was not suitable for prescribing purposes. The name finally chosen, The Solution for the Treatment of Dehydration served the dual functions of ease of identification for mothers as well as providing a precise prescription name for doctors and pharmacists. People now know it more simply as The Solution. Exemplified here is a case where selected audience research told project planners the wrong thing. Although mothers were the primary audience, doctors and pharmacists served as dispensers of the solution and should also have been consulted from the beginning in order to ensure broad acceptance of the product.

Identifying the Product with the Disease. Since oral rehydration does not stop diarrhea, another disease for which the therapy is effective must be identified. That “other” disease is dehydration. One of the problems, particularly in the rural areas, was finding a familiar term to help mothers associate the symptoms they already recognize in their sick children with dehydration. An Egyptian Arabic word gaaffa—for agricultural-related dryness or drought—was found to best express the concept that project staff wanted to convey. Although use of gaaffa in this context is not always understood by all mothers, it does provide health care workers with another means of teaching some mothers to take action more quickly when their children are sick with diarrhea and are dehydrated or in danger of becoming so.

Message Design

NCDDP research into the entertainment and mass communication habits of the Egyptian public, both rural and urban, showed that over 90 percent of Egyptians have access to radio, and over two-thirds to television (over 90 percent in urban areas). This argued for assigning radio and particularly TV central roles in the dissemination of educational messages about diarrheal disease, and TV advertisements were developed.

TV Production Sequence. Diarrheal disease experts were first consulted to learn the facts about the disease. Egyptian pediatricians and medical professors were then brought in to review the medical facts within an Egyptian context and to modify recommendations for the target audience. A "story board" (illustrations of visuals comprising the proposed TV ad) was then designed. Egyptian pediatricians were asked to review these for accuracy. At this stage of development, anthropologists took the "story board" and the accompanying script to villages and used focus groups and one-on-one techniques to solicit comments. After selected changes were made the TV ad was produced and reviewed by diarrheal disease experts and Egyptian pediatricians. This (continued on page 14)
final film was not pretested; instead, an intensive post-campaign evaluation of the first broadcast campaign, timed for release in January-February 1984 as a pilot during the non-diarrhea season, was used to gather target audience reactions. The NCDDP ads have subsequently been found to be the most remembered of any public or commercial ad according to the posttests following the second and third campaigns in the summer of 1984 and 1985.

TV Testimonial Personality. Television history was made with the production of these ads. It was the first time a famous person was used to deliver a social-oriented message and only one second time the testimonial format was used on TV. The first pilot commercials featured the actor-comedian-social commentator, Fouad El Mohandes, known widely to children as "Uncle Fouad." Although "Uncle Fouad" was well received by a majority of mothers with young children and the commercials effectively transmitted the intended messages, the response was powerfully negative in five to eight percent of mothers surveyed. More importantly, doctors overwhelmingly preferred the use of a dramatic, professional communicator and asked "How can a comedian teach about medicine?" Even when "Uncle Fouad" was paired with an eminent physician, doctors persisted in rejecting this image.

This strong negative response called for a very different image to regain the confidence of the medical profession. To accomplish this, a well-known "motherly-appearing" actress was selected—Karima Mokhtar, who plays in soap operas and movies in Egypt. Her role as an advisor/counselor in the ads proved highly acceptable among medical professionals and mothers alike. 

Physicians, Pharmacists, and Nurses. Messages were designed as much for medical professionals as for mothers. Radio and television's "leveling" effect means everyone receives the same message, giving doctors, nurses, and pharmacists the opportunity to know what the general population knows. It provides them with a base upon which to continue educating their patients/customers. Health workers were also provided with a flood of well-produced professional materials (posters, a newsletter, scientific brochures) that were equally appreciated as there is generally a shortage of good resource materials for medical professionals in Egypt.

Results

What was the impact of this intense, nationwide campaign to reduce infant mortality related to diarrhea, and could such an impact be attributed to effective communication planning? Between early 1983 and late 1984, knowledge of dehydration rose from 32 percent to 90 percent; knowledge of ORS rose from 1.5 percent to 96 percent. Ninety-eight percent of all Egyptian pharmacists have ORS available and is now the leading sale item (in volume) of all diarrhea-related drugs according to a survey of 300 pharmacists nationwide. Careful documentation shows that mass media alone increased the use of ORS from one percent to nearly 70 percent of episodes. Statistically significant, mortality reductions in children under two have been documented nationwide, approximating a 50 percent drop in diarrhea-associated deaths, concomitant with project activities. Monitoring of all processes and outcome measures continues. The success of the NCDDP project in Egypt indicates that mass media can help change behavior, but that all other elements of a mass campaign must be equally well-planned and coordinated to achieve this success.

Dr. Hirschhorn is a lecturer at Harvard University's Department of Preventive and Social Medicine. He has had worldwide experience in implementing diarrheal control programs and in training health workers in maternal child health. A.D. Development.

NCBC continued from page 5:

Surveying was based on issues identified earlier by the Ministry of Health as most severe for the population overall including: protein-energy malnutrition in three age groups—in-fants 0-4 months, infants 5-8 months, and children 9-24 months; infant diarrhea and dehydration; vitamin A deficiency; undernutrition of pregnant women; and undernutrition of women during lactation. The NCBC explored these problems in a subsample of the participating villages. A survey sheet of media habits was completed during the initial interview with mothers and all at focus group interviews.

The Communication Strategy

The qualitative investigation identified the need for change or reinforcement in particular nutrition-related behaviors. The target audience of mothers was segmented according to their needs during designated maternal stages and by the age-related dietary needs of their children under three years of age. This meant only immediately useful information would be directed to mothers in these categories.

The research showed that the cost to mothers of following the advice was at the most a few rupees (cents) more than they normally spent per day and was affordable for over 90 percent of the sample. Due to severe constraints on the mothers' time, most of the recommended behaviors demanded a small additional investment of their time; those required extra time offered a substantial and perceivable reward.

Radio was available in many homes in the project areas, so broadcast messages were integrated into the project as an additional means of reaching mothers. The radio spots, besides bringing nutritional messages into the home, also identified kaders as a crucial source of information for mothers and children, thus increasing their prestige in the eyes of mothers.

"Action Posters" were designed to meet several strategic needs; first, to reinforce the kaders' advice in areas not reached by radio; second, to ensure accurate delivery of the messages at weighing sessions and home visits. A poster was designed for each segment of the target audience. The name of the target group was printed at the top of each poster and, large, step-by-step illustrations of the recommended practices were featured below. A column of boxes under each illustration allowed mothers to record their compliance with the recommendations over a month's time.

The project also addressed the kaders' expressed lack of confidence. They were trained how to use the educational materials that would be taken to mothers' homes. At weighing sessions kaders selected a poster according to the age of the child, then counseled the mother on what she should do, using the poster as a visual aid for her and as a reminder of the advice that should be given during this session. Thus, the posters served to reinforce the advice to mothers once they returned home to review the advice. Delivering the posters to the homes of mothers also gave kaders a purpose for making the visits since it provided them with something to offer in exchange for the mothers' time.

Project Evaluation

Addressing the same nutrition problems as the national program and operating with virtually the same activities and tools, the NCBC project achieved significantly different results. The 1981 evaluation showed that the social marketing approach had improved the nutritional status significantly in the target populations. Significant improvements in food intake and the nutritional status of the target populations, the ultimate tests of the strategy's effectiveness, were also recorded and could be attributed to behavioral changes stimulated by the project. The research indicated that higher protein and calorie levels for project children and breastfeeding mothers; higher consumption of the recommended foods by project children, an improved nutritional status for 40 percent of children in the project; at 23 months, an average weight of 1.5 kg higher for project than nonproject children; and a significantly better growth rate in each experimental area for project children after five months of age.

In addition, project kaders offered more accurate, specific, and complete dietary advice to the target population than a sample of nonproject kaders. The evaluation also pointed to higher levels of performance by the project kaders than by their counterparts in nonproject communities in terms of community outreach and broader and more consistent coverage.

Cost Analysis

The NCBC case illustrates how the social marketing approach to educational programs fits the needs, resources, and desires of program participants. Social marketing made the fit possible by producing messages addressed to the most pressing nutrition and health problems with suggestions for practices that mothers could carry out and sustain (continued on page 19).
A Nutrition Prescription for the Dominican Republic

The Applied Nutrition Education Project (ANEP) of Caritas-Dominican Republic and Catholic Relief Services works with families in 90 low-income Dominican communities to improve the nutritional status of children. This is done by encouraging families to better feed and care for children, and through community action projects to increase food production and sanitation.

From the outset, ANEP has placed prime importance on education and community promotion, seeking to develop a comprehensive communications strategy that reflects community needs and abilities. In designing the ANEP strategy, the lessons of Indonesia's Nutrition Communication and Behavior Change Component were applied, and the benefits of growth monitoring as a pivotal nutrition communication activity were exploited. Other ways in which ANEP reflects the Indonesian experience: its strategy is based on community participation through qualitative research, albeit through focus group rather than individual interviews; communication and education are the primary interventions; individual counseling in conjunction with growth monitoring plays a key role in the communications strategy; and education materials can be adapted by health promoters to meet individual needs. The project has produced promotional materials, materials for group education, materials to stimulate community action activities, and materials for individual counseling at growth monitoring sessions. The primary audience is mothers with children under five years of age.

ANEP has gone further with individual counseling than either the Nutrition Communication and Behavior Change Component (NCBC) of Indonesia or the Indonesian Family Nutrition Improvement Program (UPGK) by providing a tailored method and the tool for adapting the method to the mothers' individual resources. For personal counseling, a set of 12 laminated pictures, portalaminas, was produced to guide health promoters in counseling mothers at weighing sessions. Each 11 x 14 inch lamina has graphics on one side and a message for one of four segments of the target audience on the other. The project designed two laminas for each age group: one for children who have gained weight, and the other for children who have not. Mothers of children who have gained weight are congratulated and encouraged to continue feeding as before. Promoters spend only a few minutes with these mothers. More time is spent with mothers of children who have not gained weight. In addition to offering these mothers specific suggestions for actions they should take, promoters ask the mothers how many of the recommendations they can actually carry out. As a reminder to these mothers of what they should try at home, ANEP developed take-home worksheets for mothers of nongainers. Each worksheet has illustrated recommendations for a target group at the top of the page and boxes at the bottom. For example, a promoter asks the mother of a 9- to 23-month-old who has not gained weight whether she can realistically feed her child the recommended four meals a day. If the mother says she can only manage three, the promoter circles three of the four illustrated feedings and asks the mother to punch a hole in, or to mark the boxes as she follows the advice.

Communications assistance has been provided by Marcia Griffiths of Manoff International, and two consultants to the International Nutrition Communication Service.

Distance Teaching Course Offered

A four-month course on distance teaching and its relevance for Third World countries will be held from April to July 1986 by the International Extension College and the Department of Education in Developing Countries of the University of London Institute of Education at the Institute in London.

Course objectives are to analyze an educational problem in a participant's country and determine whether distance-teaching methods are appropriate to it; to make reasoned and informed choices between different methods of distance teaching; and to work out administrative arrangements for a distance-teaching system.

All participants should be graduates or trained teachers or have adequate relevant experience, have not less than six months' experience of working full-time in distance teaching or extension, and have a thorough command of English.

Application deadline is February 17, 1986. For further information and application forms contact: Departmental Secretary, Department of Education in Developing Countries, University of London Institute of Education, 20 Bedford Way, London WC1H 0AL, U.K. Telephone 01-636-1500.

Worksheet for mothers of children 9-23 months of age who have not gained weight. Messages. Give the child the same food as the family eats. Give the child one more meal and a snack between meals for a total of four meals a day and two snacks. Continue breastfeeding.
and a five-year stock of spare parts. A key element has been involvement from the beginning of TWR, whose technicians have been used to install and maintain the equipment under a contract with the Ministry of Health (MOH). Since the GTC and MOH have collaborated from the start, each has an equal stake in seeing the MEDEX network develop successfully. Additionally, continuity was ensured by involving the same technical assistance team throughout the planning and installation stages.

All medex are trained in the use, care, and maintenance of their radios in an intensive one-day training session. Each medex receives an illustrated training manual and a set of maintenance tools. They are taught how to communicate effectively over the radio and how to fill out the logs of all calls sent and received. Georgetown headquarters analyzes the logs to determine the use and reliability of the network.

A key person in the network is the full-time communications officer at MEDEX headquarters in Georgetown, who is responsible not only for communicating with the medex and controlling traffic on the network, but also for following up on their requests. This officer must locate a physician when an emergency call is received, determine the status of patients transferred to Georgetown or of delayed drug shipments, and provide other information upon request. The competence and dedication of this officer is vital to the successful operation of the network.

Radio Use
Medex keep their radio in their office and generally have it on "receive" mode for incoming calls from 8:30 a.m. to 4:30 p.m., Monday through Saturday. An analysis of logs during the first quarter of 1985 showed that 62 percent of all calls were for administrative purposes, such as to coordinate transportation needs, order drugs and supplies, supervise field personnel, and schedule health care personnel meetings. About 23 percent of all calls were related to medical uses such as consultation between field medex and doctors, continuing education, patient referrals and follow-up, emergency evacuations, or malaria control. Messages transmitted for community meetings. About 23 percent of all calls were for administrative purposes. Administrative matters are also handled much more efficiently than before, particularly when requisitioning supplies and drugs.

Previously, drugs were ordered by mail or by messages passed through other government agencies. Medex often had to wait weeks for a reply, only to travel to Georgetown for follow-up. Such activity resulted in considerable expense to the MOH and a temporary loss of medical services to rural communities. With TWR, medex can now follow up on administrative matters without ever having to leave a site.

TWR has also greatly improved the coordination of emergency evacuations. Transportation can be immediately arranged, referral centers alerted to the patient's impending arrival, facilities prepared, and a physician placed on call. In the past medex were forced to leave their patient and travel to the closest available radio, resulting in delays of hours or days—sometimes at the cost of a patient's life. It should be noted, however, that while TWR can communicate the immediacy of a situation, poor roads and unreliable transport still limit the extent to which a medex can respond to community medical needs. Emergency evacuations which may now be coordinated in a matter of hours along the coast, may still be impossible during the rainy season in the hinterland.

Morale among medex has improved, particularly for those in more isolated stations. Medex report that their confidence grows as regular consultations and continuing education support enables them to provide better health care for their area. With TWR, medex have immediate access to a qualified doctor for consultation on diagnosis and treatment. Previously this was done by letter or personal visit. Medex also express enthusiasm about the value of the continuing education programs which keep them better informed than was possible before the installation of the system. In addition, medex feel that their status in the community has improved because of TWR. In many communities the network provides the only channel for communicating.

Conclusion
While need for and use of TWR seems to be greatest in remote locations, its utility remains constant throughout the network. Benefits of the system include:

- increased access to knowledgeable persons for administrative and managerial matters;
- improved supervision of field paraprofessionals;
- increased opportunities for medical consultation, patient referrals, and clinical follow-up;
- improved reporting of and response to emergency situations;
- increased communication between medex, community members, and other government agencies.

The benefits of the medex two-way radio system exemplify the important role telecommunications can play in the development process. Use of telecommunications for administration, supervision, coordination, consultation, and education can lead to improvements not only in the quality of rural health care, but also in improving education and agricultural extension services. As the Guyana experience demonstrates, rural communications can contribute to improving the quality of rural life in the developing world.

(ERIC continued from page 18)
Kenya's Radio Language Arts Project: Evaluation Results

by Rebecca L. Oxford

The Kenyan Radio Language Arts Project (RLAP) assessment has just been completed, documenting the effectiveness of interactive radio-based educational instruction. Analyses in the areas of listening, reading, speaking, and writing demonstrate the sometimes surprising results that children in radio classrooms consistently scored better than children in nonradio classrooms in every test.

The spring issue (#49) of Development Communication Report contained several articles describing various features of the RLAP that ran from 1979 to 1985. The project was sponsored by the Office of Education, Bureau for Science and Technology of the U.S. Agency for International Development and was conducted by the Academy for Educational Development in cooperation with the Kenyatta Institute of Education of the Ministry of Education, Science, and Technology. An evaluation of the project was carried out with the assistance of the Center for Applied Linguistics (CAL). Evaluation results came from a variety of sources, including language tests, observations, interviews, demographic and administrative records, and an attitude survey.

The Setting

A large proportion of the project’s students were considerably transient. Only 22 percent of the total student population of 3,908 were “normal progression” students—that is, they advanced regularly through their education during the life of the project. Students who moved from the area, failed a standard (grade), dropped out, or were otherwise untrackable, comprised the remaining 78 percent of the total. Seven districts were included in the project—each district being represented by three schools. All the schools were located in rural areas, but their physical accessibility varied widely. Project staff rated radio reception as excellent in 79 percent of the schools, problematic in 18 percent, and poor in 3 percent.

The average age of teachers across all districts was 31.7 years, and the average age of headmasters was 38.3 years. While all headmasters in the summative evaluation were male, project teachers were mostly female. Teachers averaged 9.4 years of experience, and headmasters had served an average of 10.1 years in that position. Teachers had received an average of 9.8 years of education and headmasters 10.7 years.

Test Results

Tests were developed for listening and reading in Standards 1, 2, and 3, and in speaking and writing in Standards 2 and 3. The achievement tests were based on the official Kenya curriculum for those standards, so as to measure achievement against the curriculum. Nearly all the differences were highly significant statistically, with a probability of less than 1 in 10,000 that the findings could have occurred “by chance.”

Table 1 shows the performance of all project students. The most striking difference is in average listening scores: Standard 1 radio students scored nearly eight points higher than did their counterparts in the control group; Standard 2 and 3 radio students outperformed the control students by 4 points. These findings indicate that the interactive radio method, which emphasizes listening, resulted in greater learning gains by radio students. Similar findings, with somewhat higher averages for both groups, were found in analyses of students who progressed regularly through grades during the project.

Somewhat more surprising is the fact that the radio group also consistently outperformed the control group in reading, writing, and speaking. In these skill areas, the radio versus control group differences, while not always large, were statistically significant. In addition, although radio students did better than control students in writing, neither group performed particularly well in that subject.

This analysis also indicated that there was a positive relationship between the average number of years of teachers' teaching experience and higher achievement scores among the students.

Positive Attitudes Prevail

Unstructured interviews and observations were conducted by the RLAP field staff. Overwhelmingly positive attitudes about the project prevailed among project teachers and headmasters. One school offered to buy its own batteries if the project staff would provide them. Project prevailed among project teachers and headmasters (by 97 percent) preferring teaching English with the radio. Eight out of ten teachers and nine out of ten headmasters said that radio instruction improved teaching skills. Nine out of ten teachers and headmasters wanted to continue using the radio lessons after the end of the project.

Significant Observations

Although the primary purpose of performing this analysis was to produce summative evaluation results, project staff members made some informal observations as they gathered formative data.

- The radio method forced systematic implementation of the Kenya curriculum.
- Good teachers mastered the technical details of the radio method and were able to "individualize" radio instruction to help children of different ability levels.
- The highly interactive nature of the instruction increased the frequency of student interaction.

(continued on page 18)

Table 1
Summary of RLAP Instruction Raw Score Results: All Students

<table>
<thead>
<tr>
<th>Standard</th>
<th>Reading</th>
<th>Listening</th>
<th>Writing</th>
<th>Speaking*</th>
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</thead>
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<td>1</td>
<td>13.1</td>
<td>10.7</td>
<td>23.4</td>
<td>15.5</td>
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<tr>
<td>2</td>
<td>14.6</td>
<td>13.1</td>
<td>15.3</td>
<td>11.2</td>
</tr>
<tr>
<td>3</td>
<td>22.9</td>
<td>19.1</td>
<td>25.7</td>
<td>21.6</td>
</tr>
</tbody>
</table>

*Speaking test used a 10% sample of all students. Subtests included Word Total (WT), Meaning (M), and Grammar (G).
On File at ERIC

All of these documents are available in microfiche or in paper copy from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22304, U.S.A. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping costs may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.

- Intended for preservice and inservice training of Peace Corps Community Health Volunteers, this selection of health education training materials presents a model designed to help community health workers become better facilitators and educators as they help motivate people toward a healthier and more self-reliant life. The introduction provides suggestions for preparing for and carrying out the training program. The twelve sessions focus on: defining expectations and clarifying objectives of health education training; beginning the program; looking at community health and education; exchanging ideas about health education; working with a group; how people learn; the role of the Peace Corps volunteer as a community health worker; identifying community needs and resources; teaching about important health issues; developing and using appropriate teaching aids (one session on story telling and one on creating low-cost materials and equipment); and the Health Fair. Information provided for each session includes objectives, an overview, lists of resources and materials, preparation, activities, and handouts. Appendices include information on working with a group, evaluation ideas, a calendar for a ten-day training program, and a listing of selected resources and references. Available from EDRS in microfiche for 97 cents or in paper copy for $3.90.

This conference focused on the role of the Mexican American's language, tradition, lifestyle, health practices, and media utilization in the design of effective education and information programs. Representing various local, state, and national health, education, and media organizations, the 108 participants attended sessions on socio-cultural factors, health values, and perceptions that affect health communication, as well as the use and evaluation of media in disseminating health information. This study involved the design of a model health communications campaign to educate the Mexican American community about services provided by a health maintenance organization for cardiovascular disease. A media critique session provided participants with guidelines for content and production to use in designing health communication materials. Topics of the research presentations included the assessment of Hispanic knowledge, attitudes, and practices related to cancer for the purpose of education programs; alternative methods for presenting bilingual health education messages; and a videotape package on cancer health education designed to reach Hispanics. Available from EDRS in microfiche for 97 cents or in paper copy for $12.65.
- Colle, Royal D Communication Planning for Effective Nutrition Programs 1983. 36 pp. (ED 149 937)

Primary health care and nutrition have been linked with communication in a variety of well-publicized projects. This partnership between communication and nutrition was made necessary by the conflict between an expanded demand for services and limited resources for meeting the demand. Senior officials have a substantial role to play in seeing that their programs gain the full benefit of what an effective communication program can offer by accepting the responsibilities of: (a) examining the implications for communication of any program while it is in the planning stages; (b) insisting that communication or education people work within the framework of a communication strategy; and (c) providing communication resources. In planning, steps should include policy formation and development of a comprehensive strategy to meet program goals. With an understanding of the policy and comprehensive strategies that govern a project's overall efforts, communication specialists should start a process that includes analysis, strategy, implementation, evaluation, and next-step planning. Program officials should insist that top communication managers deal explicitly with the elements of principal objectives, best tenative solutions, audiences, media channels, theme/messages, and schedules. A summary chart of communication and education techniques includes methods, their advantages and disadvantages, and comments. Available from EDRS in microfiche for 97 cents or in paper copy for $3.90.

This guide provides an introduction to the Unesco Sourcebook for Classroom Nutrition Learning, which is designed for both actual classroom use and teacher-training support material, with lesson plans, teaching methods, and learning activities. Nutrition information is presented in such a way that important concepts are not limited to nutrition and health classes, but can also be integrated into different subject areas within the general school curricula, including science, language arts, mathematics, social studies, and agriculture, as well as school meals. Lessons, which are provided in each subject area to cover related nutrition and health topics, include instructions for both student- and teacher-made instructional materials. This introduction to the sourcebook first presents a brief list of some

(continued on page 16)
A Guide for Primary Health Care: The MEDEX Series

by Richard A. Smith, John Rich, and Sunil Mehra

Since its publication in 1983, The MEDEX Primary Health Care Series has been distributed extensively, and today functions as a practical and flexible management and training device for new or existing primary health care (PHC) programs at various levels in 53 developing countries.

The 35-volume MEDEX Series was developed over an eight-year period by The MEDEX Group at the John A. Burns School of Medicine, University of Hawaii, numerous developing countries, and supported by the U.S. Agency for International Development. The primary health care techniques and educational materials found in this series were field-tested in Micronesia, and used in PHC programs in Thailand, Guyana, Pakistan, and Lesotho. It has taken the most important considerations in the development and expansion of PHC services and put them into a consistent and easily adapted format for developing countries. The Series can be used by planners, administrators, or trainers.

The materials are divided into curative, preventive, and promotional aspects of health care. The training curriculum is problem-oriented and therefore includes only information essential to training the worker to do his or her job. Sections within the Series cover systems Development Materials, Mid-Level Health Worker Training Materials, and Community Health Worker Training Materials. Currently, the Series is available only in English, although some sections have been translated into Spanish, French, Bengali, and Thai.

Since September 1983, this series has been requested and sent to 114 countries described in World Health Forum as "a total teaching system," it has been distributed to government ministries, nongovernmental organizations, private consultants, nursing schools, and other institutions and programs that are training health personnel and managers of primary health care services in developing countries.

Correspondence with health care professionals in 53 of the 114 countries indicate that the Series is being used in 267 PHC programs and projects of varying sizes in developing countries. Further documentation about applications of the Series is being gathered from a questionnaire sent to recipients of the manuals. A network of users of the Series is being developed as well, to expand its use through the sharing of adaptations, changes, and translations. Further communications and visits to selected sites where materials are in use are also being planned.

Recognition that nurses should play a particularly important role in PHC has led to significant interest on the part of international and national nursing organizations. The MEDEX Group has recently received requests for the Series from 31 nursing schools in eleven additional countries, interested in revising nursing curricula to reflect a reorientation toward primary health care.

Projects with sectoral interests such as oral rehydration therapy, immunization, nutrition, and community sanitation, have used the materials to strengthen their own efforts. An example is a set of learning packages produced by WHO/UNICEF to be used in 17 countries. One quarter of the materials contained in the packages were taken directly from the MEDEX Series.

India's National Institute of Health and Family Welfare has used parts of the Series as the basis for management training, to be conducted nationally in over 50 training institutions for doctors, nurses, and other PHC health personnel. Another example of its versatility was its use as a guide for designing and building a health center in Burkina Faso that would reflect the needs of that facility.

During the past two years, information about the availability of the Series has been spreading worldwide. To strengthen this process, the MEDEX Group continues to provide copies upon request in an effort to extend the growing network of users.

For further information about this series contact: The MEDEX Group, John A Burns School of Medicine, University of Hawaii, 1833 Kalakaua Avenue, #700, Honolulu, Hawaii 96815, USA.

Dr. Smith, John Rich, and Sunil Mebra are with The MEDEX Group, University of Hawaii School of Medicine. Smith is the Director of MEDEX, Rich is a Curriculum and Instructional Development Specialist, and Mebra is a Communications Development Specialist.

Available for $32.95 from CBS Educational and Professional Publishing, Order Dept. 383 Madison Avenue, New York, NY 10017, USA.
The Colombian National Immunization Crusade:
Coordination and Communication

This is "Pitin," a cartoon character symbolizing a healthy, happy, immunized child, who served as mascot in a 1984 Colombian mass immunization crusade.

In 1984 the Colombian National Health System coordinated a massive immunization crusade in order to vaccinate as many children in the country as possible against a number of common childhood diseases. Collaborating with the Colombian Government were the Pan American Health Organization/WHO, UNICEF, and UNDP. The communication strategies that were designed for this crusade helped the Health System to successfully vaccinate over 800,000 children on three separate days.

The possibility of a mass immunization campaign was first discussed during Colombian National Health Week in April 1984 with the idea of building on the initial child immunization activities that occurred during that week. Just two months later, Colombia launched a nationwide crusade to immunize nearly one million children under the age of four against diphtheria, measles, polio, tetanus, and whooping cough on three designated days: one day each in June, July, and August of 1984.

In order to accomplish this ambitious goal, Colombia had to organize and mobilize its resources to overcome the kinds of shortcomings that may be found in large scale campaigns, such as a lack of coordination of personnel, communications, transportation, or financing.

Channeling Strategy

The need to involve multiple communication channels was recognized from the start. Before the Crusade began, the Ministry of Health, with assistance from the Pan American Health Organization and the World Health Organization, developed a channeling strategy. This strategy established an aggressive child identification process through direct health promotion activities. Health workers accompanied by community leaders visited households before each vaccination date to spread news of the Crusade, and more importantly, to identify children needing immunization. They collected information on each child such as name, age, sex, address, and vaccinations needed. Children who then "channelled" to the appropriate health facility for vaccination on the prescribed dates. These visits provided important personal communication between individual households and the health centers or health posts during the Crusade. The channeling strategy also facilitated the evaluation phase since children's vaccination progress was tracked through the end of the Crusade. The impact of the Crusade was therefore more easily measured both during and after the vaccination activities. Also, since records were kept on each child, the strategy allowed for follow-up vaccination of those children with incomplete schedules.

Getting Started

Communication of technical procedures was carried out by the Colombian Red Cross. More than 13,000 Red Cross members were trained as vaccinators. Sixteen thousand volunteers were trained in the channeling strategy and immunization techniques or received instruction in technical and administrative procedures, such as cold chain standards, organization of health posts, and record keeping. A booklet on technical and administrative norms was developed and distributed to more than 10,000 vaccination posts, and training in these standard procedures ensured uniformity throughout the country.

"... the press, TV, and radio played a major role in dramatically increasing the outreach capability..."

During the Crusade, both information and evaluation reports were distributed. Information reports were released every two hours on vaccination days, summarizing data on the number of children vaccinated in each health post. The mass media stimulated the Crusade by broadcasting these reports which fostered a wholesome rivalry between the different localities. The evaluation reports provided information on the results of the Crusade at the local, regional, and national levels.

Many political and social groups were called upon to extend the communication network for this national effort. The President and the First Lady actively promoted the Crusade by conducting inauguration ceremonies on each of the three vaccination days at the Presidential Palace. The Ministries of Health and of the Interior sent representatives to municipalities to encourage their cooperation and support of health personnel. The Ministry of Education solicited departmental directors and over 200,000 teachers to help disseminate promotional materials. Air, sea, and river transportation was provided by the Ministry of Defense to deliver vaccines and set up vaccination posts in remote areas. The Catholic Church provided motivational materials, organized activities, and distributed messages about child health and immunization before the start of the Crusade. Other private, volunteer, and recreational groups offered financial support for publicity, transportation, and mobilization of community members at the local level.

Mass Media Contributions

Mass media made a fundamental contribution to the accomplishments of the Crusade. The press, television, and radio played a major role in dramatically increasing the outreach capability and focusing the population on child health and development. For example, Colombia's largest newspaper, El Tiempo, using the Crusade's mascot, Pitin, carried health messages to its largely urban readers, and alerted them to the upcoming vaccination days. Many other newspapers followed suit and adopted Pitin in their articles, helping to further spread the news of the Crusade. Calendars showing Pitin next to the vaccination dates were printed and distributed. Other printed materials such as growth charts with child immunization records, information on breastfeeding, nutrition, and treatment of diarrheal disease were developed and made available to parents at the vaccination sites. News programs on the national television and radio station carried stories of the Crusade efforts that reached an estimated ten to twelve million people. Well-known entertainers broadcast hourly appeals to parents to bring their children in for vaccination. The radio also carried hourly Crusade updates and encouraged people to participate. Other television and radio stations broadcast similar messages and programs to urban and rural areas assuring extensive coverage throughout the country.

Results

The results of the Crusade are impressive. During the first vaccination day 804,053 children, or 87.6 percent of the target group, came for vaccinations. The second day of vaccinations brought in 854,570 children, or 93.1 percent. During the third and final round on August 25, 1984, 860,000 children, or 93.7 percent of the target group, were vaccinated.

The statistics clearly attest to a well-planned and executed campaign. The role that communications played in educating and mobilizing a large portion of the Colombian population was unquestionably a central factor in making the Crusade a success.

This article was adapted from Assignment Children—A Journal Concerned with Children, Women and Youth in Development, 65/68, 1984, UNICEF, by Robert J. Vittel, Information Assistant, Clearinghouse on Development Communication.
In recent years, considerable research has been done on visual literacy and how to use visual materials effectively in developing countries. We are devoting a section of this issue to the purpose of visuals, how to use them in training, and how peoples' understanding can be improved through appropriate exposure to and use of these materials.

**The Purpose of Visuals**

by Ralph Wileman

A visual aid is a device through which the learning process may be encouraged or carried on through the sense of sight. Visual aids can take many forms: they may be real objects, models, printed illustrations, photographic prints, filmstrips, video, or motion pictures. A visual often incorporates graphic devices (such as an arrow to direct the viewer's eye to a specific part of an object), as well as words to enhance a message.

A visual should be produced in the format which best presents the idea or explanation to the audience. Visuals are used to explain concrete processes (how to prepare a rehydration mixture), as well as abstract ideas (the philosophy behind cooperative efforts). There is ample research to show that using visuals is both an efficient and an effective way to communicate many kinds of ideas.

**Acquiring Visual Skills**

The ability to understand visuals is an acquired, not an automatic skill. Picture comprehension, pictorial depth perception, and the meaning of the techniques often employed in printed illustrations must be learned. Visual aids must, therefore, be designed or selected based upon the extent to which the intended audience has been exposed to visual aids and has learned to understand them. It is sometimes assumed that a visual aid serves its purpose if the intended audience can name the items displayed or describe the portrayed condition or activity. This, however, is a simplified approach to judging the value of visual aids. The audience may well be able to describe the visuals and yet not understand the messages they are meant to convey.

Effective communication through visual aids is as complex and difficult to achieve as communication through language. This is especially true in attempting to produce visual aids to instruct people who have limited experience with them. To achieve good communication through the use of visual aids, the total communication process must be considered. The figure below lists some of the important questions we need to ask about the visuals we use to teach or to communicate. Basic educational goals parallel these questions. This figure clearly illustrates the complex task of communicating through visual aids.

(Continued on page 2)

**Evaluation: Past and Present**

by Peter Spain

Evaluation is at once both overpraised and underestimated. Too often, evaluation has been asked to be something it is not, and not asked often enough to do what it can do best. Recent experience has clarified evaluation's role, especially its specific contribution to achieving project results. My purpose here is to sketch the main aspects of evaluation's traditional role, contrast traditional evaluation with the evolved and evolving role that evaluation is playing today, and then show how evaluation fits into any process for getting things done.

**Evaluation Past . . .**

Traditionally, evaluation has been an after-the-fact exercise for those projects that can afford it. Evaluation was viewed as quite an enlightened thing to do, really, a sign of open-mindedness and a willingness to learn. But evaluation was a luxury, possible only in projects underwritten by donors of particular largess. Evaluation was not used to improve current projects but, instead, to plan and improve future ones.

Traditionally, evaluation has been performed by an outside consultant or team. The outsiders contributed not only their particular skills in data gathering and analysis, but also the requisite objectivity much in the manner of basic scientific research. Evaluation carried out in this manner was retrospective—sifting through evidence, questioning participants, drawing inferences, and then rendering a verdict about project success or failure. For the people who ran the project, the matter was out of their hands.

Traditionally, the relationship between project people and evaluators has been adversarial. Project people were often threatened by the possible discrepancy between what they thought they should have done and what the evaluators thought should have been done on the project. Because evaluators and project people were not necessarily working from the same agenda, the possibility for the development of an adversarial relationship was high.

(Continued on page 8)
The first question to ask is, "Is it perceived?" Attention is captured, at least momentarily, when viewers discern there is something new or different to look at in their field of vision. This is especially important when the visuals used to teach are posters or other visual media that must capture the viewers' attention without external verbal prompts from a health worker or teacher. The visual must also be "readable." "Can the audience see and read the pictures and/or words we have displayed?" Readability is affected not only by how we render the display, but also by the distance from the display to the furthest viewer. If people in the last few rows of a classroom cannot read or see your flipchart on crop rotation, then accomplishing your educational goals will be difficult, if not impossible.

Second, "Is the visual identified as intended?" An enlarged photograph of an insect may be understood to be an insect, but the audience may believe their crops are safe since the pests on their crops are much smaller creatures than the insect in the photograph.

Third, "Is the visual culturally appropriate for the intended audience?" In some cultures, depicting a woman smoking a cigarette would not be acceptable and might cause that audience to reject the message. Visuals of people's attire, their living conditions, or even their standing or sitting posture must be acceptable for them to be effective.

Fourth, "Does the visual depict something that is important to and valued by the audience?" If the visual is meant to instruct the viewer in the painting of a house, and house painting is of no importance to the viewer, there is little chance the visual will hold his/her attention.

Fifth, "Is the visual memorable?" An image that is remenbered is one that will be recalled and used. An abstract image of a mother nursing her child may or may not be understood by the intended audience, whereas clearly representative figures are likely to be more memorable.

The objective of this questioning is to determine if the intended audience can identify, "read," and understand the visual image. However, the ability to identify what is seen is not enough. The intended audience also must believe what they see, value what they see, and be convinced by what they see. Only then will the real educational goal—change attitudes and behaviors—be accomplished. Field testing and other research techniques are required procedures for today's visual communicator. The systematic gathering of data about how visuals are perceived, read, identified, valued, or remembered can help advance the art and the science of communicating with visuals.

Ralph Wileman is director of the Educational Media and Instructional Design training program at the University of North Carolina, Chapel Hill, and has worked in many countries, training health workers in designing and producing educational materials.

Course on Managing Health Audiovisual Materials

A course that explores the techniques of managing a collection of audiovisusals—selection, evaluation, cataloging, classification, storage, retrieval, maintenance of materials and equipment—the role that the audiovisual resources person can play within educational or medical institutions, is being offered by The British Life Assurance Trust for Health Education (BLAT) at the request of the World Health Organization. This course is intended for people without formal library training who are responsible for running libraries or resource centers, particularly in developing countries, and librarians wishing to extend their professional skills to help them cope with audiovisual materials. There will be strong emphasis on practical work. It will be held in London from August 5-21, 1986. The closing date for applications is April 16, 1986.

Further details can be obtained from Ms. B.S. Carney, Information Officer, BLAT Centre for Health and Medical Education, BMA House, Tavistock Sq., London WC1H 9JP. (Telephone: 01-388-7976).
Learning to Use Visual Training Materials

by Mari Clark

There is a long-running debate about whether trainers should be instructed in how to develop and use visual training materials. Discussions about the desirability and practicality of taking time for this type of training often are based on misconceptions that have restricted the use of this potentially powerful communication tool. Time is seldom scheduled to teach visual thinking, designing, and communicating during training of trainer sessions. Trainers rarely use visuals other than flipcharts with lists of key words or objectives in these sessions. If they do use pictures, films, or other visuals for training purposes, they often fail to select and apply them effectively toward specific training objectives. The following points address the lack of appropriate visual communication training and offer suggestions for strengthening visual communication in the training of trainers.

Misconceptions

Many trainers consider visuals for training to be a technical area requiring high level skills in design, drawing, and audiovisual equipment operation. Because trainers are busy and need to focus on only the essentials during the brief span of a training course, they often set aside visuals and how to use them as luxuries that are "nice but not necessary." This attitude is influenced by traditional Western formal education where all too often pictures are looked upon as learning materials for small children, and the reading of textbooks with many words and few pictures as the province of adults.

When trainers do use visuals, there is a tendency to focus only on their potential for information transmission — as illustrations for lectures in the form of charts, picture slides, or films — rather than using them to involve the learners actively in the training session. Related to this is the frequent lack of attention paid to effective use of visuals in terms of timing, cultural appropriateness, and smoothness in presentation. Often there is too much dependence placed upon a polished visual presentation to convey a message. Experience shows that even the best designed visual is only a distraction when shown at the wrong time, to the wrong people, or handled in the wrong way. The common theme connecting these misconceptions is that visuals are seen as separate products rather than an integrated part of the training process.

Learning by Doing

Avoidance of visuals based on these or other misconceptions is unfortunate because their use, combined with participatory training techniques and effective verbal communication, is a powerful means of conveying abstract ideas in a visual context, and adds a concrete element to the planning process. It is important to keep in mind that effective use of visuals in training is as important as their design in influencing learning and behavior change. Research and practical experience indicate that they are most effective when combined with nonformal education techniques that enable questioning and problem solving as well as transmission of information. Visual aids, when combined with these techniques, not only transfer information; they can stimulate discussion, provide a focus for problem identification and problem solving, and involve people actively in the learning process within small group and individual activities.

Working with learners to develop visual aids is an effective means of learning by doing. In the process of developing visuals, trainees broaden and reinforce their learning about the ideas or messages represented. It also

Visual Communication Training for Family Planning Workers

by Catherine Murphy

Is it possible to turn a non-artist health worker into a producer, user, and trainer of visual communication techniques for health teaching? Based on the results of numerous visual communication workshops conducted by the Program for International Training in Health (INTRAH), the answer is an emphatic "yes."

With funding from the Agency for International Development, the INTRAH Program has developed various family planning training workshops for selected African, Near Eastern, and Asian countries. One of the identified needs among some of the host countries was for family planning workers to acquire skills to develop their own visual materials and then to use them in family planning education or training of other health workers. A two-week visual communication workshop was designed to address this need, and such workshops have now been conducted in Kenya, Somalia, Sierra Leone, Mali, Tunisia, and Rwanda.

During these family planning visual communication workshops, the first step is to explore the rationale for using visual communication techniques for various general health training or educational problems. Participants then proceed through a ten-step process for planning, producing, and using visual communication materials and methods. The first step in this process examines the six teaching questions which serve as the foundation for visual communication. These questions are:

1. WHOM am I teaching?
2. WHAT do I want them to be able to do?
3. WHERE and HOW LONG will the instruction take place?
4. What teaching METHOD or METHODS will I use?
5. What VISUAL AIDS will I use?
6. How will I know how EFFECTIVE the instruction was?

The process then outlines visual thinking skills, and design considerations that form the basis for visual message design. These skills enable participants to judge what makes a good visual aid to sketch visuals which illustrate concepts, data, and processes. The workshops focus on developing practical skills. Participants decide what topics will be discussed depending upon the own needs or interests.

They work in small groups and individually on visual communication problems with guidance from trainers on designing, pretesting, and producing visual materials then demonstrating how they will be used for teaching other family planning trainers.

An important element of these workshops is the emphasis placed on making training relevant to local resources and needs. This is accomplished by creating models and picture series and other visuals from locally available raw materials, facilities, and human and material resources. Emphasis is also placed on developing materials on topics that the participants have identified as needed by their target audiences. Finally, INTRAH works with national co-trainers to design, conduct, and modify the training process itself. Once the national co-trainers develop basic skills in visual communication training, they begin contributing their own ideas for techniques and materials that are locally and culturally relevant. Through practice and technical assistance these national trainers learn how to conduct visual communication training on their own.

(Continued on page 4)
strengthen the communication skills of the learners. An understanding of how to pretest visuals is also important to assess the materials and to learn about the interests of the audience for whom the training is intended. The following visuals illustrate some of these applications.

Making visual aids is very useful in helping learners discover solutions to problems. Mothers and children can learn about diarrhea and dehydration by making their own "baby" from clay, tin cans, plastic bottles, or gourds. They can experiment with the principle of rehydration by pouring water into the "baby" and mending the different openings with "food."

You could use this picture as the basis for a discussion by asking, "What do you think this picture is about?" Often this is the only question you will need to ask. To keep the discussion going, you might ask, "Who are these people?" "What is happening in the picture?" or "How do the people feel about it?"

Selection of Visuals

Specific needs of trainers vary considerably in the selection, design, and use of visuals depending on the tasks and resources of the trainers. For some, the selection and use of visuals are the primary needs. Given a primary training situation, they need to decide what, if any, visuals will help them accomplish their goals and how to use those visuals most effectively with particular training techniques. For others who work with artists, basic skills in visual design help them communicate more effectively and avoid miscommunication that wastes hours of planning and drawing time. Those who have no artist and few resources also need skills in visual design to develop their own visuals or to use simple techniques to adapt existing materials for their specific training needs. In all these instances, how to make visuals is not nearly as important as how to select, design, and use visuals and to effectively integrate visuals with participatory training techniques.

Below are some suggestions for strengthening visual communication in the training of trainers:

1. Use good examples of visual models throughout the training.
2. Display examples of good visuals related to the topics so trainees can handle them.
3. Give trainees opportunities to practice selecting and using visuals effectively with a variety of training techniques.
4. Provide opportunities for trainees to practice and trainee feedback on selection and use of visuals with training techniques.
5. Use visuals to explore the basics of effective visual communication and what hinders communication. (See the bibliography at the end of this article.)

For trainees who need to work with artists or must develop their own visuals:

1. Provide practice exercises in communicating visually.
2. Demonstrate and practice planning visual training based materials on training objectives.
3. Demonstrate and practice pretesting materials, emphasizing this as a means to learn about the audience as well as the effectiveness of the materials.
4. Demonstrate and practice simple techniques for adapting and making visuals by tracing parts of existing materials.

Bibliography

Fetter, K., Clark, M., Murphy, C., and Walters, J., Teaching and Learning with Visual Aids, Chapel Hill, North Carolina: INTRAH Program, 1985. A limited number of copies are available free to persons working in developing countries from: Catherine Murphy, INTRAH Program, 208 N. Columbia St. (344A), Chapel Hill, N.C. 27514, U.S.A.


Experiences in Family Planning and Health, 38 pp. Individual copies free from: PATH, 10030 Nickerson St., Canal Place, Seattle, Washington 98109, U.S.A.

Muriel Clark is currently finishing her doctoral dissertation in anthropology. She was formerly associated with CP/PATH, Chicago, where she directed the development of the Peace Corps training manual for the Control of Childhood Communicable Diseases Project.

(Murphy continued from page 3)
Many developing nations are unable to provide adequate instruction in their primary school classrooms because they lack economic and human resources, especially in remote rural areas. One of the quickest and most reliable ways to alleviate this problem is to provide interactive radio instruction, a proven technology for use in poorly equipped schools with undertrained and overworked teachers.

The technology of interactive radio instruction, although quite new, has already proved itself to be very effective in improving the quality of instruction in diverse subjects and countries. It has been used to teach mathematics in Nicaragua, English as a second language in Kenya, and reading in the Dominican Republic (see DCR #49). Extensive evaluation of these programs shows significant improvements in children's achievement scores. In Nicaragua, for instance, an evaluation of a first grade class showed that average mathematics test scores increased from 39 percent to 65 percent.

Implementation costs, when used with large numbers of students, is very low—less than one dollar per year per student. Unfortunately, many nations who would like to use interactive radio instruction and who can afford the implementation cost of the lessons, do not have funds available for developing completely new lessons, and would also like to implement it at more than one grade level per year. Development costs to produce a high-quality, year-long series runs between $300,000 and $500,000, due largely to the careful planning and the extensive field testing required to produce such lessons.

A possible solution to this dilemma is to adapt interactive radio lessons that have already been prepared for another country rather than developing a completely new series. The questions are whether existing lessons can be adapted for another country's needs, and whether such an adaptation would change the materials so much that the quality of the original product would be significantly reduced.

Adaptation Process

The opportunity to investigate these questions arose in 1980, when Thailand decided to adapt the Radio Mathematics lessons from Nicaragua, and use them on a small scale to determine if they would be appropriate for a Thai audience. In Thailand there is a major disparity in the quality of education between urban and rural schools, and it was hoped that the use of radio instruction, which would be uniform throughout the country, could help to reduce this difference.

Although radio instruction has been used with considerable success in Thailand for many years, there were no courses in mathematics for elementary school comparable to the course designed for Nicaragua. At that time, adaptation of such materials had never been done in Thailand, so it was decided to adapt only the second grade, and to pilot test the lessons rigorously in a small number of schools before planning nationwide usage.

Because all the original scripts were written in Spanish, the first and major adaptation was to translate the lessons into Thai—a considerable task due to the dissimilarity of the two languages. Adaptations also were needed in the songs, games, and jokes that are an integral part of the lessons, and required comprehensive rewriting to reflect Thai culture. Geographic references, names of common fruits, and other culturally related components of the scripts were also changed.

Fewer content changes were required, for example, instruction in division was added to the lesson plans. For the most part, however, Thai mathematics curriculum for early grades was quite similar to the Nicaraguan mathematics curriculum. Adapting to the standard educational radio series already in place in Thailand which lasts 32 weeks, the total number of lessons was reduced from 175 to 160, calling for some lesson incorporation and deletions.

Lessons Begin

Broadcasting began in May 1980, the beginning of the Thai school year. The pilot study was located in two areas of the country: the Central Plain region near Bangkok, and the Northeast, a very isolated, poor region of the country. Lessons were broadcast daily to second grade children in 16 schools in each region. At the end of the school year the children were given a special posttest to assess their abilities in mathematics. At the same time, children in 32 non-radio classes, similarly divided between the two regions, were given the same test to establish comparative data to that of the children in radio classrooms.

(Continued on page 11)

![Graph No. 1](chart.png)

Mathematics Achievement in Nicaragua and Thailand

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Nicaragua | Thailand Central Plain | Thailand Northeast

Normalized Difference: .36 | .24 | .58

*A measure of improvement when comparing different populations: $D = \frac{\text{mean (experimental)}}{\text{mean (control)}} / \text{SD (control)}$
A Communicator's Checklist

1


The Promise of Literacy reports the proceedings of the 1982 International Seminar on Literacy held in Udaipur, India. H.S. Bhola, of Indian University, and Josef Muller and Piet Dijestra, both of the German Foundation for International Development, were coauthors of the report. The seminar itself was one of a number of international conferences which have been convened over the last two decades to discuss adult literacy training. In fact, to read The Promise of Literacy by itself is like reading a passage out of context.

The Udaipur Seminar focused specifically on the "mass campaign" strategy for adult literacy training. The rationale for this focus is explained in the introduction as follows: "In most parts of the Third World, barring a few happy exceptions, literacy work has been in the form of experimental projects and cautious pilot programs. Strategies used have seldom been bold or commensurate with the size of the problem." One such bold measure is the mass campaign which has proven to be a precious strategy as the Udaipur Declaration maintains. "The clear lessons from efforts in many countries is that nationally motivated mass campaigns can banish illiteracy regardless of the adversity of conditions a country faces."

Convinced of the efficacy of the mass literacy campaign, the organizers of the Udaipur Seminar attempted to provide a forum for government planners and literacy experts already experienced in conducting mass campaigns to compare and contrast strategies with each other and to share what they had learned with representatives of countries who are at the threshold of planning and implementing campaigns. To provide a common point of reference for the discussions, the organizers structured the seminar around a UNESCO-commissioned study by H.S. Bhola, Campaigning for Literacy, in which eight different historically significant campaigns form the basis for a comparative study of the campaign strategy. Bhola included in his study a well-written theoretical overview of how to plan campaigns in a chapter entitled "Planning, Implementing, and Evaluating Literacy Campaigns: A Memorandum to Decision Makers." The seminar participants found this "Memorandum" to be the most useful and concrete elaboration of planning, implementation, and evaluation of literacy campaigns, programs, and projects. Consequently, it appears again in its entirety in chapter six of The Promise of Literacy.

One of the important contributions of conferences such as the one in Udaipur is that resulting publications like Campaigning for Literacy, The Promise of Literacy, and the more recent, One Billion Illiterates together provide a historical overview of many of the mass campaigns undertaken around the world. Unfortunately, some of the campaign reports from the Udaipur Seminar in particular are overly brief or too shrouded in official government rhetoric to be informative.

The "Udaipur Literacy Declaration," a significant document which summarizes the conclusions reached at this Seminar, is also included. One of the noteworthy conclusions is that although most successful campaigns are characterized of "societies in the midst of profound and structural changes," any society, regardless of the political system, "can activate forces for change and create a supportive political environment." The introduction to the book echoes this conclusion when it claims that the necessary, and indeed, sufficient condition for mounting a successful mass literacy campaign is "the existence of the national will to mobilize national imagination and national resources." Such claims stem from the comparative evidence that, although most of the successful literacy campaigns have occurred in the context of revolutionary movements, some countries, most notably Brazil, have managed to conduct campaigns in non-revolutionary environments, as well as from evidence from countries like Nicaragua that campaigns do not depend so much on big budgets as on a national popular will to eradicate illiteracy.

In general, this book contains an informative section on the theory and practice of conducting mass literacy campaigns, and an important declaration which once again calls for literacy to be placed as a priority on the international development agenda. To be understood in context, however, The Promise of Literacy should be read as part of the formal series of publications which have emerged at the working papers or reports of other international adult education and literacy conferences.

Recommended Reading:


Cecil Klassen is currently completing his Master's degree in International and Comparative Adult Education at the University of Toronto, and has taught English as a Second Language to high school and adult students.

Available from NOMOS Publishers, P.O. Box 610, Baden-Baden, West Germany for 38 German Marks approximately US$16. Free for developing country readers from German Foundation for International Development, Hans-Bockler-Str. 5, D-5300, Bonn 3, West Germany

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This collection of essays focuses on the relationship of social priorities and scientific research as a new basis for national and international development. The goal of this lofty endeavor is to redefine development in human terms, to replace the emphasis on material goods of the industrialized nations, with the human needs and limited resources of the developing world. Technology and the products of scientific investigation, it is argued, should be redirected to the concerns of world poverty, technology transfer, and the effective use of available knowledge; and only through the reorganization of international priorities and the redirection of scientific efforts will such goals be reached.

The volume is the result of the "Research and Human Needs" program that was conceived at a symposium/workshop in Venice in December 1975. The book "discusses the results so far achieved, and what they imply for the future."

The individual presentations represent a number of disciplines, countries, and styles, divided into three sections: concepts and philosophy, methodological approaches, and practical programs in different parts of the world. The essays are written as speeches and retain a sense of purpose and polemic which suggest the political and policy orientation of the book, yet, this dialogue with the unseen governments, policy-makers, and interested public is illustrative of the lack of coherent editing or logical progression of ideas. In this sense, the book will be of interest to individuals looking for an introduction to the idea of socially appropriate development, but will not provide a satisfactory exploration of the subject for those deeply involved in the field. The humanistic/scientific dilemma is well known in most development agencies and university settings such that the real importance and impact of these essays will be on the general public and political domains. The editor has included a number of essays by individuals who

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are not normally considered authorities on development, such as the actress Bibi Andersen, but who add a new dimension to the discussion by the inclusion of the arts and humanities in the overall human needs framework.

A possible criticism of the volume is the unqualified assumption that science is good, or on the other hand, that "good science" cannot have a specific applied objective without striking "a mortal blow." It is unclear what the ultimate "good" of science will be and what contribution scientific endeavor will make to the problems of the developing world. Nonetheless, the idea that the power of science - both in the metaphorical and technological - should be linked to social priorities is a significant statement and organizing principle for research institutes, programs, and international funding. The argument that knowledge, science, and intellectual skills should be placed in the service of people is a moral imperative. This book begins a discussion of how such an imperative can overcome the problems of national boundaries, cultural values, and economic constraints.

One of the most successful papers is by K. Soedjatmoko, Rector of the UN University, who reviews the national policy implications of the basic needs model. By examining each sector of a developing economy, including health, housing, education, food, land reform, and cultural, legal, political, and ideological policies, he evaluates the problems and questions which will arise with the application of the basic needs model. He concludes by reminding us that "the massive intellectual effort and the staying power" of a continuing dialogue requires only that it be generated and maintained when mutual trust, faith in the basic qualities of the other people, and willingness to suspend judgement for a long period of time are a part of the common commitment that has been made. This level of commitment that has been made. This level of commitment and the importance of human relationships still remains the basic medium for development and successful social change.

Setha Low is Associate Professor of Landscape Architecture and Regional Planning, City and Regional Planning, and Anthropology at the University of Pennsylvania, Philadelphia, Pennsylvania. She currently is involved in culturally appropriate planning and design in Costa Rica and the United States.

Technology Policy and Development: A Third World Perspective is not that book. This collection includes a mix of articles by industrialized country authors, many written in the early 1970s, and a few reprints of articles and publications from the U.N. Conference on Technology and Development and the U.N. Industrial Development Organization. A statistical section includes some very general U.N. economic data for the 1970s, developing country research and development expenditures and the number of engineers and scientists in the early 1970s, and developing country expenses for technology transfer in the 1960s. An annotated list of pertinent books, articles, and institutions occupies almost a third of the book. Too many of the articles are hopelessly out of date. Attitudes and understanding of what is appropriate technology have evolved considerably since 1973 when Robin Clarke published the essay reprinted here. William Eller's 1980 article uncritically quotes a prediction that photovoltaic cells will cost 50 cents per cell: watt in developing countries in 1986. The article on science and technology in black Africa was first published in 1973. An article on industrial and technology policy in Tanzania describes policies in detail, but provides no insight on whether these policies are to blame for the country's current problems. Several of the articles are still relevant, if not timely. Charles Weiss and his colleagues at the World Bank offer good general advice in "Guiding Technological Change." The forbidding sounding "Technological Self-Reliance of the Developing Countries: Toward Operational Strategies," by the U.N. Industrial Development Organization is a comprehensive statement of developing country attitudes toward international patent policy, transnational corporations, and the industrialized countries, and of technology policy options open to the developing world. Denis Goulet provides an insightful commentary on the role of values in technology policy, and the UNCTAD review of developing country technical progress from 1970 to 1975 includes useful historical data.

Technology Policy and Development is most successful as a bibliographical reference. The 190-page annotated bibliography of books, articles, and other bibliographies is a handy guide to pre-1982 literature. The statistical section is a useful lesson in how little is known about science and technology activities in the developing countries. The essays provide a historical portrait of what the U.N. and Western development specialists were thinking about technology and development in the 1970s, but the book does not deliver what its title promises - developing country thoughts and actions on technology policy.

Kevin Finneran is an independent science and technology policy consultant. He has worked for the Agency for International Development, the International Institute for Environment and Development, and the National Academy of Sciences.

Available for US$49.95 from Greenwood Press, 88 Post Road West, Box 5007, Westport, Connecticut 06881, U.S.A.

On File at ERIC

Documents recently entered in the ERIC (Educational Resources Information Center) files include an overview of communication and technology in development, a report on a theater-for-development workshop, a handbook for film producers, and a study and manuals on the use of visual tool materiales

All these documents are available in microfiche and all but one in paper copy, from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22304, U.S.A. Be sure to indicate the ED number in your order. Available from the U.S. funds for the price listed plus shipping. Shipping costs may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.


For more than a decade, the Academy for Educational Development's Clearinghouse on Development Communication has collected information and chronicled trends in the application of communications technology to development. This paper summarizes what the Academy has learned about communication and development from various perspectives and discusses the future use of new technologies. Areas covered include: (a) strategies (media based, instructional design, participation, and marketing); (b) the importance of language, culture, and politics; (c) the development sector (agriculture, family planning, education, health, nutrition); (d) technology (television, radio, print media, traditional and folk media, other media, telecommunications, computers); and (e) lessons for the future (audience orientation, targeting areas for change, media networks). Examples of successful communications projects are included to illustrate the positive impact of media intervention on development programs. Available from the Clearinghouse on Development Communication, 1255 Twenty-third Street, NW, Washington, DC 20037, or from EDRS in microfiche only for 75 cents.


Focusing on the experience of one of seven working groups at a theater-for-development (TFD) workshop in Zimbabwe, this report details the process followed by many groups, and reveals some of the major learnings, dilemmas, contradictions, strengths, and limiting factors found in a practical village-based TFD process. This drama form is described as an experimental collaborative process designed to take theater out of urban enclaves and make it accessible to the masses, presenting such
Traditionally, evaluation has sought to answer the questions 'What is wrong?' 'What is the problem?' and - inevitably - 'Who is to blame?' At the conclusion of a project when people's work was evaluated, there was little to say to counter a negative evaluation. Since the project was already over, they could not make the indicated adjustments, and since involvement in future projects could be jeopardized by a negative evaluation, the evaluation exercise represented, for these people, a substantial personal threat.

Traditionally, evaluation has often been confused with policy analysis. The evaluator has been asked upon as someone who tells people what they should or should not do. There is, however, a very important distinction between these two functions. Policy analysis properly combines the wisdom, experience, and judgment of a group of people to determine what to do (policy), and to determine later if what has been done should have been done. The evaluator's role is more narrow: the evaluator determines what has been done, so actual results can be compared with the desired results.

The characteristics elaborated above have long been assumed to be standard characteristics of the evaluation process. I wish to challenge these assumptions, to show how evaluation can play a more useful role in project implementation. Indeed, many evaluation practitioners have gradually moved toward more constructive uses of evaluation, precisely because they have gone beyond assumptions.

Evaluation Present...

Evaluation occurs throughout the project. The traditional assumption that evaluation occurs after-the-fact implies that evaluation cannot contribute to the outcome of the project. It is only an evaluative body of "lessons learned" that pertains undertaking near projects might consult and follow. The most critical and limiting corollary of the traditional assumption—that evaluation was to be done after the project—was that project people somehow could not state the results they wanted beforehand, and that objective measure where they stood in terms of those results until it was too late to do anything to change what had happened. It was assumed project people could not control what was happening once the project had started. More recently, however, evaluation has been recognized as a valuable tool to help project participants achieve their goals.

Evaluation can, in fact, be carried out at any stage of the project—before, during, and after—as a way of measuring the actual situation vis-a-vis the project's desired results. Thus, what is required for a good evaluation—before getting out statistics book, plugging in a computer, or designing a specific data-gathering method—is a clear statement by the project people of the desired results, in measurable terms. Defining measurable indicators of desired results defines and clarifies the evaluator's task. It also requires that project people understand what is happening before the project (baseline evaluation), and during the project (formative evaluation) in terms of those same, precise, measurable indicators. The baseline evaluation will aid greatly in project design, and the formative evaluation will allow the project team to change things while there is still time to affect project outcomes.

From this perspective, evaluation is integrated into the project as a way to get things done. Always using the desired results of the project as the criteria, evaluators can look at what is happening before and during the project to guide project design and implementation.

**Evaluation is an essential function, not a luxury.** When evaluation is done after the project, results are used not by the project people whose work is being evaluated, but often by a nebulous group of future implementors in similar settings. Theoretically, they would take the evaluation results, find the similarities between the evaluated project and the contemplated project, apply useful lessons, and then move onward and upward on the basis of this continually cumulating body of lessons learned. In reality, future implementors take too little time to study the state of their art, and often say that few lessons are directly applicable anyway. When these future implementors are the only beneficiaries of evaluation, the sponsors of the project to be evaluated may hesitate to pay for something which is not of direct use to them.

Thus, evaluation appeared to be a luxury, something peripheral to the project itself, and something whose value for other projects was hard to determine. But when evaluation becomes part of the fabric of project implementation, as a stimulus to the achievement of clearly stated results and as a monitor of measurable indicators of those results, the project itself becomes the chief beneficiary of evaluation. No longer a luxury, evaluation is seen as essential for getting things done.

Once the sponsors are convinced that evaluation is vital to accomplishing the desired results, they can justify this investment on solid grounds—the alternative being to gamble that the project fails and will continue to achieve those desired results.

**Evaluation should be done by insiders.** To the degree that an evaluation is complex, the project team needs to include persons with the requisite technical skills who bring with them a blend of social science, statistics, and computer analysis. They should be brought in to work for the project's desired results and remain with the project from start to finish. Traditionally, evaluators have been outsiders—people not concerned with the project's desired results, who came on the scene at the end of the project. Also, grounds for using outside evaluators went further, that is, to maintain objectivity and to maintain the standards of scientific experimentation. Perhaps objectivity is important if you look at evaluation only as a post-mortem assessment of what happened. Objectivity implies a definite distance on the part of the evaluator. To the extent that accurate, timely information about results can contribute to the project, however, evaluation should not be objective, but rather be used to get those results.

Similarly, maintaining standards of scientific experimentation poses a problem when applied rigorously to evaluation. If evaluation says above the battle, not offering its findings to the project team because of a desire to be scientific, neither science nor the project benefits. A project is not an experiment—intervening simply to see what happens. A project has desired results and needs and evaluations interventions regularly in terms of those desired results. While an experiment is value-free, a project is not. Achieving the desired results of the project is the ultimate goal, and the evaluation process is used to determine whether progress is being made toward that end.

**Evaluation is not adversarial.** Evaluation has often been a threat to many project participants, and justly so. When used only retrospectively and when not arising from a predetermined project agenda, evaluation can easily become a negative and damaging experience for a person. Even the best people can design and implement a project that does not achieve—without mid-course corrections—what they had hoped for. When used only retrospectively, evaluation offers no constructive guidelines to the project; and, if the evaluation is negative—implicitly or explicitly—the blame falls on those associated with the project. A retrospective evaluation deals only with success and failure, with praise and blame, and is rightly perceived as a threat.

In contrast, when evaluation is integrated into the project, both at the baseline and during the formative stages, the focus shifts from success and failure—praise and blame, to improvement. More importantly, focus shifts from the evaluation of persons to the evaluation of methods. When an evaluation is carried out during a project, and when this information is made available to those who are committed to achieving its desired results, it is possible to change methods in mid-course.

Evaluation clearly becomes a scrutiny of methods in terms of improving desired results and not a personal ordeal in terms of success or failure. This depersonalization of evaluation is not incidental. It stems directly from the project's articulation of its desired results at the beginning, and from ongoing assessment while the project can still be improved. In the absence of desired results, people will work off their own, separate agendas and be vulnerable to criticism from people with other agendas. The work becomes personalized. With everyone focused on the same agenda, however, the project team need not question themselves when improvement is needed. It is the methods, not the people, that need changing.

**Evaluation differs from policy analysis.** In the absence of good policy analysis, evaluators are often brought in to determine what should be done. It is commonly believed that evaluators can and should tell people what to do, testifying to a lack of good policy analysis. Policy analysis should determine the desired results for an enterprise, as well as the measurable indicators of those desired results.

(Continued on page 12)
Participatory Radio in Arequipa

by Jane Duran

In the city of Arequipa, located in the mountains of southern Peru, a participatory radio project is attempting to motivate young people to become more involved in their communities' self-help activities. This project is supported by the British Council's Educational Projects Fund, and its focus is the production of a weekly magazine-format radio program called Inquietudes, or "concerns, feelings that motivate." Inquietudes is broadcast by the local religious and cultural radio station Radio San Martin and is aimed at young people between the ages of 16 and 23. With this three-year project, running from 1983 to 1986, the British Council provides a studio and on-site recording equipment and materials, training programs and resources, and a London-based project consultant, and local support from the British Council office in Lima.

The catalyst for the project is a small group of volunteers working for a production center called COAMCOS (la Comision Arquidiocesana de Medios de Comunicacion Social de Arequipa). Since 1975 COAMCOS has been producing an average of ten weekly cultural and religious radio programs broadcast locally on behalf of the Archdiocese, but prior to the Inquietudes program, the production team had had no experience in community-based, participatory radio. Funding and time constraints argued in favor of selecting a priority target audience and limiting output to a 24-minute weekly program. After considerable audience research, the team decided to focus on young people in the pueblos jovenes, or "young villages" of Arequipa in the hope that this sector could be motivated to play a more active role in the community.

Pueblos Jovenes

The pueblos jovenes surrounding Arequipa number well over three hundred, and house a majority of the population of the province of Arequipa. They are populated mainly by migrants from other regions of Peru, and are in varying stages of development depending on factors such as the length of time established, proximity to the city, the degree to which communities have organized themselves, and support from local organizations. For many villages, however, economic and social problems are acute. Water, electricity, sewage, and rubbish disposal, and adequate health facilities and schools, while unemployment is widespread. Few formal communication networks exist between the pueblos jovenes to facilitate an exchange of information and ideas on a wide range of topics and issues relevant to young people from the pueblos jovenes. This format, with its organization into discrete sections, also accommodated the time constraints of the team, who could work only at night and on weekends. It enabled the team members to work independently when time permitted, although planning and final compilation would be a team effort.

A second on-site training workshop occurred a year later. During this workshop, the BBC specialist and the team reassessed Inquietudes based on an interim evaluation survey carried out by the team in the pueblos jovenes. The training concentrated on those production and training skills which needed to be strengthened in view of ways in which the project had developed. Changes on program strategy and content were also made at this time.

Program Evolution

Since March 1984, Inquietudes has offered young people a forum where they can discuss issues that concern them. Community news and announcements are increasingly presented by members of the communities themselves; some presentations are produced entirely by groups of young people from the villages who were trained by the COAMCOS team. The program features local musicians and presents ideas for new activities in which young people can participate, while providing a channel for information on community projects. While maintaining the magazine format, Inquietudes may take the form of a "special" devoted to an individual village, recorded on location, and emphasizing problems and self-help projects to improve conditions. Content is lively and varied, increasingly carrying the voices of young people from the pueblos jovenes rather than those of the COAMCOS team members which had initially dominated the programs.

Evaluation

Evaluation is an integral part of this project. Listeners' comments and suggestions are included. Improvements and problems were also reflected in survey information gathered by the team. Another form of evaluation occurs with regular contact between the field team, the London-based Media Group, and BBC specialists. Copies of all transmitted tapes are sent to London together with "letter casettes" in which the COAMCOS team discusses new developments and problems, allowing for regular project monitoring and rapid response time.

Since the first broadcasts of Inquietudes, the team has concentrated on increasing the involvement of their listeners in the various production stages of the program. This effort has been successful as young people from many of the communities regularly participate in production activities. Seen in a wider context, the COAMCOS project is only one of a variety of existing activities in Peru in the field of participatory radio. Some of these rely on the most rudimentary facilities, such as public address systems in market places or villages to disseminate community programs. Other radio activities are implemented by local groups.

(Continued on page 10)
who acquire time on commercial stations for individual programs; while a few radio stations sponsored by religious organizations broadcast a wide range of listener-based programming. Although participatory radio in Peru is still overshadowed by traditional commercial radio programming, there is now some awareness of its potential impact and use as some communities are given access to a communication channel which can help them to achieve their self-development goals.

Jane Duran is a Media Officer with the British Council's Media Group, and advises on training and resources for radio and its applications for education and development.

Addendum

Dr. Norbert Hirshhorn, who contributed the article "Saving Children's Lives: A Communication Campaign in Egypt," in DCR #51 is Vice President of the John Snow Health Group, Boston, Massachusetts.

(ERIC continued from page 7)

common concerns as crop production, water shortages, immunization, literacy, and family planning. A day-by-day diary account of this working group provides an overview of, and describes the specific tasks involved with, the production of a "theater puzzle"—people's theater. A TFD model lists educational objectives for the drama process and defines the objectives of the workshop: (a) to train development cadres and theater artists in TFD, and (b) to start a TFD program in the Murewa area of Zimbabwe as a training and popular education/culture program. The report concludes with an analysis of the workshop, including constraints, relationship with villagers, organizational strategy, and teamwork. An extensive bibliography is included. Available from the Center for the Study of Education in Developing Countries, Badhuisweg 251, P.O. Box 90734, 2509 LS, The Hague, The Netherlands, or from EDRS in microfiche for 75 cents or in paper copy for $3.60.


Designed for use in conducting media production training with Peace Corps fieldworkers, this manual is divided into three sections: skill exercises, line drawings, and directions for making art supplies from easily obtainable resources. Nineteen step-by-step skill exercises cover basic cutting, wet and dry mounting, simple drawing, freehand lettering, cutting and enlarging, tracing, and making blackboard stencils. Guidelines are also given for using blackboards, flannelgraphs, and flipcharts with village audiences. Suggestions for effective utilization of color and design describe creative ways to enhance visuals, and simple line drawings of frequently used subjects are provided for fieldworkers to trace, copy, and enlarge. The concluding section contains recipes for making such low cost materials as paste, ink, dyes, paints, rubber cement, and modeling clay. Available from EDRS in microfiche for 75 cents or in paper copy for $9.00.

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Editing and Publications Training Course

The International Rice Research Institute in the Philippines (IRRI) and the Canadian International Development Research Center are offering agricultural communications an editing and publications training course at IRRI. The course will be offered twice in 1986 and twice in 1987. This is an intensive four-month program for eight to ten participants each session. It is a "hands-on" training experience for those already engaged in editing and publication at national or related research and extension institutions. Candidates should be 25-45 years old; have a B.S. or M.S. degree; have at least two years related experience, and be proficient in English.

For information contact: The Director of Research and Training, IRRI, P.O. Box 933, Manila, Philippines.

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short radio spots, jingles, and/or interviews; directing the same message to different audience groups (say, educating fathers and children— as well as mothers—about oral rehydration therapy); and adding sound effects and music to productions. Recommendations such as these are often provided by Network participants.

Contributions from the Network's participants are crucial in compiling subsequent packets. In fact, the only requirement for receiving the free script packets is that an enclosed information poll be filled out and returned to DCFRN headquarters. Questions from a recent survey asked which items were found to be the most useful; what crops, livestock, pests, and diseases are found in the community's area; what the terrain, soil, and climate conditions are like; and whether or not farmers can read and keep financial and other farm records. There is also room for comments and suggestions. This data is then collected, analyzed, and integrated into later packets.

In addition to radio broadcasts, DCFRN information has been used in newspaper articles, posters, classroom teaching, video tapes, TV shows, loudspeaker broadcasts, and puppet shows.

Overall, DCFRN has proven itself as an educational tool. Feedback from participants shows that farmers who listen to these broadcasts use the information that pertains to their particular needs. The Developing Countries Farm Radio Network is steadily growing as a development educator of small farmers as envisioned by Atkins nearly a decade ago.

To contact the Network, write to: Developing Country Farm Radio Network, English Language Division, c/o Massey-Ferguson Ltd., 595 Bay St. Toronto, Ontario M5G 2C3 Canada or Developing Country Farm Radio Network, French & Spanish Language Division, c/o University of Guelph, Guelph, Ontario N1G 2W1 Canada.

William Amt is Program Assistant at the Clearinghouse.
Results of this comparison showed that the radio students were superior to the non-radio students in both Nicaragua and Thailand, particularly in rural Northeast Thailand (see graph). The normalized difference of .58, for students in Northeast Thailand, is of a magnitude rarely reached in educational interventions. Reducing the disparity of educational opportunity between the less and more developed parts of the country was the primary goal of this project, and it appears this experiment has very successfully achieved this end.

However, we still have not answered one of the questions posed at the beginning of the article: "Was there a noticeable decrease in lesson quality in the process of adapting the lessons to a different language and culture?" To answer this question, we turn to a comparison with Nicaraguan data.

Comparing Results

The test used for the evaluation in Thailand was adapted from one used for the same purpose in Nicaragua. Ninety percent of the items in the Thai test and the Nicaraguan test were the same, and comparisons made here are based on only those items.

Graph 1 shows the results of the two pilot-study regions in Thailand, comparing the results from Nicaragua. It is evident that the Nicaragua study and the Thai Central Plain study yielded very similar results; the non-radio classes in both countries have close to the same achievement levels, as do the radio classes. However, an indication of a slight degradation in the quality of the lessons when adapted from Nicaragua is evident in somewhat greater differences in Nicaraguan scores between radio and non-radio classes than was found in the Thai Central Plain.

The striking fact shown on this graph is that the radio-instructed students in the Thai Northeast study gained more, comparatively, than either of the other groups—even more than the radio-instructed students from Nicaragua. Although the quality of the lessons decreased slightly in the adaptation process, it is apparent that they are still enormously successful in the remote rural regions where they are more needed.

The success of the Thai version of the radio mathematics lessons amply demonstrates that well-designed interactive radio instruction can retain its educational effectiveness when adapted for use in countries quite different from the one for which they were originally intended. It is to the credit of the Thai staff that the educational effectiveness of the original lessons was well maintained while the tone of the programs became distinctly Thai.

Jamesine Friend was Field Director of the Radio Mathematics Project in Nicaragua, and is currently president of Friend Dialogues, Inc., an educational consulting firm. Klaus Galda was a Field Director of the Radio Mathematics Project in Nicaragua and was Director of the Radio Science Project. Barbara Searle was Project Director of the Nicaraguan Radio Mathematics Project and is now with the East Asia and Pacific Education Division of the World Bank.

**DCFRN:**

**A Radio Network for Small Farmers**

by William Amt

As the populations of developing countries continue to grow, land formerly used for cultivating small-scale, domestic-consumption crops is increasingly appropriated for larger-scale export-oriented crops. This process puts pressure on the subsistence-level farmer to grow more crops on less land. Traditional farming methods usually cannot deal with this challenge effectively, and small-scale farmers have largely been by-passed by a majority of development programs aimed at increasing food supplies in the Third World. To help solve this predicament, the mass media are playing an increasingly important role in changing small farmers' behavior in order to improve national agricultural self-reliance, nutrition, and the welfare of small producers.

The Developing Countries Farm Radio Network (DCFRN) is one such media group.

Founded in 1979, DCFRN is sponsored by Massey Ferguson Ltd., Canada, a farm implement manufacturing company, the Canadian International Development Agency, and the University of Guelph, and operates under the guidance of an Advisory Committee comprised of sponsor representatives and specialists in international development, agriculture, communications, and education. It is under the direction of George Atkins, former Senior Agricultural Commentator with the Canadian Broadcasting Corporation.

Practical agriculture-related information is collected and taped for radio broadcast and supplied without cost to radio stations and other organizations involved in disseminating agricultural information for the purpose of "serving agriculture, the basic industry" throughout the developing world. DCFRN is committed to assisting small farmers to increase their food supplies by using established radio stations and other local channels of communication to spread agricultural information. The success of this effort is perhaps best evidenced by the fact that although only nine packets have been produced and distributed to date, over 500 broadcasters or organizations in more than 100 countries disseminate DCFRN information to an estimated 100,000,000 listeners in about 100 languages.

**Information Gathering Process**

DCFRN is divided into two divisions. Administrative headquarters and the English Language Division are located in Massey-Ferguson's Toronto office; while French and Spanish services are housed on the campus of the University of Guelph in Guelph, Ontario where, when called upon, University faculty and staff can assist with technical research on agriculture and nutrition information.

Information is assembled on appropriate and inexpensive technologies used by innovative grass roots-level farmers in the developing world to increase food production, decrease post-harvest losses, and to make more efficient use of food. This information comes from on-site interviews with small farmers, farm broadcasters, extension workers, health workers, scientists, and university and government officials; printed materials; and feedback from questionnaires that are included in each information packet.

Information on agricultural or nutritional innovations must meet several rigorous criteria to be put on tape and then be disseminated by DCFRN. They should have been developed, tested, and proven in the developing world, as well as be adaptable in other developing countries. There should be no, or very low implementation costs, relying only on local resources, and requiring neither chemicals nor unfamiliar types of plants or breeds of animals.

After the materials are gathered on a variety of topics, radio scripts are prepared in a culturally and religiously neutral style in order to appeal to as many listeners as possible. A personable, informal style is followed, as if one farmer were advising another. They are written simply so that local broadcasters and other agricultural communicators—writers, agricultural extensionists, educators, and health workers—can readily understand the materials linguistically and culturally for their audience. The scripts (including illustrations to help the communicator understand what he or she is conveying to the audience), or scripts and illustrations along with a cassette recording of the scripts are available in English, French, and Spanish. Taped segments run between two and ten minutes, depending on the subject matter. Scripts cover a wide variety of agricultural or health and nutrition issues, all within a rural development context. Agricultural topics have ranged from improving manure to getting more milk from dairy cows, from controlling worms and insects to marketing farm goods. Each packet also contains at least one segment on rural health problems.

**The Blue Sheet**

Enclosed in every packet is The Blue Sheet, DCFRN's newsletter for participants in the Network. As well as providing up-to-date information about the Network, it covers other development issues not found in the radio scripts. Topics such as Women in Development, the International Year of the Forest, and improving communication techniques are included in this newsletter. "The Professional Development Corner," a regular column in The Blue Sheet, gives pointers on how to make broadcasts more captivating for listeners. Suggestions include using the mini-drama format.
Briefly Noted

by Robert Vitel and William Amt

The International Rice Research Institute (IRRI) has put out a useful publication for non-English-speaking countries entitled, *Copublication: IRRI Design, Procedures, and Policies for Multilingual Publication in Agriculture*. IRRI found that many of the people who could benefit from its publications do not speak English. This booklet explains how the language barrier is overcome via the process of copublication, whereby IRRI works closely with private publishers in developing countries to translate, layout, edit, print, and distribute IRRI materials.

Another handy publication coming out of IRRI is a very extensive compilation of titles on Third World agricultural science and production. Entitled *Publications on International Agricultural Research and Development*, this 560-page catalog comprehensively lists the major publications and audiovisuals of all the International Agricultural Research Centers (IARCs) around the world. An in-depth subject index assists the user in locating available materials in countless fields of agricultural science. Materials are listed for each of the IARCs, preceded by a short description of the center and an address. Annual reports and conference proceedings are also listed. This catalog is sure to be useful to libraries and organizations working in international agriculture. It is available in English only for US$10.20. Both publications are available from the International Rice Research Institute, P.O. Box 933, Manila, Philippines.

For those francophones interested in a synopsis of the problems of African publishing, *Direct*, a French bi-monthly about educational technologies, contains an article in its issue No. 4/1984 entitled, *Le Livre en Afrique Francophone*. A number of statistics (for instance: Africa, with 10 percent of the world's population, produces 1.4 percent of the world's publications, while Europe, with only 4.5 percent of the world's population, produces 45.6 percent of the world's publications), as well as the arguments that existing books are too often found in the city, too academic, too expensive, and too French (or English), suggest that Africa is in need of more accessible and appropriate reading materials for a much wider reading public. *Direct* is available from ACCT-Direct, 15, Quai André Citroën, 75015 Paris, France.

Kumarian Press has published two complementary books that discuss ways in which integrated rural development projects can be made to be lasting and effective. A book on *Managing Rural Development with Small Farmer Participation*, Corinne Bryant and Louise White acknowledge that participatory development is a crucial element of the general theme of development. Their book focuses more on the issues of promoting equity and decentralization, expanding and managing participation, developing local institutions, social learning, collective action, and reorienting bureaucratic attitudes. It's an excellent outline (but should not be thought of as a manual) for developers and communicators in need of ideas of how to construct a well-rooted project.

Implementation for Sustainability: *Lessons from Integrated Rural Development* is a somewhat expanded version of Bryant and White's book. Written by George Honadle and Jerry VanSant, this book offers a good guide for donor, program managers, and field workers must be everywhere mindful of the need for local projects to continue effectively after outside support ends. By substantiating theory with case study experiences, this book analyzes both macro (national) and micro (local) alternative approaches to delivering and managing goods and services, and suggests ways of avoiding project failure. Bryant and White's book is available in soft cover for US$7.95, and Honadle and VanSant's costs US$22.50 for hard cover and US$12.50 for soft cover. Write: Kumarian Press, 630 Oakwood Avenue, Suite 119, West Hartford, CT, 06110, U.S.A.

Bob authors work at the Clearinghouse

Asia-Pacific Broadcasting Union Prizes Announced

The 1985 ABU Radio and Television prize winners were announced recently in Seoul, Korea. The prizes are awarded to promote the production of radio programs of a high standard which are intended to raise educational and cultural levels and to strengthen international understanding among the peoples of the countries of ABU members.

The prize for radio programs for children, for a production which entertains and educates youngsters under 12, was awarded to Radio New Zealand for "Grampita's Place"—an imaginative and professional production directed to an audience of three to five year-olds. The 1985 Hoso Bunka Foundation, a Japanese philanthropic organization, awards a radio prize to a program presenting traditional music that preserves and enriches the cultural heritage of the country or territory in which it was produced. This year's prize went to Radio Bangladesh for "Jal Ranger Gaan."
The program is a sensitive blend of music, narration and sound effects that simultaneously tells of the hardships of daily life faced by the fishing communities of Bangladesh.

ABU's 1985 Radio Prize, judged on the theme "Youth in a Changing Society," was awarded to the Australian Broadcasting Corporation for "The Whole World Loves You," a radio play that made imaginative and excellent use of the radio medium to examine tensions in child/adult relationships.

For a list of the television prizes given this year, 1986 entry forms, and further information write to: Asia-Pacific Broadcasting Union, c/o Nippon Hosyo Koyakit 2-2-1 Jinnan, Shibuya-ku, Tokyo 150, Japan. Cable ABUNI, Tokyo. Tel-ex: J22577 (RADIO NHK) Tokyo.

Evaluators can provide the data and the analysis of data to policy-makers, but as evaluators they should not make policy decisions. Evaluation can contribute to policy-making the empirical base that policy-makers hover above. Evaluators can also push them to state measurable indicators for the results they want. It is a policy-maker's job to state the measurements needed to assess the impact of their plans. If they have good evaluators working with them, they can concentrate on specific questions, confident that the evaluators can provide the answers. Policy people ask the questions—evaluators answer them. Without firm policy direction, the evaluator's lost. If a project team asks the evaluator to provide direction, this is a good indication that the project itself is without direction. An alert evaluator can contribute most effectively in this situation by helping project people articulate the results they want and help them determine the corresponding measurable indicators of those results.

This is evaluation for results: evaluation is an integral part of getting any job done. No longer a post-mortem operation separate from the task of achieving the project's desired results, no longer a luxury carried out by people outside the project, no longer confused with scientific experimentation or policy analysis, and no longer a threat to the very people most committed to the project's desired results—evaluation is becoming recognized as a constructive tool that can help to achieve desired results.

Peter Spain is currently a project officer for the Academy for Educational Development, working on the FRITECH health project.

Cornell University

Communication Courses

Between June 8 and July 4, 1986 Cornell University again offers its Communication Planning and Strategy (CPS) course designed for officials and decision-makers in agriculture, health, nutrition, family planning, and rural development, as well as for those in information and communication positions related to these sectors. The focus will be on designing communication strategies and mobilizing sources for communication component projects. Enrollment is limited to 25. Course fee is US$1400, and housing approximately US$650.

Also, a three-part video communication workshop is being offered from June 1 to 12, 1986. The first part will give participants "hands-on" experience in how to use the tapped video, pre- and post-production processing, basics of scripting, in-camera editing second session offers a four-week independent learning experience, and a third one-week workshop covering concepts related to manipulating the components of vide the electronic editing process.

For course applications contact: Dr. R Colle, CPS-85, Cornell University, 640 Stee Avenue, Ithaca, New York 14850, U.S.A., Tel 957478. Telephone (607)256-6500.
Clearinghouse On Development Communication

Whether in the hands of illiterates in Mali and India or television programmers in Niger and the Maldives, videographic technology is being put to work. Projects in agriculture, literacy, health, and family planning are using video as a tool for raising bottom-up awareness, and family planning and communication, community-to-community, and between communities to improve information dissemination.

Half-inch (video cassette) equipment is popular among villagers involved in community development work because it is lightweight, compact, portable, and relatively inexpensive. The advantages of its design, however, can be a disadvantage—if not properly maintained, it must be replaced rather than repaired. The one- and two-inch equipment required by Western television broadcasting standards is proving inappropriate for local production and development programming. The trend toward standard 3/4-inch videocassette equipment which is more reliable, repairable, and appropriate for the community level. At the same time, the picture quality is acceptable for television broadcast. When its purpose is development communication, as it is used in Western countries, it is a community-access channel. The facilities where technicians are trained for television broadcasting provide a place where equipment can be tested and where video users throughout the country can be trained.

The following sections illustrate the role of video and television in development and demonstrate the potential of the resource. There is a lot happening in the area.

DCR invited Dana Talbert to write about her experiences. Ms. Talbert, a specialist in video use in developing countries because of her particular interest in the field. She has been involved in development education and communication for the past seven years, she has helped develop a training video as a community project. She has used it in teaching English to a foreign language at Harvard and Georgetown Universities. In counseling women seeking abortions. Ms. Talbert is Vice President of Health and Education Resources.

Music Carries a Message to Youths

by Patrick L. Coleman

Who would have predicted that the most widely played song in Mexico in March 1986 would be a special record designed to encourage young people to be sexually responsible and not to bring into the world "children of bread and water," children they could not care for?

"It's OK to say 'no,' " is the message of a unique new family planning and health communication project designed to reach young people in 11 Spanish-speaking countries of Latin America and the Caribbean. The countries include Bolivia, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, and Peru. What makes this ambitious project unique is not just the message - or the remarkable success of the first song - but the combination of materials that were produced, the way they were produced, and how they are now being used throughout the region.

The Population Communication Services project in The Johns Hopkins School of Hygiene and Public Health (JHU/PCS) has been working in Latin America and elsewhere for four years to support innovative family planning communication projects. It became clear to us that one key group was not being reached - young people aged 13 to 18 who comprise approximately 30 percent of the total population in Latin America. The fertility and sexual behavior of young people have a significant impact on their own lives, their community, their country, and the region. Early pregnancy is a major health and social problem throughout the region and the world. Adolescent mothers are ill-prepared psychologically, physically, financially, and socially to accept the responsibilities of motherhood.

(Continued on page 2)

Linking Knowledge Systems in the South Pacific

by George M. Beal and K. Robert Kern

Agriculture is the leading economic activity in most of the small island countries of the South Pacific. That vital sector embraces a remarkably wide spectrum of crops ranging from coconuts, cocoa, and coffee for export, to indigenous roots. There is also a wide variation in enterprises, production practices, types of producers, and marketing practices.

Most of the islands were governed until recently by European powers, which had led to foreign influence in some segments of island agriculture, mainly focused on export crops; little attention had been given to food crops.

When islanders gained political independence, and under quickening population pressure in many cases, the concern for food crops and the interests of small landholders took on a broader national perspective. And over the last two decades, many of the islands have put some elements of an agricultural knowledge system into place.

Government-sponsored organizations now function in agricultural research, extension, education, libraries, and communications. They tend to be unique to each country, since great distances - both geographic and experiential - stand between the realities of the islands and models from developed society systems that some tried to copy or impose.

Since 1983, the Institute of Culture and Communication of the East-West Center has collaborated with the International Service for National Agricultural Research (ISNAR) in research and continuing consultations with the South Pacific island nations of Fiji, Western Samoa, and Tonga. This work has focused on the organizations and people involved in the knowledge systems in an effort to understand how the different systems are linked, how communication flows among them, and how the exchange of information can be improved.

(Continued on page 14)
Johnny, a young Puerto Rican man who was identified, a contest was held for the music and American singing group, Menudo. Previously with the most popular young Latin singer who believed in the concept of responsible sexuality, and who wanted to participate in this type of project. The final selections were made by the help of professional recording companies. JHU/PCS put together a financial, marketing, and institutional package. The finances were provided through the U.S. Agency for International Development. Development and marketing of the materials was contracted by JHU/PCS to Puentes y Fomento Intercontinentales, S.A. (FFI), a commercial marketing firm located in Mexico. Institutional tie-in was provided through JHU/PCS contacts with organizations in the 11 Spanish-speaking countries that have active programs with young people.

Analysis showed that the common denominator for young people throughout the region is music. We decided to produce two songs, each with a music video, pressed on each side of 45 rpm single records and enclosed in a full size, full-color, two-sided record jacket which folds out into a poster.

The next step was to refine the general message of sexual responsibility to a specific message, one that young people would listen to and that would not offend others. Feedback from institutions throughout the region showed that responsible sexuality is a very sensitive subject both for young people and for the whole community. Messages had to be acceptable to the social, cultural, and religious values of the countries and to the requirements of the mass media.

Focus groups with young people indicated that youth would listen to the following messages: 1) young people should be sexually responsible for their actions; 2) it's OK to say 'no'; that is, the concept of postponing sex; 3) young men as well as women should be sexually responsible; 4) young people can go to specific identified places for professional counseling or guidance; and 5) positive role models are helpful for young people who want to be responsible.

Once the messages were developed, we had to find persuasive messengers. The concept of youth speaking to youth about sexuality has been demonstrated to be most convincing. Thus, with the help of professional recording companies, JHU/PCS and FFI looked for young singers who were commercially successful, who believed in the concept of responsible sexuality, and who wanted to participate in this type of project. The final selections were Tatiana, a young Mexican woman who is rapidly developing into a commercial star, and Johnny, a young Puerto Rican man who was previously with the most popular young Latin American singing group, Menudo.

Once the artists and the messages had been identified, a contest was held for the music and lyrics, with more than 20 professional composers participating. The choice was narrowed to five songs, which were pretested in rough form, with three different groups of young people. The two favorite songs, Cuando Estemos Juntos, "When We Are Together," by the Argentine composer, Juan Carlos Norona, and Detente, "Wait," by the Mexican composer and singer, Prisma, were recorded. Music videos and radio and television commercials were then produced.

An underlying concern built into the design of this project was that the materials must appeal to young people as popular songs, not as educational materials. We wanted the songs to be played on radio stations just like any other popular song, and the music videos to be played on television stations just like any other video. We expected that the radio and television commercials would be played only if the radio and television stations were paid to do so. At the same time, we hoped for some collaboration by the government-owned educational stations and perhaps by a few socially conscious media managers and owners.

The marketing plan was conservative. We estimated that the songs would be played an average of three times a day on radio stations playing Spanish language music, and television stations would broadcast the music videos, while newspapers, magazines, and journals would occasionally publish articles related to the project. This was all considered "free" promotion for the products, based on their commercial viability.

Marketing Plans Widened

Support for a larger marketing plan came from an unexpected source. EMI Capitol, the record company for Tatiana, the female singer, wanted to put the two songs on her next album which would be launched simultaneously with this project. A major multinational recording company was willing to put its prestige and the skills of its marketing and promotion departments behind a social communication project!

As a result, radio stations would feel they were not taking any risks by playing a song with a social purpose, they would consider that these materials were commercial products with a social message incorporated into them. This was the very concept that we were trying to promote. The record company's support also made the materials more available because they could be sold through a vast commercial network, not just through the institutions we were working with.

The marketing of what became known as the "Tatiana & Johnny Project" included sending:

- copies of the record to 3,020 radio stations,
- copies of the record and music videos to 250 television stations,
- press kits to 350 newspapers, magazines, and journals,
- brochures about the project to 3,500 media representatives throughout the region,
- seven bimonthly press releases to radio, television, and press personnel throughout the region.

(Continued on page 3)
At the same time, JHU/PCS, through FFI, contracted with key radio stations in the 11 countries to broadcast the two radio spots (commercials) developed for the campaign. No funds were available for broadcasting the television spots that were developed, as the cost is exorbitant. It was hoped that local institutions could persuade stations to allot some free time to show them. The first spot promoted each song. The second spot also included a message at the end linking each institution in the 11 countries to the Tatiana and Johnny materials, and inviting young people to call, write, or visit these institutions for additional guidance or counseling about sexuality.

The local institutions were provided with copies of the 45 rpm record to give away to promote activities with young people. Since we thought the selected institutions would be the only source of the single record, we hoped young people would be attracted to it and want the record. The local institutions were encouraged to give the record only to those whom they felt were truly interested in this theme and to set up contests, focus groups, call-ins with radio stations, and other promotional activities. They also were urged to work with the record company representative in their area to develop joint activities.

EMI Capitol agreed to pay JHU/PCS royalties for the right to use the two project songs as part of its commercial distribution of Tatiana's record. This provides more promotion and visibility for the messages as well as income to be reinvested in future activities for young people in the region.

Enthusiastic Reception

Initial reaction to the project has been overwhelming. In Mexico, even before the first song was launched, the most popular live television variety program — reaching some 150 million people every Sunday — asked to premiere the first video. Immediately, the song was enthusiastically accepted by young people and radio stations. Our initial calculation of three radio broadcasts per day was far short of reality — which sometimes reaches 15 to 20 broadcasts daily. Monitoring by record companies and radio stations in Mexico shows that the song was number one on the hit parade within six weeks after its release.

The song is also becoming a commercial hit in other countries. As of March 1986, the local institutions reported that letters and requests for their services increased anywhere from 200 percent to 2,000 percent, all within two to four weeks of initial promotion. This increase occurred before direct local institutional promotion began. In addition, the radio stations and the record company have received calls and letters of thanks from young people.

Lessons for the Future

Several lessons have been learned from this project that can guide future social development communication projects.

1. Choose the most appropriate medium to reach the intended audience, in this case, popular music.
2. Enlist professionals experienced in the chosen medium to be sure of the best available resources, both human and material.
3. Develop a high-quality product that will attract the commercial sector. Commercial support for a social message defrays expenses, assures wider dissemination of the message, and may generate income for program expansion.
4. Use a medium, in this case popular music, which has a big regional and national audience. This enables a large-scale project to draw on resources not readily available to a local organization working alone and brings additional attention to the project because of its international scope.

Parachutists worked closely with FFI and local institutions to ensure that the products of this project would be responsible and socially acceptable. Mixing the commercial and social sectors worked in this case because both groups cooperated to achieve the results each wanted while respecting the interests and needs of the other.

Patrick L. Coleman is Project Director of Population Communication Services, The Johns Hopkins University, Baltimore, Maryland. He has worked in social development communication for more than 12 years, primarily in Latin America.

Making an Agricultural Video

by Melissa Beck-Yazman

Winrock International Institute for Agricultural Development, a nonprofit organization committed to agricultural and rural development, has been involved in video production since 1976. We have focused on agricultural education and training, information dissemination, and promotion of appropriate agricultural techniques initially in the U.S. and now increasingly in developing countries.

At the request of Control Data Corporation (CDC), Winrock International produced an educational course, Dual-purpose Goats Management Series, for Caribbean and potentially for Latin American countries which offers a series of nine videos on basic goat husbandry. The audience was to be agricultural extension agents and farmers in these two regions who would learn how to improve milk and meat production from goats.

Site Selection

The video was filmed in Haiti and Mexico. These locations were chosen for two reasons. First, they are representative of the environment of the primary (English-speaking Caribbean) and secondary (Latin American) target audiences. Secondly, Winrock had contacts in both Haiti and Mexico who could serve as hosts and counterparts for the production team.

Winrock's Goat Improvement Project in Haiti provided an excellent Caribbean location, with local farm workers who were available for on-camera talent, and a project manager who also served as the customs liaison, logistics coordinator, and interpreter. In Mexico, professional contacts through Winrock led us to a veterinarian who teaches at a university in Mexico City and owns a goat farm. He provided the location, talent, and subject-matter expertise at this site. Local farmers and extension workers in both countries were eager to cooperate as on-camera talent.

Preproduction Considerations

We faced different preproduction problems in each country. In Haiti, we were able to bring in our own equipment and personnel. In Mexico, however, the customs procedures proved so complex that we risked losing our equipment impounded. To avoid this, we rented video equipment in Mexico City where both equipment and trained video specialists are readily available.

Scouting the selected locations prior to the actual filming gave us the chance to carefully plan the scenes we would take at each location. We were also able to get information on transportation, equipment rental, reliable battery supplies, housing accommodations, and other preproduction concerns.

Script Development

The narration for the videos was fully script-ed which allowed for the possible future dub-(Continued on page 4)
We shared experiences and explored how women could benefit more from this technology. Of these meetings it was also decided to hold a workshop at the NGO Forum '85, which met concurrently with the UN Decade Conference on Women in Nairobi. A report generated from the meetings preceding the Forum includes case examples, advantages, and obstacles to using video for women in development programs, some of which are summarized below.

Advantages
1. Video can be used at convenient times and places.
2. Video is effective with illiterate or multilingual groups.
3. Video can bridge cultural differences, helping women to share common concerns and goals.
4. Video facilitates group discussion, motivating women to work together and to organize for community development.
5. Video boosts women's self-confidence and encourages their self-development.
6. Video facilitates communication between funders and women beneficiaries.
7. Video simplifies technical information and improves comprehension of such materials.
8. Video can be a cost-effective training tool.

Obstacles to Video Use
1. Electric power is often lacking or erratic in developing countries.
2. The communication components of women's projects are poorly funded.
3. Technical training is lacking, particularly for women.
4. Spare parts for video equipment are difficult to find in developing countries.
5. Comparability of video standards and formats between organizations and countries is poor.
6. Importron restrictions and theft of equipment in developing countries aggravate the equipment shortage.
7. Cost of equipment is high when compared to slides, flannelboards, and radio.
8. Video is often controlled by urban "elites" or foreign organizations.

The advantages far outweigh the obstacles for women using video when considering the opportunity it gives them to control a medium and to communicate with each other across cultural, linguistic, and geographic boundaries.

To obtain OEF's 40-page report, Video Technology Applications for Development Projects Designed to Benefit Women, send a US$7.50 check payable to OEF International, 2101 L Street, N.W., #916, Washington, D.C. 20037, USA. Please add 20 percent to cover airmail costs where appropriate.

Deborah Ziska is Director of Media and Video Projects, OEF International.
Taking Video on the Road in the Philippines

by Jean E. Andersen and
Anita H. MacDougall

The experiences of the Nutrition Center of the Philippines (NCP) suggest that the effectiveness of development communication can benefit from a systematic approach and the evolution of "high-tech" into appropriate technology.

It was ten years ago that the Nutrition Center of the Philippines decided to test video-vans (vehicles containing video playback equipment that are driven to communities to promote social programs through videotapes) as a key component of their nutrition program for preschool children. After a two-year pilot project demonstrated effectiveness in experimental versus control villages, the program was implemented in critical areas nationwide.

Continuing evaluation has shown not only where improvements are needed, but also a persistent success in increasing mothers' nutrition-related knowledge and improving preschoolers' nutritional status. Cost-effectiveness studies have indicated that these improvements have apparently been accomplished at a cost comparable to or less than other types of field interventions that have such data.

Impact Evaluation

In 1979, a comparative study was made among rural villages: no intervention (comparison group); only a village nutrition worker (BNS-only group); with a village nutrition worker and short exposure to the video-vans (VTRs group); and with a village nutrition worker and longer exposure to the video-vans (VTR group). Results comparing these groups showed significant differences related to amount of intervention. For example, mothers in the VTR group were 71 percent more likely to feed their children "Nutri-Pak" as it was present in the videos. They were 50 percent more likely to describe feeding their children of "Nutri-Pak" as it was present in the videos.

In a follow-up study in 1981 in the same villages, improvements in nutritional status continued, with an additional 17 percent decrease in moderate to severe malnutrition and a 12 percent increase in mild malnutrition. Similar results were obtained in another impact study of 46 rural villages receiving the same intervention in another part of the Philippines with measures taken in 1981, 1982, and 1983.

Careful accounting was done on all expenses related to the program in 1981. Management, field personnel, training of field personnel, development of videotapes and other materials, and daily operating expenses, as well as a five-year depreciation allocation for video playback equipment and vehicles.

It is difficult to make comparisons between studies regarding cost-effectiveness. Calculation standards differ, methods and measurement definitions differ, as do sample sizes, price data, and cost of materials depending on seasonal and yearly changes. Nevertheless, some data has been compiled for comparative purposes from programs similar to the Nutri-Bus project: mass media and mass media with local workers. One example is from a 1981 mass media nutrition education project also implemented in the Philippines. Per-child costs per year where mothers' reports indicated positive changes in nutritional practices came to US$5-$29; whereas the Nutri-Bus project calculated US$5 per-year, per-child cost where mothers reported significant changes in nutritional practices.

Communication Model

Major factors in the success of the Philippine program are certainly the abilities, talents, and dedication of the Nutrition Center staff and management; another factor that may help account for the continuing success of this intervention model is the use of the "ABC Model for Developing Communication to Change Behavior." This model utilizes a systematic process of developing communication materials built upon the:

- analysis of the abilities, experiences, beliefs, customs, current practices and preferences of the audience (mothers of preschool children);
- explicit specification of the behaviors or skills mothers need in order to improve the nutritional status of their children;
- definition of how much behavior change of each type will constitute a worthwhile level of effect;
- analysis of each behavior or skill sought and how the mothers can best be helped to learn to make the necessary changes;
- development of training materials that provide active participation of the learner and frequent opportunities for positive feedback to increase learning and foster self-reliance;
- emphasis on communicating through realistic visuals;
- careful pretesting and revision of draft materials until they are effective in bringing about the changes sought;
- periodic, statistical field evaluations.

The development process outlined above is guided by a series of worksheets and aids that help the Nutrition Center staff perform each step, after they have completed a ten-week training program. To deal with the problem of turnover among trained staff and provide quality control and consistency of what is taught, microcomputer-based tutorial programs are being developed to teach the use of the "ABC Model" to each new person.

All audience analysis, design, development, and production of the videotapes is done by NCP personnel. Topics include growth monitoring, oral rehydration therapy, breastfeeding, immunization, family planning, and nutrition. Tapes are shot either on location or in a small studio at NCP and produced in six dialects. The studio has two complete, portable 3/4-inch U-matic systems with cameras and an editing system. Half-inch playback machines are used for the video-vans.

Information and Feedback System

After the systematic development and production of the video modules, a fleet of Jeep-type vans (called Nutri-Buses) regularly visits the villages. Each van is equipped with a TV monitor, Betamax player, and public address system. A driver-technician operates and maintains the vehicle and the audio/video equipment. A "communicator," who is a registered nurse with one month's training in communication techniques and community organization, rides each van. She raises the tape at designated points, using the loudspeaker system to encourage discussion and decisions from the viewers. She provides feedback and reinforcement during these discussions and solicits comments about the videotape. She also...

(Continued on page 6)
Jean E. Andersen is president of Development Communications Consultants (DCC) and specializes in communication for behavior change.

Anita H. MacDougall is vice president of DCC and specializes in management information systems.

Development Seminar Offered

The University of Minnesota is offering its annual Development Project Evaluation Seminar from September 15-26, 1986. This two-week course focuses on a practical approach to project evaluation. Through presentations, training exercises, case analyses, and group interaction, participants will consider evaluation approaches and strategies for establishing evaluations useful to decision-makers.

The cost is US$2200 for courses and lodging. Meals and transportation are extra. For more information contact Fred Hoefer, 405 Coffey Hall, University of Minnesota, 1420 Eckles Ave, St. Paul, Minnesota 55108, USA.

A Daily Newspaper for The Gambia

A daily newspaper in The Gambia is now a reality thanks to support from Unesco's Special Fund, the International Programme for Development Communication (IPDC). Replacing a weekly, Gambia News Bulletin, the inauguration of a daily paper in November 1985 was preceded by a one-month training course for 12 local journalists and the installation of offset printing equipment. The paper will receive stories from the Gambia News Agency which was recently installed as part of the West/Central African News Agencies Development (WANAD) network. This US$2,500,000 project, a joint effort by the Federal Republic of Germany and Unesco, enables news collection and dissemination, particularly between urban and rural areas, in eight countries (Benin, Congo, The Gambia, Ghana, Guinea, Mali, Niger, and Nigeria) with a combined population of 115 million people. WANAD, in turn, will provide a solid foundation for the Takar-based Pan African News Agency (PANA) for news exchange throughout the continent and with agencies outside the region.

Broadcasting in the Pacific

Another collaborative effort between IPDC and a Federal Republic of Germany foundation, Friedrich-Ebert-Stiftung (FES), will soon provide training for broadcasters from the South Pacific island nations of Papua New Guinea, Western Samoa, and Fiji. This US$1,200,000 project, with training provided by the Pacific Broadcasting Development Project (PACBOARD), calls for the establishment of subregional training bases using already-existing national facilities to train skilled personnel to plan, manage, and operate broadcasting networks oriented to development goals in the Pacific Island States.

Call for Papers

The Fifth World Telecommunication Forum Part 2, Technical Symposium is scheduled for October 22-27, 1987, in Geneva, Switzerland. This international gathering of professional engineering societies has been organized by the International Telecommunication Union and will be held in the framework of TELECOM 87. The forum theme is Telecommunication Services for a World of Nations. A limited number of papers will be accepted for presentation. They must be unpublished and based on original research, developments, and approaches carried out in the period between TELECOM 8 and TELECOM 87, and should be about new equipment, systems, networks, or services. The submission deadline for the initial summary paper is September 1, 1986. For a description of technical subject areas and guidelines in preparing the summary write to: FORUM 87 Secretariat, International Telecommunication Union, CH-1211 Geneva 20, Switzerland.
Video in the Village

by Sara Stuart

"At first we were very afraid of these video machines. Now we almost love them," Lellaban Datarske, vegetable vendor and member of the Self-Employed Women's Association (SEWA), Ahmedabad, India.

For more than ten years, Martha Stuart Communications, Inc. has trained literacy teachers, women's organizers, scientists, and family planning workers in developing countries to use video. Their videos on topics such as a village that is energy self-sufficient, a community health center, the child labor issue, and a woman's cooperative are shown in communities to exchange experiences and to promote local development.

Mali Tries Video

Two projects, one in Mali and the other in India, illustrate the possibilities in this kind of local-level approach under quite different circumstances. In Mali, as part of a rural women's literacy project funded by the United Nations Fund for Population Activities with technical assistance from Unesco, a video team was equipped and trained at the National Department for Functional Literacy and Applied Linguistics (DNAFLA). The literacy project began in 30 villages and has since grown to more than 60 villages in three regions. While teaching literacy, they also give information and training on infant nutrition and health care, income generating activities, and marketing skills.

Of the fifteen video workshop participants, there were five women who organize village literacy classes and train adult literacy teachers, and ten male "technicians." None of them had had any experience with video, although a few had film experience. They have grown into an effective and committed video team that travels for weeks from village to village, making tapes and then playing them back in other villages. They take along one video camera, a portable recorder, batteries, the necessary cables and microphones, a generator, and a large monitor.

The video team tapes exemplary literacy classes that are then shown in other villages, either to supplement classes where there are no teachers or to help train teachers. Tapes for discussion topics in classes can be made in local languages or with French voice-overs. One video recorded a day care center, another a malaria clinic describes symptoms and treatment, followed by mothers giving their children preventive medication.

At the UN Decade Conference on Women in Nairobi, the head of the rural women's literacy program in Mali, Mme. Dembele, described some of the successes she attributed to video. Many women did not or were not allowed to attend the one-week literacy training program in a neighboring town. But after their villagers saw the video tapes of the women who were just like themselves and had participated in the training, the following years all the women attended. Once the women in the 60 villages realized that the video was in their language and that it reflected their reality, they were eager to participate. In response to the challenge regarding the appropriateness of this sophisticated and expensive technology to Mali, Mme. Dembele once said, "True, with the money it costs to buy this equipment we could dig ten wells, but with this equipment we can organize 100 villagers to dig their own wells!"

India's Success

SEWA, the Self-Employed Women's Association, is a trade union for poor self-employed women in Ahmedabad, Gujarat, India. More than 24,000 street vendors, small-scale producers, and laborers are members of SEWA. The organization provides its members with skills training and cooperative mechanisms to aid in the production and marketing of goods, as well as child care, life insurance, and maternity benefits. It advocates women's rights before the authorities and operates SEWA Bank, a cooperative bank that extends credit to self-employed women. SEWA has become a model self-help organization and is extending its activities into rural areas and to other states.

In 1984, with funding from the U.S. Agency for International Development, twenty members of SEWA were trained to use video equipment; a second workshop on editing is scheduled for later this year. Video training assisted SEWA at a time when the organization was growing rapidly in numbers and scope. It has enabled SEWA's leaders to save time by using videos to explain their work, to communicate more effectively across distances, and to organize more effectively.

One-third of the video workshop participants were illiterate and another third had less than a high school education. They included women of all ages. Hindus and Moslems, a vegetable vendor, a photographer, and a carpenter, as well as several top SEWA leaders. The training workshop was an unqualified success and resulted in the formation of a cooperative called Video SEWA. Benefits have already been realized from the cooperative. For example, one of its video programs about a dispute between small scale vegetable vendors and the city, was shown to a municipal leader and contributed to an equitable resolution. This municipal leader had never really listened to these women before and probably never would have if not on a videotape. The vegetable vendors themselves would not have spoken freely and forcefully to a city official but could do so to the impersonal video camera.

The Video Challenge

Interaction between television and video has been a positive and productive experience especially for the Malian and Indian video teams. In Mali, video was introduced in advance of television's arrival in the country rather than in reaction to it. Fortunately, the DNAFLA video team was well established and respected prior to television's advent. As a result, Malian Television requests DNAFLA's development-related programs for broadcast. DNAFLA continues to reach an audience not served now and not likely to be served by television for some time. In the case of India, television represents an important potential market for Video SEWA's programs.

Self-directed community-to-community development communication can succeed dramatically and can contribute to real improvement and change through human exchange. However, this is sometimes perceived as a loss of control—a loss of power or authority by government leaders. This is when it is crucial to have support and a clear understanding of programming aims by leaders on several levels. Both DNAFLA and SEWA were able to garner this kind of very necessary support.

(Continued on page 8)
Equipment

Maintenance and repair are no longer the issues they once were. In pre-television Mali, there was a lack of local repair expertise, test equipment, and spare parts. Once when an editing deck broke down, it had to be returned to the factory in Tokyo. Despite this setback, DNAFLA's video team operated successfully for three years with only one camera and one portable deck. Since then, they have received additional equipment. With the advent of Malian television in 1984, service and repair have become more accessible. Video SEWA has required only one minor adjustment on their equipment. In Ahmedabad, there are adequate repair and maintenance facilities and they are well supplied with spare parts.

When operated by teams who have been carefully and thoroughly trained, 3/4-inch, low-band video equipment has proven to be reliable, sturdy, and able to function in a wide range of climates. It also produces broadcasts with quality similar to that of cable television in the USA. The teams trained by Martha Stuart Communications, Inc. over the past eight years have been equipped with basic 3/4-inch production and editing equipment, a generator and multi-standard playback equipment, to facilitate exchange of programs, and to make them locally on 1/2-inch, either VHS or Beta.

While video technology is changing rapidly, this configuration continues to meet the goals of reliable, durable, and easy-to-operate equipment which affords high quality and flexibility over several generations of a standard conversion.

Spreading the Word

The Village Video Network, co-sponsored by the United Nations University and Martha Stuart Communications, Inc., was founded at a meeting in Bamako, Mali in 1982. The founding members come from many backgrounds and 14 countries. They established the network to promote video as a tool in support of development and to facilitate the exchange of tapes between people who are involved in finding solutions to community-level problems.

Small-format video has many useful qualities. It is easy to use, functioning equally well in the heat and dust of India and in the wind and snow of northern Quebec. The equipment is durable and tape stock is reusable. There are no processing charges. Immediate playback capability gives the users flexibility to revise on the spot to fit their needs, and to show the same material again and again. With video, there are no literacy hurdles. Most importantly, video teams can travel directly from place to place, unburdened by the need to return to a central clearinghouse, laboratory, or manufacturing center. This freedom reinforces a communication process that helps individuals and communities to extend the reach of their voices.

Sara Stuart is the president of Martha Stuart Communications, Inc., New York and coordinator of the Village Video Network.

Appropriate Technology Mini-Library Continuing

TRANET, the Transnational Network for Appropriate/Alternative Technology in Rangeley, Maine, has received renewed funding of US$8,000 from UNESCO to ship its mini-library on appropriate technology to ten more developing countries.

These one hundred-volume conventional libraries will go to institutions in Botswana, Papua New Guinea, the Philippines, Sri Lanka, Sudan, the Yemen People's Democratic Republic, and Zimbabwe, bringing the total to 79 libraries shipped since 1980.

Each library consists of 100 core books suitable for a technical library in a developing country. The collection contains appropriate technology materials in food production, animal husbandry, housing, home and farm techniques, village crafts and industries, energy, transportation, health, and nonformal education. Most are do-it-yourself manuals, some are general resource guides, and others deal with concepts of appropriate technology, participatory development, and local self-reliance. TRANET has also developed a 25-volume energy supplement to the basic library.

For more information contact Janet Wilcox, TRANET, P.O. Box 567, Rangeley, Maine 04970, USA.
My Experience Teaching Video in the Maldives

by Doe Mayer

When I learned that I had received a four month position as a United Nations Development Program television consultant in the Maldives—a tiny Islamic island nation with a population of only 100,000, west of Sri Lanka in the Indian Ocean— I searched for literature about it and the conditions under which I would be working. The terms of reference used a lot of words that added up to one mighty cry of "Help!"

My assignment was to teach video production skills at a TV station, something I had done during a two and one-half year consultancy in Zimbabwe. I arrived in country with some production textbooks, my trusty copy of Herbert Zett's Sight, Sound, Motion, and my fingers crossed. My arrival was cause for some interest; the TV station thought they had selected a man—my name having caused the confusion. I was concerned how they would relate to a woman, but did find it as difficult as I had feared. The Maldivians came to see me as an American who could teach them things about television that they wanted to learn.

TV Maldives

TV Maldives (TVM) broadcasts almost exclusively for the capital city of Male, with a population of 40,000. There are four and one-half hours of programming daily—from 4:30 p.m. to 9 p.m. Approximately one hour of these programs is generated locally. The remaining materials are free— or borrowed documentaries from Western countries. The station also broadcasts English- and Hindi-language feature films that come in VHS format from local video clubs. These are usually fifth or sixth generation (duplicate copies) of tapes that are often low quality and in poor condition. (The Maldives, like many other developing countries, does not recognize copyright laws imposed by other countries.) Also, there never had been a general broadcast policy established, either by the station management or by the government. Broadcasting ended each month position as a United Nations Development Workshop.

Doe Mayer is a video consultant who appreciates a challenge whether it is in the United States or in a developing country.

Microcomputers in Development Workshop

Stanford University's Food Research Institute is conducting a workshop on Microcomputers in Development for people without previous microcomputer experience who wish to gain a broad overview of the technology, and to develop skills in the use of selected commercial software packages. A combination of "hands-on" sessions and presentations of case studies on microcomputer applications will give participants working knowledge of the latest computer software and hardware, and insight into problems of project appraisal and project management.

The four-week session costs US$2750; housing and meals are not included but can be provided upon request. The workshop is limited to 30 participants. Native French and Spanish speakers will be on the instruction team. Registration ends June 30, 1986. For information contact Carl H. Gotsch, Food Research Institute, Stanford University, Stanford, California 94305, USA.
A Communicator’s Checklist


Television has been called the “jewel of a tired and spent bourgeoisie,” — a statement that could apply to Africa as well as the Western world, and reflects some of the findings in a recent report from the International Development Research Centre (Canada), entitled Television for Development: The African Experience. Its author, journalist Iain McLellan, notes that nearly every country in Africa has television broadcasting facilities and trained technicians, producers, and directors. But, in many African countries much of the television budget is spent on the facilities, and not much is left for program planning.

In this 157-page report, the author discusses the education and development role of television in Africa 25 years after its introduction. McLellan provides constructive criticism and suggests ways television can be improved and better serve the African societies. The report is based on interviews in 14 countries with media professionals, government officials, development workers in the field, international development organizations, and nongovernment organizations involved in development, support communications. Issues addressed include the potential of television to support development, why this potential has not been realized, what might be required to fulfill this potential, and what the likelihood is that those changes might occur.

Producers, government officials, viewers, educators, field workers, and aid donors agree on their dissatisfaction with television’s evolution. Most African countries have adopted the same approach to TV as North Americans and Europeans but do not have the resources, infrastructure, or training to follow it through, according to McLellan. TV producers in Africa rarely venture out of capital cities to mix with, understand, or assist rural people in communicating with each other or with those who are trying to help them. African television imports or mimics Western programs, it diverts or entertains rather than educates.

In McLellan’s terms, the assessment of the potential of television in Africa was faulty from the start and the social, cultural, economic, and political restraints combined to limit its potential. Few governments encourage freedom of expression in media which would enable urban poor and rural populations to better understand themselves and articulate their needs. It is not easy to give citizenry the means to raise consciousness, explore various development options, and express their points of view. El Hajj Diouf, University of Dakar communications professor, points out the importance of considering the human dimension in rural development. There may be a great risk in keeping the population mure, ignoring their needs, and making only cosmetic changes.

McLellan believes that television could justify its costs if used for development, but that would require integration and coordination with other development efforts. Decentralized, local television — as a development medium — is designed to activate the community it serves. Its horizontal structure facilitates exchange within and between communities. It is geared to local needs, customs, and languages. Combined with personal field contact, television and video provide enormous potential for allowing people to articulate their needs to leaders and policy-makers, and work together to solve their problems, perhaps with outside technical and financial assistance.

It might seem amateurish for ordinary people to make a video, resulting in an awkward and slow moving production at times, but this is acceptable if the goal is not the “seduction of the eye and ear, but the enlightenment of the eye, ear, and voice.”

The future for development support television and video is seen by many to lie in broadcast signals that reach rural as well as urban areas via satellite, government purchased and maintained group-viewing television powered by solar energy, coordinated multimedia campaigns and local discussions, increased feedback and interaction between broadcaster and viewer, and decentralized or community broadcasting and videos in local languages.

McLellan found signs of encouragement during the three-month survey in Africa. The decentralization of the Nigerian Television Authority gives local stations the resources to produce for the national network as well as to generate their own local programming. In the Ivory Coast, nonformal educational television broadcasts are being coordinated with a network of field educators. Television sets are being relocated from schools, where they were used for formal education, to villages throughout the country. Niger operates solar-powered television sets for group viewing in a number of rural villages as well as in urban youth centers. Its Tele-Sahel’s programming is geared to nonformal education with more video recording taking place on location in rural areas than in the Naiemy studios.

The report is divided into three sections. The first concentrates on experiments and innovations with group viewing centers, solar-powered television sets, local discussions, and television used with other development communication media. The second section focuses on social dramas, video, and formative evaluation and research as a means to improve television’s capacity as an educator. The last section points out beneficiaries — women, agriculture, and health — when African television supports development.

This report is available free from International Development Research Centre, 1° O Box 8500, Ottawa, Ontario, Canada K1G 5H9

Reviewed by Diana Talbert, Vice President, Health and Education Resources.


Ronald Rice and an impressive team of twelve associates have come up with an encyclopedic state-of-the-art reference book. From the title, which contains all the “right” words, to the comprehensive coverage in its twelve chapters, the book contains a collection of data, insights, case study descriptions, and predictions. The well-chosen chapter order first provides a brief history, some theory, and alternative research methods, which are then followed by sections on individual and group communication, organizations communication, and communicating within institutions.

The generous collection may offer more than the reader wants to know, but whatever current information is being sought will probably be found, whether it is videotex, microcomputers, television, teleconferencing, libraries, office automation, electronic mail, and a host of other media developments — all in a communication context. All topics are treated responsibly by competent and articulate authors. Rice provides the introductions and summaries which help to create a modicum of unity. His greater contributions come in the three chapters he wrote and the five chapters in which he appears as co-author.

The book has many audiences, but probably leans more toward individuals who are concerned about communication in the academic sense rather than practitioners who might be seeking guidance for selecting and using contemporary information technologies. This volume would be a good textbook for an introductory course which considers contemporary information technologies. The book is The New Media: in its second printing may indicate its popularity for such courses.

Readers of DCR might be disappointed not to find many references to the use of media and technology in the developing nations of the world. They will be pleased, however, to find descriptions of diffusion and implementation of innovative technology-based practices which are discussed in several chapters. The settings in which such innovations are presented are usually business or commercial environments rather than education and human services. One exception is Milton Chen’s chapter, “Computers in the Lives of Our Children Looking Back on a Generation of Television Research,” in which the lessons learned from television research are held up and compared with the research questions about microcomputers.

There is a wealth of information in this volume. Most of the data and electronic developments will be outdated within five years, but many of the research agenda will probably remain. Let us hope some progress is made in that sector so that the use of these “new” media and technologies will bring about answers
to some of the communication problems we continue to face. ■


Reviewed by Donald P. Ely. Professor of Instructional Design, Development, and Evaluation and Director of the ERIC Clearinghouse on Information Resources at Syracuse University. He has recently served as a consultant at the Center for Communication Technology in Jakarta, Indonesia.

3


For better or worse, educators now believe that economists exercise great influence over budget allocation in the developing countries. That great influence has motivated educators to expend considerable energy in demonstrating the economic viability of the educational enterprise. Primary school has recently been shown in a number of studies to have a high return, both to children who complete the elementary years and to the society into which they are delivered as productive participants. Secondary and tertiary education have fared less well; they are clearly valuable to the relatively small numbers of students who succeed in completing their studies, but are very costly to the society which heavily subsidizes secondary schools and especially universities.

In this volume editor Chris Duke cites the "hope, maybe a naive expectation" that the seven chosen case studies would produce some proof that the money spent on adult education reduces poverty more than if the funds were spent in other sectors. The studies were chosen from a range of countries across the political spectrum and around the world. Six public and one privately sponsored programs are included. Cases examined are the Nicaragua Literacy Campaign, Chile's Educational Operational Units, MOBRAL in Brazil, Kenya's Adult Education Program, Seamaul Education in Korea, the Adult Education Program in Tamil Nadu, India and the well-known Sarvodaya Program in Sri Lanka.

Duke characterizes the aims and objectives of the program on two scales: political, from "cautiously reformist" to overly revolutionary; and educational, from literacy plus "safe" functional skills to societal transformation.

All the programs studied had as one stated aim to reach the poorest of the poor in their country. Certainly, combating poverty is not likely to be an enterprise that is accessible to those in need. Four of the seven programs were found to succeed in this aim: for a variety of reasons the programs in India, Korea and Chile did not. Why they failed is too complicated to tell in the space available.

What then was the impact of the remaining four programs on alleviating poverty? This book does not tell us. While the authors have made valiant efforts to specify costs of the programs, they all agree that conventional economic measures cannot cope with the complexities of causality and quantification, so the case for supporting adult education as a means for reducing inequality and addressing pov-

dery "must be made on other grounds." Frankly, I am not certain what that statement means. Chris Duke is forced to the less than ringing conclusion that, given the right timing and well-chosen methods, adult education has a "significant contribution to make as part of a larger strategy."

My view for some time has been that adult education in fact can contribute directly to alleviation of poverty under a wide variety of overarching social and political systems. Two conditions seem necessary and sufficient to make this contribution both possible and measurable. First, the program must be designed to address specific problems or constraints identified by members of the learning community. A number of techniques used in the cases studied in this book have proven effective in helping community people identify problems and decide on how to attack them. The majority of these problems are related to questions of how to make money through self-employment—participants recognize that employment in an established firm is an unlikely product of adult education and training. (That perception was borne out by the MOBRAL study, which found that fewer than one person in fifty gained access to full-time employment after taking part in MOBRAL's programs.)

The second important factor for getting more money into people's bands following training is access to seed capital. For poor rural community-based groups, access to credit is difficult at best. Individuals have some access to informal credit through local money lenders, albeit usually at high interest rates. For groups who need to share the risk of a new venture growing out of a learning experience, however, there is often no source—and if the group is largely or wholly made up of women, credit is virtually impossible to obtain.

Gweneth Eng and Louis Woo have recently undertaken four case studies looking at pro-

garms which closely linked training and credit. They looked at benefit-cost ratios in each of the programs, and found the following results.

All returns to participants were positive. The lowest benefit-cost ratio, 1.14, was realized by a women's rural development project in Kenya—not because the women are not productive, but because they, alone among the four programs studied, could not spend full time putting their new skills to use. They continued to spend about twelve hours a day on their daily chores and used their spare time for money-making. Other returns to participants ranged from 2.37 in a rice growing program, 3.97 in a microenterprise development program, to a highly remunerative 12.47 in a Central American farmer education program.

I find the total absence of any reference to linking education with credit a most surprising mistake in a book focused on combating pov-

erity. Or perhaps it is a mistake to be surprised, these worthy studies, and Chris Duke's summary of their findings, perhaps tell us something we in adult education are loath to admit: putting money in people's pockets is a fairly low priority of most large scale adult education programs. Persons enrolling in those programs should do so to become more informed citizens, to improve their literacy capabilities, to obtain formal school equivalence certificates—but if they need to improve their economic circumstances in the short run, they would do better to spend their time and effort elsewhere.

4


According to many philosophers, nobody can be given experience, but there is no doubt that the case study approach to learning can provide vicarious experience of real value. With this in mind, this little book by Felix Librero can be seen as a valuable asset to anyone who already is or who is planning to be a practitioner in the field of rural radio.

The book, as the author says in the forward, is "an effort to synthesize experiences in running a rural educational station at the University of the Philippines at Los Baños, as well as the experiences of other rural educational broadcasters in various provinces of the country during the last 25 years."

It is, in fact, a case study of Radio DZLB, with explanations of its framework, its operational guidelines, and a detailed account of the DZLB School On-The-Air.

The Operational Guidelines and the information on "how to get started" could be of real value to anyone new in the profession, or for anyone seeking ways of improving an existing rural radio network. The author is honest enough to set down the failures as well as the successes of the station, and there is no doubt we learn as much, if not more, from the study of mistakes as we do from the study of successes. Radio DZLB was indeed ambitious in its enterprises, running programs such as the 4-H Club, The Moiler's Club, the Dairy Farmer's and Milkman's Hour, very successfully.

The information on the workings of the farmer's forum, with its opportunities for farmers to share news, concerns, and tips is very encouraging, and could provide a good springboard for starting similar fora in other countries. The explanations of the failure of the Fisherman's Hour are equally enlightening and deserve careful study. One of the most
On File atERIC

by Barbara Minor

Documents recently entered in the ERIC (Educational Resources Information Center) files include a bibliography on mass media systems in educational development, a report on the methodology developed for the Radio Language Arts project in Kenya, an analysis of development communication during the 1970s, a handbook for making films, and a packet of audiovisual instruction materials.


Intended as an introduction to the use of educational media in developing countries, this bibliography provides an overview of materials available in government documents collections. Although the 33 documents listed are derived principally from the Agency for International Development (AID), two documents from the Educational Resources Information Center (ERIC) are also included. Each entry indicates a source for obtaining the document and includes an annotation. Data of publications for the references range from 1972 to 1985, with most falling in the mid-1970s. Abbreviations used in document titles and annotations are defined, and an index provides an alphabetized listing of titles and areas of concern. Available from EDRS in microfiche only for 75 cents.


The methodology described was developed for use in a U.S.-sponsored radio-based English language arts program for grades one through three in Kenya. Adapted to the special circumstances of the medium, the context, and the program's administrative limitations, the highly interactive radio lessons adhere to distributed-learning principles in instructional design and use in a practical and relevant curriculum to organize the elements of instruction. The Radio Language Arts Program series of lessons uses direct-method language teaching principles and postlesson audio exercises when appropriate and where the limitations of instructional broadcasting justify their use. Available from EDRS in microfiche for 75 cents or in paper copy for $1.80.


Quantitative data on various indexes of national development—mass media, "horizontal communication" (mail, telephones, and telegrams), democracy, social growth, literacy, and urbanization—were collected and estimated for more than 100 developing countries for roughly the decade between 1970 and 1980. These data were then used to test various theories and definitions of communication development. The analyses revealed that in all geographic regions, broadcasting showed spectacular growth, while print media grew only modestly. Horizontal communication, social growth, literacy, and urbanization showed some growth, while democracy—defined in Western terms as civil and political liberties—did not fare well in developing countries. Analysis of the data showed little support either for the original dominant paradigm of communication development that mass media could spur economic and political development, or for alternative theories that emphasize horizontal communication and social development. Available from EDRS in microfiche for 75 cents or in paper for $3.60.


Each chapter in this book is a self-contained unit about specific aspects of film-making designed to accompany film courses being offered by the University of the West Indies, the Jamaica Broadcasting Corporation, and the Institute of Mass Communication in conjunction with the German sponsor, Friedrich-Ebert. The following topics are addressed: the Jamaican film industry; the Jamaican film financing; budgeting, planning, and directing films; editing techniques; and more personalized and localized approaches. The DZLB Fisherman's Hour was by no means the only radio program to have gone under because of a failure to spend time in adequately assessing its audience.

The chapter on the School On-The-Air is very detailed and helpful. It explains just what a School On-The-Air is: "A specially designed radio program where the subject matter is presented systematically and in a progressive manner with the ultimate goal of achieving desired results under a teaching-learning situation." And then it details the characteristics of such a school; explains how to establish a school (including details of personnel needs, management schemes, and feedback mechanisms); gives program suggestions and information on enrollment, examinations, and graduation. It also provides an audience survey instruments and a School On-The-Air program schedule. In short, everything needed to provide a sound basis on which to explore the possibilities of such a school in another place.

The last part of the book is devoted to a chapter on "Looking Ahead." The author prophesies that the future of educational radio lies in more interactive programming, more education-oriented entertainment programming, and more personalized and localized presentations—all prophecies that would be readily endorsed by those of us working in educational radio in other parts of the world.

The book is complete with a good bibliography and some helpful appendices, containing outlines for training programs and evaluation papers. The major weakness of the book has nothing to do with its contents or its authorship; it has to do with its publication. The book has been bound so poorly that the minute one attempts to open it, all the pages fall out. It would seem like a good idea to punch the fishpond and fishpond operators did not believe that a radio program could help increase their production. Both these realizations point to what is possibly the most logical starting point for all radio programming—understanding the audience—both their professional knowledge of the subject and their appreciation of program formats and approaches. The DZLB Fisherman's Hour was by no means the only radio program to have gone under because of a failure to spend time in adequately assessing its audience.

The problem with the broadcasted program was in the fishpond technology that was used; it did not work. Both these realizations point to what is possibly the most logical starting point for all radio programming—understanding the audience—both their professional knowledge of the subject and their appreciation of program formats and approaches. The DZLB Fisherman's Hour was by no means the only radio program to have gone under because of a failure to spend time in adequately assessing its audience. Available from Felix Librero, Chidrunn, book.

Barbara Minor is Publications Coordinator at the ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, New York 13244-2340, USA.

Available free from Felix Librero, Chairman, Dept. of Development Communication, University of the West Indies, Mona, Kingston 7, Jamaica. For orders outside the Philippines, please include US$5.00 for handling and postage.

Reviewed by Esma de Fossard, a Senior Communications Officer at the Academy for Educational Development. She is currently Project Administrator for the Academy's Development Communications Project in Switzerland.
Colombia hopes to reach more than 20 million potential students with nonconventional education services. This figure represents the portion of the population that is not served by the formal education system - a system unable to keep pace with the rapid growth of the population it must serve.

What would it cost the formal education system in personnel, infrastructure, and supplies to serve not just the seven million people currently reached, but the 28 million who should be served? The calculations are astronomical; and, what is worse, these costs are impossible to cover. Another consideration is that these additional services could not be implemented quickly, even in a country where impossible things happen.

In response to these issues the Colombian government has formulated a policy that encourages implementation of strategies to complement the traditional system and permit marginal groups to receive the benefits of education. This program is known as CAMINA (a Spanish acronym meaning "walk"), and is being promoted under the theme of "Education for All Colombians." Its base point of departure is to use existing educational resources and programs, in both private and public institutions, formal and nonformal sectors.

A School That Reaches Everyone

Based on the experience over several decades which the Fundación Acción Cultural Popular (ACPO) has acquired, as well as the educational work it has done through its Sutatenza Radio Network, the national government decided to link the available transmission and production facilities of this radio network for maximum population coverage, offering a multiplicity of educational opportunities. Sutatenza's 700 kilowatts, with transmitters in Bogotá, Cali, Medellín, Barranquilla, and Magangué, can provide a school within reach of everyone with access to a radio.

Secondary and higher institutions, private and public alike, have joined this effort. Having traditionally provided educational services to Colombians through their nonformal programs in cooperativism, ecology, family life, and through formal programs at the primary, secondary, or higher levels, they will now offer, via this network, their unique educational programs in cooperativism, ecology, family life, and, what is worse, these costs are impossible to cover. Another consideration is that these additional services could not be implemented quickly, even in a country where impossible things happen.

In response to these issues the Colombian government has formulated a policy that encourages implementation of strategies to complement the traditional system and permit marginal groups to receive the benefits of education. This program is known as CAMINA (a Spanish acronym meaning "walk"), and is being promoted under the theme of "Education for All Colombians." Its base point of departure is to use existing educational resources and programs, in both private and public institutions, formal and nonformal sectors.

The staffs of the 18 participating entities are responsible for the production of the radio programs look forward to continuing the project. They value the experience gained as radio communicators, the high visibility their institutions receive from the radio, and the letters and telephone calls that indicate acceptance by their audiences.

- Coordination among the institutions has been difficult but stimulating. The medium of radio provides them with an opportunity for exchange, self-criticism, mutual awareness, and team-building.
- The initiative taken by the National Ministry of Education coupled with ACPO's experience, has resulted in the extension of the network to more than 100 small radio stations which retransmit programs using audiodisc tapes prepared and distributed by CAMINA.
- Adequate and timely distribution of support print materials has been a problem. Although not required by all the programs that are broadcast, support material needs have been a financial and logistical burden in the early stages of the program.
- Project directors feel that more and better promotion is required to catch the attention and enthusiasm of a larger number of potential users.
- Finally, it is not enough to simply prepare and broadcast good programs. Education, especially distance education, creates other complementary needs in users such as consultation by telephone, responses to letters, additional topical information provided to users, and support to local organizations that have been stimulated by this service.

Much has been said about the power of the media and its role in education. A multitude of academic questions arise from these discussions, all of them important. But there is also a practical question that needs to be answered: is there a way to quickly reach the millions of people in our cities and rural areas who have no access to educational opportunities? Colombia says "yes," and the answer is radio. Soon, twenty million people who are now deprived of education will have an opportunity to learn.

Jorge Humberto Jiménez is Director of National Programming, Sutatenza Radio Network, Bogotá, Colombia.

CIESPAL Radio Contest Winners

In DCR 43, we announced a radio contest sponsored by the International Center of Higher Communication Studies for Latin America (CIESPAL) in collaboration with Radio Nederland, to select commendable Latin American educational radio programs. The contest winners were announced during CIESPAL's 25th anniversary festival held in Quito, Ecuador, October 15-20, 1984.

It was not until recently that we learned the results of this contest, and although considerable time has elapsed since the awards were announced, we would like to congratulate the winners, and commend the organizers of this contest for their continued support of educational radio in Latin America. The contest drew a large pool of entrants, with almost 200 submissions from 15 countries competing in four categories — documentary, radio magazine, radio drama, and radio education.

First prize for a documentary went to: "The Poor Taught Me to Read the Bible," by Radio Santa María, Dominican Republic.

No first prize was awarded, but second prize in the radio magazine category was awarded to: "Opening the Way," by El Centro Nacional de Acción Pastoral (CENAP), Costa Rica.

In radio drama also, there was no first prize winner. Second prize went to "The Legend of Sunday the Seventh," by Radio La Voz de la Selva, Peru.

The first (and only) prize in the education category was awarded to the adult education courses of Ecuador's Instituto Radiodfónico Fe y Alegría.

Over 450 participants joined in the anniversary activities, with representatives from Latin American and international broadcasting organizations including Radio Canada, Radio Switzerland, the Voice of Germany, Radio Sweden, and Radio Nederland. There were seminars on educational radio topics, tapes of radio programs from participating countries, and professional development exchanges. In part, the Festival represented the culmination of CIESPAL's efforts in the area of radio since 1982, but the week's activities also signified their commitment to continued improvement of radio programming in Latin America.
System Challenges

Although favorable climate and soils allow islanders to grow many crops, there has been little research available that can be applied to the islands' principal food crops. Mounting research to deal with all the important crops would require a huge investment.

Other factors challenge the systems. Many farmers have had little experience in applying other than traditional cropping practices or producing in a complex market economy. Land ownership is extremely complicated, and cultural factors affect motivation and communication. Education has only recently become widespread. While most people are literate, few can communicate well in languages used in agriculture and higher education institutions. Communication of all kinds is constrained by mountainous and tropical jungle terrain, and the great distance between islands. Of the mass media, only radio reaches beyond the main cities to more than a tiny fraction of the population involved in agriculture.

Despite these constraints, agriculture is still the leading economic activity; it is the main focus of development in most of these countries and for at least three-fourths of the people. National development plans stress agricultural development needs: to improve both quantity and quality of food; to reduce amounts of imported foods; and to increase the country's international trade credits through export of agricultural commodities.

All of these countries have similarly structured agriculture ministries, although each has its unique characteristics. The basic unit is a national ministry or department of agriculture, which typically has a politically appointed minister and a civil service-type administrative structure. In addition, most ministries also provide research, extension, and agricultural education services. A communication or information unit is located in this ministry as well.

Knowledge Systems Communications

We have studied and worked with these island systems in a broad context of communication, including (1) linking the island system to external knowledge sources and to the political and production systems of the nation it serves; (2) linking units within the system; and (3) linking users of agricultural knowledge—producers, input suppliers, marketers, planners, etc.—to each other. Our studies have gone well beyond media use, dealing with other means of communication, such as formal and informal training, person-to-person, group, organizational and interorganizational communication, and extension media.

From our work in the region, we have seen programs and activities that are building bridges and stimulating agricultural communication. Many of the developments have been fostered by creative and informed individuals or units without major increases in resources that are limited, to be sure. Information staffs are small and they have limited professional training (only one person in these three countries has degree qualifications in communications).

External Communication Connections

Island people have limited contacts with the fast-changing socioeconomic milieu of the westernized and northern nations. Many island producers have had some exposure to modern agricultural ideas from islanders returning from advanced studies and training abroad; however, these contacts have not been extensively exploited. We found few cases where communication networks were created between these trained people; not much was apparently done to try to maintain continuing access to such knowledge. In the few technical libraries that exist, literature collections tend to be fragmentary, incomplete, often years behind current agricultural thinking, and language-bound to the original publication.

There are stirrings of change in the region. In more and more of the newly independent nations, international donors have helped establish elements within knowledge institutions. There are now two island-based universities that offer Bachelor of Science and Master of Science degree training in agriculture: the University of Technology at Lae, Papua New Guinea and the School of Agriculture of the University of the South Pacific (USP). The USP library, whose main campus is in Suva, Fiji, directs a major effort to collect literature (cultural, economic, social, and technical) of the Pacific Islands. Under grant funding from Canada and United States sources, this program is also training librarians for each of the participating nations—expertise that has been in short supply.

The agricultural library at USP, which is located on the Alafua Campus of the School of Agriculture in Western Samoa, serves the student population and borrowers throughout the region through loan circulation.

The Institute for Research, Extension and Teaching in Agriculture (IRETA), created by the 11-member nations of USP also located at Alafua, serves the region in several ways, and is supported in part by grant funding from the U.S. Agency for International Development, and technical assistance from the University of Hawaii and Cornell University. IRETA has built special facilities on the Alafua campus, where it sponsors regional workshops and conferences, sharing regional expertise and bringing in specialists to teach and interact with national representatives. It also supports networking through electronic mail messaging and two-way voice contact via satellite and ground stations in member countries. (The latter effort was interrupted when the existing satellite ceased functioning, but will be resumed when another becomes available.)

One of IRETA's most innovative contributions has been its Agricultural Liaison Officer (ALO) network which is designed to increase the flow of knowledge among the participating national systems, and to make known to the leaders at the Alafua campus the needs of national agricultural systems.

By 1985, seven of the member nations had appointed an ALO representative to serve as his or her country's eyes and ears to enhance the flow of agricultural information. It is the ALO's responsibility to keep in touch with current local research, to seek out earlier, perhaps neglected reports, and to review international data sources. They report their information to national officers and contribute to a quarterly newsletter that circulates among the 11 member countries.

Communication within Systems

Over the past four years Fiji, Tonga, and Western Samoa have begun to build better bridges between their in-country knowledge system units. In some cases, contact with donor organizations has stimulated better communication; other bridges are indigenous adaptations of ideas from elsewhere.

Both Fiji and Western Samoa have recently developed national research plans, working with ISNAR in the planning process. These plans have helped form communication links with extension leaders, with policy makers, and with other elements of the agricultural knowledge system.

In-service training efforts in the three countries had been limited and fragmentary. All have shown impressive changes in recent years, helping to improve links between research centers, extension services, and producers. In Fiji, for example, responsibility for in-service training and information services has been vested in one officer. This has led to greater awareness by information staff of the programs and technical content dealt with in the action agencies, which has helped these writers and broadcasters to identify and to get to know information sources. At the same time, elements of communication philosophy and methods have been more and more technologically trained programs.

For several years, Tongan in-service trainers have been required to provide advance copies of their training materials. In addition to their use in training, the materials fill needs as references for field officers. In Tonga, research and extension officers often train together, taking turns serving as trainer and trainee.

As Western Samoa has adapted the Training and Visit (T&V) system (see DCR #22) to its situation, increased attention to in-service training builds bridges between extension and other agricultural groups.

One notable factor encouraging change is the growing awareness among extension, research, and other institutional administrators of the need for communication support. Despite budget constraints, some have supported efforts to improve information staff competence, methods, and equipment. In Fiji, at least one information staff member has been approved for degree-training abroad. Western Samoa is developing increased technical assistance and upgrading equipment with Asian Development Bank and Food and Agricultural Organization backing.

Communicating to Producers

Efforts to get information out to producers is paying off well. Field days, farm trials, and demonstrations (three typical activities that introduce new and improved agricultural techniques) have attracted more producers than ever in some of these countries. For example, Western Samoa recently held an Agricultural
Show on one of its islands; more than 10,000 people attended the activities—nearly one quarter of that island's total population. A coordinated multimedia campaign helped boost attendance and offered follow-up printed materials to reinforce the messages delivered at the educational sessions. Both Fiji and Tonga make extensive use of field days to reach farmers. Their staffs are trained in how to plan and execute these three activities to improve their outreach effectiveness.

The modified T&V system developing in Western Samoa strengthens their outreach effort. Greater number, frequency, and continuity of visits by extension officers are built on more and more stronger links with farm producers. Similar emphasis on farmer contacts by extension in Fiji and Tonga strengthens the dissemination of agricultural information. Fiji is rapidly upgrading dissemination efforts, especially with publications. One new series provides reference materials for field extension staff, and another is devoted mainly to reporting new findings and recommendations from research to extension. Within the last year, an information officer has been assigned full-time to work with the Research Division to speed the flow of new information to users. Coordination between staffs of Fiji's broadcast and print media assures dissemination in both media of information produced by the work of one information specialist.

Need for Communications Training
Training in communication practices and principles continues to be a scarce item on the educational agenda in the South Pacific. A relative vacuum for development communication specialists has existed because nearby training has not been available. The nearest degree-based training or intern programs are in Australia, New Zealand, or the Philippines. Fortunately on this point, IRETA appears to be maturing as a source of support by offering some agricultural communication courses. Meanwhile, Agricultural Liaison Officers are demonstrating that contributions can be made by professionals who work in both agriculture and communication training.

These and similar steps have helped to improve communication within the agricultural knowledge systems of the region over the past three years. They have been a motivating stimulus for still larger and more creative steps toward overcoming multiple constraints that persist.

For a bibliography of related studies, write either to: George Beat, Institute of Culture and Communication, East-West Center, 1777 East-West Road, Honolulu, Hawai 96844, USA; or to International Service for National Agricultural Research, P.O. Box 93375-2509 AJ, The Hague, Netherlands.

George M. Beal recently retired as Research Associate, Institute of Culture and Communication, East-West Center, in Honolulu. He was for many years a research, teacher, and head of Sociology at Iowa State University, Ames, Iowa.

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Briefly Noted

by Robert Vettel and William Amt

- Guidelines for Planning Communication Support for Rural Development Campaigns is a manual published by the UNDP Asia & Pacific Programme through Development Planning and Communication Planning (UNDP/DTCP) and compiled by Najib M. Assif and James H. French. The manual covers the main components of planning communication support for rural development campaigns, how to carry out precampaign studies, how to design a communication strategy, and how to develop a management plan. Each section is supplemented by overhead transparencies (in the trainer's version), reference sheets, and worksheets. Available in English only, the trainee's version (which may be used for self-instruction) is available for US$80.00, and the trainer's version costs US$40.00; however, UNDP/DTCP will include five single copies of other publications free of charge with this order. Write: UNDP/DTCP, P.O. Box 2-147, 19 Phra Atit Road, Bangkok 10200, Thailand.

- The Industrial Information Section of the United Nations Industrial Development Organization Technology Programme has prepared a trilingual (English, French, and Spanish) Directory of Industrial Information Services and Systems in Developing Countries. This directory of 345 industrial and technological information facilities is designed to serve as a catalyst for increased networking activity among those institutions at the national, regional, and international levels concerned with accelerating the process of industrialization. Each entry includes the name of the organization, the address, languages used, a description of activities, topics about which information is provided, and a publications list. Free copies are available from the United Nations Industrial Development Organization, Industrial Information Section, P.O. Box 300, A-1400 Vienna, Austria.

- The sociology and political economy of mass media and interpersonal communication are central issues in Communication and Social Change, a new book by Michael Kunczek. Kunczek looks at development and communication from various viewpoints, concluding that there is a need for a "free media system within a nation state and a free flow of news on the international level." He raises many questions by outlining the major economic development and social change paradigms; showing how mass media have affected such change for good; and the position of developing countries in the international flow of news. Available in English from the Friedrich-Ebert-Stiftung, Godesberger Allee 149, D-5300 Bonn 2, Federal Republic of Germany.

- INTERPAKS, the International Program for Agricultural Knowledge Systems, is a program which provides educational and technical assistance in support of agricultural development through the dissemination of knowledge in developing countries. One of INTERPAKS' main functions is to provide information about agricultural knowledge systems through the publication of a newsletter and an ongoing series of booklets INTERPAKS Interchange. A quarterly newsletter examines methods of agricultural information dissemination in developing countries with feature articles, synopses of reports, speeches, book reviews, and INTERPAKS project activity news.

The INTERPAKS ongoing series of booklets include: 1) The Cooperative Extension Service: An Adaptable Model for Developing Countries, which examines how the U.S. university land-grant extension system has effectively combined both the research and extension functions of agricultural development, and how components of this system can be applied to developing countries; 2) The Role of the Information Specialist in the Dissemination of Agricultural Information looks at the uniqueness of this field, the different levels of information which are dealt with, i.e. the scientific, the extension, and the trade levels, and skills and education required of agricultural information specialists; and 3) Problems Facing Native Agricultural Extension in Developing Countries discusses the results of 59 developing country agriculture extension directors who responded to an INTERPAKS questionnaire. The survey attempts to reveal present areas in developing country agriculture extension systems and concludes with recommendations for improvements.

Other useful INTERPAKS publications include: Development Communications in the Third World, a collection of the papers that were presented at the "Midwest Regional Symposium on Development Communications in the Third World" at the University of Illinois at Urbana-Champaign on April 15, 1983. Emile McAnany delivered the keynote address which was followed with presentations by several other development communication specialists. Annotated Bibliography on Development and Transfer of Technology, Vol. 1, contains 271 relevant citations and annotations of literature in five areas: general agricultural development, policy and planning, technology development, technology transfer, and technology utilization, followed by an author and title index.

Single copies of the above-mentioned publications are available from INTERPAKS, Office of International Agriculture, University of Illinois, 113 Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801, USA.

The authors are on the Clearinghouse staff.

Call for Abstracts

The World Federation of Public Health Association will hold its Fifth International Congress in Mexico City March 22-27, 1987. The conference theme is International Health in an Era of Economic Constraint: The Challenge. Abstracts of proposed papers should be submitted by October 15, 1986 in English or Spanish. Request abstract forms and guidelines from: WFPFHA Secretariat, c/o American Public Health Association, 1015 15th Street, N.W., Washington, D.C. 20005, USA, or Dr. Jose Luis Luna, General Secretary, Local Coordinating Committee, Mexican Society for Public Health, Insurgentes Sur 1397, 6th piso, Col. Insurgentes, Mexico, Delegacion B. Juarez, 03920 Mexico D.F., Mexico.
Continuing education centers (CECs) are neither new nor particularly glamorous stars on the development scene. They serve as catalysts to improve long-term development efforts and provide the framework for linking ideas and people—a basic objective of development support communication (DSC).

The most familiar type of CEC found in developing nations are the farmer training centers. More recently, universities are establishing CECs to serve the wider community, especially at middle and higher manpower levels. This article offers suggestions on how universities can plan a continuing education center with an emphasis on DSC principles.

A typical university-based CEC develops a wide range of activities, including distance education services and training workshops, seminars, short courses, meetings of professional associations, and national and international conferences that will require housing and dining facilities.

Many developing countries already conduct these activities, but usually on a between-term or ad hoc basis. More impact can be gained by creating a CEC that can properly organize and conduct outreach activities throughout the year. With this arrangement, the staff, meeting rooms, and residential facilities dedicated to continuing education programs are not at the mercy of ongoing academic timetables. Similarly, a well-equipped audiovisual unit becomes a necessity for the comprehensive CEC to meet the varied demands of its programs.

The observations below are based on the evolution of the Centre for Continuing Education at Sokoine University of Agriculture in Morogoro, Tanzania, which received US Agency for International Development (AID) assistance from 1980 to 1984 as part of a larger agricultural education and extension project. After five years of successful operation, some of the lessons learned might be useful.

The Sokoine Centre is physically divided into three units: a main meeting building, an office block, and a hostel complex, integrated into the university campus and with the usual student activities and services. But Sokoine has developed a pattern characteristic of many continuing education centers: it has become a campus within a campus. One link between the two is the Centre’s Audiovisual Unit whose media equipment and production facilities also serve ongoing university media technology needs.

Lessons Learned

Lessons we learned in creating and operating the Sokoine Centre were in the areas of planning decisions, staffing, physical facilities, funding base, and programs and philosophy.

Planning Decisions:

1. Develop a cooperative alliance between donors and expected users. Participation by the expected major users and any donor agencies must be promoted early in the planning process. If the university chooses not to involve key decision makers and identified users, the effort probably will not reflect the actual needs of such a center.

2. Provide flexibility and freedom from departmental policies by placing the CEC in a suitable location within the institution’s organizational structure. If possible, the CEC should have independent standing similar to a library or an institute.

Further planning recommendations:

- Study existing continuing education centers in the country to determine the needs that are to be met by this CEC to avoid legitimate objections to duplication of effort.
- Solicit donor support. This is particularly important initially to purchase audiovisual and other imported equipment, and provide special staff training.

Staffing:

Select the right director. He or she should have strong academic credentials as well as a solid background in extension, continuing education, and administration.

- CEC staff should be highly professional, with knowledge of DSC principles and with a strong service commitment. They should be encouraged to participate in CEC management operations.
- A title, such as “educational specialist,” should be established for these professionals.
- Training and development plans should include all professional and support staff including audiovisual technicians, hostel and dining room staff, and others.

Physical Facilities:

If new buildings are necessary, visit other facilities prior to making the architectural specifications. Second to staff quality, the physical facilities are the most critical element in the long-term success of a CEC. Remind fiscal officials that the CEC will charge daily rates per person to cover meeting, living, and dining amenities appropriate for professionals and senior civil servants.

Take nothing for granted in developing the specifications for facilities and services. CECs require special physical surroundings that few architects or bureaucrats appreciate. The quality of the facilities needed by CEC clientele is something that may be overlooked by architects who are more experienced at designing buildings for high schools on small budgets.

Design for media use. A high-quality media center with a trained staff is a necessity for a national continuing education center—not a luxury. There are several reasons for suggesting this apparent extravagance:

1. The seminars, short courses, and workshops should demonstrate media use with hands-on activities to encourage understanding of development communication support.
2. Speakers and participants at international seminars will use slides, overhead projectors, films, or possibly video in their presentations.
3. CEC training materials might be produced at the center for other training centers, schools, or for correspondence courses.

Funding Base:

A flexible, fair funding strategy should be developed so as not to strain existing university finances. The university can support the CEC by absorbing staff salaries, utilities, and other basic budget items. Otherwise, the CEC should be a self-supporting unit and charge for all other CEC activities and services.

There should not be a blanket subsidization of program activities by donor agencies. Because of budgetary constraints, no provision was made by AID to support Sokoine continuing education programs. Nevertheless, the staff discovered many groups—private industry, ministries, development projects, and other donor agencies—with funds available for short-term staff training at the Centre. This avoided the usual financial jolt that often occurs when a foreign aid project comes to an end.

Programs and Philosophy:

The CEC should have a primary program focus. Although it may seem economically smart to use a CEC as a general convention center where other groups can schedule their meetings and programs when there are open dates on the CEC calendar, this practice may alienate primary users who find they cannot schedule their activities at appropriate times. A liaison from the client group should be assigned to work with the center’s program specialists during the planning stage of an event. This type of cooperation exposes all clients to good communication and training techniques, and serves as an example of how communication support can bring greater depth to their activities.

An Advisory Committee of primary users should be established. This will help keep the CEC responsive to users’ needs. The committee also gives the director a forum in which to develop CEC policy and to solicit help in solving various problems that arise at the facility.

A Summary

A successful continuing education center blends of good facilities, service-oriented staff, active program planning, sound financial policies, and professional marketing of services. If the setting is a university campus, intellectual resources usually available only to students can benefit the wider community through CEC programs. Entwined with the elements is a strong communication support dimension that can serve as a model for use when they return to their home institutions.

David Giltrow was Team Leader for the Tanzania Agricultural Education and Extension Project, and coordinated upgrading of the Cologne Centre Audiovisual Unit. He is now a private consultant in development communication and education.
Transcending Barriers:
SHARING Satellite Technology

by Gail Bouck

In many areas of the world, particularly in developing countries, natural geographic barriers, lack of teachers, dispersed populations, and inadequate infrastructures make conventional communication methods either physically or financially impossible. The expanding use of telecommunications, especially new satellite technology, can help overcome such difficulties. Although the use of such technology is likely to be affected by a country's political and economic situation, projects using telecommunications are, nonetheless, being carried out in education, medicine, and agriculture.

Under the auspices of INTELSAT, the 110-member organization which owns the world's international telecommunications satellite system, and in conjunction with the International Institute of Communications, a London-based member organization concerned with the uses and developments of international communications, Project SHARE (Satellites for Health and Rural Education) was initiated in order to make more people aware of the practical uses of satellite communications for educational and health purposes. Since its inception in 1985, it has provided free satellite access for rural health and long-distance educational programs which use new satellite technologies.

Each SHARE project involves a series of tests and/or demonstrations aimed at showing how modern telecommunications can help alleviate the problems inherent in providing rural health care and education. Originally conceived as a 16-month project, scheduled to end in April 1986, it has now been extended through December 1986. To facilitate the development of permanent long-term programs, extensive evaluations and studies will be conducted on each project, as well as on the project as a whole. These will be published and made available upon request to individuals and institutions in the field. (See address at end of article.)

To date, most projects have been affiliated with universities, professional societies, or hospitals, working with the various telecommunications entities in the countries involved. Each sponsor designs and dictates the content of the project and is responsible for securing financial support, whether private or governmental, and for the logistical links. Once the project application has been submitted to INTELSAT, it is reviewed by the International Advisory Council—a special panel of experts in international communications from around the world. The review determines if the project fits the image and spirit of Project SHARE, its potential long-term benefits, and the overall feasibility of the proposal.

Exemplary Projects

Thirty-seven different countries are currently participating in Project SHARE. In education, the People's Republic of China uses satellites to transmit daily lectures to university students throughout the country. Called "A TV University," it serves as an example of how standardized education levels can be brought to scattered populations in countries where great distances and geographical barriers make contact difficult. The use of satellites has also been successfully demonstrated for years by both the University of the South Pacific and the University of the West Indies where a high percentage of course completions, along with high test scores, have been achieved. (See DCR 24 and 26.)

(Continued on page 3)

Where in the World are Radios?

by Graham Mytton

Accurate and reliable data on radio ownership in rural areas of developing countries are notoriously difficult to obtain. On the other hand, we know quite a lot about access to and ownership of radios and televisions in urban areas of these same countries, primarily because this is where the bulk of manufactured consumer goods are sold. Those who purchase advertisement space or time want to know what consumers are buying, how many people in Lagos, Nigeria can be reached by a series of 30-second radio commercials for toilet soap, or how many people in Jakarta, Indonesia have television sets, and how many watch it at home? Advertisers need this information. In contrast, there is little demand for information about rural consumers in developing countries, so not much is known about them.

Although commercial research agencies do exist in many developing countries, consumer research is not their only, or even their major activity; they do many other types of research as well. What about research by broadcasting organizations? In Latin America, commercial radio stations commission audience surveys, but these too concentrate on urban audiences. In Asia, audience research is carried out with growing frequency only in Sri Lanka, India, and Pakistan. In sub-Saharan Africa, the picture is even less clear. Other than in South Africa, no radio or TV stations do regular audience research. In North Africa, only Morocco, Tunisia, and Egypt have done systematic research and these have been mainly urban-based studies of their audiences.

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Development Communication Report, published quarterly by the Clearinghouse on Development Communication, has a circulation of over 6,000. The newsletter is available free of charge to readers in the developing world, and at a charge of US $10.00 per year to readers in the industrialized countries.

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 U.S. Agency for International Development, Bureau for Science and Technology, Office of Education, as part of its program in educational technology and development communication.

The views expressed in Development Communication Report are those of the authors and not necessarily those of its sponsors. Original material in the report may be reproduced without prior permission provided that full credit is given and that two copies of the reprint are sent to the Editor.

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Washington, D.C. 20037 USA
Tel: (202) 659-2250
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Judy Brace, Director
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ISBN 0192-1512

AED
Academy for Educational Development
International Division

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BBC's Survey Findings

This lengthy introduction serves to suggest some caution when interpreting the following facts and figures. Since 1944, the BBC has applied the sample survey methodology to gather audience data, interviewing randomly selected people in designated areas of a particular country. Their External Services Division performs regular audience research in countries around the world in order to collect accurate information about radio ownership and to determine who listens to the BBC and other international broadcasters.

In recent years, increased attention has been given whenever possible, to rural areas. These studies verify the already-assumed high levels of exposure to the media in urban areas and the generally lower listening levels in rural areas. Nonetheless, increased radio ownership among rural people in developing countries has been confirmed by these surveys.

Given the expense and difficulty of research in developing countries, it is understandable that the information we have is both meager and incomplete. In 1964, for example, a survey in the West African country of Togo, showed 44 percent radio ownership in urban areas, but rural surveys indicated only four to five percent ownership. No more recent data are available. Elsewhere in West Africa, figures are somewhat more current. In neighboring Ghana, an extensive survey in 1977 showed that 72 percent of urban households had radios, with 46 percent ownership in the rural areas. In Nigeria, Africa's most populous country, a 1983 national survey showed 85 percent ownership or access to radios in urban households and an impressive 62 percent were found in rural households.

In eastern African countries, surveys have occurred more regularly, making it possible to show change over time within a country. In Tanzania, for example, a nationwide audience survey in 1960 indicated that 10 percent of urban households had radios, but fewer than two percent of rural homes had radios at that time. By 1967, the situation had been transformed. In the capital city, Dar es Salaam, ownership had grown to 58 percent. Another survey in 1974 showed that among the 14 million people in the country, there were 1.7 million radios with nearly 1.6 million of these located in rural areas. At that time, it was one of the highest levels of recorded radio ownership in the developing world.

Less spectacular, but equally significant growth has occurred elsewhere. In Kenya, radio ownership grew from a very low base in 1960 to 72 percent of urban households and 36 percent of rural households with radios by 1978. Five years later, this figure had risen to 76 percent and 42 percent respectively.

Potential in China

In China, the picture has been broadly similar. In China, individual radio ownership was not encouraged during the cultural revolution, but since then it has rocketed. While there has not been a nationwide survey, recent estimates put ownership at over 100 million, perhaps five times as many radios than in the years before the cultural revolution. At that time, the dominant equipment was the ubiquitous wired radios, delivering only local broadcast services. Since then, much of the growth has been in individual ownership of portable radios in rural China. Moreover, there remains enormous potential for even greater growth in radio ownership in a country of more than one billion people.

In India, where so much emphasis has been put on the developmental role of radio, in some rural areas a majority of people still do not have their own radios. Therefore, despite the fact that there is widespread community and group listening, there are still many who are not reached at all. The pattern is very similar to that in Africa -- a high level of radio ownership in towns and a smaller but growing presence in the countryside. In a 1975 survey of eight Indian states, 75 percent of those interviewed in urban areas had a radio at home, while in rural areas, ownership came to only 38 percent.

Elsewhere in South Asia, one finds a similar picture. In 1975, a very limited survey done in accessible regions of rural Pakistan, showed that no more than 11 percent of households had radios. By 1982, the situation had been significantly transformed. Although a different sample of rural people was interviewed, it was clear that there had been substantial growth in ownership -- more than half of those contacted had a radio.

At the present time, there are still many areas of the world where broadcast research is not possible. Afghanistan is a good example. The strategy used by BBC to assess Afghan radio-listening habits was to conduct a study of Afghan refugee camps in Pakistan, since the approximately three million refugees living there had come mainly from rural Afghanistan. In the survey, 75 percent had had radios.

We have less data for Latin America, but what exists shows a somewhat earlier expansion of radio into the homes of rural residents. Radio ownership seems now to have reached nearly saturation levels.

A Downturn Ahead?

Although the statistics seem to indicate that the trend is toward having a radio in every household throughout the world, this is not actually the case. There are signs that the growth documented in the above figures appears to have peaked. In fact, there is evidence of a decline in radio ownership in some developing countries. With the onset of worldwide recession in the late 1970s, which is still greatly affecting the poorest regions of developing countries, the purchase of radios or batteries is not foremost in the minds of people struggling with daily survival.

A lack of batteries and the need for foreign exchange for more essential commodities are major problems in many developing countries with severe balance of payments difficulties. In Tanzania, where there are two factories that could produce enough batteries to meet the local demand, most are now being exported for foreign exchange purposes. As a result, (Continued on page 3)
World Resources 1986

The World Resources Institute has just published an excellent reference book on worldwide environmental and resource trends—the first of its kind. In World Resources 1986 you will find a wealth of global, regional, and national resource trends, with dozens of charts, maps, figures, and data tables for 146 countries. Six emerging issues that seriously affect the human condition and demand urgent remedial action are highlighted, including: multiple pollutants and widespread forest decline in Europe and North America; the environment and human health; tropical deforestation; the atmosphere as a shared resource; soil degradation; and population growth and resource use, especially in Africa.

In the United States, copies can be ordered directly from the International Institute for Environmental Development, 1717 Massachusetts Ave., N.W., Suite 302, Washington, D.C. 20036, for US$19.45 cloth, and US$16.95 paperback, with discounts on multiple orders. Payment or purchase orders, plus $3.50 for UPS postage and handling, is required on all orders. It is also available from IBD Publications, 3 Endsleigh Street, London, WC1H 0DC, Great Britain, for cloth £22.95, paperback £11.95. Postage and handling additional.

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batteries currently cost as much as US$2 each—more than 10 percent of an urban Tanzanian worker's weekly wage, and an even higher proportion of a rural dweller's income.

The dual problems of battery supplies and the shortage of radio repair services have become major obstacles to further expansion of radio ownership in developing countries. The cost of batteries has stimulated increased use of plug-in radios, but most developed countries have only limited electricity supplies outside urban areas. And, after all, the main attraction of the battery-powered transistor radio is that it portability. As a result, attention has turned to developing an inexpensive, maintenance-free, solar-powered radio that will require no other electrical supply source.

Until these supply and distribution problems are solved, the question remains: Will a Zambian farmer ploughing his field while a transistor radio swings from the harness of his bullock become an image of the past?

Graham Miyton is Head of International Broadcasting and Audience Research for the British Broadcasting Corporation. He was previously a producer in the African Service of the BBC, and a Zambian Broadcasting Services Research Fellow at the University of Zambia.

Bouck continued from page 1

In order to further professional and vocational education, lectures on water management and engineering sponsored by the Higher Education for Development Organization (HEDCO) are being transmitted on a bimonthly basis from University College, Dublin, Ireland to the University of Anman in Jordan for approximately three hundred participants, both students and professionals in the field, to attend these lectures.

Because providing medical information over great distances is difficult, developed and, to a lesser extent, developing countries are turning to satellite technology. The Miami Children's Hospital is sponsoring a large and very successful project to bring the latest techniques and information on pediatrics to doctors in South and Central America. (See article in this issue.)

In another health project, brain scans are sent via telephone lines from Nairobi, Kenya to St. Johns, Newfoundland, Canada, where diagnoses are performed. This same facility maintains a link with the Makarere Medical Center in Kampala, Uganda to support our small staff of doctors and trained personnel, helping them to serve a much larger population than otherwise would be possible.

More Ideas for SHARE

Other projects also are in various stages of preparation or operation. Some innovative proposals that have been submitted include: using small, transportable microterminals to assist in coordinating famine relief; creating interactive access to international databanks for nutrition education in South Pacific island nations or for children's television programming; and relaying training programs to bring computer literacy to developing nations.

Each SHARE project carries with it a different challenge and has attracted an impressive diversity of individuals and organizations. By taking the initiative, these participants have gained insight into the problems and the promises of telecommunication for their countries. SHARE's ultimate goal, of course, is to stimulate developing countries into future activities on their own, building on the skills acquired while bringing expanded services to rural populations.

For further information about Project SHARE contact: Gail Bouck, INTELSAT, 3400 International Drive, NW, Washington, DC 20008-3089 Telex 89-2707, Telephone (202) 944-7825

Gail Bouck is Assistant Development Affairs Officer in the Office of Policy Analysis and Development Affairs at INTELSAT where she manages Project SHARE.

Call for Papers

The International Communication Association is calling for papers and program proposals for its 37th Annual Conference to be held May 21-25, 1987, in Montreal, Canada. Proposals should address one of the nine established divisions, four special interest groups, or the Conference theme of "Ecology of Communication." Proposal submission deadline is November 1, 1986.

For a description of the categories and submission guidelines, write to Robert L. Cox, Executive Director, International Communication Association, P.O. Box 9589, Austin, Texas 78776 USA. Telephone (512) 454-0899
Supporting Health in Swaziland

by Alfred B. Mndzebele

In order to successfully disseminate health messages to general audiences in a developing country, careful planning and implementation is required. It is important to consider all the components that contribute to bringing about successful change in a systematic manner, including research and evaluation, media, resources, and training.

During 1984-1985, the Ministry of Health in Swaziland applied mass media communication techniques to promote the use of oral rehydration therapy (ORT) to overcome infant dehydration from diarrhea. Building on this successful dissemination activity, another communication campaign was designed for Swaziland's Expanded Program on Immunization acceleration campaign. Radio, print, and interpersonal channels were used to disseminate the ORT messages.

In developing countries, use of these media is often accompanied by inherent drawbacks. Radio messages associated with a project may not be very effective unless they are preceded by adequate preprogram research or built-in feedback measures to assure that the messages are relevant. Print messages are susceptible to misinterpretation because audiences may not have regular exposure either to the written word or to graphic materials. Training programs within an extension system may begin dynamically, but then lose their effectiveness over time without constant updating of training materials and techniques. In light of these constraints, a communication system that endeavors to orchestrate these trouble-prone media into a coordinated program must be based upon a strategy that is developed from a comprehensive, preprogram planning process.

Development Research Phase

Planning the communication component of the Expanded Program on Immunization acceleration campaign in Swaziland began with a development research phase—first essential step in any development communication project. We conducted field investigations and reviewed data to determine current patterns of rural mothers' behavior, attitudes, and practices regarding immunization. A knowledge, attitude, and practices study was also done in order to systematically plan an in-service training strategy for clinic nurses as well as to gather information for the design of a general health education campaign on immunizable diseases.

In our development research, we were looking for evidence of existing appropriate behaviors to build upon that would lead to increased knowledge and use of immunization, and to uncover areas of audience unfamiliarity that our campaign would need to focus upon. For example, our field research revealed that Swaziland mothers want their children, particularly those under one year of age, to be protected against traditional diseases through the application of traditional medicines. Building on this, messages were designed that were based on the traditionally practiced behavior of protecting children against diseases. The focus of the messages was not that the diseases were "modern" as opposed to "traditional," but that immunization should be practiced on their young children as other protective behavior.

In addition to designing messages based upon our research, we were able to implement three other components of our planned development communication project:

1. Media Use: By determining current media use behavior, attitudes, and knowledge of the target audience, we could devise health messages that addressed the desired changes.
2. Resources: By ensuring an ample supply of vaccines and refrigerators would be available to implement the immunization campaign, we were able to reach the campaign goal.
3. Training: By designing and holding a training program we could be assured that all health personnel coming in contact with the target audience knew their teaching responsibilities.

The Power of Communication

With the experience gained in the use of systematic development communication, we have learned some important lessons including:

- Systematic development communication commands a special authority. Research confirms that greater impact is possible when interpersonal communication is combined with radio or TV messages, newspaper articles, or poster illustrations.
- Systematic development communication assumes better control of the message. Since message conception and design are of primary importance, the most desirable means of communication is the one that guarantees the message will be delivered consistently and correctly.
- Systematic development communication lends a cumulative impact to a message. Messages that are consistently reinforced through different media produce a greater overall impact and have a stronger psychological advantage over a campaign that does not consistently repeat its message.
- Systematic development communication reaches audiences more quickly. Multiple media applications can disseminate messages further than a single medium in a comparable amount of time. A single medium may take months to saturate an audience, whereas repeated use of mass media exposes a larger audience to a stronger dose of the same information in a shorter period of time.

- Systematic development communication influences other major audiences while directing the message to its target audience. For example, although directed to mothers, a nutrition message will be seen and heard by farmers who learn of the special emphasis on selected foods, or by government officials whose support for new policies is always necessary.

Without a thoroughly designed communications strategy, otherwise well-planned development projects will be doomed to failure. It is not an exaggeration to say that a development project is only as successful as the communication system that supports it.

Alfred Mndzebele is a Health Education Officer with the Swaziland Ministry of Health.

Briefly Noted

by Robert Vittel and William Amt

- IBM has recently released The Guide to Software in Developing Countries, a compilation describing personal computer software programs covering the areas of agriculture, economic and social resources, physical infrastructure and administration. Programs described cover a wide range of developing-country applications, among them farm planning, aquaculture management, timber yield forecasting, census processing, population growth monitoring, water supply requirements, foreign debt, loan, and payment monitoring, and many others. The guide also includes descriptions of related software literature, supporting software, national language supplements, (IBM) hardware, a glossary of terms, and a list of software sources. Most materials included in this guide are free of charge. The guide is available at no charge from Communications and External Programs Manager, IBM Area South, 190 Avenue Charles de Gaulle, 92523 Neuilly sur Seine, France.
- The Pacific Telecommunications Council (PTC) has published the proceedings of their eighth annual conference on Evolution of the Digital Pacific held in Honolulu, Hawaii on January 12-15, 1986 Over 60 of the conference papers appear in this volume. They address issues such as Pacific facilities' developments and requirements, policy, planning, and facilities, business strategies, network applications, socio-economic impacts, educational programs, and others. The 384-page volume is available for US$4 from the University of Hawaii Press, 2840 Kolowalu Street, Honolulu, Hawaii 96822, USA.
- We have recently received three periodicals that will be of particular interest to our readers looking for literature on educational technology and communications, and informatics. AGORA Informatics in a Changing World, a quarterly journal published by the Intergovernmental Bureau for Informatics (IBI), examines developments in informatics (Continued on page 13)
In a lush tropical setting fifteen minutes' drive from Arecibo, Puerto Rico, a vital new educational facility has come into being. Situated on a five-acre hillsie farm, the Amoz Gibson Training Centre was established in 1982 and is operated by CIRBAL, an international Bahá'í field agency for development media. The center provides practical, "hands-on" training in appropriate media and technology for the spiritual, social, and economic development of people the world over.

Within easy reach of all the Americas, the training center shares space with CIRBAL's Broadcast Division, which oversees the planning and construction of Bahá'í radio stations throughout the world. These highly successful radio operations have been featured in professional journals because of their unique emphasis on local participation and management, and their innovative educational and cultural programming. Radio stations currently exist in Ecuador, Peru, Bolivia, Panama, and the United States, with others under construction in additional Latin American countries and in Africa. They are staffed by members of the local community, many of whom received their training at the Amoz Gibson Centre. Several articles about Bahá'í radio stations have appeared in earlier Development Communication Reports (See Nos 40, 42 and 44).

Bahá'í radio stations are bases for education and community service. In the Andes, these stations have become the most popular in the region. When the station at Lake Titicaca, Peru stopped broadcasting for a week while awaiting repair parts for its transmitter, campesinos went to the city to demonstrate, thinking that government had taken the station off the air. In Bolivia, thousands of villagers walked for days to attend festivities associated with the anniversary of Radio Bahá'í.

Course Offerings

Originally established to prepare volunteer workers for these stations, the center began with a three-week, 140-hour radio broadcasting course. The course, now offered annually, is organized around an intensive, six-day per week schedule covering the fundamentals of educational and cultural broadcasting, programming and production, legal and technical topics, and management. In the classroom, a wide range of instructional methods are employed, from traditional lectures to role playing, mock interviews, audiovisual presentations, panel discussions, independent projects, workshops, and self-administered exams. Throughout the course, students are immersed in a multicultural environment designed to foster a spirit of cooperation and service, in addition to providing instruction in specific knowledge and skills.

An Expanding Curriculum

In response to rapidly expanding media opportunities and the corresponding need for skilled volunteers, the curriculum has evolved to become an integrated program in Development Communication with six to eight training sessions held each year. The program is intensive and practical, designed to prepare students for all communication-related aspects of project management, including technical maintenance and the training of others. The curriculum is divided into five broad areas: hardware, software, human development, international service, and participatory media theory and practice—all presented from a Bahá'í perspective. 

Special Training

Courses have also been designed to meet the needs of special groups, like that given to the past staff of the Bahá'í radio station recently constructed in rural Panama. Instructors have had little formal schooling and no experience with even the most basic audio production equipment. In one session, students learned to produce "oral scripts," in which pictographs are organized into an outline that then serves as a guide for a radio interview or presentation. In the evenings, the Guaymis alternated between studying and sharing beautiful examples of their folktales, traditional music, and dance.

Occasionally, the center sponsors off-campus activities such as a 14-country media-training trip through the Caribbean in 1984, and an international "Scriptwriting, Programming, and Production Workshop" conducted for staff members and managers from three Bahá'í radio stations in South America, that was held in Puno, Peru, during that same year.

As one of the very few institutions that offers training for media trainers as well as for local participants in a media project, the Amoz Gibson Centre has brought in students from over 25 developing nations, including members of national Bahá'í administrative bodies, nonliterate villagers, university professors, young people investigating career possibilities and Nord Americans who train to serve abroad as volunteer workers and as consultants to the local project staff. Classes are conducted in both English and Spanish—many times on a fully bilingual basis. The center is currently consulting with several universities about the possibility of offering joint degree programs, a step that will allow eligible students to receive college credit for courses taken at the Arecibo campus.

The center has attracted a highly qualified faculty with extensive media and international (Continued on page 6)
experience including: the executive producer of a national radio education project in Kenya; a doctor of education specializing in cross-cultural communication and media; the manager of a rural black community-service radio station; and a well-known South American director of human progress.

For more information about the center, contact Dr. Randie Gottlieb, Administrator, Amoz Gibson Training Centre, Arecibo, Puerto Rico 00612.

Randie Gottlieb is the administrator of the Amoz Gibson Training Centre. She received her doctorate in Media and Instructional Development from Boston University.

1986 Agricultural Catalog

Winrock International has recently distributed an expanded version of their Agribookstore 1986 Catalog. It contains over 200 abstracts of agriculture-related publications available through the Agribookstore. For a catalog, write to Agribookstore, Winrock International, 1611 North Kent Street, Arlington, Virginia 22209, USA.

The Brazilian Society of Interdisciplinary Studies of Communication (INTERCOM) is holding its 1986 meeting from September 1-7, 1986 in Sao Paulo, Brazil. The focus of the meeting will be "Communication for Development."

A Media Use Survey in Malaysia

The following article is a good example of how information from a small-scale survey can be used at the local level to improve training courses for audiovisual aids users. With relatively little effort, data can be gathered and assessed for the purpose of pinpointing strengths and weaknesses in local applications of media for effecting change.

by Zaharah S. Keeney and Musa Abu Hassan

The link between effective communication practices, appropriate media use, and successful development efforts is well established worldwide. In Malaysia, however, current development efforts are still highly dependent on oral communication. Research shows that the level of material retention relayed orally is characteristically low, and mere awareness of new ideas and technology is not enough where changes in attitude and practices are the ultimate goals. At the same time, it has been shown that when interpersonal communication is supported by the use of audiovisual aids (AVAs), it is a most effective means of persuading people to change.

In Malaysia, especially over the last twenty years, the availability of AVAs has increased greatly, but better understanding of their applications is still needed. In order to improve courses given in AVA use and in general communications at the Agricultural University of Malaysia, and to meet future needs of Malaysian organizations involved in agricultural development, the authors conducted a survey of relevant agricultural institutions. Among the 23 agencies surveyed were the Malaysian Agricultural Research and Development Institute, the Rubber Research Institute, the Department of Agriculture, the Veterinary Services Department, the Palm Oil Research Institute of Malaysia, and the Agriculture Bank.

Who Uses Which Aids?

The survey was limited to asking those responsible for an organization's communication division: 1) what communication media and software they owned and used; 2) how they used these aids; 3) who within their organization used them; and 4) where they were used. Twenty of twenty-three agencies responded.

Fewer than ten respondents indicated they provided the following AVA support services: 1) publication and production assistance, 2) equipment and software servicing, and 3) lending audiovisual equipment.

All of those with AVAs varied widely. Nine agencies reported yearly AVA budgets in excess of US$4,100. Three agencies reported having AVA budgets between US$3,400 to

Table One: Media Most Often Used by Agencies

<table>
<thead>
<tr>
<th>Media/AVA</th>
<th>Number of agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slide projector</td>
<td>12</td>
</tr>
<tr>
<td>Overhead projector</td>
<td>11</td>
</tr>
<tr>
<td>Movies/films</td>
<td>6</td>
</tr>
<tr>
<td>Video</td>
<td>7</td>
</tr>
<tr>
<td>Pamphlet</td>
<td>2</td>
</tr>
<tr>
<td>PA system</td>
<td>2</td>
</tr>
<tr>
<td>Poster</td>
<td>1</td>
</tr>
<tr>
<td>Slide series</td>
<td>1</td>
</tr>
</tbody>
</table>

Although there is potential for greater AVA use with the wide range of audiovisual aids and software owned by agricultural development agencies in Malaysia, users indicate a need for better understanding of when and where AVAs have the most impact on development.

This study, although limited in scope, demonstrates how educators can use this type of data to develop future training sessions. It also brings to light other questions for future investigation; for instance, which media and audiovisuals are most effective and for what purposes? In what situations do AVAs contribute the most to learning and attitude change? How can Third World countries develop software more suitable to their particular needs?

Musa Abu Hassan and Zaharah S. Keeney are lecturers with the Department of Development Communication at the Agricultural University of Malaysia, Serdang, Selanger. Musa specializes in communication media, and Keeney in technical writing. Both conduct in-service training courses in these subject areas.
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by Elayne Cliff

Women provide more health care than all the world's health services put together, according to United Nation's data. Women are often the innovators and opinion leaders responsible for successful diffusion of new health practices in developing countries.

Women's health and status are intricately related to the health of all persons, especially children.

The above points often can be lost or muted in development communication planning, implementation, and evaluation. Conversely, when they are integrated into the complex process of communications designed for primary health care in developing countries, outcomes can be vastly improved. Closer examination of each point sheds light on this perspective.

According to United Nation's findings, hospitals, clinics, and health programs are less vital to the world's health than the actions of women, whose key role in the home enables the rest of the world's inhabitants to eat and drink, to live in a warm, clean environment, and to work outside the home for wages.

When illness strikes a family, a mother's intervention is essential: it is the mother who must recognize and treat common diseases, or make the decision to seek outside help. Women have thus become the principal targets and beneficiaries of global programs to prevent disease and to promote health. This emphasis is especially evident in recent programs to promote child survival, using techniques such as oral rehydration therapy (ORT), immunization, growth monitoring, breastfeeding, and child spacing.

Discovering the Key

Women, therefore, play a key role in executing the primary health care approach and in diffusing new health innovations. In the social marketing model of diffusion, the user's perception, preference, and satisfaction are crucial factors in terms of health behavior. Cultural sensitivity and a sound knowledge of the audience are extremely important. For this reason, it is essential that opinion leaders come from the target group.

Dr. Maybelle Arole understood this when she created what is now recognized as a model primary health care program in the Indian state of Maharashtra. When the program began, trained Indian nurses were sent into villages to work, but these nurses were rejected by the villagers because they were not indigenous to the community. Dr. Arole decided that villagers should choose a woman from among themselves—an opinion leader—to be trained as a primary health care worker for her own village. During weekly instructions, the selected women eagerly learned about family planning, maternal and child health, nutrition, and sanitation. They carried this new knowledge back to the other women in their own villages. Through these interpersonal channels, a new health innovation—a cadre of locally trained village workers delivering primary health care—has been built up to a current ratio of 1:1,000 people. The program now extends to over 200 villages, accounting for a population of more than 350,000.

This woman-to-woman, door-to-door transfer of information has led to 98 percent of the state's children being immunized, pregnant women receiving regular prenatal care, and mothers of children under five receiving oral rehydration therapy. Maimuna Blh's credibility with rural women, especially her nutritional status, is a key determinant in her child's survival. Even with the strongest will in the world, women may lack time, energy, or understanding to do their part in providing primary health care for their children. It is not always easy to prepare special foods in addition to regular meals, or to leave the field to take a child to a health center for immunization or weighing.

Women's skills, creativity, and leadership ability are unquestionably needed in development communications aimed at health interventions. Therefore, it is in the interest of all that women's personal health status be improved and maintained along with that of their children. The continued success of communication programs to ensure health for all can best be accomplished when women are recognized as active participants and change agents, as well as beneficiaries.

Carrying the Message

While health has traditionally been a somewhat reluctant partner of communication, it is increasingly recognized that much health care activity is a form of communication between health providers and health receivers, and not just the provision of drugs and acute care administered in clinical settings.

A growing appreciation for the role of communication in health delivery in developing countries has led to expanding health education activities referred to as the public health communication approach. This approach attempts, in a pre-defined period of time, to change a particular set of behaviors in a large audience which has a specific health problem.

"...credibility with rural women... was a key element in the success of this effort."

Here again, women have played a key role in delivering public health messages. In the Gambia, for instance, Executive Producer Ami Joof worked with the country's leading female radio announcer, Maimuna Bah, to produce a series of programs for Radio Gambia. In a program called "Hospital Request," Bah visited rural hospitals and conducted spot interviews with patients. Often, this was the only way for patients to communicate with their families who were far away. Bah also conducted another radio program, "For Women Only," during which she provided practical advice about subjects such as child care and personal hygiene, as well as the proper mixing of sugar, salt, and water for oral rehydration therapy. Maimuna B.'s credibility with rural women, and her understanding of their vocabulary and experience was a key element in the success of this effort.

Other women, working primarily within non-profit educational organizations, have been instrumental in assisting host government counterparts to design and implement appropriate public health communication campaigns. In many countries, illiterate women are successfully producing radio programs and instructional videotapes to be shared with other women. Still other women serve a crucial function in the evaluation of messages designed for health; it is often their insight through focus groups, surveys, and questionnaires that helps planners to understand why a project is not working.

Women's Health Status

Women are receiving increased recognition for their contributions in the technical fields of health and for their role as caregivers. What is less well recognized is the relationship of women's personal health status and societies' role in the World Health Organization's goal of "Health For All by the Year 2000." The commitment to saving children's lives is encouraging, and the techniques used to meet the goal are impressive. But has enough thought been given to women's role and status in improving children's health?

Viewing women as extension workers within the health delivery system can be risky unless special efforts are made to understand the reality of women's lives within a developing country context. Women cannot effectively work toward child survival if they are too overworked, malnourished, and sick to deliver and raise healthy children. Women's own health, especially her nutritional status, is a key determinant in her child's survival. Even with the strongest will in the world, women may lack time, energy, or understanding to do their part in providing primary health care for their children. It is not always easy to prepare special foods in addition to regular meals, or to leave the field to take a child to a health center for immunization or weighing.

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The author wishes to acknowledge the contribution of Bernadette Orr of the National Council for International Health, to this article.

Elayne Cliff is Associate Director of HEALTHCOM, an international health communication project, at the Academy for Educational Development, Washington, D.C. This article is adapted from her paper, "Diffusion and Development: Women, Media and Primary Health Care in the Third World." (in press)

Methods of Communication Planning is UNESCO's third monograph on communication planning. This edition was prepared by the East-West Communication Institute, Honolulu, Hawaii.

The need for efficient use of resources and the importance of systematically planning ahead are irrefutable. The question is, what planning methods are appropriate for the design and management of communication projects in developing countries? This book suggests using the method of systems analysis and its derivatives such as: resource assessment, trend extrapolation, the Delphi technique, scenarios, simulation and gaming, cross-impact analysis, input-output analysis, zero-based budgeting, and goal achievement matrices.

The book begins well with two chapters by Middleton presenting definitions and a sensitive conceptual framework. These introductory chapters rightly stress that the nature and methods of communication planning in developing countries should reflect the nature of their social, economic, and political conditions. Would that the methods prescribed in the subsequent 21 chapters provide supporting evidence on the appropriateness of this methodological technology. Actual experiences with its use, given the constraints on the availability of technologically skilled human resources and information data bases, are lacking.

The question is asked, What basic requirements must be met by users of systems analysis techniques in communication agencies? First, systems analysis requires large amounts of reliable, quantitative data, and hence good data collection and data analysis mechanisms. Many developing countries do not have adequate birth and mortality statistics. Wedemeyer's successful use of trend extrapolation to estimate probability of occurrence of electronic shopping in the U.S., Sata's use of estimate rather than real data, and the large number of illus- trative imaginary hypothetical cases used in this book speaks loudly of the lack of experience with these methods in developing country communication planning.

The book recognizes the limitations of systems analysis approaches that are preoccupied with efficiency criteria, but it does not deal with it other than to say, "In the Third World, the absolute need for efficient use of resources can lead to unequal access to communication resources in society, and the use of communication for domination and exploitation." Systems analysis methods demand quantification; if a dimension of the problem is not quantifiable, it is not counted. Thus, reliance on systems analysis alone can lead to quantitative conceptualizations of communication, even though communication and it financing aspects are essentially social, political, and economic in quality.

Therefore, it is with relief that I turned to the chapters on the more inclusive data collection methods and planning tools such as brainstorming, planner's workshops, suggestions for interorganizational coordination, and the case study and sample surveys presented by those who had used them in developing country settings.

Written in technical terms, for the most part, Methods illustrates the transfer of systems analysis techniques to the civilian communication sector in developing countries. Systems analysis originated in the unique political environment of developed-country defense and aerospace establishments with methods drawn from engineering, math, statistics, and economics. The approach has been applied to public policy and planning in the U.S., and has been found wanting. Methods of Communication Planning presents a prescription for developing country communications without significant in-country trials. Middleton's introductory framework deserved to be followed up by readable documentation of planning attempts made by communication practitioners operating within developing country constraints as illustrated by some of the contributors, particularly Beal, Domingo, Hermas, and Dissanayake.

Available in the U.S. for $37.25 plus 5 percent for postage, from Bernan/Unipub, 10033 F, Martin Luther King Highway, Lanham, Maryland 20706, USA, or from UNESCO book sellers worldwide.

Reviewed by Bella Mody, currently teaching telecommunications at Michigan State University. She participated in the Indian Satellite Instructional Television Experiment (SITE), and has worked in Nepal, Thailand, Malaysia, and other developing countries, specializing in the design and evaluation of media systems media education.


Bringing together the work of 25 writers representing 16 countries, the editor of Media Education has assembled a group of articles that focus on a major problem in education today, as succinctly stated in the preface:

"...all over the world, there coexist two sources of information and knowledge for school-age children. There is the traditional school, that of writing and books ... facing it, around about and all pervading, is the 'parallel school' of the media, whose techniques, operation, modes of presentation, and even content are completely different from those of the school and which subject the individual's mental development, and the individual's preparation for work."

The third section considers some teaching and learning strategies that might be considered in integrating the parallel schools. Some of these are that:

- It is important to know more about mass media and the roles they can play in the education process
- Audiovisual materials can help learners absorb and integrate new information
- Computers offer new possibilities in information storage and retrieval for education
- Information from mass media must be integrated with school curricula.

Sections four and five address communication activities and programs that have been successful in Europe, Asia, and the Americas. Examples are taken from Norway, Switzerland, Finland, Australia, Brazil, Cuba, Japan, France, and the United States.

In section six, focusing on developing countries, India is used as an example where the media have tended to channel information and entertainment to urban and wealthy rural residents. India's huge hopes that mass media would play an important role in aiding development have not yet been fulfilled.

Two questions are raised in a discussion of mass media and the transmission of values. What is the power of media in transmitting foreign values to school-age children, and do these values conflict with those that are fostered in the formal educational system? The author notes the importance of introducing media education into the schools in order to reduce the disparity between the two value systems.

In the final section, the differences between education and mass media are discussed. The writer concludes with the point that new technologies, the availability of additional broadcast channels, interactive systems, reduced costs, and other factors will enter into the picture in the next decade, but that changes will come through the educational system, not through technological developments.

It is not possible to fully summarize the variety of facts and opinions presented in Media Education. Many important ideas are expressed that are worth careful study by those...
who are concerned about education. One point this reviewer would make in summary, is that a major barrier to the effective use of instructional technology has been the traditional classroom system. Education, to be truly effective, must develop new structures that make optimal use of facilities, personnel, and all appropriate forms of media.

Available in the U.S. for $22.50 plus 5 percent for postage, from Berman/Unipub, 10033 F, Martin Luther King Highway, Lanham, Maryland 20706, USA, or from Unesco booksellers worldwide.

Dennis W. Pett is Chairperson of the Instruc-
tional Systems Technology Program at Indi-
a Channel University. He was the Chief-of-Party for a USAID/University of India Communica-
tions Media Project in Nigeria.


Women and Media is a collection of articles which alerts development and mass media communicators that women of the Pacific and Asia regions are going to start "fight back" and create their own media. The articles have been compiled by Isis International, an international women's information and communica-
tion service, and the Pacific and Asian Women's Forum, a network concerned with women's issues.

In Part One, several highly critical yet in-
sightful articles assess the societal effects of development communication's and mass media's portrayal of women. In "Women, Devel-
oment and Media," Kamla Bhasin, one of the editors, sets the tone for the journal. She says that development communication and mass media "reinforce the conservative view of women and ignore their economic participation and contribution..." She believes that women have been neglected because "their concerns and interests remain unarticulated." Her conclusion calls on women to create media alternatives "to inform and empower wom-
en, to get women out of their isolation."

In the second section, "Action/Alternatives," the reader learns that women are no longer "passive consumers of sexist media," but "active agents in media creation." The 13 articles in this section represent a wide array of actions and alternatives, including launching a camp-
paign of protest against sexist, negative, and distorted portrayals of women; involving rural women in video production to make a devel-
lopment program more relevant to their situa-
tion; publishing a women's journal totally sup-
ported by individual donations and non-sexist advertising; and organizing "jalsas" - a special kind of public gathering at which women from all walks of life communicate their concerns and raise the consciousness of others through entertainment, speeches, and resolutions. The editors selected articles that show how women are involving other women through participa-
tory and non-hierarchical interaction.

Over half of the articles are from India or written by Indians. As the editors explain, this reflects easier access to, and familiarity with, the people and literature of India and is "evidence there of media analyses, action for change, and alternatives." However, the re-
maining articles from Sri Lanka, Malaysia, Aus-
tralia, Pakistan, Bangladesh, and Thailand, indi-
cate there is much happening in other Asian-Pacific countries as well.

Unfortunately, none of the articles focus on the status of, or employment opportunities for, women in mass media and development com-
munication. This omission leaves the reader wondering what progress, if any, has been made by women in these potentially influen-
tial areas.

As a whole, this book begins to fill the gap in media literature of the region, on the relationships between women, media, and development. There is a weakness, however, in several of the articles, particularly in the "Action/Alternatives" section, in linking examples from these three areas.

These are minor drawbacks, however, since Women and Media is successful in revealing how women are taking creative steps to change how they are viewed and presented by development and mass media communicators. This book gives them a good opportunity to share their strategies with women in other countries. Also included is a useful list of key women-oriented media resources and networks and a selected bibliography on women and media issues and programs.

Available in English and Spanish from Isis Interna-
tional, via Santa Maria dell'Anima, 30, 00186 Rome, Italy for US$6.00.

Reviewed by Deborah Ziska, Director of Press and Media Communication for OEF Interna-
tional, a nonprofit development organization focusing on women in developing countries.

New Ph.D. Program at University of Hawaii

September 1986 marks the commencement of a new Ph.D. program in Communication and Information Sciences at the University of Hawaii at Manoa. This new interdisciplinary program will focus on the training of telecommu-
nication researchers and policy analysts to serve the rapidly emerging government, busi-

ness, and academic needs in these areas.

For further information contact Dr. Miles Jackson, Chairman pro tem, Doctoral Program in Communication and Information Sciences, Graduate School of Library Studies, University of Hawaii at Manoa, Honolulu, Hawa i 96822, USA.

Communication Tech
Confere nee

Between August 25th and 30th, 1986, the International Association for Mass Communication Research will be holding its Fifteenth Conference and General Assembly in New Delhi, India. The session's theme is "Communication Technology, Development, and the Third World." In a coming issue of DCR, we will report on the proceedings of the Conference as information becomes available.
En Influencia de la Comunicación en el Campo

Mario Villarroel Terán

La radio, Instrumento de Educación

Entre los campesinos, el que menos o el que más dinero dispone, poseen radios y aún los más pobres, lo disfrutan. Y los campesinos, que conocen de ellos sólo lo que se ha transmitido hasta aquellos hogares donde el punto de atracción e interés es el receptor de radio transmisorizado. Alrededor de ese aparato se reúnen grupos, unas veces de amable conversación y otras, de interesante cambio de opinión respecto a los mensajes que les entregan los "comunicadores de la radio".

Instituciones educativas, servicios de promoción social y económica, organismos religiosos y otras entidades, estatales y privadas, han volcado su interés al uso de la radio, para hacer de ella uno de los instrumentos más importantes y eficientes en la educación de los grandes conglomerados campesinos que, en Bolivia, constituyen la mayoría de la población.

Escuelas que Surcan el Espacio

En Bolivia funcionan varios sistemas de escuelas radiofónicas que poseen modernos y poderosos transmotores que cubren grandes áreas del territorio nacional. Numerosos centros de alfabetización funcionan a lo largo y ancho de la extensa meseta andina, atendidos por un guía o "monitor" a quien bien podriamos llamarlo "líder" de la comunicación educativa por radio.

Los programas de alfabetización por radio, están demostrando el alcance y eficacia de este instrumento de comunicación que no solamente está siendo utilizado en esos fines, sino que sus contenidos programáticos incluyen diferentes temas, entres ellos preponderantemente la agricultura y ganadería.

Canales para Divulgación Agropecuaria

Si bien no dependientes directamente de organismos creados para atender los problemas del subdesarrollo agrícola, funcionan en Bolivia, programas que se encargan de divulgar e informar conocimientos tecnológicos sobre agropecuaria, cuyo objetivo fundamentalmente es orientar y motivar al campesino hacia la adopción de técnicas para un mejor uso de la tierra y de los recursos naturales que progresivamente nos ofrece.

Trabajando para y en esos programas, han empezado su actuación campesinos genuinos en calidad de "periodistas". No es raro encontrar algunos de ellos realizando entrevistas mediante la utilización de una grabadora magnétófona, para utilizar después ese material en programas radiales que tienen un diseño muy sugeneris y propio de ellos.

Los campesinos no sólo han incursionado en el campo del periodismo propiamente dicho, sino que otros se han situado en el papel de locutores, librettistas, guionistas y otras tareas propias de la utilización de la radio. Existen interesantes conjuntos de radioteatro que utilizan este género para difundir contenidos educativos. Lo interesante de la programación radial campesina e incluso urbana, es que se utiliza exclusivamente el idioma nativo de aquellos para quienes va dedicado el esfuerzo educativo.

Al igual que la radio, otros canales de comunicación están actuando masivamente en la adopción de cambios. Y los comunicadores, considerarse profesionales o meros amantes del arte de la comunicación, vienen contribuyendo de manera importante a los propósitos de desarrollo socio-económico. Y en ese dramático, como apasionante proceso le toca al campesino el doble papel de gestor y actor, roles que los cumple con un sentido altamente positivo.

Sin embargo, para que la acción educativa sea más eficiente, se requiere preparar a los comunicadores que hacen uso de la radio, capacitándolos para un mejor desempeño de su trabajo y el uso de la tecnología de comunicación.

En suma, que el maravilloso y eficaz instrumento de la comunicación, como es la radio, sea utilizado como verdadero medio de educación, mediante el cual se pueda promocionar y luego conseguir cambios favorables en los modos de vida de los campesinos aimaras que habitan la gélida altiplanicie boliviana.

Mário Villarroel Terán, Director General de Comunicación Social y Técnica del Ministerio de Agricultura de Bolivia, tiene 20 años de experiencia en programas de extensión agrícola para beneficio de campesinos bolivianos.

(The following is an abstract of the preceding article.)

The Influence of Communication on the Countryside

The lives of Aymaran peasants of the altiplano region of Bolivia have been changed by the adoption of new health and farming practices. Radio has played a major role in bringing about this change. Radio broadcasts now reach into the most isolated areas of the altiplano, overcoming barriers of illiteracy and distance, informing, entertaining, and promoting social action among the peasant audience. Most Aymarans have access to a radio which often serves as a gathering point where they exchange ideas and opinions about the social messages they hear. Therefore, radio has dramatically increased interchange among these people, and is seen as a solidifying force in their communities.

Educational institutions, social and economic service groups, religious organizations, and other public and private entities have begun using radio to educate and inform the Ayman who make up the largest segment of the...
On File at ERIC

by Barbara Minor

Documents recently entered in the ERIC (Educational Resources Information Center) files include a collection of papers delivered at a conference on nutrition education, instructions for easy-to-make aids for nutrition teaching and learning and a bibliography of materials on curriculum development in population education. All of these documents are available in microfiche, and two are also available in paper copy, from the EDRS (Educational Resources Information Center) Reproduction Service (EDRS), 3900 Wheeler Avenue, Alexandria, Virginia 22304, USA. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping costs may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.


This monograph is an edited collection of some of the papers presented at the conference on "New Developments in Nutrition" held in London in 1983. One of the strengths of the conference was the diverse background of the participants, who represented more than 30 different countries. This diversity of interest and expertise is reflected in the papers, which examine a wide range of important issues in nutrition education. Discussions are included on the effectiveness of traditional nutrition education activities which have taken place outside the education sectors, and experiences are reviewed which included extensive experimentation with new and different approaches, attitudes, and behaviors. The following issues and problems are addressed:

(a) the importance of nutrition education;
(b) teaching approaches;
(c) teaching resources;
(d) the training and education of teachers and individuals;
(e) use of mass media;
(f) coordination of education agencies;
(g) national and local level food and nutrition policies; and
(h) evaluation of nutrition education.

Descriptions of programs making use of videotapes and radio in Thailand, and mass media in Chile are included. Available from EDRS in microfiche only for 75 cents; paper copy available from the Division of Science, Technical, and Environmental Education, Unesco, 7 place de Fontenoy, 75700 Paris, France.


This issue of the Unesco Nutrition Education Series presents a sampling of ideas for teaching aids created from experiences in developing countries and is representative of materials currently being compiled for the fourth volume of the Unesco resource pack for nutrition teaching-learning. The selection of easy-to-make teaching aids is designed for persons interested in trying out innovative ways to promote effective nutrition teaching and learning. Instructions for animating teaching and stimulating learners to explore the important problems and issues of nutrition and health are provided. Although learner levels, teaching expertise, educational and cultural environments, and resource availability will differ from area to area, the materials included can be adapted easily to meet local needs. The teaching aids described include flannel boards and flannel graphs, flipcharts, flashcards, posters, bulletin boards, chalkboards, cardboard boxes, educational games, puzzles, drama, demonstrations, tools, and common recipes for paint, clay, and other materials. An initial explanation of the role of teaching aids and suggestions for their preparation are also provided. Available from EDRS in microfiche for 75 cents or in paper copy for US$10.80.


One of a series of annotated bibliographies (compiled by the United Nations Fund for Population Activities), dealing with issues and problems raised by education involved with population education programs, this bibliography focuses on curriculum development in this area. Entries are presented in six major categories: (a) Strategies for Curriculum Development in Population Education in the Formal Education System; (b) Strategies for Curriculum Development in Population Education in the Non-Formal Education System; (c) Development of Curriculum Materials in Specific Subject Areas; (d) State-of-the-Art on Curriculum Development in Population Education; and (e) Evaluation and Research in Curriculum Development in Population Education. While Parts One and Two deal with the general processes of developing curriculum materials in the in-school and out-of-school sectors, Part Three details procedures for integrating population education concepts into more specific subject areas. Thirteen of the 16 publications reviewed in this section focus on the subject areas of social studies, home economics, health education, environmental education, science, medical education, hygiene and physiology, biology, teacher education, and geography. The three abstracts for nontraditional education programs deal with various aspects of farm management and agricultural training courses. The publications listed document curriculum development experiences in Asia, Bangladesh, India, Malaysia, Nepal, the Pacific Islands, Pakistan, the Philippines, the Republic of Korea, and Thailand. Highlights of these reports include the conceptual framework and structure of population education, goals and objectives, population education content used in enriching selected subjects at specific grade levels, types of curriculum materials developed, teaching methodologies used, and evaluation tools used to determine the effectiveness of the curriculum materials and teacher training. Subject and geographic indexes are provided, as well as sources for the individual publications reviewed. Available from EDRS in microfiche only for 75 cents; paper copy available from the Unesco Regional Office for Education in Asia and the Pacific, P.O.Box 1425, General Post Office, Bangkok, Thailand 10500.

Barbara Minor is Publications Coordinator at the ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, New York 13244-2340, USA.

Short Training Courses Offered in Bangkok

The UNDP Asia and Pacific Programme for Development Training and Communication Planning (DTCP), a Bangkok-based service unit of the UNDP, provides short training courses in media-related subjects. Some of the courses available are "Audiovisual Production Techniques for Rural Development," "Communication Campaign Planning," and "Training, Planning, Management, and Methods." Courses run from two to four weeks, with fees from US$1,867 to US$2,910. They are open to government staff who perform training and/or communication support functions in their agencies. Ability to work in English is essential.

For registration information contact either your local UNDP Resident Representative's office or write to UNDP/DTCP, P.O. Box 2-147, 19 Phra Athit Road, Bangkok 10200 Thailand. Call: UNDEVCOM (Bangkok).

Call for Abstracts

The National Council for International Health (NCIH) is calling for abstracts for its 1987 annual conference to be held June 14-17, 1987 in Washington, D.C. This year's conference theme is Influencing Health Behavior: Communication, Education, and Marketing. Subject categories include descriptions and evaluations of communication, education, and marketing (CEM) programs; designing CEM strategies; ethics of behavior change through CEM; communication vs. education vs. marketing vs. other strategies; health behaviors most susceptible to CEM strategies; institutional issues and management: market research and evaluation; training and CEM; private vs. public sector role in CEM; and schools and CEM.

The submission deadline for abstracts is November 15, 1986. For an application write to: Director of Programs, NCIH, 1101 Connecticut Avenue, N.W., Suite 605, Washington, D.C. 20036-4390, USA. Telephone (202) 833-5900.
Satellite Technology—A Vehicle for Health Training

by Norman P. Fenton

Man has long been fascinated with speed and distance, and their relation to communication. The need to relay important messages has been a concern ever since man has felt the desire to explore beyond his immediate environment.

Today, thanks to the impressive advances in satellite technology, we are able to communicate faster and in ways that, not long ago, only science fiction novels predicted were possible. In the field of health, particularly in the transfer of medical information, patient diagnoses, and continuing educational programs, it is now possible to connect facilities located in opposite corners of the world.

In January 1986, after nine months of development, Miami Children's Hospital, Miami, Florida, initiated a pilot continuing education demonstration program under the sponsorship of International Telecommunications Satellite Organizations' (INTELSAT) "Project SHARE," which has marked a new era in international medical education exchange. (See SHARE article elsewhere in this issue.) The project is composed of a series of continuing medical and health education teleconferences, each transmitting for 24 hours, over a four-day period, and is carried free of charge as part of INTELSAT's 20th Anniversary project.

Miami Children's Hospital is the first and only hospital in the United States designated as a sponsor for this worldwide project. Development of a worthwhile program called for sensitive and complex political and economic negotiating in each of the participating countries. Because of its sophisticated domestic communication network, Colombia was selected as the pilot country to receive the first transmission. Following three months of program design, the Colombian government, via their signature, Empresa Nacional de Telecomunicaciones (TELCOM) in Bogotá, filed their request to receive our programming.

After INTELSAT's approval of the pilot program, separate negotiations began with other countries as well, including: Venezuela, Costa Rica, Chile, Peru, and the Dominican Republic, Bolivia, Ecuador, and Honduras later joined to receive delayed programming.

Course Transmission Begins

At 8 a.m. on January 27th, 1986, Miami Children's Hospital began its live satellite broadcast of the 21st Annual Pediatric Postgraduate Course, directed by Donald H. Altman, M.D. Twenty-eight specialists lectured on 40 medical topics over the 24-hour, four-day educational course. The program's one-way video, two-way audio format made it possible for physicians at the remote sites to participate in question-and-answer sessions throughout the four-day period. All sessions were translated into Spanish at the remote sites.

A video equipment truck and two satellite antennas, comprising the portable up-link facility, were taken to the Miami hotel conference site where local health practitioners had assembled for the annual course. A selected team of doctors stood by throughout the four-day course to take questions that were telephoned in from the remote sites as the course proceeded. Similarly, at each remote site, antennas and portable down-link facilities were taken to the designated course facility. Teams of doctors were in place at each site where they fielded and translated questions from their respective audiences and then telephoned them to the awaiting doctors in Miami. Responses were again relayed by telephone once an appropriate specialist had been consulted in Miami. More than 3,500 pediatricians, physicians, and health professionals attended the teleconference, with an additional 2,500 pediatricians attending the delayed program.

Evaluation

A questionnaire was prepared and sent to all participants to evaluate the effectiveness of this teleconferenced course. Responses were received from six of the nine participating countries—675 questionnaires were returned in all. The responses, as indicated below, were overwhelmingly positive to all of the questions, each of which could be rated from poor to excellent.

- Was the subject matter adequate? 87%
- Was the presentation clear and adequate? 85%
- Did the program enhance you professionally? 82%
- Was the transmission clear and acceptable? 85%
- Were the visual aids clear? 93%
- Did the program have practical applicability? 87%
- Was the quality of translation acceptable? 87%
- Was there correlation between sound and image? 86%
- Did the presentation time seem adequate? 80%
- Would you attend another teleconference? 88%

This enthusiastic evaluation response was very gratifying. The successful transmission of the course has set the groundwork for an ongoing series of programs designed to disseminate life-saving medical information at a distance throughout the world.

In addition, this valuable exchange of information was accomplished at a minimal cost to its participants. As it allowed physicians and health professionals throughout the hemisphere to attend the conference without leaving their respective countries. Most remained in their home cities, which means that the course expense amounted to less than five percent of the overall expense they would have had if attending a similar conference in the United States.

22nd Annual Postgraduate Course

Dr. Altman's annual postgraduate course will again be carried by satellite in January 1987, and will incorporate some of the latest technological advances in audiovisual transmission. It will feature two-way video, and two separate audio channels for simultaneous English and Spanish transmission. The bi-directional video will add an important dimension to the conference, as it will allow leading pediatric figures in these countries to contribute as well. Participating countries where languages other than Spanish and English are spoken will be able to translate the audio portion of the program simultaneously at their country's down-link site, and broadcast the transmission locally. Arrangements are now underway for translations into French, Italian, and Portuguese.

It is predicted that by the 1990s, satellite supported educational programs will be commonplace. With the increasing cost of attending conferences that are great distances from where health practitioners live and work, continuing education via satellite may, in the future, help fill the gap that might otherwise be created by economic and time constraints. There are still complex issues that must be addressed before satellite conferencing can become an economical alternative for continuing education courses and other health delivery purposes, but this experiment has clearly demonstrated many of the advantages that accompany the use of this technology in the health sector.

Dr. Norman P. Fenton is the Director of Business Development and Telecommunications for Miami Children's Hospital. He has participated in over sixty projects related to health care in the Americas during the past fifteen years.

(Villarroel Téran continued from page 14)

Bolivian population. Radio schools and literacy centers are operating across the altiplano, regularly broadcasting educational programs. Other programs contain information that encourages listeners to adopt new agricultural techniques.

The Aymara peasants who have worked for and in these programs have developed radio production skills and are now producing their own material, sometimes even using tape recorders in the field to collect material to use in broadcasts that they gear to their particular needs. Others have become involved in scriptwriting, program producing, and broadcasting as well.
In recent years, communicators have looked anew at the potential of print media to carry educational messages in dramatic and captivating ways. New research and new applications have shown us how effective well-planned, well-integrated, and well-tested print materials can be in informing both literate and nonliterate audiences. These include photo novels, comic books, illustrated booklets, rural newspapers, and posters. Developed on the spot for the local audience, using local talent, and addressing local conditions, these materials have immediacy and an impact that hold great promise for development activities.

In this issue of DCR (and in its accompanying calendar) we have shared with you some of the interesting work and projects that are using innovative print materials which have come to our attention. We hope that you, in turn, will share with us your own interesting print materials, and tell us how they are used in your programs or projects. I would like to thank Bonnie Cain for her suggestions and comments as we compiled this special issue.

Saying it This Feeling: Photo Novels and Comic Books
by Bonnie Cain

Photo novel: A dramatic literary text accompanied by captions and illustrations. The story is told in a narrative sequence.

Print medium that uses either text or illustrations or drawings, or a mix of just photographs, holds a unique place in development communication. These materials are often the only in-hand memory aid available to the people in developing countries. They are a medium that can also present detailed information and some complexity to an audience with limited literacy skills. When presented in the very popular format of photo novels or comic books, they can be fun and action-provoking as well. Although they require special skills to produce, can be expensive, and have high costs, a brief history as couriers of educational messages, in some cases, photo novels and comic books will be the most effective format in which to present persuasive messages that can induce people to change their behavior or to take desired action.

A photo novel or comic format contains a sequenced story told in both pictures and words, building emotional links to the story or message. The format through attractive characters and dramatic action provokes action. Photo novels, comic books, photomurals, and comic strips, and some graphic booklets are distinct from other educational materials in that they have a story line and a set of characters going through a sequence of activities.

Special Advantages

All illustrated print materials can be used to focus the agenda on public action, provide a specific reminder of how to do things, and make information immediately available at times of need. Photo novels and photo novels have several advantages that permit story writers to:

- Explain technical subjects,
- Illustrate abstract messages,
- Explain cause and effect relationships,
- Introduce technical subjects in the midst of the action.

Education: A photo novell or comic is a strong argument against the charge that an entertaining format communicates a message. On the one hand, it is capitalized upon to dramatize information to improve lives, to highlight the need for behavior change, and to clearly and powerfully transmit information about a product or service that is part of a larger social improvement program. This is so because:

- Audiences love a good story and will follow a plot through the dullest of materials. If the audience is interested in the lives of appealing people they will learn along with them about any public health subject or educational theme
- Audiences love to identify with dramatic characters—people who are somewhat...

El Agricultor: A Rural Honduras Newspaper
by Carleton Corral

Look for it, ask for it, read it, and share it.

Loudspeakers mounted on delivery vehicles announce the arrival of El Agricultor with the official theme song of this new newspaper that is directed toward the rural population of Honduras. For over a year now, weekly editions have been distributed to every major city in the country.

El Agricultor is thriving in an environment where print materials are virtually nonexistent. The paper is a unique exercise in private-sector sponsorship of public-sector educational efforts, and at this time it is close to breaking even on sales figures.

Honduran educators know that only by making more print materials available to the rural population, will efforts in providing educational services and in adult literacy be worthwhile investments. Interesting, relevant reading material is essential if literacy skills are to be retained, improved, and used.

A Special Purpose

In 1984, a group of 26 leading Honduran businessmen and women organized a non-profit organization called AVANCE to provide media-based educational services. Its first project was to publish and distribute a rural newspaper that would: 1) supply the rural literate population with helpful information; and 2) provide newly literate readers with an opportunity... (Continued on page 2)
glamorous but not too dissimilar. Convince the audience that the people and their actions are similar to theirs and they will become increasingly drawn to the characters and more thoughtfully consider the messages.

**Challenge: Sell Information**

Commercial photonovels and comic books are a proven success. People buy them and read them avidly. Why are they so popular and why should an educational communicator use this format? Often it is necessary to package information so that people take the time to understand its importance. People must relate to it and believe that the prescribed actions could make their lives better.

Sometimes the telling of a story with illustrations or pictures can take a great number of pages as opposed to the same message that could have been presented in a small educational pamphlet or set of posters that directly address the issue. So why use the story line format? Research shows that a majority of people think in "story" format, and that they remember these messages better than those delivered didactically. Three features of the story line format make it a particularly good candidate for educational campaigns. 1) Stories contain analogies to real life, 2) they can carry themes within themes; and 3) they can be used to create identity. Analogies help the reader analyze the results of certain actions, to identify the cause and remember the effect. The "two families" theme, widely used for delivering family planning messages, demonstrates the consequences of one family following the recommended activity and of the other family ignoring it.

Other people's lives, sexual intrigues, encounters with the supernatural—all are themes that appeal to a wide audience. The educational message may seem irrelevant to these "interesting" stories, but subthemes can be effectively woven into the drama. The theme-within-a-theme has been used effectively to present ideas that are both technical and emotional. For instance, use of contraceptives may be a difficult topic to discuss within a family in some cultures and a photonovel or comic book about contraception, read by both husband and wife, may help to spark a discussion between them.

A well-developed story evokes a response from the audience because they see it as relevant to their lives. If readers believe the story line, they are more likely to take remedial action that ends, changes, or continues a behavior. And, audiences relating well to a message tend to remember it better.

**Pretesting Your Design**

"Attractive" is a very subjective concept. Your material must prove to be attractive, understandable, and educational to your intended audience through pretesting. What constitutes an attractive design is defined by the culture and the specific environment in which the graphic material is used. It must be attractive to the user, not necessarily to the communicator. If photonovels are popular with adults in a specific culture, adults will be attracted to that format in hopes of a similar entertaining experience. This is where skilled illustrators and photographers serve as a vital link between author and reader.

An "attractive" design does not ensure that a viewer will understand or remember the message, even if he or she is attracted to it. Attraction, perception of drawing, the meaning of a drawing, the educational value of a picture or sequence of pictures are at- tense-specific reactions. Any graphic medium for educational efforts should be pretested to determine its impact on the audience and to identify where improvements should be made. Commercial producers know when their comics and photonovels please an audience, they sell. Educational communicators have a far more ambiguous task— to measure comprehension, retention, and adoption.

**Conclusion**

Producing an attractive, motivating, well-paced photonovel or comic with strong, relevant characters who display realistic and identifiable behavior in stories that transmit technical information or educational messages is not an easy task. Still to be answered are the questions of determining whether or not to charge for an educational publication and how to best distribute them (see articles elsewhere in this issue).

All difficulties aside, photonovels and comics are rising stars in development communication. They are two of the few formats that can dramatize the dramatic and put emotion into discussion of emotional issues.

Bonnie Cain is president of B L Cain and Associates, a media-based training company. She has worked in development communication for ten years.

(Cornales continued on page 1)
Tips on Getting Started with Graphics

by John Comings

Nonprofessional can produce graphic literature such as comic book or photonovel with simple equipment and limited outside help. I produced my first photonovel with Bonnie Cain (see her article elsewhere in this issue) with no previous materials development experience or special equipment. If you are in a similar situation, here are some guidelines that will help you develop your own graphics.

- Your audience doesn’t have to be visually literate. A nonprofessional might believe that without special knowledge about visually illiterate people, communication will be difficult if not impossible through print media. This is not the case. Some people may not understand a drawing when they first see it, but once it is explained to them, they will. Often, if people cannot read the material, they have family, a neighbor, or a community worker who can.

- You can write a story. Writing a story is easy. Borrowing one is even easier. There are no new stories in the world; just variations of common human themes of conflict and resolution. Take a story from classic literature, from a folk tale, or from TV and adapt it to your needs. Or, better yet, collect stories from members of the target audience.

- Your target audience can help you. The more you involve members of the audience in the design and production of your material, the more popular it is likely to be. They can help you to integrate local stories, issues, and folktales. You may find if they are directly involved in the production process, they will help to promote it as well.

- Your production process can be kept very simple. There are many different ways of drawing comics or graphics, some are quite simple. Even commercial photonovels often have simple formats and less-than-perfect pictures. The content, the characters, and the dramatic story are what attract and hold attention. I have seen effective photonovels that used Poloroid photos and pictures cut from magazines and postcards.

- Pretesting simply means listening to your audience at a draft stage of production. The jargon of market research—focus group, mall intercepts, etc.—may lead you to believe that pretesting is difficult and complicated. All you need is a small group of people from your target audience and some well-designed questions. This representative audience is asked to read the material and to explain what it means to them, if they believe what is presented, and if they would show this to a friend. Use the answers to these questions to improve your draft. When the changes have been made in your materials, ask the same questions of a larger group.

- Set reasonable goals to avoid becoming discouraged. The social, political, and economic problems these materials address are complicated and not easily solved. Print materials can inform, educate, and change attitudes, but they will only be effective when integrated into a larger, well-coordinated effort. Evaluation of your materials should focus primarily on their popularity, their credibility, and how effectively they provide information.

John P. Comings is senior program officer at World Education, in Boston, Massachusetts. He has been involved in materials development, training, and adult education in the U.S. and Asia for more than 15 years.
Briefly Noted

by Robert Vittel and William Amt

- How to Prepare Materials for New Literates, originally published in Spanish, and now available in English and French, is a 35-page book that surveys the needs of newly literate people and demonstrates simple techniques for producing and evaluating post-literacy print materials for maintaining reading skills. Divided into four clearly and simply written sections, the book will assist literacy workers in developing print materials and services for new literates, who often lack printed materials written at a slightly higher level than basic teaching texts. Available in English, Spanish, and French, are US$7 (members) and US$5 (nonmembers) from: International Reading Association, 800 Barksdale Road, P.O. Box 8139, Newark, Delaware 19714-8139, USA.

- Primary health care (PHC) is considered by a majority of health professionals to be the most cost-effective and practical method of achieving the goal of "Health for All by the Year 2000." Primary Health Care Technologies at the Family and Community Levels reports on an international workshop held in Sri Lanka in the fall of 1985 which was sponsored by the Aga Khan Foundation, Unicef, and the World Health Organization. The report emphasizes the need for communications that facilitate the dissemination of appropriate PHC information; particularly needed are innovative participatory communication strategies that take advantage of existing traditional communication structures, such as the oral tradition. The key targets of such information flow are community organizations and training programs for villagers that: 1) involve the community in the planning, formative evaluation, and maintenance of health programs; 2) improve the status of women, who are the primary health care deliverers in the villages; and 3) are integrated with a well-coordinated national health program. Available free from Unicef, 866 United Nations Plaza, New York, NY 10017, USA.

- Two volumes have recently arrived at the Clearinghouse that will interest our African readers. The first is published by the Thoi'son and Freidrich Naumann Foundations in association with the Commonwealth Media Development Fund. Reporting Africa, edited by D. Rowlands and Hugh Lewin is a 181-page manual written by and for Anglophone African reporters. It is intended as a training manual for beginning reporters. Topics covered include source development, interviewing, political and legal news coverage, radio and TV reporting, and photography for journalists. Each chapter concludes with a handy bibliography. Copies are available from the African Council on Communication Education, P.O. Box 1636, Harare, Zimbabwe for £10 (US$14.50).

- Guide to International Education, by David Hoopes, is a comprehensive volume that lists addresses and descriptions of US-based programs, organizations and publications concerned with international studies and global education. Designed for students and educators, this guide provides information on such topics as educational exchange organizations; grants, awards, and fellowships for international studies and programs, foreign language learning, regional studies centers, and academic programs and selected resources for country studies. The cloth-covered guide costs US$75.00 and is published by Facts on File, 460 Park Ave. South, New York, NY 10016, USA.

- A Farmer's Primer on Growing Rice, by Benito Vergara, is one of the most widely translated and distributed agricultural handbooks in print. Published in English by the International Rice Research Institute (IRRI), this 221-page book uses illustrations with simple captions to teach farmers and rice technicians about how and why improved rice varieties and agricultural technologies increase crop yields. Topics covered include the life cycle of the rice plant, selecting good seedlings, increasing the efficiency of fertilizer, and controlling weeds. This book and addresses for other language editions are available from the Communication and Publications Department, IRRI, P.O. Box 933, Manila, Philippines.

- Another publication brought to our attention that will interest those who follow African telecommunication issues is a new newsletter, the African Telecommunication Report. As a private venture, this newsletter has been established to keep readers informed about important issues and developments in telecommunication applications in Africa. Published monthly, introductory subscriptions are US$78 per year (US$98 regularly) plus $12 overseas postage and handling. To subscribe contact: African Telecommunication Report, 1718 Connecticut Avenue, N.W., Suite 410, Washington, D.C. 20009 Phone (202) 939-8327.

by Robert Vittel and Bill Amt work in the Clearinghouse

Pictures Open

by David A. Walker

It is sometimes said that illiterate villagers have trouble getting meaning out of pictures in our adult literacy work in Nepal, we tackled this problem head-on. In fact, picture literacy is one of the important accomplishments of Nepal's Nonformal Education Program.

Earlier research had shown us that Nepalese adults did indeed have trouble understanding three-dimensional spatial relationships depicted on flat, two-dimensional surfaces, but that they were more comfortable with pictures of objects. Even distorted illustrations, such as cartoons, were easily understood. But identifying what is shown is not the same thing as understanding the meaning of an illustration. Villagers simply see a picture for what it is and feel no compulsion to "read" any additional meaning into it.

Beyond Picture Description

As in many literacy programs, we use pictures in Nepal to introduce key words. Consider, for example, a picture showing a family migrating. The intended meaning is to call attention to the way increased population pressure has depleted the traditional agricultural resource base. Deforestation and land erosion have been two of the most serious consequences. Marginal farmers can no longer survive in the hills of Nepal and are being forced to move to the lowlands in the south. A typical villager describing such a picture might say: "The girl is carrying a baby. The man has something under his arm. This looks like a cow. These are goats, or maybe sheep. Look, this woman has an umbrella."

If encouraged to describe what these people appear to be doing, the villager might add that the picture shows a family migrating. A response such as this shows the observer has no trouble identifying what is depicted, yet the intended message of the picture is hardly touched upon, let alone consciously articulated.

Participants in the literacy program are asked to study and describe illustrations such as this one throughout the six month course. As a first step, the class is broken into small groups to discuss the picture among themselves. Then one member is selected from each group to come to the front of the class and, using a large poster reproduction, tell what he or her group understood from the picture. We found that these group reports rarely went beyond a superficial description of what objects were being depicted or what actions were taking place. This did not mean that the participants could not say more when encouraged to do so; it simply meant that they defined their task very narrowly.

In order to help the participants respond to illustrations at other levels, the facilitators finally asked the entire class: "Where do you think this family is going and..."
Unexpected Horizons in Nepal

why? Have any people from our village migrated? How do you think this family feels about what is happening? Is this a good thing or a bad thing? Questions such as these help the group to analyze the picture, to relate it to their own life experience, to empathize with the situation and to make value judgments. In this way, after repeated experiences, the participants learn to read more meaning into illustrations. As the course progresses, their spontaneous reports begin to show the kind of perceptiveness that we would call getting the meaning or the intended message of the picture.

From the beginning of Nepal’s Nonformal Education Program, which was developed and tested over a period of seven years with technical assistance from World Education, a conscious effort was made to develop ways to communicate through pictures. Adult learners meet six days a week for a period of six months. During that time they learn to read and write and to solve simple arithmetic problems. They are also exposed to a wide range of functional content in areas relevant to Nepal’s development priorities, such as health, child care, family planning, agricul-

Introducing Comics

Because question words could often be written with a single syllable, many of our earliest reading passages were in the form of dialogues—questions and answers. The dialogue idea was confusing for the new learners, however, as it involved two speakers and they easily lost track of who was saying what. We thought of illustrating the dialogues in the manner of a comic strip, the purpose being to clarify who was speaking in each instance.

As we began to work with comics, however, we found them taking on a life of their own. Using the lists of possible words, we wrote stories and comics for each of the early lessons. We discovered that the comics for any given lesson were vastly more interesting and complex than the stories we were able to develop. Looking over our work we found that the stories were limited in vocabulary and simple, if not to elementary, in theme, whereas the comics were dramatic, provocative, and were able to address serious social issues. This was because the dialogue and pictures of the comics were able to convey an array of actions and ideas in a variety of ways while our stories had to be grammatically correct. We had to leave out many good ideas simply because we could not write one important word.

As an example, the script in one early lesson read: “Gopal lives in Gorkha. Gopal has a son. Gopal has a cow. Behind the cowshed is a forest. Gopal’s son takes the animals into the forest,” etc. It is hardly one you could get excited about. The frequent repetition of the name Gopal is used because the syllable needed to write “he” is not introduced until the name is used because the syllable needed to write “he” is not introduced until the name is used. If we thought of illustrating the dialogue in the manner of a comic strip, the purpose being to clarify who was speaking in each instance.

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In the same lesson there is a four-page comic about a hard-working woman whose husband is a gambler and a drunkard. She earns money by selling vegetables at the weekly market. Six frames of the comic depict a confrontation between Suntali and her husband in which he demands the vegetable money that she has hidden away. This episode ends when Suntali finds that Biray has taken the money. In the next installment, Biray loses the money at cards and returns it to some of Suntali’s jewelry. There is a fight. He ends up unconscious on the floor and Suntali takes her child and leaves for her father’s village. In the final episode Biray repents and swears to give up drinking and gambling. The story ends with Suntali debating whether or not to return to him. This comic was very popular among the participants and the problems it depicted were considered realistic and relevant to their own concerns (They invariably felt Suntali should go back to Biray.) See illustration.

Although some of our problems preparing reading materials in Devanagari had to do with the particular nature of that script and the order in which we introduced the syllables, I think more general conclusions can be drawn. A comparison of the two formats shows that the written story must be coherent while the comic can be fragmentary. This difference allows for a great deal more freedom when writing comics. It is even possible to carry on the action for one or two frames without words at all. This means that much more ground can be covered with a given number of words in a comic format than in a story format. That is an important consideration when preparing reading material for new literates. Too many words on a page can be overwhelming. The pictures make the page more familiar and at the same time reinforce the written word. The storyline can be carried along much more swiftly in comics as well—a big advantage for slow readers. As they struggle to read the words of a story or essay, they can lose the thread, much like not being able to see the forest because of the trees.

Once we had pictures and comics in our primer we were able to experiment with other ways to use them. For example, we had the participants role-play comics (a confidence-building activity). We were surprised to see how quickly they were able to mimic not only the actions but even the facial expressions. Later we asked them to create their own stories around the discussion pictures and role-play those. As a form of creative writing we drew situations with blank “bubbles” and asked the participants to fill in the dialogue.

The many different kinds of illustrations in Nepal’s literacy program not only add to the attractiveness of the package, it opened up the possibility for many valid learning activities. Constant testing and revision showed many of these activities to be educationally sound and appropriate to the cultural setting in which we worked. The further forward we went the more our horizons kept expanding. The end is not yet in sight.

David Walker served as World Education’s Resident Adviser in Nepal from 1979 to 1986. During that period he oversaw the development of Nepal’s Nonformal Education Program from starting as a pilot project at a university research center to becoming the government’s national adult education program.
On File at ERIC

by Barbara Minor

Documents recently entered in the ERIC (Educational Resources Information Center) files include a manual for writing distance education instructional materials and sample materials, a resource book for adult basic education, a report on the development of fotonovelas for teaching literacy, a guide for teaching reading through the newspaper, and a guide for producing publications. All of these documents are available in microfiche, and three are also available in paper copy, from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, Virginia 22301, U.S.A. Be sure to include the ED number and payment in U.S. funds for the price listed plus shipping. Shipping rates may be calculated on the basis of three microfiche per ounce and 75 microfiche or pages of paper copy per pound.

- deJardon, Linda King, ed. Writing for Distance Education. A Manual for Writers of Distance Teaching Tests and Independent Study Materials. 1983, 91pp (ED 246 896)

Six instructional units from the International Extension College (Cambridge, England) offer guidance in the process of writing printed educational materials. Each unit provides objectives, writing exercises and activities, and end-of-unit discussion questions. Unit One considers the first steps in writing, emphasizing the importance of varying instruction according to student needs and background, and discussing how people learn. Active learning and different types of learning activities are then examined in the second unit. The third addresses ways of improving a presentation, such as writing in an appropriate style; using clear, simple language; and trying alternative presentation forms, as with pictures and diagrams. Unit Four covers all steps of production and starts students on an individual project to produce materials in their own subject area. Unit Five emphasizes specific instructional writing skills with advice on distinguishing between different kinds of instructional materials, what to include and how to organize it, and writing correspondence units. The final unit outlines processes of editing, reproducing materials, administration, tutoring, and evaluation. Four supplements provide additional information on learning theories, behavioral objectives, media, and readability and layout. Available from EDRS in microfiche only for 75 cents.

- Writing for Distance Education. Samples Booklet 1983, 46pp. (ED 246 897)

Approaches to the format, design, and layout of printed instructional materials for distance education are illustrated in 36 samples designed to accompany the manual reviewed above. Each sample is presented on a single page with a note pointing out its key features. Features illustrated include use of typescript layout, a comic strip story, various question and instruction formats, checklists, signs and a key, study guidance, diagrams, list formats, pictures reinforcing written messages, objectives, culturally relevant designs, charts, flowcharts, tables, photographs, and illustrations. Materials used in the examples are taken from a variety of actual projects and courses in such institutions as the Mauritius College of the Air, Javeriana Open University (Colombia), Botswana Extension College, "enya Cooperative College, Open University, Lesotho Distance Teaching Centre, and the National Extension College. Available from EDRS in microfiche only for 75 cents.


Recognizing that newspapers are among the best supplementary instructional materials, this booklet from the International Reading Association offers suggestions for the use of newspapers for teaching or reinforcing specific reading skills. The booklet focuses on inferential and evaluative comprehension skills, and the suggestions range from how to teach students to identify main ideas and details to the development of higher order critical reading competencies. Though its major emphasis is on comprehension, the booklet gives some attention to the reinforcement of decoding skills through the use of newspapers. Following an introduction, the first two chapters provide a rationale for using the newspaper as an instructional resource and using it to teach reading. The remaining chapters provide suggestions in the following areas: (a) teaching a reading lesson with the newspaper; (b) developing critical readers; (c) developing vocabulary and word identification skills; (d) developing appropriate reading rates; and (e) reading and the language arts. A list of suggested books, materials, and periodicals is appended. Available from EDRS in microfiche for 75 cents or in paper copy for US$15.50; or from the International Reading Association, 800 Barksdale Rd., P.O. Box 8139, Newark, Delaware 19714, USA (IRA Book No. 210, US$3.00 member, US$4.50 nonmember).


Intended for those responsible for all kinds of publications in developing countries, this manual from the Friedrich Ebert Foundation (Bonn, West Germany) has three main objectives: (a) to give the ordinary person who knows nothing about printing or printing processes enough information to be able to deal intelligently with a printer; (b) to show how it is possible for a person or group of persons with no previous experience to set up their own printing operation; and (c) to demonstrate how modest publications -- from leaflets to small booklets, and even rural newspapers serving particular groups of people -- can be produced. Various sections of the manual deal with relief block, rubber printing, letterpress, linotype, offset litho, stencil duplicating, dealing with the printer, starting one's own publication, getting price quotations, preparing the manuscript, proofreading, and pagination. Available from EDRS in microfiche for 75 cents or in paper copy for US$15.50.
by Mary Whittington

Employing a story that carries a development message is a successful way of reaching an audience, and a piece of graphic literature that tells a story, such as a comic book or a phonovela, is a unique way of transmitting that message.

Many development professionals prefer to address the audience in a didactic manner—one of instruction, not persuasion. Some professionals view their message with such importance that using an illustrated story appears to be unnecessary “sugar-coating.” However, in a community that has coped with a situation for a long time or is facing more pressing problems and cannot take the time to respond immediately, a more appealing format is needed to hold their attention.

Selecting an Approach

The needs of the audience determine whether or not a story-oriented approach will work and what type of story to use in delivering an educational message. The story/illustration format can be very effective in certain situations. A community that has already decided to install a well needs only clear instructions and illustrations on how to proceed to install one. In this case, much of the educational task is already accomplished because they have taken a course of action. Illustrated print material is a powerful tool to convey these “how-to” messages.

A more difficult task is to convince an audience to change a particular behavior. In this case, both instruction and persuasion are called for. For example, convincing a couple that they should practice family spacing calls for both clear instructions and illustrations on effective contraception practices, and for persuasive messages that family spacing is for them. This is a “will-you” situation; that is, will you change your behavior to accommodate this practice?

Pacing is the selection of which actions take place in which frames (sequences of illustrations that “tell” the story). Commercial phonovels and comic books usually follow two principles: 1) Do not confuse the audience with an unfamiliar layout. If the audience is used to reading from left to right, let them continue to do so in your publication. 2) Explain the conflict quickly, depict the crises in the conflict, show how the people will continue their lives after resolution of the crisis. After introducing the characters and plot, the author builds the story with scenes that increase in intensity as they approach the end of the conflict. The pace of the plot should vary, gradually building to a climax, then slowing down to permit characters to reflect on their actions, plan new actions, and continue. Pacing the drama effectively is an important key to developing a good story.

The climax of the story reveals the final resolution or attempted resolution of the main conflict. Most authors quickly wrap up the story after the climax.

Ensuring Effectiveness

An exciting plot and impressive visuals will be wasted if the audience does not understand or identify with the actual message. Pretesting of the materials is an absolute must, as all the factors that have been discussed—plot, characterization, visual style, and pacing—must reflect the culture in which the story unfolds. Pretesting should focus not only on the audience’s perception of the character’s visible traits such as facial features, clothing, or body carriage, but also indicate the emotional reaction of the readers to the story. Which character did you like best and why? Do they remind you of someone you know? How? Or what makes them different? Could any of these events happen to you, or someone you know?

For example, the illustrations below would not be interesting to many Western readers, who are used to action-packed novels. It is a story line from the comic book that was produced in Pakistan by the USAID Central Health Board with technical assistance from the Program for Appropriate Technology in Health (PATH). This comic book was part of a twofold project, an accelerated program that encouraged people to use iodized oil capsules to prevent goiter development and a long-term program to promote replacing noniodized rock salt with iodized salt.

The comic book chronicles the story of Hur Bibi, who has had a goiter since childhood and is now pregnant, and her interaction with Rabia, a Lady Health Visitor. Rabia compares Hur Bibi’s son, who has goiter, with another child who does not.

Although they are the same age, the child with a goiter is shorter and smaller. Rabia explains that the other family uses iodized salt, and that iodized salt will produce healthy, active children, while children with goiter lack the energy to play or concentrate in school. The merchant extends his support to the program and will no longer carry noniodized rock salt.

The pamphlet, developed by a local artist, uses bright colors, details of the local landscape, indigenous farming practices, animals, food, and even common body positions; it speaks directly to the intended population.

Story-oriented comic books and phonovels can be a powerful tool in development communications. Through audience market research, communication practitioners can be assured that the intended audience has played a central role in designing an educational message and that the message is more likely to be received by an attentive and responsive audience.

Mary Whittington is a writer and researcher with B J Cam & Associates, Inc. and a freelance writer, has produced programs for public and cable television. She holds an MFA in Theatre from The Catholic University of America.
A Communicator's Checklist


This Guide contains 316 reviews of nutrition education materials, which are organized by topics including nutrition for the family, maternal nutrition, young child feeding, growth monitoring, and nutrition-related health problems. Furthermore, names and addresses of the producers are provided so that the reader can request additional information and samples of the materials. It combines the efforts of Manoff International, Inc., and the Education Development Center, Inc., two well-known and respected groups in the field of education and communication.

The worldwide acceptance and use of mass media and educational materials in nutrition education programs is well demonstrated by the broad range and diversity of materials reviewed in this book. The Guide includes charts, radio spots, puppets, stories, games, fannel graphs, filmstrips, booklets, manuals, slides, etc. Contributions come from many developing countries in Africa, Asia, Latin America, and the Middle East. The reader is given a good overview of the types of and trends in educational materials being developed throughout the world.

Materials included in this publication are described according to their country of origin, language, content, format, and target audience. In some instances, the authors provide further information about how the materials were designed and evaluated. However, the book does not provide an evaluation of the materials' positive and negative features.

In defense of this approach, the authors give recommendations for the successful incorporation of mass media and educational materials into nutrition education programs. They suggest that evaluation of materials should be based on more than physical appearance and statistical impact; it should include the process used in developing the materials and the role they play within the overall communication strategy. Thus, specific questions and guidelines are provided for the reader to use as a standard for measuring the materials.

In addition to the reviews, the Guide provides a glossary of communication terminology and a nutrition education game. The glossary is helpful in establishing a common frame of reference. The game is useful in providing a concrete example of a non-formal educational tool. It leads one through the steps to follow in developing such materials and in this respect it follows the guidelines suggested in the beginning of the Guide. Nevertheless, the game does not seem to offer an opportunity for discussing alternatives in food selection or preparation, which is an important aspect of the participatory education process.

The Guide is extremely useful as an annotated description of materials. It provides an easy reference for educators wishing to use examples and types of education and media materials that have been developed in nutrition. The reader will have to use his or her own judgment as to whether any of the materials would be appropriate for their target audience, given the large diversity of educational, cultural, climatic, regional, and linguistic differences between populations of the world.

Available free to nutrition educators in developing countries, and for US$10 elsewhere from: INCS, Education Development Center, 55 Chapel Street, Newton, Massachusetts, USA. 02160

Reviewed by Marilyn Rice who is the Regional Advisor in Health Education at PAHO/WHO in Washington, D.C. She has worked in the field of public health project coordination and education in the U.S. and abroad for 13 years.


Most people, whether they can draw or not, often refer to the old adage that a picture is worth a thousand words. Those who work in developing countries and who like to draw, tend to try and prove this saying by using many graphics they consider to be good. But as Munoz says in the introduction to his study, pictures might not always be worth a thousand words. Some people in developing countries might have a difficult time interpreting pictures because of their lack of exposure to illustration techniques or because their life experiences do not allow them to relate to what they see in a drawing. The study points out that illustrations are often selected on the basis of subjective feelings of design and on concepts of pictorial composition that are intuitive rather than scientific in nature, and thus not always perceived in developing countries as intended.

By examining the differences in perception patterns among individuals with different literacy levels, Munoz believes his study will help to increase people's comprehension of communication theory, particularly about visual communication. In addition to its theoretical contributions, the study also seeks to provide practical recommendations for communication programs in Colombia, where the study took place, as well as in other countries.

Understanding Visual Illiteracy is a technical study, that asks two major questions. First, what are the differences between the perceptual patterns of literate or illiterate individuals when they look at an illustrated page; secondly, how much do different literacy levels and life experiences effect people's comprehension of photographs and drawings?

The methodology section includes descriptions of the region, sampling procedures, the application of variables, the questionnaire, data, statistical analysis, and the limitations of the study.

In the results section, Munoz concludes that the tests support the hypothesis that illustration is not an intercultural language, but that interpretation of illustrations is primarily a learned skill. Munoz suggests that rural people be given more exposure to illustrated materials to encourage development of their visual skills, and that this should be supported by research to increase our understanding of visual literacy.

The monograph has a 92-entry bibliography, a 23-page literature review, and an appendix with numerous statistical tables. The paper did not have a table of contents, which considering its technical nature, would have been helpful.

This useful study made me aware of what can be done to improve illustration techniques I have used as a resource scientist who has had to communicate with Africans of different educational backgrounds ranging from college-educated technical counterparts or administrators to rural villagers. I believe others who are involved in visual communications, particularly in developing countries, will benefit from reading this study with its thorough and rigorous approach.

Available free of charge from the Department of Agricultural Journalism, 440 Henry Hall, University of Wisconsin-Madison, Madison, Wisconsin, 53706, USA. Include US$1.35 for postage.

Reviewed by Chuck Doris, an environmental scientist and consultant who has worked for ten years in remote sensing and integrated resource assessment projects in Africa.


Despite some significant national programs mounted in recent years, the international literacy effort has languished for more than a decade. Following the disappointing results of the Experimental World Literacy Program (EWLP), Unesco has done little refashioning of its assumptions, concepts, or approaches.

The EWLP (1967-73) was a series of pilot efforts through which Unesco developed its concept of functional literacy and tried to promote a methodology which would be used for a global literacy program. The results of the EWLP were not compelling enough to push the international community toward an all-out attack on illiteracy.

The present book is a collection of papers presented at a workshop held in 1982. The reader is left to judge whether it was worth the wait. In any case, the book is thoughtfully orga-
nized and well-edited. It contains useful national "self reports" on literacy efforts in Chi-
ana, Nicaragua, Vietnam, Iraq, Ethiopia, Kenya, India, Tanzania, Nepal, and Brazil. Other pa-
ners treat topics related to training, evaluation, mass media usage, language, post-literacy, and
the relationship of literacy to formal schooling and to providing other basic services. As a
sourcebook of description of recent experience in literacy, the book succeeds and is of
interest to development professionals.

Unfortunately, the book contributes little to the understanding of literacy's role in national
development. Much of what is said has been said many times before. Worse, many difficult
policy issues are not treated openly or in their full complexity, and this is a disservice to those
hoping to learn more about planning and managing literacy programs.

One gets the impression in the Preface that the international literacy effort has blossomed
since the end of VLP. It has not. We are reminded of Unesco's content in that "literacy educa-
tion for adults and the provision of schooling for children must be seen as two sides of the
same coin." This had appealing face value, but it masks the difficult policy and resource allo-
cation choices: adult literacy activities must compete with primary school education for
scarce development funds. In the majority of developing countries, provision of schooling for
children is both sides of the coin.

Also, in the Preface, readers are referred to the Persepolis Declaration (1974) and the no-
tion that functional literacy should be regarded
as "not just the process of learning reading,
writing, and arithmetic skills but a contribu-
tion to the liberation of man and his full de-
velopment." The poetry above obscures reality, in
fact, "literacy for liberation" emerged as a re-
action against functional literacy and not as its
extension. The idea of government-sponsored
literacy efforts contributing to liberation can
hardly be taken seriously.

The book's Introduction sketches a process of planning and managing literacy programs
that might play well at an intern...nal meet-
ing but has little connection with the realities outside the meeting room. Consider the fol-
lowing conclusion for the Introduction (p. 18):

Expressed in more general terms, differ-
dent dimensions of functionality could be
introduced at different points of an inte-
grated package of pre-literacy, liter-
acy and post-literacy according to the
needs and possibilities of participants. It
was further stressed that the operationa-
ization of the functionality concept im-
plies that systematic linkage mecha-
nisms with various agencies be es-
thablished at different levels and at
appropriate moments in time.

In what developing countries do conditions
permit such an orchestration of reality? Where
are there literacy program planners and man-
gers who have the time, resources, or the
control over events to engage in planning ex-
ercises that consider where to insert this or
that "dimension of functionality" at specific
points in integrated training packages system-
atically coordinated with all other aspects of
development? Most planners and managers
spend their time and limited resources getting
materials printed and delivered; convincing
often unwilling participants to join or stay in
a group; recruiting and retaining tutors to work
without pay; trying to generate new in...; and
then trying to demonstrate a connection be-
tween income and acquiring rudimentary
skills in reading, writing, and arithmetic

Many of us look forward to a renaissance at
Unesco and for its return to a position of lead-
ership in international education. A rethink-
ing of its approach to literacy is long overdue and
might well be a good place for the renaissance
to begin.

Available for US$29.75 from Bernan/Unipub,
10933E Martin Luther King Jr. Highway, Lan-
ham, Maryland 20706, USA, and from Unesco
distributors worldwide.

Reviewed by Stephen Anzalone of the Insti-
tute for International Research, McLean, Vir-
ginia. He is co-author of Making Literacy Work:
The Specific Literacy Approach.

Management Skills Training

Courses designed to enhance skills in man-
agement of rural development programs and
agencies are being offered by the Interna-
tional Institute of Rural Reconstruction, Silang,
Philippines

A six-week course starting Feb 9, 1987
"Middle-level Managers' Course," is designed
to increase participants' knowledge and skills
in project planning, implementation, and eval-
uation. Subjects covered include history and
philosophy of rural reconstruction, reflection
on development, and strategies in working with
peasants. The cost is US$2,500 including room and
board.

The "Senior Managers: Seminar," also start-
ing February 9, 1987, will broaden and rein-
force the participants' skills and knowledge
needed for effective management of rural de-
velopment agencies and programs. Macro is-
ues and trends in development, organization-
al and program management, comparative
analysis of rural development agencies and
programs, and history and philosophy of rural
reconstruction will be covered in the seminar.
The cost is US$1,800 including room and
board.

English proficiency, experience in rural de-
velopment programs, and a B.S. degree are
required for both courses. For further infor-
mation and application material please con-
tact: Training Director, IIRR, Silang, Cavi-
t, Philippines 2720, or Vice President, IRR, 1775
Broadway, New York, NY 10019, USA.

Health Care Courses

Boston University Schools of Medicine and
Public Health offer a number of courses in
1987 for those interested in health care in de-
veloping countries. From February 27 - April
12, 1987, a course on "Management for Child

PTC Ninth Annual Conference

The Ninth Annual Forum of the Pacific Tele-
communications Council, PTC'87, will be held at
the Sheraton Waikiki Hotel, Honolulu, Ha-
wai from January 18-21, 1987. Telecommuni-
cation professionals from some 50 countries
representing government, industry, and edu-
cation participate in this year's conference
entitled "Pacific Telecommunications Users: A
Spectrum of Requirement."

For more information or to register contact:
PTC, 1110 University Avenue, Suite 308, Hon-
oulu, Hawaii 96828, USA. Telephone (808)
941-3789.
Improving Visual Comprehension in Nonliterate

by Sikandra Spain

(This article has been adapted from the 1983 Master's Thesis of Sikandra Spain, who died in an automobile accident shortly after completing her research with the Mass Media and Health Practices Project in The Gambia. I would like to thank Sikandra's family who kindly granted DCR permission to share her research with our readers. I would also like to thank Dr. Robert Hornik of the Annenberg School of Communications, under whom Spain studied and who assisted in the preparation of this article. KM)

How do you know if your target audience is receiving an intended message from specially prepared visual materials when they have not had regular exposure to this medium, and are likely to be visually nonliterate? The results of a special study in The Gambia indicate that in a community with low visual literacy, materials with pictures can be used successfully if training is given in interpreting the pictures.

This special study, funded by the Annenberg School of Communication, University of Pennsylvania, was conducted during a nationwide campaign of the Mass Media and Health Practices Project, in The Gambia (see DCR 51 for articles that describe this project). It was funded by the U.S. Agency for International Development and implemented by the Academy for Educational Development. The purpose of the project was to introduce home-based oral rehydration therapy (ORT) to rural Gambian mothers, and to improve mass communication techniques used by existing health services in The Gambia.

ORT Flyer

Instructional flyers were to play an important educational role in teaching mothers to properly mix and administer the simple water-sugar-salt solution to their children suffering from diarrhea. While visiting Gambian villages prior to the development of printed materials, project planners observed that there were few print and visual materials (photographs, posters, and drawings) in compounds or public places. With the possibility that visual literacy might be low because so few materials were available, only two pictorial flyers were developed, and these were specially designed so that they could be used to teach mothers (the primary target audience) how to interpret the pictures.

The multi-step ORT flyer illustrated how the ingredients should be measured, mixed, and then administered to a child suffering from diarrhea. The flyer was distributed throughout the country and explained during radio broadcasts that were aired during a special campaign called the "Happy Baby Lottery."

To determine how effective the mixing flyer was in teaching mothers the correct ORT preparation and administration techniques, when combined with radio instruction and trained health workers, a questionnaire was assembled and administered to a sample group of Gambian mothers in 20 villages in August 1983. Flyer comprehension was measured by showing mothers the flyer and asking them to describe what they saw. Simple line drawings were used to measure mothers' ability to identify and make inferences about depicted scenes, and to measure depth recognition. Pictorial experience was measured by determining previous exposure to pictures in books, photographs, and other sources.

Results

Survey results showed that comprehension of the flyer was high, with approximately three-quarters of the mothers in the sample group correctly answering at least 10 out of the 17 items in the questionnaire. There was also a very strong relationship between pictorial experience (having seen photographs, drawings, etc.) and the ability to understand pictures. Thirty-five percent of the mothers who had had exposure to all three types of pictures used in the survey, scored high on the pictorial comprehension test, whereas among mothers who had had exposure to only one kind of picture or no pictures, under five percent had a high score.

Measurements of the relationship between training in "reading" the flyer and flyer comprehension indicated that the two were clearly and positively related. Mothers who had no training scored the lowest in flyer comprehension; those who had heard instructions over the radio scored higher, and those with both radio and personal training by health workers scored highest in flyer comprehension.

The effect of training was strongest on mothers with low initial ability to understand pictures. Radio training alone clearly enhanced flyer comprehension scores. Radio and personal training together increased the average score for this group even further. The training effect was far less pronounced among those women who already had moderate to high picture comprehension.

Conclusion

In summary, the findings confirm that exposure to pictorial materials correlates with the ability to understand pictures which, in turn, is associated with the ability to comprehend particular educational material. They showed that nonliterate Gambian mothers could be taught to "read" pictures of the ORS mixing flyer and several months later still recall how to correctly prepare the solution according to the instructions given on the flyer. By providing the mothers with a flyer of their own and giving them training in interpreting it, their ability to understand the flyer was significantly increased. Radio, particularly, was found to be an effective medium for training them to understand the mixing instructions. In fact, test results show that exposure to the flyer combined with radio training could close the gap in flyer comprehension between mothers of low and high ability to understand pictures.

This suggests that even though an intended audience may not be visually literate, pictorial educational materials can be used effectively if explanations are provided either in person or by radio, preferably both. The results also demonstrate how crucial pretesting is for a project that plans to use posters, flyers, or other visual materials in an educational campaign.

New Education Journal

Journal of Distance Education (JDE) is the newest addition to scholarly distance education publications. A peer-reviewed international journal of the Canadian Association for Distance Education, the JDE is intended as a forum to reflect current theory, research, and practice related to teaching and learning at a distance. Submissions of a theoretical or empirical nature that represent original work in the field of distance education are welcome. Manuscripts are accepted in English or French. JDE is published twice yearly beginning in October 1986. The subscription fee is $40.00 in Canada, US$62.55 elsewhere. For subscription and submission information please write to Dawn C. Howard, Editor, Journal of Distance Education, 611 Centre for Distance Education, Continuing Studies, Simon Fraser University, Burnaby, British Columbia, Canada, V5A 1S6.

Cornell Communication Courses

Cornell's Department of Communication summer 1987 courses have been announced. The regularly offered four-week "Communication Planning and Strategy" course offers the background and skills that will help participants organize and carry out systematic and effective information and communication activities. The course blends discussions and lectures with case studies, problem-solving, and hands-on experience.

Another course, "Training and Development: Theory and Practice," is an intensive four-week course focusing on the analysis, design, and administration of training programs for the development of human resources in small-farm agriculture, rural health and nutrition, literacy and nonformal education, and general community development. The course is appropriate for professional personnel and graduate students.

Admission is based on relevance of the applicant's background to the program. Each course costs US$1825.00, with an additional US$650 for housing. Meals and personal expenses are extra. For an application please write to Dr. R.D. Colle, Communication Arts, Cornell University, G40 Stewart Avenue, Ithaca, New York, 14850, USA.
Female literacy plays a critical role in child survival. Even though mothers may be poor, if they have received some schooling, the chances of their infants surviving childhood increase dramatically. In the World Health Statistics Annual 1985 (WHO, 1985), analysis of data from World Fertility Surveys involving 160,000 women in approximately 30 countries shows that in countries where the adult female literacy rate is low (less than 35 percent), children are two to three times as likely to die during the first two years of life than in countries where the literacy rate is above 90 percent (WHO, 1985). Over 24 separate studies in 15 countries have established that the level of a mother's education is a key determinant of her children's health, State of the World's Children, (UNICEF, 1984).

Despite the importance of formal education in improving women's and children's lives, many literacy programs have been criticized for their heavy reliance on primers which may have little relevance to the adults using them. The impact of maternal education on child health is related not so much to the mother's absorption of printed information as it is to her acquired ability to question, analyze, and act upon new information. A mother with some schooling is better able to assess the health status of her family, to understand and adopt preventive health practices, and to know when and how to intervene when a family member becomes ill. An example of such a project follows, where carefully designed visual materials were used to promote the active participation of Peruvian women in child survival activities.

Asociación Peru-Mujer is a private, nonprofit organization whose main objective is to stimulate, through study and action, the participation of women in national development at all levels. Since September 1984, PATH (Program for Appropriate Technology in Health) has been collaborating with Peru-Mujer on a project to develop materials, as well as to provide technical and financial support that motivate illiterate and semi-literate women to participate in family planning and child immunization services. Booklets on these two subjects were developed - one each for the coastal, the highland, and the jungle regions of Peru - based on initial qualitative research and locally conducted pretesting. The materials are primarily pictorial but contain a simple line of text on each page for the benefit of semi-literate booklet recipients, as well as for community development workers in their program activities (See Illustration.)

Materials Use Training

Once the booklets were printed, community activity leaders were selected from ten different areas of the country to receive a training course in how to use the materials to stimulate group discussion and problem-solving. In addition, a guide was developed for the promoters to assist them in this process. Illiterate women in each of these communities were invited to attend sessions in which the promoters used the print materials as a complement to other participatory techniques, such as role-playing and dramatization, to encourage group identification of problems, discussion of possible solutions, and decisions on what action to take.

Participants were also given crayons and encouraged to color or decorate their booklets at home. This activity in itself was motivating to the women, some of whom commented that this was the first opportunity they had been given to learn to read. As one participant said, "Education is the best thing we can have and pass on. They haven't let us women learn, as if we were animals in the field." Pride of ownership of the materials also contributed to this new sense of self-reliance. A number of women subsequently enrolled in literacy or other adult education activities.

Several beneficial health-related community activities emerged as a result of the group problem-solving orientation of the course. In Chiclayo, course participants organized a day of activities to focus public attention on the need for improved maternal and child health services in the community. In Cajamarca, a group of participants organized to gain support from the local government to build a health post. In Puno, the participants of one course planned a community pharmacy.

Women in a number of the courses throughout the country requested additional family planning and immunization materials so they could conduct courses of their own with their neighbors. The demand from other women for additional courses in the community has far exceeded the expectations of the project staff. In all areas where the courses were conducted, the use of family planning and immunization services by course participants increased, although the exact level of the program's impact is still being assessed.

Peru-Mujer has also made a concerted effort to share its experiences and materials with other Peruvian organizations involved in adult education activities. Officials from the Adult Education Program in the Ministry of Education participated in a workshop sponsored by Peru-Mujer and PATH on the development of health education print materials for illiterate adults and subsequently developed pictorial materials of their own on population topics.

The process developed by Peru-Mujer of combining well-designed visual materials with entertainment and action has led to some innovative and helpful community-oriented activities, while at the same time giving female participants greater confidence in their own abilities to gain more control over their environment.

Joan Haffey and Nancy Newton are Associate Program Officers at PATH (Program for Appropriate Technology in Health), Washington, D.C. Blanca Figueroa is Project Coordinator at Peru-Mujer in Peru.
Assessment Steps

There are four main steps to follow in assessing the costs and developing a plan for using graphic media cost-effectively:

1) State objectives as precisely as possible. How many people are to be reached? How many messages are there? Is it a one-time effort or an ongoing campaign with plans for other media packages?

2) Decide how effective you need to be. What is your minimum successful impact level? How will you measure this impact? What are the consequences of reaching less than 100 percent of the target audience or of some people misinterpreting the message? What costs are you prepared to pay to develop a more complex campaign with higher quality materials or other media?

3) Assess the resources available. The manager should look at the net costs of the program. Include staff time, facilities, and any contributions in kind as well as finance. Also include any possibilities for cost recovery such as sales of the product, advertising revenue, and grants or contributions which may come as a result of dissemination.

4) Determine the costs of production, considering factors of scale and technical production qualities. How many books will be distributed for how much?

Creative Choices for Latin American Photonovels and Comics

by Cornelia Butler Flora

To walk the streets in a working class neighborhood or a small town in Latin America is to see first hand the popularity of inexpensive, sensational print materials or pulp media. People read comics and photonovels as they ride the bus, or buy them from little stands in town, or rent them from vendors who, for a small fee, allow readers to sit beside these curb-side libraries and read them.

Community educators in Latin America have long recognized the popularity of such print materials and have attempted to adapt them for alternative purposes, aimed at social change. In this way, educators and activists have changed the content of the message to inform and educate their target audience.

There are a variety of ways to develop alternative photonovels and comics, but the three variables that most strongly influence the extent of their success and their cost benefit ratio are: (1) who creates the content (the audience, the artist, or the publisher), (2) who absorbs the risk of production (the creator or the sponsor), and (3) how it is distributed (commercial or alternative channel). Combining these three variables in different ways offers a wide variety of production and publication alternatives, many of which can be found in Latin America. The mix of the variables, to a certain extent, results in products that are both cost-effective and successful.
and Development


Lent, John A. "A Different Japanese Comic Strip "Media History Digest Fall 1985:51


Mag-Uyon, Madeline G. "Comics Readership and Performance in Classes of Elementary and High School Students in Manila." AB Thesis, University of the Philippines, 1972 41pp


Dr. John Lent has written extensively on mass media topics dealing with developing countries. He was the organizer of the Working Group on Comic Art at the 1984 and the 1986 meetings of the International Association for Mass Communication Research

My research shows that the risk factor is a major challenge for alternative publications. Creating the content for these publications is much more costly than it is for commercially produced comics or photonovals. The increased cost results from having to consciously and systematically change the story lines of mass produced popular comics or photonovals when applying this approach to alternative publications. Furthermore, the educational message presented in each frame of the story must first be discussed to make sure it is internally consistent—something most commercial publishers of popular pulp media generally are not concerned with.

Who Distributes?

Distribution of alternative publications presents another challenge. Often, the traditional channels are bypassed in favor of less commercial approaches. In part, this reflects the intellectual bias of those involved in the production of alternative publications. My research shows that while much thought has gone into the alteration of the content and production phases, there is little understanding of how comics and photonovals are currently distributed or which channels to use.

In examining various alternative photonovals and comics' distribution systems, I found that the most effective technique was to create alternative forms of distribution using already established grassroots organizations as the channel. This suggests that alternative media do not take the place of other forms of outreach, but best serve to supplement it. It is expensive to produce alternative comics and photonovals in the necessary quantities to effectively exploit commercial channels, the initial capital outlay would exceed the resources available to most nonprofit operations. Also, it is difficult to track readership once the material enters the commercial channel. One never knows how the content is interpreted or how it is being used.

I am aware of two attempts, one in Colombia and another in Venezuela, where production staff and editors of commercial photonovals made conscious attempts to improve the cultural level of their publications. Their limited success suggests that educators were working with them to introduce socially relevant educational themes into their photonovals or comics, their efforts might have been more successful.

In summary, a system that uses the existing private sector and slightly modifies the content, or that uses private voluntary organizations; and grassroots organizing to produce and distribute alternative publications seem to yield better results than attempting to set up a parallel subsidized alternative source of mass culture in a developing country.

Cornelia Butler Flora is a professor of sociology at Kansas State University who has done research on photonovals in Latin America for the past 10 years.
Looking at Costs of Graphic Literature

Adapted from "Photonovels, Comics, and Graphic Literature: Popular Print Media for Development," by Bonnie Cain

A medium cannot be judged cost-effective unless it is first effective. Only when no other medium exists that is less costly for at least the same level of effectiveness, is it a worthwhile investment. And, ultimately, the medium can only be a cost-effective choice when the educational program using it can afford the costs of development and dissemination. The fact that photonovels and comic books are relatively inexpensive is not the only reason, or necessarily the best reason for considering them, rather, that they are an effective means of delivering persuasive instructional messages.

What are the costs involved in producing photonovels and comic books? Costs of any medium are the costs of obtaining services and supplies to put that medium together within a specific setting. In one country, printing paper may be readily available at reasonable prices. In another, there may not be a reliable supplier and paper costs may be excessive. Affordable graphic artists may be available in one country and nonexistent in another. Some costs can be retrieved through advertisement or sales, or by having an efficient distribution system. The following hypothetical case study illustrates the numerous cost factors that make it difficult to predict what the final expense will be.

The Case Study

A populous country has seven major ethnic groups, each with a different language. Malaria is found in all these regions and all recognize there is a need for a national educational campaign to treat the problem. The need is for universal action to cover or treat mosquito breeding grounds and for increased understanding of how to treat trauma cases of malaria. The objectives are to ensure that the families of each region learn about family and community health, control of malaria, and community organization and adult education.

The communicators decide that the messages are too complex to use the broadcast media, with language differences complicating matters further. After considerable research and analysis, the campaign directors decide that the most cost-effective approach is to produce a series of photonovels built around the lives of the Ranna family. The lessons are to be illustrated as the Ranna family grows and prospers. Story lines will be developed and messages tailored to the regional and ethnic audiences. Photographic and copying techniques will be used to create culturally accurate booklets for each of the regions. Booklet covers will carry public service announcements.

Expense Factors

- Market research, modes of message presentation, quality of illustrations, distribution systems
- Salaries for photographers, writers, researchers, and staff support
- Printing of covers and duplication services
- Distribution and transportation costs

Savings Factors

- Costly in-country printing and paper supply problems are avoided when two local businesses agree to donate the use of high-speed Xerox machines which reproduce photographs well and to provide the paper at cost. They will also donate personnel to run the machines.
- Polaroid pictures bypass the film development process and immediately show the amateur photographers whether or not their pictures are good.
- Participating ministries have agreed to use their existing extension and community education programs to distribute the materials.
- Multiple ministries using the same medium for their educational messages, will realize savings through shared costs.
- Market research and testing will produce instructional materials that will be understood without the intervention of outside specialists.
- The photonovels will be read and shared among families and other community members. Because materials will be circulated for a long period of time, it will be attractive to potential advertisers.

Potential Cost Recovery

- Poorly trained extension personnel will be able to use the materials as effective instructional aids.
- Public service announcements by other departments and ministries not involved in the malaria campaign, might result in paid advertisements.
- Businesses may request ad space on the covers, or wish to include inserts in the booklet.

Cost Effectiveness Decisions

The important question is, which medium will achieve the best results for the lowest price? Given the high cost of paper in the case study presented above, would radio broadcasts or print advertisements have been a better choice? Photonovel and comic books have unique cost characteristics that influence the cost decision:

- The Pass-along Factor: The pass-along factor takes into account how many people will actually see a magazine or other periodic publication. Descriptive evidence, mostly anecdotal, shows that audiences share their photonovels and comic books with their families and other community members. Shops where used commercial photonovels and comic books are resold can be found in most countries. The pass-along factor should also be considered in the printing and distribution costs. It can safely be projected that at least two other people will read each copy distributed. Thus, if 2,000 photonovels or comic books are handed out, the costs should be divided by 6,000 to reflect this pass-along factor.

- Commercial Versus Educational Costs: Commercial photonovels and comic books are produced cheaply and rapidly. Often the entire production process of a photonovel — conceptualization, scripting, casting, shooting, and editing takes only four days. With wide distribution, unit costs of the materials are extremely low, and a sizable profit can be expected.

- Educational photonovels or comic books, on the other hand, are developed by researchers and instructional media specialists. Their consulting fees or salaries absorb a sizable part of the production costs.

- High-end/Low-end Production Costs: Production choices influence cost enormously. For example, photonovels can be made with a researcher, ministry personnel, evaluators, pretesters, professional photographers or artists, paid actors and professional writers. They can also be developed by one locally trained media specialist using a Polaroid, who writes the story with help from the audience and pretests at the same time. The latter type of production can be completed in two weeks and is typically printed on newspaper stock, while the former often takes six months and may be printed in three colors on glossy stock.

- A more elaborate production may still be the more cost-effective if it is widely distributed, is so well-designed that trial readers easily understand the graphics, and is integrated with other elements of the program to ensure impact.

A decision must be made on how many refinements should be made to a product. While the publication might be capturing only 70 percent of the intended audience, it may not be cost-effective to try to reach that last 30 percent. It may be cheaper to create a separate message for that group than trying to appeal to the entire audience with a single product.

- Cost Effectiveness: How do the costs of photonovels and comic books compare with those of other media equally effective in achieving the same instructional goals? Photonovels and comic books are uniquely effective in delivering instructional, emotional, persuasive messages to audiences that wish to remember and review the elements.
Radio Education in the Dominican Republic

by Beatriz Casals-Andrews and Ruth Eshigh

The following article appeared in the first issue of Radio Learning, August 1986, a publication of the Radio Learning Project. DCR would like to thank Thomas Tilson, Project Director, for allowing us to reprint this article in its entirety.

In 1982, the Radio-assisted Community Basic Education (RADECO) project was implemented in the Dominican Republic as a means of bringing basic education to children seven to 14 years old who do not have access to public schools. Through the cooperative effort of the U.S. Agency for International Development (AID), InterAmerica Research Associates, and the Dominican Secretariat of Education (SEEBAE), basic skills are being taught through the medium of radio in the rural areas of the Dominican Republic where there are no schools and where children must work during regular school hours.

RADECO

The goal of RADECO is to teach children the basic skills they would have learned had they gone to regular school. To achieve this goal RADECO has developed a program of practical, low-cost, effective radio-based instruction in the primary grades. Lessons are based on existing Dominican curricula and reflect the special historical, cultural, economic, and social characteristics of the nation.

RADECO faces the task of incorporating instruction for an entire grade-level into a sequence of daily, hour-long broadcasts. The resulting program has to be fast-moving enough to hold the interest of a seven-year-old child and, at the same time, cover sufficient materials so that the required skills are learned.

Each day, after completing their work in the fields, the children meet at the centers where they are given instruction in basic skills. Reading, writing, and arithmetic are stressed, while social studies, science, music, and physical education are also presented. Although the children are supervised by an adult proctor, or radio auxiliary, instruction is given almost entirely by radio.

The success of interactive radio education can be attributed largely to the innovative style of the broadcast lessons. During interactive radio lessons the learner is constantly active, asking and answering questions, engaging in structured conversations, reading, writing, calculating, solving problems, standing up, moving purposefully about, participating in active songs, games, and exercises - for the course of an hour of lively, focused study.

The results from the RADECO project are the most powerful demonstration to date of the capacity of interactive radio to provide effective instruction in basic skills, whether or not a trained teacher is present, and without significant investment in accessory instructional materials.

Institutionalization

On March 19, 1986, RADECO realized its international development goal when the Secretariat of Education formally institutionalized the project as a permanent educational program in the Dominican Republic. Key factors which contributed to institutionalization are 1) the existing need for an alternative to formal education, 2) acceptance of interactive radio by professionals as well as the communities as a viable alternative to formal education, 3) the human commitment and involvement, and 4) development of local capacity to maintain the project after AID support ends.

The scattered population of the southwest region of the Dominican Republic and the lack of schools and teachers created the need for an alternative educational approach. Initially, educators doubted the methodology of interactive radio. Open communication between the project and the educational community minimized any resistance and the positive outcome of the evaluations gained their support.

Commitment to the project existed at all levels. Local as well as AID support for the project enabled the benefits and successes of the project to be highlighted and provided the essential support needed to implement the program. Local support and acceptance were the result of the community outreach component.

By visiting the targeted communities in the southwest region of the Dominican Republic, the RADECO staff learned that education was considered an urgent need. The community members wanted to be able to write letters to friends living in other communities to be able to read the newspaper, and to make purchases without fear of being cheated.

The communities were asked to help by identifying candidates for radio auxiliaries, potential students, and possible sites for the entramadas or shelters where the children would listen to the radio broadcasts. They also helped build small learning centers for the children to use. These centers were frequently very simple, but the labor put into them reflected the strong need felt by parents for an education for their children. By involving the communities in the decision-making process and in the contribution of goods and labor, they became partners in achieving the goals of the project.

The development of local ability to sustain a project of this type was as important to the institutionalization of RADECO as was the community outreach component. The RADECO management plan relied heavily on existing resources and on the host country infrastructure. By remaining flexible when designing the management plan, RADECO was able to more closely respond to local needs.

Key responsibilities of project management, design, and implementation were assigned to staff members already part of SEEBAE. Thus the project was able to provide vital training and development needed to manage such a program. By including institutionalization in the management plan from the onset of the project, the foundation needed for continuation of the program was developed.

Through clearly defined project objectives, local capacity building, utilization and expansion of existing resources and infrastructures, and hard work, RADECO has succeeded in ensuring that children in the southwestern region of the Dominican Republic will continue to have access to a primary education.


(Rappaport continued from page 16)
Why Another Handbook?

The Clearinghouse would like to thank George Grinnell for his kind permission to reprint an abridged version of the following article which originally appeared in the June 1986 issue of Media in Education.

by Rosalyn Rappaport

After a year of working at the Mauritanian Vegetable Production Project at the Sani Oasis and observing the farmers of the Senegal River Valley, planners had confronted the problems of vegetable gardening at the edge of the desert. At Sani, simple methods had resulted in a paradise of plenty and it was time to spread the good advice around. The Project hired an artist, and I (the horticulturist) started to write "method sheets" intended to grow into a handbook of vegetable technology.

Mauritania has its share of intelligent, innovative farmers who, by trial and error, have solved many of the problems of Sahelian vegetable production. Unfortunately, distances and the costs of travel trap these ideas at their points of origin. A handbook that presented these ideas in a lively teaching format seemed the most economic, adaptable, and lasting means of technique transfer. It would inform farmers of what their peers were doing in other parts of the country and could start others thinking along similar lines.

There is a small Extension Service but, even were its numbers increased, it would always be insufficient to meet with all the gardening cooperatives in this huge country. According to the World Bank, "Agricultural Extension Services are most effective when they support a profitable or risk-free technology." The handbook is planned as a source of this kind of information.

What Kind of Handbook?

Small landholders, large-scale farmers, extension agents—all would want the facts—but in different detail and presentation. In larger villages there is usually someone who can read and, since scientific background should be available to those who can use it, this suggested two levels of text.

The contents would be confined to locally developed techniques drawn from western Sahelian practices, as throughout the Sahel, fall management and date-palm irrigation are ancient practices and in the thirty years since irrigated vegetables appeared in the region enough local expertise has accumulated to complete a text covering some fifteen vegetable crops. Local solutions are well adapted to climate and terrain, are within ordinary labor and financial limits, and take account of consumer preferences.

Each information unit—preparation, crops, protection, processing—would be composed of a simple account of what to do, followed by the scientific explanation of why the procedure works, the latter intended mainly for the Extension agents.

Doing It

Justification arrived at and content decided, the format seemed equally clear—a dispassionate, carefully sectioned text illustrated with diagrammatic figures. The project hired Mohammed ben Bara, a high school boy with a talent for copying. He didn't want to produce the first sheet. "Planting Onions," Mohammed had combed the technical literature to good effect, reproducing familiar persons, planting, measuring, etc., in profile. The page could not have been clearer.

Preliminary comprehension tests were carried out on the project's three drivers. The office staff read them the text, pointing out the illustrations and then asked who the drawings were of and what they were doing. The drivers duly admired, but were mystified. They did not understand the text nor could they theorize about the pictures. Dismayed, I started asking questions such as "Who is this man?" which produced answers such as "He is poor," "He is a picture!" If our work was incomprehensible the idea must be abandoned. Our artist's job was preserved when I discovered, in a corner of his notebook, a delightful caricature of a bird perched droopily on a camel. I persuaded Mohammed to draw some cartoon people carrying out familiar agricultural tasks.

He drew: a plump seductive matron hoeing and her husband, cheery and muscular, welding a pick. Upon showing them to our drivers, they voiced the general opinion that "These are the people to ask because they know the business." and Suzie, the bird, the outsider, was free to speak her mind—actusly if necessary. The next step was to develop the story line; the real difficulties began at this point.

Each cartoon comprised six to eight conversations. Problems emerged as we merged the cartoons with the script. In particular, the farm family seemed locked into the role of lecturers who were not doing much. To emphasize the family's active role, I started to write up the scenarios as little dramas. Emphasis was moved away from technology toward the family's attempts to use the technology. This both enlivened and "telescoped" the stories, enabling more information to be included in one frame.

As time passed and the refinement of the cartoons proceeded, I realized the enormous potential of comic strips. I made the project's staff now contribute ideas to the comic strips. The figure below illustrates how people would benefit from having more vegetables in their diets. Marianne dreaming of couscous topped with vegetables brought roars of laughter and set me to search for more comic situations. (See illustration below.)

Pictures Carry Information

A well-drawn picture presents a whole situation, facts plus implications at a glance—its advantage over the written word A: its best, our comic strip combined this overview with the precision of the written word in a very concise form—the "ballon." One such frame may carry multiple messages of equal or ranked importance.

The main message may be varied. Most agricultural procedures occur but, particularly with vegetables, they do so with variation. Comic strips have a special ability to present the repetition with variation. This leaves the instructor or reader free to select from several story situations exactly what he or she needs to make or understand a point. The opportunities for cross reference are practically endless.

Comprehension and Retention

As ex-farmers who had for years ranged the western Sahel, our drivers were well-qualified observers of the rural scene and their reactions to our pictorial representation of the work they knew so well, was exceptionally enlightening. Politeness forbade them to criticize openly and the existence of errors or misconceptions could be inferred only from their silence.

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