



# Mass media in development an overview

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Many developing country governments have attempted to use mass media—which are often officially owned or controlled—to educate and inform their populations and in this way to promote economic and social development. Frequently the media have also been used for political purposes. In a large number of cases, these two roles have been intertwined, making it difficult to assess accurately the effectiveness of either. This article examines only the use of mass media for development through education and information campaigns; it does *not* look at the wider role mass media might have as instruments for such purposes as “nation-building.”

Most developing countries today have access to the tools of mass communication, but the reach of different media varies considerably with the level of development and size of individual countries. The use to which the different media are put also varies. All developing countries today have a radio broadcasting system in place; a majority also have television systems. Most countries have national or regional newspapers, although their reach is somewhat limited by the lack of newsprint, low literacy, and relatively high cost to readers. Films are widely available for entertainment but traditionally have been a somewhat limited medium for development purposes. They involve comparatively expensive and cumbersome production and distribution systems. The emergence of the relatively cheaper and more convenient

videotape, however, has displaced film to some extent.

The potential audience for the mass media in the developing world is huge, predominantly rural, and ill educated. Over 3 billion of the global population of about 4.7 billion live in developing countries. More than 2 billion live in countries with GNP per capita, in 1980, of less than \$410 per annum. On average, about four out of five inhabitants of the low-income economies live in the countryside. The average level of adult literacy in developing countries, including China and India, is only 56 percent, and this level falls to 40 percent when these two countries are excluded.

As already indicated, the developmental role of the mass media may be divided into two parts: formal education, by which is meant vocational training as well as classroom instruction; and informal or general information that serves to keep people aware of developments that may not directly affect their immediate activity but that is designed to add to their stock of knowledge and help improve their lives.

## Educational role

A basic aim of all educational efforts has been to assist large numbers of people in becoming more productive at the least cost per person. Mass media are well suited for this purpose. However, different media have different effects and often they have to be used jointly. For example, radio broadcasts on farming techniques, the use

of water and fertilizer, or the timing of various husbandry activities have been seen as an effective means of affecting the actions of large numbers of persons at great distances. The technique of reaching distant farmers was pioneered by the Canadian Farm Forums over 1940–65. The Canadian Adult Education Foundation and the Canadian Federation of Agriculture provided advice and support to the Canadian Broadcasting Corporation in reaching distant groups of farmers. The radio lessons became the basis for later discussions among the farmers and were supplemented by printed materials and the work of local extension agents. This farmers’ forum idea was adapted for use later in many countries, including Benin, Ghana, India, Nepal, Niger, Nigeria, Pakistan, Senegal, Thailand, Togo, and Zambia, with varying results.

A major teaching tool for on-the-job training is the use of the demonstration method. Traditionally, the master-and-apprentice method was employed for imparting practical instruction. Television and radio can multiply this experience by teaching large groups of persons how things are done, at a relatively low cost per person.

However, broadcast media have limitations—their one-way flow and transience. There is no room for pause, questioning, or feedback. They demand total attention during the broadcast, and, once transmitted, the message cannot be easily recalled. Therefore, the broadcast media continue to

need support from locally available audio-visual aids, the print media, and personal contacts through educators or extension agents. Personal contacts also compensate for the lack of literacy.

Supplementary printed materials afford the recipient of broadcast information the opportunity to review the information, to get detailed information on concepts that are difficult to convey solely by the broadcast medium, and to repeat the tasks learned from the broadcast. Such materials also provide a link between the trainers and the trainees. Another useful supplementary activity is the field survey using oral questionnaires that allow recipients of information not only to test their knowledge but also to provide the trainers with their views on both the form and content of the broadcast instructional program. The tape-recorded survey also surmounts the barrier of illiteracy.

### Teaching in classrooms

The mass media have also been used as a teaching tool in the classroom. In the early days of educational broadcasting there was a perception that the tools of mass communication could replace traditional forms of teaching, involving a class and a teacher who stands before them to direct their work and impart information. In fact, radio, television, and printed media have been most often and most successfully used as adjuncts to the teacher, supplanting the teacher only to the extent that they have provided technical or vocational instruction in which they had the advantage of efficiency and low cost. Science and mathematics lessons, where the teacher's work is complemented by broadcast lessons, have been found to be very effective in programs monitored in El Salvador, Mexico, Nicaragua, Spain, and Western Samoa. In other cases, broadcast media have been effective in presenting concepts and instruction in a vivid and interesting manner to such an extent that the traditional role of the teacher has been altered considerably.

The "telescola" program in the state of Ceara in Brazil, for example, employs the principle of peer group "demonstration effect" to impart mathematics and language instruction. A 15-minute television program features a group of young football players. Their activity keeps the audience's interest alive and is used to relay to students of their age group the basic principles of grammar and mathematics. Next, the class breaks into small groups to discuss and use the information given. This is followed by a broadcast lesson with a television teacher who guides the class through their workbooks and assigns read-

ing tasks. The teacher also runs through the typical problems encountered in the tasks assigned to the class earlier, thus serving as a conduit for the experience of other classrooms in distant parts of the same educational system. Instead of the traditional trained teacher, this class is supervised by a person who basically coordinates the work of the group and provides feedback by checking and marking the workbook exercises.

### The informal role

Whether government-controlled or otherwise (in Latin America, for example, a large part of radio and television activity is in the private sector), most mass media institutions have also mounted motivational and general information campaigns. These would fall into the broad category of informal education for development purposes. Both the inherent limitations of the mass media and the environment in which they operate affect their ability to alter the behavior of their audience. Mass media messages are generally one-way and short lived. They need to be repeated frequently to register upon an audience. Often they act in a slow, subtle, and indirect way. The mass media rely upon the accumulated knowledge and experience of their audience to create the impetus for change. But achieving rapid behavioral change with the aid of mass media over a limited period is a difficult task even in developed countries. The predominantly rural and poor populations in developing countries are traditionally risk averse and may not readily accept the new information as a strong enough stimulus for change.

Mass media programs have been successful in reaching large numbers and introducing them to the possibility of change more than effecting change. For example, a nutrition education program in Ecuador in 1974-75 attempted to use radio and posters to increase breastfeeding and the use of iodized salt. A survey after the campaign showed that, while the campaign had increased the knowledge of the audience about nutrition, it had not achieved a discernible change in the status of health of the target group. In other cases, the broadcasting of market prices for commodities can strengthen the hand of small producers vis-à-vis traders purchasing their products in the country side.

The low literacy levels in developing countries restrict the ability of the mass media to provide information to a large part of their audience, especially broadcast information that the recipient could supplement with other available materials. The educational use of mass media needs to be supported with efforts to raise the general level

of education of the target groups. Research into the use of media campaigns as a complement to agricultural extension work shows that educated farmers supplement the information gained from radio or television programs with written materials. Education enhances the effectiveness of information being imparted to farmers, since they are in a better position to take advantage of the latest information and also are better equipped to seek out other sources of information.

### Benefits and costs

The benefits derived from mass media campaigns cannot easily be measured in terms of rates of return on investments. They depend on factors such as the commitment of the sponsoring organizations, the proper mix of media, and the suitability of follow-up measures. Broadly speaking, the benefits can be listed as: an enhanced and more efficient educational system; greater awareness in the audience of development issues in general, or an improved knowledge of specific topics such as health or farming techniques; involvement of large, often distant and dispersed, populations in development efforts; and the creation of a national communications circle that could help in creating a national identity. These benefits are difficult to quantify, although some efforts have been made in the education sector.

The costs relating to achievement of these benefits are easier to identify and can be seen as (1) the cost of reaching people and (2) the cost of producing the message to be imparted. A more difficult exercise is to calculate the cost of effecting the desired change. Since there is less agreement on the accuracy of estimating this final cost element, it is the least useful in assessing the relative value of different mass media.

In terms of costs of reaching the target audience, the cheapest medium is radio. It allows economies of scale in production and transmission. Evidence from Malawi, quoted in a recent World Bank study, suggests that the cost per listener of a one hour radio program is about one 3,000th the cost of a one hour face-to-face meeting between a single farmer and an extension agent. The cost of the farmer attending a puppet play designed to inform him about agricultural techniques was about \$0.08; that of watching a film for an hour was \$0.17; and that of listening to a radio program was \$0.004. These costs vary from country to country but their relative proportions do not change widely.

Printed materials, such as booklets, posters, newspapers, and books, are next in order of cost. Again, the costs of reaching the audience vary, depending on the print

run and the nature of the printed document. Further, if a pamphlet or book has a high "pass-along" rate, its cost per person is reduced considerably. A Colombian radio school published a weekly newspaper, *el campesino*, with a print run of 70,000, costing \$0.21 per copy for a 16-page issue. A Malawian bimonthly of the same size, *Za achimumbi*, costs about \$0.30–0.34 per copy, with a print run of 30,000. And, in Lesotho it cost \$0.30–0.34 per copy to produce and distribute 15,000 pamphlets on crocheting as part of an educational project. Some 26 percent of the total costs in Lesotho was for distribution alone. This highlights a major drawback of printed materials. They involve difficult logistical problems of production and delivery, and their concomitant costs. Further, the print media depend on literacy as an important precondition. Therefore direct comparisons with broadcast media costs become less reliable as a measure of their efficiency.

Details of educational television production and transmission costs are harder to come by. Only a small proportion of television programs are designed for purely educational purposes. They are often a conglomeration of purely informational programs and those designed for political purposes. Rough estimates made on the costs of producing television programs vary between 10 and 30 times the cost of equivalent radio programs. However, many governments, seeking to influence the politically more active urban audiences served by television, tend to concentrate their expenditures for development of mass media on this more expensive and as yet relatively less effective medium.

### Emerging technology

As national planners and international organizations, such as the World Bank, UNDP, UNICEF, UNESCO, and FAO, get further involved in the design and implementation of educational programs and projects using the mass media, they will be examining closely the emerging technology of communications. The World Bank has, in recent years, supported considerable research in the use of mass media for development purposes (see box). The 1980s may

well be termed the Decade of the Satellite, as information distribution systems will be able to tie into the increasingly cheaper and more efficient use of satellite transmission and reception facilities. This technology is available not only for broadcast but also for printed messages. Texts can be written and set in pages in one place, and reproduced for printing and distribution from a distant point. This is being done by satellite transmission of digitized information that recreates the original pages and even photographs without any loss of quality. Advances in photocopying allow reproduction, even in distant rural areas, thus lowering distribution and printing costs. Television programs can also be made available to a growing number of people by satellite transmitters and low-cost receivers. These receivers cost as little as \$3,000. As the costs of building and launching satellites decline, more developing countries may opt for their own satellites. India has experimentally used a U.S. satellite to provide educational television programs over most of the country with the use of small, inexpensive dish receivers. This experiment led to the launching of an Indian communications satellite from the U.S. Space Shuttle "Challenger" at the end of August 1983.

The rapidly falling cost of videocassette recorders will make them more accessible to developing country audiences in future. Videocassette recorders have the ability to capture and store messages from television broadcasts, thus eliminating a major drawback of that medium, its transience. Further, the production of training and education programs on videocassettes, which can be duplicated cheaply, makes it possible to direct specific messages to smaller audiences, while retaining the ability to broadcast them through normal television transmitters. For example, an FAO/UNDP-assisted project in Peru successfully used videocassettes to train farmers in the field.

Of course, audiocassettes, and the seemingly ubiquitous transistorized cassette recorders, can also play a greater part in both transmitting educational information and preserving broadcast messages. While not as dramatic as visuals, audiocassettes

can be an economical adjunct to written materials in formal education as well as in the transmission of general information.

The new tools of mass media are changing the way individual media can be used. The one-way flow of broadcast information is no longer a restricting factor. Instant feedback is already possible through the emerging technology of two-way cable television, although its widespread use may not be possible until costs are reduced substantially. The use of portable video cameras and recorders in the field can bring back to central planners and instructors an audiovisual record of rural development activities and also help them evaluate for example the effects of their broadcast lessons or printed instructions on farmers in distant rural areas. A portable color video camera and recorder, currently costing as little as \$1,200, could soon pay back its costs, for instance, by helping reduce travel by central directing staff to rural project areas for evaluation purposes. These portable videosystems are not complicated to operate and demand little logistical support.

Over time, the lowering of costs of even existing technologies will make it possible for mass media to serve smaller, more discrete groups, as well as individuals. Instead of relying on nationally planned and centrally produced programs, the cheaper and simpler new technology can allow small communities to produce their own educational and informational programs. Access of such local groups to national communications networks would increase the participation of distant groups in national economic life, radically altering the current top-down nature of government and planning in most countries. Evidence since the 1960s indicates that the mass media can inform and educate large numbers of people at decreasing costs. The critical test of their future effectiveness will be the manner in which developing country governments harness them for development purposes.

The rapidly advancing technologies can only be well used if there is a proper understanding of their capabilities and purpose. This entails research on the audience for education and development messages, the design of the messages themselves, and then the use of different media for specific purposes. There is a growing literature in this field. Until all developing countries acquire experience with the use of the mass media for development purposes, and share it with each other, either directly or through the multilateral agencies, the answer to the question "Can the mass media help develop efforts?" can only be a qualified "yes."

#### Bank research on mass media

World Bank-supported research on mass media and development is reported in the following publications: Gloria Feliciano and others, *The Educational Use of Mass Media*, World Bank Staff Working Paper No. 491, \$5; Dean T. Jamison and Emile G. McAnany, *Radio for Education and Development*, Beverly Hills, CA, USA, Sage Publications, 1978; Hilary Perraton (editor), *Alternative Routes to Formal Education: Distance Teaching for School Equivalency*, Baltimore, MD, USA, The Johns Hopkins University Press, 1982, \$35; Hilary Perraton and others, *Basic Education and Agricultural Extension: Costs, Effects, and Alternatives*, World Bank Staff Working Paper No 564, \$15; and Heli E. Perrett, *Using Communication Support in Projects: The World Bank's Experience*, World Bank Staff Working Paper No. 551, \$3. (For ordering Bank publications, please see inside front cover.)