

## **MASS MEDIA AND INFORMATION TECHNOLOGY IN EDUCATION**

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### **Summary**

This article relates recent changes in new communication technology and their applications in social uses and education to broader social objectives and research agendas embodied in theories of communication and development. Competing theoretic approaches in understanding both the relationship between communication and development, and, to a lesser extent, the effects of mass media, provide the conceptual basis for this discussion. The article will provide a brief survey of literature on modernization, dependency, and democratic participation models applied to development communication. It also describes briefly mass media research agendas, such as media literacy, the cultural environment movement, and effects research. This survey illustrates how media technologies have been conceptualized and used in developmental communication projects, analysis, and research.

Educational applications of direct broadcast satellites and the World Wide Web provide examples to focus this examination. Both of these technologies are useful examples for several reasons. They were initially conceived of as technologies with significant potential for use in educational programs, such as the Satellite Instructional Television Experiment (SITE) program in India in the 1970s, or distance education programs in other parts of the world. The uses of both technologies have become increasingly

dominated by commercial applications in the 1990s, with design and deployment more and more directed toward commercial mass media and specialized entertainment media. Even with this shift in priority, approaches to communication and development continue to provide a useful evaluative framework in reference to new possibilities and applications of educational media.

## **1. Introduction**

As the 21<sup>st</sup> century begins, many of the most vexing problems confronting humanity in the 20<sup>th</sup> century have not been resolved. Among these is the problem of serving the educational needs of children and adults in different parts of the world. Education is among the highest priority human needs for a number of reasons, including the empowerment of people to change their life situations, the enhancement of national economic growth, and the promotion of sustainable development. While governments and private organizations have responded in many ways, continued growth in the numbers of children, especially in the developing world, make it difficult for governments to successfully meet these educational needs. In addition, the skills and knowledge that are now required for the working age population have changed rapidly in the last decades. The need for continuing education or adult education adds yet another task to the crowded agenda facing educational planners in formal and informal educational programs contributing to both societal and individual development.

The link between the use and availability of printed educational materials and widespread literacy is often presented as an historical parallel of the tie between new media technology and social change. Historically, however, the link between media technology (book publishing) and literacy was not automatic. Public decisions to require compulsory education and to provide funding for universal education were necessary in the creation of widespread literacy. The uses of various types of mass communication technologies or interactive communication media have been presented as central to the solution of emerging, immediate, and other long-standing educational needs. Again, such technology is presented as being of primary importance, rather than the public decisions to provide universal services to citizens.

In the past 50 years, electronic media, whether radio, television, audio/video tapes, or computers have been proposed as tools to assist in meeting significant educational needs. Radio was a central tool in agricultural extension communication campaigns in the northern market economies in the post-1945 era, and similar programs were used to model development communication campaigns in the south beginning in the 1950s and 1960s.

With regard to new communication technologies that have taken on importance during the past decade, two specific technologies have attracted much attention. The first, direct broadcast satellite delivery of audiovisual or television programming, has the ability to cover large geographical areas. The second, Internet or World Wide Web technologies, offer access to a wide range of digital materials and media services. Both of these technologies, despite increasing influence of commercial and entertainment applications, provide useful models that illustrate media usage in development communications and in open/distance learning.

Below, the first part of this article reviews how competing theoretic approaches in understanding the relationship between communication and development deal with the use of media technologies. The next part examines the use of media technologies in open and distance learning, and describes various concerns that have been raised by practitioners and researchers in the field. The article closes by examining some general issues that arise in considering the use of media technologies in communication and development, and what priorities or themes these concerns might set for continuing use of media technologies.

## **2. Communication and Development**

How do the goals of sustainable development connect with the use of mass media and information technology? This discussion will track the different approaches to understanding the role of communication in development, arguing that as a backdrop for considering the link between media technologies and education, we should consider the link between communication and development. The idea of sustainable development has arisen as a response to questions and concerns about previous generations of development planning and programs. Communication for sustainable development, especially as applied to formal education programs and informal public information campaigns, can draw useful insights from research efforts grouped around the notions of participatory development, cultural environment, and knowledge societies.

One of the most powerful conceptual models for global change in the past half-century has been the idea of development. This idea has had several meanings. Initially, as noted in many sources, the concept of “development” was part of a Cold War project to prevent the spread of Communism. Two of the original and most important components in the idea of development came from the field of communication. One component was the idea of the diffusion of innovations -- that the steps leading to modernization of social systems and to further development, would require decisions about the adoption of new ways of doing things, and that these new ways of doing things would spread through social systems in relatively predictable patterns.

A book by Everett M. Rogers first published in 1962 called *The Diffusion of Innovations* (1995), helped spread this concept. The second related component from the field of communication addressed the ways of encouraging developmental processes, most specifically by accelerating the rate of adoption of new and beneficial ways of doing things. This model of communicative action was closely associated with educational programs that focused on communication and development. A significant number of other innovative approaches linking communication and development have appeared over the past four decades. Several are discussed below.

### **2.1 Modernization**

One of the key elements of modernization as an objective in development was to promote change in attitudes and behaviors that would be more consistent with those of persons in a modern society. These changes included greater individuation (the treatment of persons as individuals rather than as members of groups), the use of scientific forms of knowledge, and more geographic and social mobility based on

education and merit. Modernization approaches to communication and development were typified by the use of mass media campaigns, supplemented by local opinion leaders or change agents, to encourage attitudinal and behavioral change. The problem of “underdevelopment” was thought to be one of attitudes and behavior tied to traditional ways of understanding things and doing things. Even traditions more conducive to sustainable living patterns were suspect.

Finally, unlike the domination of mass media in North America by commercial funding and entertainment uses, media technologies utilized in development and modernization efforts were associated with educational and change efforts. Mass media could be used to undertake public campaigns in such areas as agricultural or health care practices. Media technologies might also be used as a more efficient way of distributing educational programming in countries where the needs for education were great, and where teachers and experts were in very short supply.

## **2.2 Challenges to Modernization**

Communication and development theory, research, and practice have gone through many debates and changes over the past four decades. Dependency models challenged the advocates of modernization. Dependency analysis emphasized the failure of open trade strategies and modernization programs in promoting equitable economic growth, and pointed to national autonomy as a strategy necessary to escape the dependent linkages to international production and exchange that contributed to underdevelopment. Similar patterns that contributed to dependency and underdevelopment were noted in the structure and organization of international media industries, and in the flows of world news and entertainment programming.

Other challenges to modernization emphasized local participation in development and democratic patterns of communication, consultation, and planning. These challenges contributed to the defining of another approach to development in the late 1990's that challenged the sole criteria of economic growth as a measure of modernization. Such development included the concept of basic needs, an endogenous vision of the future and of development, self-reliance, an ecological perspective on resources and resource distribution, sustainability over time, participatory democracy, and the need for structural and sustainable changes in economic and political relations.

Participatory development noted the importance of a bottom up approach to development and change. Communication was not then just a tool to persuade the masses to adopt different attitudes or ways of doing things. It became a method to organize consultation among the participants in development to ensure that all voices were heard and considered, and to assure that involved communities determined the development agenda on their own terms. In a stronger phrasing of the role and importance of bottom-up communication for development, Servaes noted in the late 1990's that such communication could be claimed as a "human right", as a "delegated right" to be defined by each society to advance participation and accessibility, or as an important facet of emancipation and liberation in the development process.

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### **Biographical Sketch**

**Stephen D. McDowell** teaches in the Department of Communication at Florida State University in Tallahassee, Florida. His published work includes a book on India’s communication policies, *Globalization, Liberalization and Policy Change: A Political Economy of India’s Communication Sector* (New York: St. Martin’s; and Houndmills, U.K.: The Macmillan Press, 1997), as well as articles and book chapters dealing with international communication and with communication and new media policies in Canada, India and the United States. He has held fellowships with the Department of Communication in the Government of Canada, the Shastri Indo-Canadian Institute, the Social Science and Humanities Research Council of Canada, as well as a Congressional Fellowship supported by the American Political Science Association.