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ABSTRACT

This newsletter begins with an interview with Dr. Nora Quebral, Chairman of the Department of Communication at the University of the Philippines at Los Banos, who discussed the past, present, and future of development communication with staff members John Middleton and Heddy Reid. In "The Future of Computers in Education in the Developing World," Jamesine Friend reviews the uses and history of computer-assisted education in the United States and highlights some of the benefits and pitfalls ahead as computers are transferred to the developing world. K. Ofori-Ansa addresses "Africa's Search for Communication Technologies for Education: A Reflection on Problems and Prospects." In "Villagers Teaching Us to Teach Them," John Siceloff describes projects in Peru and Tanzania that used photographs as a village education tool and directly involved villagers in the planning and development of the picture series. Judy Brace's column, "Publications of More than Passing Interest," describes four development resources, while "A Communicator's Checklist" provides additional book reviews. The use of media in Mexico's Programa Nacional de Alfabetizacion is described by Linda King de Jardon in "Mexico's National Literacy Program." In "On File at ERIC," Barbara Minor reviews five ERIC reports and papers related to development communication. (LMM)

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Quebral and Middleton: Some Thoughts on Development Communication, Past, Present, and Future

One of the rewards of working in the Clearinghouse is the opportunity to meet and talk with many of the international visitors who come to use the Clearinghouse collection. We were delighted in July to welcome Nora Quebral from the Philippines.

During her stay in Washington, Dr. Quebral, along with John Middleton, then of the Academy's Washington staff, and DCR *editor Heddy Reid, took time to reflect on development communication as a field, discussing its past and speculating on its future. We present excerpts from that discussion here.*

HR: Could we begin by discussing where development communication came from, and how the discipline got started?

NQ: When I'm asked that, I always talk about development communication Los Baños style, because I think development communication as a field of study may have begun differently in other countries. In Los Baños, where I work, it really came from agricultural communication, which is very much related to agricultural extension. It has broadened out from agriculture, taking in other areas where communication concepts and skills are useful. Areas like population, education, nutrition, health, environmental care, which are the priority problems, really, of any developing country.

JM: One of the interesting aspects of agricultural extension as a parent of development communication was that originally it was used to link the agricultural university research stations with farmers.

There were both sides to the issue—there was an ongoing research program such as the one at Los Baños, and the job of the extension system was to translate research findings into useful information for farmers and to provide feedback from the farmers to the research center. It was a very strongly organized and balanced kind of system.

Other fields in development communication are different—for example, health communication or population communication—because they haven't had a similarly strong research base for generating new knowledge. Therefore they have had rather different sorts of communication formats, and the messages consequently have been simpler. And I think that's part of the reason why the other aspects of development communication have tended to rely more heavily on mass media than on interpersonal communication.

NQ: One thing though, about agricultural university research in many developing countries is this issue of technology transfer and the needs of small farm families. As you know, university agricultural researchers, and maybe other researchers as well, don't always think of user needs when they think up research projects. They think about the gaps in the discipline, their particular disciplines, but not too often about the situation of the small farmers who will use the technology, so this is quite an issue, as far as we're concerned.

JM: In line with the user needs question, I recall when I visited you in Los Baños you were working on getting farmers to identify their needs.

In this issue . . .

ANNEE MONDIALE DES COMMUNICATIONS
WORLD COMMUNICATIONS YEAR
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DCR *is honored to be among the publications approved by the U.S. Council for World Communications Year 83 to display the official WCY 83 logo.*

NQ: Was that in 1979? We were developing a radio-based learning system, and our project didn't have field people, and to really link up with farm families you have to have a field base, but we did work with an organization that had field people, so we tried to get information about user needs through them.

We had a board of subject matter specialists that decided what topics would be covered in the radio program and a staff member of that organization sat on the board to feed back the particular information needs of the families in her community as told to her. Farmers don't really write letters, even though we tried to make it easy by having drop boxes in the villages. . . . It's encouraging, though, that many field technicians seem to know the needs of farm families. We compared the responses of farmers and of field technicians on their perception of farm problems and they were quite similar.

JM: I think what you're saying illustrates very well what might be a general principle, that we always think we should combine mass media with the field workers for outreach. Perhaps the most important function of the strong interpersonal component in a development communication program is the feedback it gives the mass media people. You have people in the village who know what you're trying to do with mass media and who know the needs and habits of the villagers, and they can be very effective in providing feedback. A conscious effort has to be made to do that—it's not enough to hope that they'll call you up or send you a letter.

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A publication of the Clearinghouse on Development Communication
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The Future of Computers in Education in the Developing World

by Jamesine Friend

Although computers are being used more and more widely as an educational tool in the United States and Europe, there has been little use of this technology in the developing world, largely because the costs have been prohibitive for all but the wealthiest nations. However, with the advent of the low-cost microcomputer, the cost deterrent is rapidly being overcome, and it is likely that if the current trend toward lower-cost hardware continues, some educational uses of computers will become feasible in most developing countries.

DCR *asked Jamesine Friend, a well-known specialist in the field of education who has been working in the design and production of computer-assisted instruction for more than ten years, to speculate on the most likely applications of computers for education in the developing world. In this article, Dr. Friend provides a thoughtful review of the uses and history of computer-assisted education in the U.S., and highlights some of the benefits as well as some of the pitfalls that she sees ahead as computers are increasingly transferred to many parts of the developing world.*

In some ways, the future of educational computing in the Third World will parallel what has happened in the United States. The first uses will be in administration and in the teaching of computer science at the university level, and only later will computer-assisted instruction (CAI) be used in other than small experimental projects. In other ways, the Third World is in the position of "leapfrogging": by taking advantage of technological changes that have occurred over the last 20–25 years, the developing world can enter into the field of computing at a more advanced level immediately. Not only hardware, but also software from the industrialized world can be used without going through a lengthy development process. Especially in administration and in computer science departments, ready-made software can be imported and put to use immediately. It is less clear that imported CAI programs can be used in the Third World, though, since the educational needs of developing countries differ from the needs of the countries in which such programs are now available. Before looking more closely at the possible applications of CAI in the developing world, we turn to a brief overview of the history of CAI in the United States.

Computers have been used in the U.S. for teaching for 20 years, providing individual-instruction that is both motivating and effective. The first educational programs were written for large *mainframe* computers which communicated with remote sites by means of telephone lines. One mainframe computer could serve many schools that were as far as several thousand miles from the computer center. Because of the high cost of telephone service, many schools began to acquire their own *minicomputers*. Although minicomputers serve fewer students, the lower cost of smaller computers plus the saving in telephone charges made them a viable alternative to central mainframe computers. The more recent *microcomputer*, with its even lower cost, has given new impetus to computer use in the field of education. There is hardly a school in the United States that cannot now afford at least one microcomputer.

Drill-and-Practice

Many of the educational programs developed for mainframe computers and minicomputers can provide students with daily lessons for months or even years. Some of the programs provide drill-and-practice exercises, which are meant to supplement a regular course of instruction. These programs derive their effectiveness from their ability to provide individualized instruction, offering each student the precise kind of practice needed to fully develop skills previously presented in the classroom. Another kind of program is the tutorial program which provides instruction as well as practice; tutorial programs are intended to provide complete instruction in a given subject, and are most often used by students who do not attend regular classes. One of the most attractive features of the tutorial programs is that students can study at their convenience, working at any time of day, and for any length of time.

A number of research studies have shown that both drill-and-practice programs and tutorial instruction can be very effective for many subjects and for a wide range of students. While drill-and-practice programs have been most common in elementary schools, tutorial programs have been used most often by high school or college students, or by adults who are not regular students. Drill-and-practice programs are characteristically developed for skill subjects such as arithmetic, grammar, spelling, and foreign languages. Tutorial programs have been used for a wider range of subjects: logic, computer programming, algebra, history, geography, statistics, physics, etc.

Several other forms of computerized instruction have also been used, although to a lesser extent. Intelligent computer-assisted instruction, which involves the application of artificial intelligence techniques, is a sophisticated development, promising programs that are more "knowledgeable" about both the subject matter and the individual student. "Artificial intelligence" refers to the capacity of the computer to simulate human intellectual and cognitive behavior, which can include voice recognition and personalized responses. So far it has seen little application outside of a specialized, research environment, and much basic research is needed before intelligent computer-assisted learning replaces the more standard drill-and-practice or tutorial programs. Simulation programs are also very promising; in a few short, interactive sessions, these programs can provide students with experience equivalent to hours spent in the laboratory or field. Flight and driving simulators use a computer to control elaborate simulation equipment and provide training that would otherwise be more costly, more dangerous, and more time-consuming.

Dental and surgical patients have also been simulated by computer for use in training dentists and diagnosticians. These are elaborate constructs that simulate human reactions to drugs, blood loss, etc., in quite a realistic fashion. There are also simpler kinds of simulations which use a simple computer terminal to simulate experiments with rocket trajectories, chemical mixtures, life cycles of organisms, and so on. These simpler simulations are highly verbal, describing outcomes rather than providing realistic simulations, and although they do not provide the same kind of realism as the more complex simulations, they can be quite effective teaching devices.

Most of the kinds of programs mentioned above are implemented on mainframe computers or minicomputers. Some of them can be translated for use on microcomputers, al-

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Development Communication Report, published quarterly by the Clearinghouse on Development Communication, has a circulation of over 5,000. 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 Bureau for Science and Technology of the U.S. Agency for International Development as part of its program in educational technology and development communication.

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

Africa's Search for Communication Technologies for Education: A Reflection on Problems and Prospects

by K. Ofori-Ansa

For the last quarter of a century, various forms of international aid schemes have supported the search for new strategies and resources to improve the quality and quantity of education in Africa. Through bilateral and multilateral aid programs, many African countries were encouraged to undertake innovative educational projects that relied heavily on the use of modern communication technologies, often transferred from the industrially advanced societies.

Today, with the rapid advances made in the development of communication technologies in the industrialized countries, the demand for educational use of these technologies is likely to increase. Africa, like most developing parts of the world, will continue to be a recipient of these advanced forms of communication technologies. In addition to such earlier mass communication technologies as radio and television, such new ones as video, computers, and satellites will continue to attract the attention of educational planners and policymakers in Africa. The lessons of past efforts at educational use of the mass media, and the problems and prospects of current attempts in Africa are the central issues discussed in this article.

New Strategies and Resources for Educational Expansion

New and more efficient strategies were needed to support educational expansion in post-independence Africa. With political independence came an increased demand for education to meet the growing manpower needs of the emerging nations in Africa. It was considered that education, as a means for human resource development, was a viable capital investment necessary to support social and economic development. Yet, in many African countries, the educational systems and the traditional teaching methods inherited from colonial rule were not adequate to satisfy the increased demand for trained manpower. In response to the need for educational reforms and expansion, many African governments invested heavily in the development of their education systems. Between 1960 and 1968, according to a Unesco report, public expenditure for education doubled in Africa, and as a percentage of gross national product, public expenditure in education grew at an average annual rate of 14 percent. It is estimated that Africa, like most developing areas of the world, spent between 15 and 20 percent of the national budget on education, during the 1970s.

That high level of expenditure on education was justified by the increased demand for education in Africa. The educational expansion efforts also increased shortages of qualified and competent teachers, shortages of instructional materials, and shortages of adequate equipment and physical facilities. New strategies and resources were needed to solve these mounting problems.

The Technological Alternatives

Taking a cue from educational trends in the industrialized nations, many African countries began to experiment with the use of mass communication technologies to support their educational reform efforts. It was generally agreed that the mass media, especially radio and television, had certain qualities that could be exploited either to replace or improve conventional methods of teaching. Through the mass media, it was thought, good teaching could reach a large population of learners who otherwise would have been confined to a narrow and inadequate level of education. Radio and television were therefore used in various ways to deliver both formal and nonformal instruction. Generally termed educational broadcasting, these two mass communication technologies were used for in-school curriculum enrichment, for in-school direct instruction, for an extension of instruction to remote areas where a monitor would do the work of a qualified teacher, and for distance teaching in which the mass media in combination with correspondence courses replaced both teacher and school.

By the late 1960s, at least 16 African countries were using educational broadcasting of one kind or another. International aid agencies, governmental donor agencies, and private foundations in the industrially advanced countries provided the support base for many African countries in their efforts to use radio and television for educational improvement (see Tables). Radio and television, it was believed, could help improve the quality of education, increase access to educational opportunities, reduce educational costs, and reduce the rate of dropout and repetition.

Most of these efforts, however, failed to make any significant impact on educational development in Africa. Some of the projects were discontinued after external aid ended, while others, though they remained in operation, failed to grow as expected.

Educational analysts have generally concluded that post-independence educational reforms in Africa failed to achieve their aims. There is still a high level of illiteracy in most African countries, as well as a rising level of unemployment among school-leavers, and the economic development that was expected as a result of educational expansion is far off the mark. By implication, educational broadcasting, as an aspect of the total educational expansion efforts, has therefore not been fruitful. There are, however, two basic schools of thought with regard to the educational use of the mass media in Africa. One school of thought argues that educational radio and television are too expensive and unnecessary and should, therefore, not be given a priority in educational reform efforts. It argues that without a technological base, educational broadcasting in Africa will continue to face problems and will only end up as cosmetic additions to educational programs.

The other school of thought views the failure of educational broadcasting in Africa not as a failure of the technology, but a failure of planning and implementation. The latter school of thought points out several factors that have, in the past, militated against the success of educational broadcasting and are continuing to do so in current efforts. Among these factors are:

1. Inadequate and defective needs assessment approaches;
2. Minimal consideration for social and cultural norms of recipient countries;
3. Minimal local participation in project planning and execution;
4. Rigid implementation schedule that makes no room for a mutual adaptation.

The first of these factors is discussed here, and possible solutions for the other three are offered at the close of the paper.

Assessing the Real Educational Needs

Often the real educational needs of a recipient country escape the attention of project designers who apply rigid and bookish approaches to project identification appraisals. Results of successful projects in other countries tend to influence decisions of policymakers and project designers. As a result, a technological solution may be selected before a problem is properly assessed. The Tables show how few countries were able to sustain and expand early experiments with educational radio and TV. (See page 4-5.)

As the Tables further illustrate, there are still a few African countries which are using communication technologies of one kind or the other to support their educational development programs. Radio and television, in combination with print materials, are used to provide direct classroom instruction and to enrich curriculum. In general, greater emphasis is now placed on basic education and the training of teachers for elementary, secondary, and vocational schools.

Generally, the current efforts are still con-

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fronted with some of the problems that plagued earlier attempts. Most of these problems are still rooted in planning and implementation. If these current efforts will make any significant impact on educational development in Africa, much depends upon the extent to which lessons are learned from past failures and successes. There are still risks, but the prospects are good. Some recommendations are offered here, with the aim of contributing to the ongoing international effort to search for more effective approaches in using communication technologies to support educational development in Africa.

Two-Way Flow of Information

1. Technical assistance programs supporting educational use of modern communication technologies should be perceived in the context of international cooperation, with a two-way flow, rather than in the context of a donor-recipient relationship. Assistance given within the context of cooperation is more likely to attract active involvement of all parties involved. Such active involvement in project generation by all interested parties would reduce apathy and passivity on the part of those who are to receive, and also minimize aggressive cultural imposition on the part of those who are to give. This would have a positive impact on project implementation and therefore promote effectiveness and continuation of the outcomes of educational innovations.

Needs Assessment on a Country-by-Country Basis

2. Greater emphasis needs to be put on thorough country-by-country assessment of educational needs and problems in order to provide an adequate basis for designing project objectives and project contents to satisfy specific needs. Instead of a wholesale transplant of predetermined solutions based on preconceived beliefs about the educational needs of developing countries, solutions should be based on the peculiar needs of a given country. Results of educational technology projects in technologically advanced countries and those in other developing countries can provide useful guides, but cannot be considered as absolute criteria for justifying the planning of projects along similar lines in a different country.

Pragmatism and Flexibility in Needs Assessment

3. Needs assessment should be tempered with pragmatism and flexibility in approach. Rigid, bookish approaches to needs assessment may only succeed in providing artificial information, and glossing over actual needs. The real educational problems and needs may lend themselves to a more pragmatic human-based approach to needs assessment. When assessments are conducted by outside consultants, consultants should have a thorough understanding of the traditional culture

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Table 1
Development of Educational Radio in Africa

Country	Year of Introduction	Function	Sponsors	Current Status
Algeria	1978	Teacher training	Government of Algeria, the World Bank	Still in operation and being expanded
Botswana	1976	Distance teaching; adult education on agriculture	Government of Botswana, International Extension College (United Kingdom)	Still in operation, but not extensively expanded
Cameroon	1957	Out-of-school formal and informal instruction in literacy campaign	Government of Cameroon, Government of France	Still in operation, but performing below capacity
Dahomey	1969	Nonformal adult education on health and agricultural techniques	Government of Dahomey, Food and Agriculture Organization (FAO)	In progress, not extensively expanded
Ghana	1959	English instruction to primary schools, supplementary instruction in formal school systems	Government of Ghana, Government of Canada, Unesco	Was expanded to middle and secondary schools and teacher training college, but now deteriorated
Kenya	1967	Distance learning for teachers	Government of Kenya, USAID, World Bank (1976)	Still in progress but underutilized
Lesotho	1974	Formal and nonformal distance learning, practical education	Government of Lesotho, International Extension College (UK), World Bank, UNICEF, Danish Government	Ongoing, expanded
Malawi	1963	Supplementary education in secondary schools	Government of Malawi, University of Missouri, West German Government	Expanded in 1978 to cover all secondary schools
Mauritius	1972	Out-of-school education, in-school instruction on agricultural techniques	Government of Mauritius, World Bank (1978), International Extension College (UK)	Still in operation, dropped several courses, added campaign program on trade unions
Niger	1961	Upgrading instruction, adult literacy	Government of Niger, Government of France, Unesco	Still in operation; expanded but still underutilized
Nigeria	1961	Regular in-school education, supplemental	Government of Nigeria, Ford Foundation, USAID	Adversely affected by a decade of political unrest. Still in operation but not fully utilized
Northern Nigeria	1957	In-school instruction in English language	Nigerian Broadcasting Corporation, British Broadcasting Corporation	Initial format was abandoned during political upheavals; revived but not fully utilized
Senegal	1965	Out-of-school formal and informal literacy instruction and health education to urban adult population	Government of Senegal, Government of France, Unesco, Government of Switzerland	Still in operation and run by Senegalese; extended to in-school education
Sierra Leone	1962	In-school instruction, supplemental	Government of Sierra Leone, British Government	Discontinued because of troubled economy
Tanzania	1971	Adult education in health and community development	Government of Tanzania, Swedish International Development Authority, University of Sussex, International Council for Adult Education	Still in progress; progressively expanded and yielding positive results
Togo	1964	Adult education and community development	Government of Togo, Unesco, Governments of France and West Germany	Still in operation, but not extensively expanded
Uganda	1966	In-school supplementary	Government of Uganda, British Government	Abandoned
Zaire	1963	Telestar—formal instruction in languages, health education and science	Government of Zaire, Catholic Church of Zaire, USAID, Government of West Germany	Expanded to include educational television

Source: Compiled from UNESCO, World Bank, USAID, and AED current documentation.

Table 2
Development of Educational Television in Africa

Country	Year of Introduction	Function	Sponsors	Current Status
Algeria	1978	Teacher training	Government of Algeria, the World Bank	Still in operation and being expanded
Egypt	N/A	To supplement in-school instruction	Government of Egypt	Expanded in 1965; still in progress, but operating under capacity
Ghana	1965	To supplement in-school instruction at the primary, secondary, and teacher training college levels	Government of Ghana, British Council, Friedrich-Ebert Foundation	Discontinued due to economic and political problems. Some out-of-school programs in operation
Ivory Coast	1971	Formal education reforms; elementary and secondary levels	Government of the Ivory Coast, Government of France, Government of Canada, Unesco	Was yielding good results; expanded but heavily reliant on external support. Terminated in 1982
Mauritius	1978	In-school instruction, distance learning for secondary school and teacher training college and vocational school students and government employees	Government of Mauritius, World Bank, International Extension College (UK)	Still in operation
Niger	1964	In-school instruction at the elementary school level. French language, math, reading and writing	Government of Niger, Government of France, Unesco	Expanded but still operating below expected level
Nigeria (Northern)	1961	Direct classroom teaching	State Government of Northern Nigeria, USAID, UK companies	Abandoned during political unrests and civil war; revived
Nigeria (West)	1959	In-school instruction	Eastern Regional Government, USAID, British Government, CETO	Terminated during civil war; revived
Morocco	N/A	Farmer education	Government of Morocco, USAID, RTV International	N/A
Senegal	1963	Adult education	Government of Senegal, Government of France, Unesco	N/A
Sierra Leone	1966	Science teaching	Government of Sierra Leone, CETO, British Ministry of Overseas Development	Terminated in 1968
Tunisia	1968	To improve quality of in-school instruction and expand educational opportunities	Government of Tunisia, National Association of Educational Broadcasting (NAEB) for USAID	Still in operation
Uganda	1963	General broadcasting to senior secondary schools and teacher training colleges	Government of Uganda, British Government	Terminated because of political and economic problems
Zaire	1969	Adult education in agriculture civic education, out-of-school youth education, in-school instruction	Government of Zaire, USAID	Still in operation, but has not grown as expected
Zambia	1965	In-school instruction for upper primary and teacher training colleges	Government of Zambia	N/A
Zimbabwe	1962	In-school instruction for white schools only	The then all-white Government of Rhodesia under British colonial rule	Discontinued during liberation war; now being revived and desegregated

Source: Compiled from UNESCO, World Bank, USAID, and AED current documentation.

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and contemporary social conditions in the target country. Such an understanding would be a useful asset in adopting a pragmatic and flexible approach to needs assessment.

Training and Orientation for Foreign and Local Experts

4. Greater attention should be given to training local experts in the mechanics of donor agencies' approaches to project planning and management. This would foster reciprocal understanding between local officials and externally sponsored experts, thereby promoting a mutual adoption of project goals and content. It would also encourage recipient countries to take greater control over planning and implementation and thus relieve them of the burden of having to adhere rigidly to bureaucratic and legal requirements imposed by the nature of operations of technical assistance agencies. Such a control will offer recipient countries the opportunity to formulate implementation strategies suitable to their own local conditions. The challenge of having to accept accountability for project outcomes is more likely to induce effectiveness.

With increased awareness of the operational strategies of donor agencies, local experts would be capable of assuming greater responsibilities and therefore release donor agencies' foreign experts to conduct more in-depth implementation monitoring and policy studies. This would enhance the role of a donor agency as a facilitator/partner in an international cooperative venture.

Increased Local Participation

5. Local participation should not be limited to the few government officials who usually share little in common with the majority of the local population who are often the targets of innovative educational projects. Local participation should therefore be broadened to include parents, teachers, and community leadership. This early involvement in project formulation has the advantage of increasing local awareness of the technicalities and ultimate implications of the project. With such an awareness there would be a reduction in the effect of cultural shock that might result from the rapid social and behavioral changes stimulated by the innovation.

Use of Indigenous Channels of Consensus Generation

6. To minimize the negative side effects of extensive local participation in project formulation and implementation (resulting from conflicting group interests), greater use should be made of indigenous channels of social interaction and consensus generation. Most African countries still rely on traditional political leadership to reach the communities and to generate discussion. This indigenous channel should be effectively exploited

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On the Horizon

International donor agencies frequently have a publication that represents the particular perspective of the agency to the larger development community. Especially good examples that come quickly to mind are *The IDRC Reports* (from Canada's International Development Research Centre), and *Development Dialogue* (from the Dag Hammarskjöld Foundation in Sweden). In general, these publications provide the reader with a sense of the current issues of concern to the agency as well as an idea of future funding trends.

The latest in a series of informational publications about AID and its development activities is *Horizons,* published by the Office of Public Affairs of the Agency for International Development.

It would be well worthwhile for readers working at the international level of development to learn about the variety of AID-supported projects that *Horizons* presents. In addition to feature articles illustrated with excellent photographs, there are regular sections on books, business, academe, and lessons learned, all useful and in the best tradition of information-sharing.

The editor is to be commended for the attractive layout and design of this monthly publication, as well as for the obvious concern with making it a source of transferable information.

For subscription information, write to *Horizons,* Office of Public Affairs, OPA/DCR, Publications Division, U.S. Agency for International Development, Washington, D.C. 20523, USA.

— **Judy Brace**

Scriptwriting Help

The Clearinghouse has available a limited supply of a paper which was written as a guide for scriptwriters working on USAID's Kenya Radio Language Arts Project. Specific references are to the radio lessons and scripts developed for that project, but the principles suggested apply equally to instructional radio scriptwriting for other content areas. The manual, entitled "Writing the Instructional Radio Script," was written by Esta de Fossard, a well-known international educational radio consultant and a frequent contributor to *DCR.*

The paper includes 18 pages of text, followed by a 52-page sample radio script. It is available, as long as supplies last, for US$5.00 *prepaid* from the Clearinghouse; free of charge to readers in the developing world. ■

Villagers Teaching Us to Teach Them

by John Siceloff

The photographer squints through the viewfinder, then motions to the woman holding the baby to dunk it in the bath. The baby shrieks. "Click!"

The scene might evoke familiar memories. But here in this Tanzanian village, there is a difference: the subject is a village woman, and so is the photographer. But even more novel than the scene was the assignment the photographer had undertaken: she was taking pictures of a familiar village activity of her own choosing in order to use the result to teach others how that activity could most easily and economically be performed.

The use of graphic illustrations in communicating ideas about development has been extensively researched. The central purpose of much of this research has been to understand how non-literate rural people respond to visual aids such as drawings, photographs, slide sets, and posters. My goal was similarly to enhance that understanding but to do so in a manner that gave the people themselves virtual control of the material that had to be produced and assessed. So I decided to hand over the tool—the camera—to the villagers so that they could film their own activity. Their choice of perspective, "editing," and the subject "frame" would, I felt, yield significant indications of the way they perceived things visually.

Over a two-year period in Peru and then Tanzania, two hundred delegated villagers cooperated enthusiastically in the exercise. Each learned how to use an instant picture camera, then took and explained their picture series on how to hoe, to harvest, to cook, to feed the baby, and many other everyday activities. And it became apparent very quickly how invaluable a tool in village education pictures can be. Again and again I saw photographs spark the interest of villagers and provide them with detailed images of both familiar and unfamiliar things and places.

In the process I learnt a great deal about the effective use of picture series among villagers, especially women, and as well about why villagers were sometimes left confused about the overall story or message of the pictures and films made by "experts." Particularly confusing have been "how-to" films designed to communicate new skills in essential activities. So putting the camera in the hands of villagers was a move back to the basics, to find out how villagers related to their own productive work on the visual plane.

The picture series taken by the villagers could be roughly grouped into two categories. In the first group, the emphasis was on the action; each step was shown in a separate picture. The photographers in this grouping were mostly men. And they were men who lived in villages near major roads or in shanty-towns near urban centers.

Pictures taken by women, and by men in more isolated villages, were very different. Their pictures emphasized people doing the work, not each step of how the work was performed. Large blocks of activity were often shown in a single picture.

These photographers conceived of a "how-to" picture series in a very broad sense. They showed people travelling to work, working, resting, and often drinking. The emphasis was on "how *we* work," not a step-by-step presentation of an activity. It was a style of communicating with pictures that was descriptive, personal and "whole," reflecting how villagers taught and learned from one another in their daily lives.

"Why-to" and Not Just "How-to"

This provided insight into what kind of picture series would be needed to introduce new ideas into village areas. For men in the first grouping, conventional "how-to" pictures, with each step shown in a separate picture, were likely to work. But for nearly all village women, and for men in isolated villages, picture series would need to follow certain guidelines:

- The narration, or written description, that accompanied the pictures would be very important. Pictures in themselves would convey little without highlighting what was seen in the image and why it was important.
- A picture series could not be expected to teach villagers how to perform a specific activity. This could only be done by someone on the spot. "How-to" picture series were unlikely to work.
- Picture series could be very successful in encouraging villagers to adopt new ideas, ranging from improved cropping techniques to better diets for babies. Instead of a "how-to" series, these would be "why-to" pictures.
- A "why-to" picture series would need to be presented in a descriptive, person-to-person style.
- The picture series would need to present experience, not merely information. This would mean showing something which actually happened in a village and worked.

I struggled with different ways to carry out these guidelines. I found it was difficult to script a picture series that would speak on a person-to-person basis to villagers. The problem was the enormous gap between the actual situation of villagers and my own situation—or indeed that of any highly trained communications worker living in an urban

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Publications of More than Passing Interest

by Judy Brace

• In the past, we have directed readers to the always useful "broadsheets" of the International Extension College. The appearance of a new such publication certainly merits attention. Janet Jenkins has written *Mass Media for Health Education*, a monograph developed around the experiences of a number of health project case studies. The publication, illustrated with examples of referenced materials, is intended to encourage developing country health personnel to apply the mass media to extend and support health education. Print materials are featured in several projects, as is radio. Projects using television, film, and cassettes are also mentioned.

With the exception of an example from the contemporary Nicaraguan "Popular Health Days," the project examples presented are old and well established, and probably familiar to readers of *DCR*. Pulling them together, however, and taking the next step by suggesting ways to start a project is a valuable service.

New health projects that use media are being planned and implemented continuously. It should be incumbent on project management to document the process of getting their program—a campaign, or a product—out and accepted by their audience. This would add to the body of knowledge on the subject, and would be another indication of the widespread acceptance of the validity of development communication. It might even indicate that readers of *DCR* are putting into practice what they read in its pages!

Mass Media for Health Education will be a useful book, and should take its place on the health shelf of any development communication practitioner. The broadsheet, Number 18, is available for £4.00 surface, £4.80 air, from the International Extension College, attention Mrs. M. Stirling, 18 Brooklands Avenue, Cambridge BB2 2HN, United Kingdom.

• The organization that has most aggressively tackled the difficult problem of transmitting social service messages to non-readers is PIACT. The Program for the Introduction and Adaptation of Contraceptive Technology has taken the lead in the design, validation, and distribution of visual print materials intended to reinforce interpersonal instruction.

How they have done this in cultures as diverse as those of Mexico, Bangladesh, Thailand, Nepal, and the Philippines; how they have moved to include men in their portrayals of family care; and how they have developed guidelines and a methodology for materials' development, are succinctly set forth in a publication that encourages others to follow their carefully tested path. *Print Material for Nonreaders: Experiences in Family Planning and Health* by Margot L. Zimmerman and Gordon W. Perkin, focuses on the process of developing materials in the field of family planning. Nonetheless this process can, and should, be adapted to other fields.

Media programs, campaigns, extension workers, all could use support materials to reinforce a specific message or behavior. Despite some confusion that could easily be clarified by labeling misunderstood illustrations as such, this attractive and valuable Piact Paper Eight will greatly contribute to the communication process at hand. Available for US$2.50 from PIACT, Canal Place, 130 Nickerson St., Seattle, Washington 98109, USA.

• Two European information resources should be noted. General development and information exchange issues are the concern of "Development Innovations and Networks" located in Geneva. They and their publication, *IRED Forum*, encourage the sharing of experiences, technologies, and information among and between NGOs, PVOs, international organizations, and interested governments. Much of their activity is centered around Africa, but they seek to expand their network in Latin America and Asia. To be added to their network and to subscribe to their *IRED Forum* (US$12) contact Fernand Vincent, Case 116-3, rue de Varembé - 1211 Geneva 20, Switzerland. ■

Judy Brace is the Director of the Clearinghouse on Development Communication, as well as the Resource Center Manager.

CIESPAL Anniversary Contest Planned

Preliminary plans have been launched to celebrate the 25th anniversary of the founding of CIESPAL, the International Center of Higher Communication Studies for Latin America, with a Latin American Festival of Educational Radio. The Festival will feature a contest to select the best educational programs in three categories.

This event, planned in collaboration with Radio Netherland, will take place in Quito, Ecuador, October 15-20, 1984, giving well over a year to raise money for awards and develop specific plans for a week of programs, seminars, cultural exchanges, and professional development.

During the Festival, judges will review and evaluate the educational radio programs that have been submitted to the contest. The following guidelines will be used in judging the programs:

a) Programs must be educational in the broadest sense, and encourage an active and full participation in community life by all groups, particularly the disadvantaged;

b) Programs must be specifically Latin American, in subject matter as well as in presentation, with reference to local legends, dress, folklore, and music;

c) Programs must be innovative.

The three categories into which the programs will be divided are:

1) Latin American legends, to reinforce local values and cultures;

2) Local (as opposed to national and international) news, providing clear, objective information and encouraging audience participation;

3) The ongoing programming of a community organization (educational, cooperative, union) presented in a creative, continually effective manner.

CIESPAL is soliciting comments and suggestions with regard to these plans. *DCR* readers are invited to respond, and can request further information (in Spanish) from Antonio Cabezas, who is serving as Executive Secretary of the Festival. Write to him at CIESPAL-RNTC, Apartado 9336 Suc. 7, Quito, Ecuador. ■

Printing Help

No matter how humble the item may be, no question about printing goes unanswered by the Printing Panel of the London-based Intermediate Technology Development Group.

Some of Britain's most experienced professionals are part of the Panel which recently formed four groups to handle specific inquiries. The groups are:

1. Educational Technology—dealing with the preparation of aids to learning.
2. Periodicals and Community Newspapers—covering the production of information and news for rural and urban areas.
3. Screen Process Printing.
4. Illustration and Design—covering all types of illustration and matters affecting the presentation of visual material.

Henry Larken, who heads the Printing Panel, explains that the group includes in the word 'printing' stencil duplicating, the Hecto process, and hand-operated methods of producing multi-copy work.

The Panel gives advice without charge to organizations with limited financial resources. ■

Printing Panel, Intermediate Technology Development Group, 9 King St., London WC2E 8HN, England.

Reprinted from *ACTION, WACC Newsletter*, July 1982.

A Communicator's Checklist

1 *Meeting Learners' Needs through Telecommunications: A Directory and Guide to Programs*, by Raymond J. Lewis (Washington, D.C.: American Association for Higher Education, 1983), 264 pp.

Ray Lewis devoted two years to his investigation of educational applications of telecommunications technologies by postsecondary organizations in the United States. The results of that research are reflected in this excellent and useful book, *Meeting Learners' Needs through Telecommunications: A Directory and Guide to Programs*. As the subtitle indicates, the book is both a directory and a guide: a directory of 70 individual program descriptions, and a guide that illuminates the patterns and trends that emerged from Lewis's analysis of those programs. As Lewis states it, the book has a twofold purpose: first, "to increase the likelihood that when educators use telecommunications technologies to solve educational problems, they will be more aware of the practices of other organizations," and second, "to encourage educators to focus their attention on the educational problem before considering which, if any, electronic technology is appropriate to the problem."

Lewis conducted his research under the auspices of the Center for Learning and Telecommunications, a service that is funded by the Carnegie Corporation of New York and housed in the American Association of Higher Education. The Center also publishes a bimonthly newsletter, *Telescan*, and offers a computer-based inquiry service that comprises a database of the literature in the field and the program-specific information that resulted from Lewis's work.

Lewis based his book on a survey of programs in the United States that met at least one of the following criteria:

- a program with a delivery system or curriculum that is marketed nationally to postsecondary educators;
- a program with features that could be readily adapted to others;
- a noteworthy or unique approach to a specific educational mission;
- a noteworthy or unique application of one or more technologies;
- a noteworthy or unique approach to solving the problems of managing the delivery of education at a distance.

The programs chosen for inclusion also have [illegible]ial emphasis on addressing the educational needs of learners, rather than administrative needs of the organization; and on the capacity to serve students in off-campus, as well as on-campus, settings. These emphases lead necessarily to a focus on interactive programs.

The book is organized in such a way that the reader or researcher can either spend time with the "Guide to Programs" section, which provides an overview of the patterns and trends in post-secondary telecommunications applications, or go directly to a specific piece of information about a specific program or technology. The analysis of trends reveals, for example, that "when it comes to educational applications of telecommunications technologies, professional continuing education is perhaps the fastest growing and most competitive area." Or that staff members of the 70 programs stress that, for working adults, "convenience is the single most important consideration affecting adult learners' decisions about whether, where, or when to get involved in education." Or (and this will come as no surprise to distance teaching institutions in developing countries) that "one of the biggest problems facing programs that rely on remote learning sites or delivery into students' homes is making adequate print materials available to the students."

The report points to some serious considerations in the area of "problems and possibilities." It discusses several equity issues—for example, the fact that "limited educational services are available for citizens with low levels of prior educational attainment." The survey revealed that "the postsecondary education community is not fully exploiting the capacities of electronic media to change existing patterns of adult participation in education." Another example: "limited educational services are available for special populations" (such as minority language groups, homebound and handicapped persons, prisoners, etc.). "With the exception of rural residents, no one of these populations was served with special programming efforts by any more than 17 percent of the surveyed programs."

The directory of the 70 programs included in the book is very well indexed and cross-referenced, both by educational mission and by telecommunications technologies used. Each program description, which has been checked and approved by the institution being described, includes information on educational mission, telecommunications technologies, curriculum, faculty roles, delivery system, enrollment, administrative structure, finances, and resources available. Useful marginal notes include noteworthy features of the program, problems encountered, observations about distance learning, future plans, and contact persons.

The telecommunications technologies covered in the survey include: open broadcast television, microwave (ITFS), point-to-point microwave, one-way cable television, interactive cable television, slow-scan television, satellite, video teleconferencing, electronic blackboard, radio, telephone, audio teleconferencing, videotape, audiotape, computer-assisted instruction, computer-based instructional management, computer/videotape interface, and computer/cable interface.

Although all of the programs included in this survey are U.S.-based, the volume is nonetheless useful to the development communication audience, in that it is the best compendium I have come across of descriptions of how telecommunications technologies are currently being used in educational institutions in the U.S., particularly for distance education, and the problems and successes of that experience. ■

Reviewed by Sandra Lauffer, Program Officer for Telecommunications with the Academy for Educational Development, and Director of Information, Applications Management, AID Rural Satellite Program. She is also a former editor of *Development Communication Report*.

Available (prepaid) for $45.00 within the United States, $47.50 to all other countries from the American Association for Higher Education, One Dupont Circle, Suite 600, Washington, D.C. 20036, USA.

2 *Education and Training for Library and Information Services in a Predominantly Non-Literate Society*, edited by B. Olabimpe Aboyade (The Hague: Federation Internationale de Documentation (FID) Publication 604, 1981), 108 pp.

This collection of papers records the proceedings of a four-day conference held in Ibadan, Nigeria, in May 1981. The book is divided into four sections: first, the background which covers communication and the transfer of information in a non-literate society, and determinants of agricultural productivity among non-literate farmers; second,

the identification of user populations and their needs, which deals with agricultural extension and the documentation and transfer of scientific information for rural communities; the third section focuses on providing information to non-literates; and the last section looks at a special program in library and information education. Most speakers at the conference were Nigerian academics and senior government employees. The papers therefore refer specifically to Nigerian rural systems.

Before discussing particular issues raised by the papers, it has to be said that anyone requiring a broad background in rural communications would find this book of value. It is ironical however, that papers on communications are rarely simply written, and these are no exception. A further irony lies in the fact that speakers at this conference on information systems generally cited studies at least ten years old, and that this review comes two years after the conference was held: so much for timeliness of information. However, the problems have not changed very much over that period, and the solutions arrived at by this conference seem familiar.

The thrust of the conference was to identify training needs for library and information services for rural non-literates. Why a *library service* for non-literates? Two answers emerge. Dr. Aboyade suggests that literacy is more than the ability to read and write. Literacy should be re-defined to account for the learning and wisdom of people who can do neither because, she says, they are 'orally literate.' Unfortunately, widening the definition does not make the printed word any more accessible to those who cannot read, even though it may change perceptions of the capabilities of non-literates.

The second answer is to re-define the concept of libraries for rural information-seekers. This makes a good deal of sense. The provision of information in forms other than print would have immediate benefits for illiterate users, and might have the secondary effect of encouraging them to become literate. Technologies other than print for the retrieval and dissemination of information are spreading through the developing world, and training in their management is becoming increasingly important.

It is disappointing, therefore, that there is a gap between the identification of the problems and the training recipe offered in the last paper. The third section of the conference report describes the information needs of rural women and touches on the corollaries of illiteracy (such as high fertility). Dr. Seeger relates various information strategies to a communications model, but no real attempt is made to detail rural information services and the consequent training needs. The last paper consists of a discussion of rural communities, a paradigm for identifying their information needs, and then a model service. A core curriculum is appended.

One gets the impression that the curriculum had been developed independently and prior to the conference. This is not inherently a problem, but no indication is given of how training objectives and curriculum development were related to the problems and needs cited in earlier papers. And that should have been the heart of the conference.

Perhaps a conference format is not suited to much more than statement and counter-statement, particularly when people read prepared papers. Of course, in non-literate societies they probably know how to manage conference speakers to reach logical and organic outcomes. Pity they can't write about it. ■

Reviewed by Michael Laflin, a Research Scientist with the Institute for International Research. He is currently advising the Liberian Rural Communications Network.

Available from International Federation for Documentation, P.O. Box 90402, 2509 LK, The Hague, Netherlands.

3

Cultural Autonomy in Global Communications, by Cees J. Hamelink (New York, New York: Longman, Inc., 1983), 144 pp.

This book is an excellent critical piece which clarifies the perspective on global communications endorsed by segments of the communications intellectual elite of the Third World.

The book presents a very compelling rationale for the preservation of indigenous cultures, i.e., the potential destruction of survival mechanisms built into the world's diverse cultural patterns may endanger the survival of the societies who have strived to adapt to their unique environments. More important is the explanation that the potential destruction of indigenous cultures is solely for the benefit of global merchants, according to the author.

The book has five chapters, a bibliography, a list of abbreviations, and an index. The first chapter, "Cultural Autonomy Threatened," introduces the reader to the main issues of cultural synchronization and dissociation. Cultural synchronization is conceptualized as a refinement of imperialism, and dissociation as liberation in the realm of culture. This first chapter addresses the interests and implications of transnational advertising and communication technology, and provides the motivation for the book.

The second chapter, "Resistance to Cultural Synchronization: National Initiatives," exemplifies how nations can provide for their independence or dissociation. The case studies detailed are those of Canada, Australia, Cuba, Peru, Mozambique, Tanzania, and the People's Republic of China. However, as the author sees it, these efforts are a mixture of success and failure.

Chapter three, "Resistance to Cultural Synchronization: The International Discussion," is an account of the historical and conceptual development of the "New International Information Order" (sic). The chapter concludes that the discussion has been too narrowly defined, concentrating on news, and that there has been no clear focus toward coherent objectives in the search for a new international information order.

Chapter four concentrates on the concept of "cultural dissociation" and explores the bases for the formulation and planning of national information systems in the Third World. Dissociation is said to be closely linked with horizontal communication structures between developing countries.

The last chapter discusses the issues involved in regional and international cooperation, and like many other recently published materials, it emphasizes the need for the establishment of clear national communication policies and international cooperation guidelines.

The book is enriching and well documented, but biased in the direction of mainly blaming the U.S. for the ills of Third World nations. A more balanced presentation of cultural influences from multiple sources would constitute a better framework for the understanding of the critical issues discussed. However, Hamelink does strongly acknowledge the flaws in national systems which perpetuate a pattern which allows for dependence.

This book makes good reading for those persons involved in communication policy and planning, but the reader should approach the work with an awareness of the author's critical biases. ■

Reviewed by Felipe Korzenny, Associate Professor of Communication at Michigan State University. He has worked in many developing countries, and has written and published widely on communications.

Available from Longman, Inc., 19 West 44th St., New York, NY 10036, USA, for US$15.00.

4

Health Care: Which Way To Go? An Examination of Issues and Alternatives, edited by Abhay Bang, M.D., and Ashvin J. Patel, M.D., D.H.C. (New Delhi: Medico Friend Circle, 1983), 256 pp.

Readers with an interest in alternative health care and low-cost, community-based health services will be interested in a new publication from the Medico Friend Circle in

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NQ: That's true, John. We tend to say that interpersonal communication fills in the gap between mediated types of activities, but I think it's the other way around in the Asian countryside—it is mediated activity that fills in the gaps between interpersonal communication.

JM: One of the things I wanted to ask you about has something to do with the question of the direction of development communication in the very small academic circle concerned with development communication (and I'm afraid it's getting smaller). There had been a significant move towards the idea of integrated planning at a national level across the sectors, the concept being that (as we've observed in various places) if each ministry or each sector goes its own way, using radio, and using field-workers, and using a variety of communication resource systems in various villages, they get in each other's way, and the pressure on the communications system can grow very high, very quickly. If you're working with local radio stations, it's less of a problem; but where you have a centralized national radio, it's significantly high. So people have been asking, can we step back and look at the needs of different areas of development, and the needs of the people for different kinds of information and assistance? Is there a way to plan so that we use our limited communication resources better? How have you reacted to that idea, practically, from your experience in the Philippines?

NQ: What you said is already happening. In a way, governments have taken over development communication because they see the importance of harmonizing the different development sectors by the use of communication, so that now they talk about integrating communication in national development plans—that's fine.

One danger, though, is that some people have started to think that development communication is only government communication and so it becomes associated solely with the promotion of government activities. Or they don't think about what's happening at the community level, and of course it is at that level where the details of development communication should be planned and worked out: using community facilities, local communication resources, localized radio stations to do what national radio wouldn't be able to.

JM: Tell us a little bit about your curriculum now in Los Baños.

NQ: Well, it really hasn't changed very much from when we started it. It has a broad base in general education, on top of which we try to train the students in communication concepts and skills, so that's the communication component. And then, one element that we think is important is what we call the technical subject matter component. In Los Baños it need not be agriculture. It can be any technical field that is available in the university, like forestry management, human ecology, nutrition, health.

JM: So you feel that the professional development communicator, the kind of person you train in your program, should have a good level of knowledge and applied skills in development sectoral areas; that is, a combination of communication skills and concepts *and* health or agriculture or nutrition or some applied sector of development.

NQ: Yes, plus we require additional social science courses because it is partly in those courses where they get development concepts and a broad picture of what's happening in society. One popular course among students who opt for an agricultural component, for instance, is rural sociology.

We think that the technical courses are important, because they expose students to the basic developmental problems; they discipline the students to think of practical, research-based solutions. Otherwise they would know only about the arts, get into speech and theater arts, which are important too, of course, but which would not be the particular emphasis of development communication at this time. Other communication programs in the university take care of those areas.

HR: What sort of fields do your students go into? Do they work with extension agents, and do they find planning jobs in ministries where they can use their skills?

NQ: Yes, many of them work in development agencies, both government and private. These are agencies which now use communication media as aids in their own work. Not many of our students go into broadcasting or newspaper offices; more of them go into the development agencies. A good number of them work in universities because, at least in the Philippines, the regional universities see the importance of having development communication in their curricula.

HR: We could talk a little bit about how you see the future of development communication; about whether you're optimistic about governments' recognizing the importance of early communication planning in projects, or whether the field will be a victim of further economic cutbacks.

NQ: As a profession, I think it will go on and I think it will get stronger, because administrators know the utility of communication. Of course, there's a danger that these skills and concepts will be used only for promotional purposes by administrators—aims which are also quite legitimate. So we will have to see that our students know this and guard against it, that all of their efforts will not be diverted to promotion, and that they will mainly think of communication as a teaching tool for disadvantaged families. So, as I said, I think as a profession, development communication will continue and become stronger.

Now, as a field of study, that depends very much on university funds. The growth of the field will depend on how much money there is. In Los Baños, the administrators have generally recognized the importance of communication. When it comes to setting priorities, however, we cannot say that development communication is Number 1. There will always be other fields that will have higher priorities.

HR: We've had cutbacks in many of our university communications departments, so it seems that in the U.S. we don't even recognize the field as much as you do in the Philippines.

NQ: Well, perhaps we need it more!

JM: That's sort of true. On the other hand, I think in the U.S., and outside of the U.S. as well, that if you look carefully at what people are doing you find far more development communicators at work than we think there are. They have lots of funny titles: they're the director of public information, they're in charge of outreach services, they're called counselors—a variety of names, but they're all basically concerned with the process of social change and with purposely, consciously creating information and getting it to some people for some reason. Somewhere, in the development communication situation, in my experience, you always find some element of learning. Someone in a development agency believes that it would be a good thing for people to learn something. And then organizational structures are created to assist in that process.

NQ: They don't know they are development communicators.

JM: For example, social workers working in poor urban areas in the United States are essentially field workers, and while they don't often use mass media resources (they can't get at those very easily in the U.S.), they're still running community classes, showing films, seeking to help people control their lives better and to improve their lives. They're development communicators.

I think what development communication has done academically, and in that way has had some impact on the profession, is to draw explicitly on social psychology, learning theory, and communication theory to train students conceptually so that they're able to analyze problems well and to think through the problems in terms of the learning needs.

Then, on the other hand, we've tried to give them practical media training and management and planning skills, so that they can take this conceptual knowledge and apply it to problems and then DO SOMETHING—and that's where it becomes professional rather more than academic.

So it's always seemed to me that the ideal development communicator, say with a mas-

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ter's degree from a fine university like yours, knows enough of these different academic disciplines to work with economists and rural sociologists and others to understand the problems of a family or a series of families, or a village or a region, and identify those areas for learning. Then he or she has the practical skills to go and, if necessary, write some radio scripts, do a little questionnaire for needs assessment, write a proposal to get some money to set up a project—a variety of practical capabilities.

NQ: Yes, and so then you agree with the statement that the development communicator is essentially a mediator between people?

JM: It doesn't do much to increase the status of development communicators to be seen as mediators, but I think it is essentially accurate. You know, this touches on part of the fundamental problem of the field of communication. What can you say? Communication is a fundamental human process. Fair enough. Nobody's going to disagree with you. And then you can elaborate that statement academically through research in learning more about this fundamental human process. Essentially, the social psychologist's attitude toward communications. And that's a very important and useful and interesting academic field. Once you move out of that, it almost always becomes communication *for* . . . e.g., communication for development, communication for social integration, communication for political campaigning, communication for advertising, communication for this, communication for that. That to me seems to reflect what you said, that communication is in a mediating position—it's *for something else*, and that something else always has more prestige, unfortunately. Except perhaps in commercial advertising. There people make a lot of money being good communicators. . . .

HR: Dr. Quebral, in your recent study, "Piloting A Distance Learning System for Small Farmers," you note in the introduction, "Economic growth cannot be sustained—nor is it desirable—unless people learn to eat better, become healthier, and achieve a more satisfying family and community life." When you're teaching your students, do you stress the community, show them that one must move from the theoretical level right down to the community level?

NQ: Yes, we have that part of it, although . . . well, we also talk about development communication at national and international levels, so our students get some of that, too, and the information imbalance issues. They like that, because sometimes they think that talking about agriculture alone is limiting. Mainly they like it because they see the part played by development communication in the larger picture, both nationally and internationally. We don't become too parochial.

HR: Is part of your role, as an educator and as a writer, to be an advocate of development communication, to keep the field in the public's attention?

NQ: Yes. There is one thing that development communication has done, too: it has made people more aware of development. And that's why going back to curricula, the social science courses are important—so that students will know what they should use their skills for, so that they will be working towards something.

JM: I also think that in general the role of the university is to give people a broad perspective on their lives and their work. Also to offer development communication skills training, but it's such a wonderful opportunity to go to a university that I think we ought to enable the students to have as broad an experience as we can. Universities are there for education, not for development communication. When we run our programs, we have to keep that balance in mind.

NQ: Yes, that's part of university education.

JM: In fact, the international communication environmental system or policy can affect the work of a development communicator very directly—it just takes a couple of decisions about satellite access, orbiting, and financing to affect the resources that the communicator has to work with. So the connection's very direct, and it's important for people to understand where they fit into the world system.

HR: Dr. Quebral, could we end our talk by asking you how the field of development communication has changed since you have been working in it?

NQ: The changes have come from new ideas on development and on communication. And when you talk about communication, you go back to all of the social sciences, to nonformal education. When you talk about development, then, of course, the scope is even broader. So all these things impact on development communication. You're not hard up for concepts and insights. It's *applying* all these concepts that people have thought up that becomes a problem. ■

Nora Quebral is chairman of the Department of Communication at the University of the Philippines at Los Baños. She is an international consultant in development communication, and has been involved in several action research projects. She is the author of many publications on development communication.

John Middleton is Vice-President for Academic Affairs and Director of the School for International Training of the Experiment in International Living in Brattleboro, Vermont, USA. From 1980–1983 he was a member of the AED staff, first in Indonesia and later as Director of Technical Planning Services in Washington, D.C. At the East-West Communication Institute in Honolulu from 1972–80, he worked closely with development communicators in Asia, including Nora Quebral.

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recently completed a course. The aim is to build up their confidence and inspire others to take the plunge and enroll. Literacy students and neo-literates are also encouraged to write in to the program; their letters are read out over the air and are an important stimulus to students to practice their new skills.

The program has managed to hit on a formula which combines maximum participation from its audience with a strong local emphasis. The results have been so successful that the program is now being extended to another state, that of Veracruz, where a special radio program in support of literacy among the sugar cane cutters has been started.

Currently in the planning stages, but due to start up soon as a pilot project, is a literacy-through-radio series using a similar format and organizational structure as the literacy-through-television program *Aprendemos Juntos*.

According to figures for 1970, 65 percent of the population owned one or more radio sets per household. And according to a recent survey carried out by PRONALF, over 80 percent of the country's illiterates own and have use of a radio, irrespective of whether or not they have electricity in the home. The question of electricity is extremely important, as only 28 percent of the population had electricity in their homes in 1970. Whereas the transistor radio operates cheaply on batteries, television is the privilege of those rich enough to own one and to have the electricity to use it.

The proposed radio literacy project will use a workbook in combination with classes, supported by the *visitador* and the *orientador*, in the same way as television literacy. The course is based on the generative word method, but there is greater emphasis on local and regional content. Owing to the nature of radio literacy, the course will take longer to complete than either the direct or the television method.

The Importance of Media

At the time of writing this article PRONALF has been in operation for just under 18 months. It began with an ambitious goal and a single option for the illiterate wanting to study. As the program has matured and reflected on its achievements and shortcomings, media such as radio and television are playing an increasingly important role in reaching illiterates who for reasons of time, working hours, distance, or 'shame' are unable to attend the group classes using the direct method. ■

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On File at ERIC

Reports and papers from the ERIC (Educational Resources Information Center) files reviewed in this column deal with distance education, instructional technology, communication media used in support of development projects, teaching children information-handling skills, and nonformal education and the handicapped. All are available on microfiche and some in paper copy from the ERIC Document Reproduction Service (EDRS), P.O. Box 190, Arlington, Virginia 22210, USA.

● Daniel, John S. and others, Eds. *Learning at a Distance: A World Perspective.* 1982. 343pp. (ED 222 635)

The proceedings of the 1982 World Conference of the International Council for Correspondence Education held in Vancouver, British Columbia, this book includes papers or abstracts from more than 120 authors representing some 25 countries. The 118 papers provide a state-of-the-art review of distance education in the early 1980s. They are divided into seven sections, and the first paper in each section gives an introduction to the topic. The topics addressed include (1) important international trends (10 papers); (2) the contribution of distance education to national development (16 papers); (3) recent research and developments in distance learning (18 papers); (4) the difficult relationship between the mass-produced learning package and the diverse student base (13 papers); (5) the process of policy-making and management (22 papers); (6) approaches needed to provide instruction on topics varying from music to affective relationships (19 papers); and (7) the contributions of communications media and computer technology (20 papers). Appended materials include a glossary, a bibliography, notes on contributors, and author and subject indexes. Available from EDRS in microfiche for 97¢ or in paper copy for $24.90.

● Hollaway, Robert E. *Technology Transfer and Instructional Development.* 1982. 25pp. (ED 222 185)

This discussion of some of the factors involved in the successful transfer of instructional technology argues that this transfer is the last step in the knowledge cycle, preceded by invention, technical and commercial development, and dissemination. Technology includes both equipment and the practical knowledge needed for application. Industrialized nations package technology; however, little practical knowledge is transferred with the packages. Rather, the knowledge remains with the originator or imported technical staff, maximizing short-term implementation. Without adaptation, however, long-term failure is probable. Instructional development is generally described as a systematic decision-making process. In practice, the process has frequently been an effort to develop a convergent, closed system. Such systems appear clear and unambiguous, appeal to administrators and funding sources, and are efficient in controlled settings. Transferring technology to new settings may require an alternative instructional development process that makes fewer assumptions about outcomes. Such a process would assume that technology will evolve in an open system in a kind of reinvention cycle. Development-as-reinvention appears less exact and is more expensive in implementation. In return, it offers a higher probability for long-term success. Finally, through a gradual socialization of the technology and the recipient, it offers opportunities to examine second-order consequences. It is recommended that funding go to projects designed to build the capacity of people in the recipient country. Available from EDRS in microfiche for 97¢ or in paper copy for $2.15.

● *Project Profiles. A.I.D. Studies in Educational Technology and Development Communications.* 1982. 396pp. (ED 225 542; includes English, French, and Spanish versions)

These profiles contain brief case studies showing how communication media are successfully used to support development projects in a variety of fields and international settings. Projects described emphasize agriculture, health, nutrition, population, education (primary and middle grades, adult, and distance), and integrated development. Project descriptions are presented in a uniform, two-page format listing target and audience, objectives, media, donors/sponsors, duration, contacts, project description, results, points of note, and references. The English version contains 72 profiles, while the French and Spanish language versions contain only 45 project profiles each. The index in the English language version is arranged in chart form, listing projects by sector, country, title, media use (audiovisual aids, audiocassettes, correspondence, film, folk media, interpersonal, print, radio, two-way satellite, and television), and sponsor/financing (AID participation, international donors, national government, and self or local financing). Names and addresses have been updated to show current contact data. Available from EDRS in microfiche for 97¢ or in paper copy for $28.40.

● Irving, Ann, Ed. *Instructional Materials for Developing Information Concepts and Information-Handling Skills in Schoolchildren: An International Study.* 1981. 69pp. (ED 226 758)

Based on a survey covering 56 countries, this Unesco report lists internationally relevant instructional materials and research aimed at familiarizing school children with information concepts and skills, and also discusses the creation of new instructional materials in this area. The study's aims, methods, and rationale are briefly described, as well as the skills involved in information-handling at a child's level. The partially annotated bibliography which is provided contains 98 items—mostly of European origin—on children's information concepts and their reading, studying, and library skills. Bibliographies and literature reviews, reports of current research, background reading for teachers, and descriptions of teaching methods and materials are among the items included. Slides and films, overhead transparencies, and graphic and textual printed materials are noted as three appropriate formats for student programs. A list of the countries and territories contacted for this study is appended. Available from EDRS in microfiche only for 97¢.

● *Non-Formal Education and the Handicapped in Developing Countries: A Selected, Annotated Bibliography. Annotated Bibliography #7.* 1982. 35pp. (ED 225 597)

Compiled from the resource collection of Michigan State University's Non-Formal Education Information Center, this bibliography presents approximately 50 international publications on topics ranging from the education, environment, vocational training, rehabilitation, and health of the disabled to strategies for preventing disabilities, as well as a listing of 26 individuals and organizations worldwide who are interested in nonformal education and the handicapped. Three important themes covered by the citations are noted as: (1) the development of relevant community-based training and rehabilitation programs that reflect local cultural and social contexts and promote the participation and integration of the handicapped in mainstream society; (2) the special needs of handicapped children, including the long-term personal and social benefits attained from receiving education, vocational training, and rehabilitation at an early age; and (3) the need for educating the non-handicapped to change stereotyped attitudes. Titles listed include discussions of many programs in Asia, Latin America, and Africa. Books, pamphlets, directories, reports, journals, newsletters, special issues, and articles are listed, and addresses are provided for individuals, organizations, and sources of cited publications. Annotations indicate the availability of the publications cited in languages other than English. A list of the staff of the Non-Formal Education Information Center from 1976 to 1982 concludes the publication. Available from EDRS in microfiche for 97¢ or in paper copy for $3.90. ■

Barbara B. Minor, Publications Coordinator, ERIC Clearinghouse on Information Resources, School of Education, Syracuse University, Syracuse, New York 13210, USA.

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India. While some of the judgements in "Health Care: Which Way To Go?" may seem harsh (one chapter, for example, is entitled "Doctors in the drug industry's pocket"), the book accurately represents the increasingly widely held view that medicine must be demystified, made preventative as well as curative, and brought within the reach of *all* the people if it is to help in any way the millions of people who will never be able to have access to modern treatment facilities. While this may not reflect the prevailing position of the medical establishment, it is the passionately held view of the physicians and community health experts whose writings make up this interesting and at times provocative book.

Drawn from articles published in the monthly Medico Friend Circle *Bulletin*, the anthology reflects, as the publisher states, "the attempts being made by socially conscious medicos in India to analyse critically their own profession and try to grapple with alternative strategies . . . for a just, rational, and humanitarian medical system."

The collection includes essays on herbal therapy ("Ayurvedic Drugs") with lists of plants and their effects; discusses case histories of the effects of poverty on disease; presents a statistical analysis of malnutrition in pregnant and lactating women; offers an eye-opening article about sexual exploitation of nurses by doctors ("How to motivate doctors to go to rural areas? Appoint beautiful nurses at the Primary Health Centres!"); and considers such diverse health-related topics as community water supplies, the politicizing of health care, oral rehydration therapy, and adverse effects of mass cholera vaccination.

A strength of the book is that instead of merely criticizing existing practices, it makes a point of offering suggestions for alternative ways of doing things. The authors provide many models and examples. In the chapter on training *dais* (traditional birth attendants) to follow aseptic practices and current techniques, for example, the author emphasizes that standard teaching aids are not going to be appropriate without careful testing and appropriate modification. In the case of the illiterate *dai*, who may have 30 years of work experience but no understanding of modern science, he suggests as a training technique "guided gossip-type storytelling sessions" to elicit and build on each *dai's* past experience in a positive way.

The Medico Friend Circle believes that "a fundamental change must occur in the existing health system. Within the new system, people must gain control over their own health; nurses and other paramedics must not be regarded as inferior to doctors; decentralization should occur as much as possible, and traditional forms of medical care must be encouraged. . . ." The urgency of this belief is d in the 18 articles in the collection.

The book offers much to think about. Although some people may be put off by the rhetoric, "Health Care: Which Way To Go?" nevertheless performs a valuable service in trying to break traditional barriers and examine old problems of health care in non-traditional (that is, nonWestern) ways. ■

Reviewed by Heddy F. Reid.

Available from Voluntary Health Association of India, C14, Community Centre Safderjang Development Area, New Delhi 110-016, India, for Rs. 10 in India and US$4 elsewhere.

(Communications continued from page 5)

to involve the communities and interest groups in decision-making. A thorough understanding of the implications of the project through such channels would generate consensus and attract strong community support for its immediate and long-term objectives.

Educational Innovation as a Non-technological Innovation

7. Educational innovations should be seen more in terms of a non-technological innovation. Educational planners and educational technology practitioners should resist the temptation to apply industry and business-oriented planning and implementation approaches to the management of educational innovations in developing countries. Strategies to implement educational technology should make room for a gradual phase-in. Implementation schedules should be flexible and should have a built-in mechanism for analysis in order to make room for mid-stream corrective measures that would ensure continuity. The process whereby project characteristics are modified to allow for an adaptation to the changing institutional setting, and vice versa, should be encouraged. This can be achieved by formulating projects that have the following characteristics:

a. Project objectives should be such that they can be reduced or modified during implementation.

b. Project implementation schedules should be in phases, simple and flexible enough to allow adaptation and to ensure incorporation into the existing system.

c. Expectations of the outcomes of the project should not be too high and should be based on criteria relevant to circumstances in a given setting.

d. Results should be measured not only in terms of short-term instructional effectiveness but also in terms of long-term social behavioral changes.

e. Implementation monitoring should be consistent and should provide information for midstream changes in schedule and organizational pattern.

Regular Research on Policies and Implementation Strategies

8. Policies and implementation strategies of technical assistance programs supporting educational development in developing countries should be subjected to regular analysis on a case-by-case basis, and findings should be made more open and accessible to the public than the present practice allows.

Conclusion

The search for new resources and strategies to support educational reforms in Africa has had its share of failures and successes. All in all, the picture is not as bright as was expected. Communication technologies were expected to stimulate rapid expansion of educational opportunities in order to produce the needed human resources to support development efforts in post-independence Africa. Because of weak national economies and lack of an adequate local technological base, earlier large-scale efforts to transfer modern educational technologies to Africa had a minimal effect on the quality and quantity of education. Some expansion did occur. But the question is whether it was adequate or appropriate enough to support effectively the development efforts of post-independence Africa.

In Africa generally, there are still serious teacher shortages on all levels of education. The rate of drop-out, repetition, and illiteracy has not decreased significantly. On the economic side, the rate of youth unemployment is increasing, living conditions in most African countries have deteriorated, and national economies are rapidly declining, resulting in political unrest. The educational technology miracle did not happen.

Or was it that technology was 'mis-transfered' and misapplied? In retrospect, it is easy to see how such failures could have been avoided with better planning and implementation. African societies, however, have undergone tremendous political and economic changes. New situations have arisen, bringing about new problems and new challenges to educational development efforts. The search will continue for new strategies and resources to help improve education and satisfy growing manpower needs. Meanwhile the technological and economic gap between the industrialized societies and most African countries continues to widen. If the new and advanced communication technologies are to make any positive impact on Africa's educational development effort, the process of transferring them from the developed nations should be tempered with caution and be guided by the lessons of the last quarter of a century. ■

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(Villages continued from page 6)

center.

Eventually, I found the best way was to involve villagers directly in the planning and production of picture series.

My method was to choose a village where a development idea had been successfully applied, and then to select a group of villagers and ask them to tell with pictures why they had adopted the idea. They planned the story-line and composed the pictures; I shot them. The narration was written jointly and recorded by the villagers. The final product became a testimonial from one village group to other village groups on why they adopted a particular idea, ranging from ox-ploughs to sanitary latrines.

The final step was to create an effective method of using picture series in villages. I settled on a slide series with a recorded narration as format. I then designed a means of distribution which depended on the villagers themselves. This was an audiovisual kit which can be carried on the back of a bicycle and includes a 12-volt projector and a cassette recorder, both powered by generators fitted to the bicycle. It requires no petrol and no batteries. The advantage of this small kit is that it can be left in the village for weeks at a time. A village worker, paid on a part-time basis, can show the picture and answer questions. Many small showings can be scheduled at times which are convenient for the people in the village.

Reporting on Concrete Results

As a result of producing these picture series with villagers, I found that I also developed a new attitude toward the role of communication workers in development. I began to see specialists in development communications primarily as journalists, not producers. The first requirement of a successful picture series, I found, was a successful village project on which to base it.

This would mean, for instance, that to educate village women about a balanced diet, the first step would be to find a village where this has actually happened. This might be a village where a cooperative had started to raise chickens and a group of women had planted beans. Should a setback have occurred, such as the treasurer running off with the money, this would also be portrayed in the picture series, along with the remedial action taken. The essential characteristic of the village selected for the series would be that the results of the project were visible. Picture series for villagers are effective only if they are based on actual occurrences, not merely on advocacy or promotion.

What this means is that communications workers must be effective journalists if they are to be effective educators. Before snapping the first picture or drawing the first storyboard, they must be able to see how a project is operating in the field. Only then will they be able to make audiovisual or other aids which present concrete, realistic options likely to motivate villagers to reassess their own practices in favor of more productive alternatives. ■

John Siceloff has worked in communications and development in Afghanistan, Peru, and Tanzania, and is working on a book on the subject.

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(Computers continued from page 2)

though the smaller memory and storage space available in microcomputers precludes easy adaptation of the bigger programs.

Teaching programs for microcomputers are usually small efforts, aimed at providing game-like instructional activities to supplement teaching in specific topics. The programs are intended for occasional rather than daily use, and few guidelines exist to help teachers integrate the use of CAI programs into their planned curriculum. Only a knowledgeable and well-trained teacher can successfully select, from the miscellany of available small programs, a mixture that is well integrated with on-going instruction and well suited to the needs of individual students.

Not much research has yet been undertaken on the effectiveness of programs produced for microcomputers. However, one would expect greater variance in quality among the microcomputer programs than among programs for larger machines, primarily because small producers of microcomputer software are not subject to the kind of quality control that has existed in producing programs for mainframes and minicomputers. This works in two ways. On the one hand, some independent entrepreneurs have little interest beyond producing a marketable item which may have much immediate appeal but no enduring educational value. On the other hand, precisely because there is less bureaucratic encumbrance, some truly innovative and educationally knowledgeable people are producing excellent programs.

Although there are teaching programs that are remarkably effective, the decision to use a particular program must be based on its cost as well as effectiveness. This is especially true for the developing countries that cannot afford to purchase expensive systems simply to improve the quality of instruction, much as they would like to. Since much of what is taught by educational computer programs could be taught by other means at lesser cost, no matter how good the computer programs may be, they might not be suitable for use in the developing world. This is not to say that all educational applications of computers are out of the question for poorer countries, but the decision to use them ultimately rests on their cost effectiveness, rather than simple effectiveness. It must also be considered that a program that is cost effective in the United States due to savings in labor costs may not be so in another country where teacher salaries are lower.

Even with cost in mind, there are several possible applications of computer-assisted instruction in the educational systems of developing countries. One of these is for remedial instruction, which has proven one of the most cost-effective applications of computers in U.S. schools. For any country that is now providing small-group instruction for students who are below grade-level, drill-and-practice by computer might, in fact, be quite cost effective. A potential problem with this application, however, is the development of suitable software. Programs that are designed for the United States are probably not suitable for most other countries. The content may not be appropriate; reading and social studies programs, for example, are specific to both language and culture. The style of instruction and format of programs may also be inappropriate; many of the programs now available for microcomputers are more concerned with motivation than with teaching, which may be neither acceptable nor appropriate in other countries.

Computers for Advanced Courses

Another cost-effective use of computers in education is in classrooms with low student/teacher ratios. This most often occurs in university classes on such advanced technical subjects as topology, thermodynamics, multivariate analysis, and econometrics. In some countries, there may be very few students for even less advanced topics, such as probability theory, differential equations, and organic chemistry. The cost of providing a qualified instructor for only a few students may well be higher than the cost of providing tutorial instruction via computer, especially if the programs can be used, and the development cost shared, by several countries.

A third, and even more promising, possibility is to prepare instructional programs that teach computer literacy and programming. There will be an ever-increasing demand in the Third World for instruction about computers themselves, and there are now few qualified instructors. Several successful experiments have shown that students can learn programming from instructional programs, even in the absence of a teacher. Here again, there may be only a few students in any one location (at least in the immediate future), so the cost savings would thus derive from sharing development costs.

To sum up, many of the common educational applications of computers in the industrialized world today will be in wide use in the Third World in the near future. Particularly likely to be transferred are microcomputers for drill-and-practice and for remedial in-

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(**Computers** continued from page 14)
struction, and specialized technical courses by computer for advaneed education.

Cost effectiveness is an issue that needs careful review, with local teacher salaries factored into hardware and software purchasing decisions. As more evaluations of programs and software become available, it will be easier for decision-makers to have a basis on which to judge and compare the merits and relevancy of various systems to their unique situations.

It is hoped that the U.S. experience with CAI over the last 20 years will be of value to developing countries, and that this experience may help such countries to avoid some of the start-up errors that so often go hand-in-hand with the introduction of any new technology. ■

Jamesine Friend has worked in education for 20 years, with over ten years in the design and production of computer-assisted instruction. She was the Overseas Director of the Radio Mathematics Project in Nicaragua.

(**PRONALF** continued from page 16)
course. While newspapers and posters have been amply used for general publicity purposes, PRONALF has employed other more typically Mexican media often in combination with street or community events.

One such use is the *manta*, a printed sheet of canvas which is often strung on buildings or hung across the street to advertise anything from the local dance to the visit of the President. In the case of PRONALF the *manta* was successfully used in combination with street marches designed to call attention to the Program and to recruit *alfabetizadores*. Those taking part in the march are usually *alfabetizadores* or new literates.

Usually accompanying street marches of this kind are mobile sound units giving out information on courses and where to join them. *Volantes* or handouts are also frequently used.

Television

Television was used from the outset by PRONALF as a means of creating public opinion with regard to the illiteracy problem in Mexico. Later it was used to train *alfabetizadores*, but more recently it has come into its own through a television literacy series which has had by far the greatest impact of any of Mexico's educational television programs.

The use of television for calling attention to the importance of adult basic education centered round the theme: *No Hay Desarrollo sin Educación* (Development doesn't happen without education). In the main, these commercials were directed towards an urban audience showing housewives, factory workers, construction site workers, and rural migrants to the city. Messages centered around one of the 14 generative words used in the literacy method.

Although the television was used principally to recruit *alfabetizadores* and to create public opinion, there were some TV spots that were directed to the illiterates. These had a strong emotional appeal; one showed a rural migrant recently arrived in the city trying to find his way about but unable to read street signs or bus numbers; another showed a little girl reading a letter to her grandfather—the letter was from her father working in the United States; another showed a typical Mexican provincial scene, that of the scribe seated on the pavement with his typewriter while a young Mexican girl dictated a loveletter to her boyfriend; another showed a bricklayer—again a recent rural migrant to the city—unsure whether what he was being paid by the boss was what was owed him in wages. The message behind all of these commercials was, learn to read and write so that you can stop depending on others.

By far the most important use of the television in PRONALF, however, has been the television series *Aprendemos Juntos* (Lets Learn Together). *Aprendemos Juntos* combines literacy teaching with a popular drama series something along the lines of Britain's *Coronation Street*. Ten minutes of each 30-minute program is dedicated to the use of the alphabet, and 20 minutes to the lives of six adults who decide to join a literacy group and who all live in the same part of the city. The ten minutes of actual didactic content is dramatized through the participation of the six characters and the *alfabetizador* who is also an actor.

Students following the television series use a specially designed coursebook in combination with the television classes. They receive support from a *visitador*, a tutor who visits them at least once a week at home and an *orientador*, a literate member of the family or a neighbor who provides support and guidance of an informal kind.

The TV series is broadly based on the direct group literacy method. The majority of students study on their own at home. In addition, some study groups have been formed, taking advantage of neighbors who own a television set or community classrooms used by the national system of secondary education through television—*telesecundaria*.

But whereas the direct literacy method uses printed media as a stimulus to the group discussion which precedes learning to read and write, the television literacy method uses dramatized situations. In the series, a study group is formed composed of Doña Chole, a street vendor; El Sonora, an apprentice mechanic; Nacho, an unemployed aspiring boxer; Don Eduardo, a carpenter; Ursula, a servant; and Raquel, a housewife. The *alfabetizador*, Samuel, is a foreman on a building site.

The characters are all played by Mexican actors who to a certain extent have made their fame with the program. The dramatized situations which affect the lives of the characters are those which affect illiterates and the poorer working classes in Mexico in general. Community problems such as lack of drinking water, rubbish collection, transport, etc., are portrayed, as are problems such as being cheated and general corruption.

Aprendemos Juntos surpassed all expectations in the response it has had from the general public, whether illiterate or literate. It owes its success not only to the fact that it manages to combine educational content with an enjoyable dramatized format, but it is also a genuinely Mexican series. The greater part of Mexican television is composed of American films and series; those programs that are produced in Mexico tend to center round passionate dramas of middle and upper middle class Mexican life, little related to the problems and lifestyle of the great majority of Mexicans. *Aprendemos Juntos* sets its characters in a poor working class community; they are true to life and the public identifies with them.

The series is broadcast throughout Mexico on local TV channels. Each course lasts 100 hours of broadcasting time and takes the student four and a half months to complete.

Radio

Radio was perhaps the least used of the media in PRONALF until recently. It is now developing into one of the most important aspects of the program. It offers support for the direct literacy method and develops an alternative literacy-through-radio method similar to the television literacy program. But whereas the TV literacy series has been directed at an essentially urban audience, the radio aims at Mexico's rural population.

The radio support service was set up in July 1982, one year after the start of the program, with the aim of providing publicity for the direct and TV literacy classes, of motivating the adult illiterate to join a study group, and of preventing drop-out, which has been a considerable problem throughout PRONALF's history. At the moment it is in its pilot stage, but results from radio projects set up in three states have been encouraging, and the radio program will be extended to the rest of the country shortly.

The radio program put out by the radio support service is called *Nuestras Palabras* (Our Words), and the emphasis throughout is on the participation of the illiterate, the literacy student, and the neo-literate in the program. The program combines news, chat, and music; the news section gives the latest information on literacy classes and adult education, it puts *alfabetizadores* in contact with each other and answers their queries, while the music is almost always local and regional.

Mexico has a rich and diverse regional musical tradition, which the program *Nuestras Palabras* emphasizes. Pop and western music are frowned upon. An important part of the program is the interviews carried out among adults who are actually studying or who have

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Mexico's National Literacy Program

Mexico's Programa Nacional de Alfabetización *was launched in July 1981 with a goal of making literate one million adults in one year. Linda King de Jardón, who works for the program, describes its use of media.*

Census figures have recorded an illiteracy figure of 6.5 million in Mexico for well over half a century; but while in 1930 this represented 63.6 percent of the adult population, the percentage had decreased to 16.8 percent in 1980. Nevertheless, one in six Mexican adults is illiterate, according to the statistics, and recent studies have estimated that over 26 million adults lack basic education, making the number of functional illiterates much higher. Approximately 60 percent of the illiterate population is female and there is a tendency for the proportion of women illiterates to increase as the overall number of illiterates decreases.

The problem is even more serious when one takes into account the fact that probably at least a third of the illiterates in Mexico do not speak Spanish as their first language, while others do not speak it at all. There are over 50 Indian languages in Mexico with strong local differences between the various languages, making the problem extremely complex, especially in the context of the literacy program. Illiteracy is on the whole largely a rural problem in Mexico, but with the growing number of peasants leaving the countryside to look for work in the big cities, it has recently become an urban problem too.

It is in this context that the *Programa Nacional de Alfabetización* (PRONALF) was created: to offer literacy and numeracy to all adults over the age of 15. A year from the outset, PRONALF had made literate 700,000 adults. The goal of one million was reduced owing to initial difficulties in incorporating students and to public spending cuts brought on by Mexico's current financial problems.

But the literacy program itself ceased to have a temporary nature and was incorporated into the recently created National Institute for Adult Education. This covers not only adult literacy but also primary and secondary education for adults and nonformal education based on community centers known as *salas de cultura*.

Initially, PRONALF used one literacy method and one organizational structure; more recently, however, it has been developing ways of diversifying the types of educational alternatives it offers. In the search for developing new ways of reaching and attending the illiterate population, the media, particularly radio and television, are playing an increasingly important role.

Print Media

The printed media have been used in PRONALF in two main ways: first and perhaps most importantly, as part of the literacy method employed, and second, in diverse and sometimes unusual ways as publicity and information about the Program itself.

PRONALF uses what it calls a direct group method of literacy training. This is broadly based on the Paolo Freire method and uses a series of 14 generative words which are discussed and analyzed in the study group before the student learns to read and write and form new words. Each word was chosen for its relevance in the Mexican context and for its syllabic variety. The method demands that the word be broken down into its different syllables in such a way that from the syllables new words may be formed.

Hence from the word pala (spade), the first word which the student learns, are formed the syllables pa pi pó pu pe and la li lo lu le; from these new words can be formed such as pipa (pipe) pila (battery) pelo (hair) etc. The words used in the classes cover a variety of situations: pala (space), vacuna (vaccine), basura (rubbish), medicina (medicine), cantina (bar), trabajo (work), guitarra (guitar), familia (family), leche (milk), tortilla (maize pancake), piñata (Mexican toy or game), casa (house), mercado (market), and educación (education).

To support the discussion phase of the literacy class, large scale black and white photographs illustrating the different generative words are presented for decodification and analysis by the students. For the word vaccine, for example, there is a photograph of a farmer injecting his cattle and another of a mother holding her baby while a nurse applies an innoculation. Once the word has been decoded through the use of the photographs, printed strips show the word itself and the syllables it contains.

The printed media also play an important part in the publicity and information for the program on two levels. On the one hand they are used to create awareness of the illiteracy problem among the general public, in the main through newspaper advertisements; on the other, as means of recruiting *alfabetizadores* (literacy teachers) to teach reading and writing.

For obvious reasons, the printed media have been used less than television and radio in inviting illiterates to register for a literacy

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Development Communication Report

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