Education for All – The Mass Media Formula

David Walker and Gajaraj Dhanarajan[*]

Community FM Radio in South Africa

"All available instruments and channels of information, communications, and social action could be used to help convey essential knowledge and inform and educate people on social issues. In addition to the traditional means, libraries, television, radio and other media can be mobilized to realize their potential towards meeting basic education needs of all". Final Report World Conference for All: Meeting Basic Learning Needs, Jomtien, Thailand, 1990.

Why Community Radio?

Community radio is an immensely powerful technology for the delivery of education with enormous global potential reach. Creating opportunities for communities to utilize this delivery system will enable disadvantaged groups to engage in a development agenda, sensitive to their needs and aspirations. In order to serve the underprivileged and rural poor, mass media such as radio must create conditions and mechanisms that provide people with genuine access to useful information. Such mechanisms will offer ways in which people can express their sentiments, opinions, views, dreams and aspirations, their fears and insecurities, their strengths and capabilities, and, of course, their ideas for development.

High illiteracy rates and low levels of schooling among disadvantaged groups, especially women, in many developing countries continues to limit their ability to lift themselves out of poverty. The existing educational system has shown itself to be unable to respond to the massive demand for increased education. This is especially true in many poverty-stricken countries with respect to meeting the substantial education needs of the rural poor. Consequently, disadvantaged groups

continue to be denied access to information, knowledge, skills and technology transfer.

The answer is to deploy Distance Education techniques and delivery systems such as radio and television based at the community level to address directly local issues and needs.

Community Radio – A Proven Track Record

Radio also has a developed infrastructure that must be the envy of any developing country telecom operator. In Sri Lanka, one person in 500 has access to the Internet, but virtually everyone has access to a radio. Bolivia had fewer than five telephone lines per hundred people in 1996, but more than 57 radio receivers per hundred (Girard, 1999).

Some of the undeniable strengths of radio include the following:

- Radio reaches a wider audience than any other medium: for example there are an estimated 94 radios per thou-

sand people in the least developed countries, ten times the number of televisions.

- Radio can motivate people by building on aural/oral traditions and stimulate the imagination better than video or television.

- Radio programs are cheap to make compared to television and video.

- Radio receivers are widely available, comparatively cheap and portable, making them convenient for listeners.

- Radio can reach people who are isolated by language, geography, conflict, illiteracy and poverty.

- Radio can help create a demand for services and convey vital information.

- Radio can facilitate assistance in the early stage of complex emergencies when forms of aid are not possible.

- Radio can be a group activity, encouraging discussion of educational issues after the broadcast.

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- Radio gives listeners the opportunity to make informed choices about decisions and can give them greater self-determination over their lives (Burke, 1999).

Some examples of the usefulness of community radio are:

- It can act as a community telephone, broadcasting community-based announcements during the day.

- In many rural areas radio is the only source of information about market prices for crops.

- It is used both for formal and informal education such as agricultural extension information for farmers and agro-food processors.

- It plays an important role in the preservation of local language and culture.

- It can be used in calling for emergency medical assistance. (Girard, 1999)

Despite radio's many advantages it is, like television, a one-way delivery system; therefore sufficient local tutorial support is needed to supplement educational broadcasts. Many people lack sufficient access to electricity, and batteries are expensive to obtain. However alternatives in solar and windup technology have been developed and are gradually making their way to the village level. (See TechKnowLogia March/April 2000 Issue, *FM Radio Stations: Broadcasting with the Sun)*

Radio – An Under-utilized Delivery System

In order to empower disadvantaged groups as equal partners in development, the limitations of formal and non-formal education are now being challenged. New ways to achieve mass education, that can be both efficient and effective, are being sought. In this context, radio, an effective telecommunications medium, was proposed at Jomtien in 1990, as the solution most likely to address this great need. Radio can cut across geographic and cultural boundaries. Given its availability, accessibility, cost-effectiveness and power, radio represents a practical and creative medium for facilitating mass education in a rural setting. However ten years since Jomtien, radio still continues to be an under-utilized technology in education. This is especially surprising, because from a learner's point of view, radio is user friendly, accessible and a well-established medium. From an educational provider's point of view it is easy to set up, produce and broadcast programs.

After almost one hundred years of broadcasting history, most nations possess more than a respectable level of engineering skills and broadcasting talent needed to apply the technology in education. In the last ten years, radio has been greatly enhanced by the emergence of new technologies, which have opened up opportunities for a variety of forms of delivery and access for both broadcaster and listener. For example, portable, low cost FM transmitting stations have been developed and digital radio systems that transmit via satellite and/or cellular are being implemented in many parts of the globe (Walker, 2000). Internet streaming audio software technology has emerged to allow a global audience to listen to news from a distant country. Also, windup and solar radios have been developed thus freeing radio from the need for expensive power sources.

Projects and studies completed by The Commonwealth of Learning (COL) and others in the field of Distance Educa-

tion and Media have determined that one of the overriding factors to the success of these stations has been the proper community access and ownership, which is paramount in the initial project design. If the station is or becomes an integral part of the voice of the community, and local interest groups have an equal say in the information that it disseminates, then there is a greater likelihood of success in the long-term sustainability of the station. The broadcaster and audience must continuously interact. People sense the relevance of what they are learning when they appreciate how the issues touch them in their immediate environment. The content creation of a community radio station will occur when good station management is in place and groups are trained to supply programming aimed at specific identified needs. Finally, political support for community radio from both local and national leaders is important.

Leveling the Playing Field –
Going Digital for the Community

Radio and the Internet are fast becoming one delivery medium, with the advent of streaming technology and the conversion from analogue to digital radio broadcasting. A small community radio station will serve not only its local listeners but also communities of listeners around the world.

An advantage of digital radio transmission is that areas which suffer 'signal gaps' due to blockage by hills or buildings can literally be 'gap-filled' by installing very-low power digital radio repeaters in these locations. This is possible due to the digital radio receiver's 'intelligence'. Unlike conventional receivers, digital radio receivers are capable of sorting through a number of signal paths on the same frequency, a capability that will aid in the conservation of scarce radio spectrum. In other words, broadcasters can enter the digital radio marketplace on an equal footing; where they go from there will depend on individual creativity and appropriateness of content to address community needs. Finally, broadcasters should be able to make this transition in a cost-effective manner because the digital radio transmitters currently being tested can carry up to six stereo services at once, meaning that the cost of transmission can be shared among as many as six community stations either in a region, province/state, nationally or even internationally. And, because the power requirements are considerably lower for generating digital radio transmissions, the operating costs should be substantially reduced as well. No longer will powerful transmitters, as in the analogue FM world, be the factor that makes or breaks the development of a community station. Instead, since digital transmission power is the same regardless of a station status or power output, issues of quality, appropriateness of content, and ability to address a community's needs will be the focus of a station's strategy to attract listenership.

A number of digital initiatives are being undertaken at both national and global levels. For example, WorldSpace is a digital radio system that is targeting Asia, Africa and South America via satellite transmission of digital programming. Community broadcasters can take advantage of the educational programming that is available via rebroadcasting of national and international initiatives to the local populace who would not normally have access to these programs. There is an issue with rebroadcasting of national and international programs by local community broadcasters: while the programming may be excellent in production values and quality compared with what can be created locally, there is a cost in the loss of choice, of local information and of alternative perspectives. Digital audio broadcasting will also allow for text/graphic-based information to be displayed on a small screen on a digital radio as a supplement to the audio broadcast. This will open a wide variety of opportunities for content creation aimed at the illiterate, allowing learners a written or graphic context for lessons in reading and writing.

The Ability to Reform –
A New Paradigm in a New Age

The overarching issue that will face community radio in the future will be a government's ability to reform licensing and broadcasting regulations. These have been major inhibitors to the proliferation of community radio stations and therefore educational programming in many countries. Community radio cannot be equated with commercial radio. Therefore, licensing fees for community-based stations should take account of the station's limited budget, which is focused on program creation and service to the community.

In some countries a community station must show an increase in transmitter power each year for the station license to be considered for renewal. Increasing FM transmission power does not improve the radius of coverage; rather it saturates more thoroughly the radius where the antenna is able to see to the horizon. It is more efficient to use small transmitters as repeater units that retransmit the main station signal further afield. The issue, in many cases, is that a community station cannot efficiently cover the targeted populace due to regulators' demands for additional licensing fees to acquire a second frequency for rebroadcasting to a greater radius of distance and population. This becomes prohibitively expensive given that the first frequency may have cost several thousand dollars without even having the fees demanded for a second rebroadcast frequency.

If radio is to be utilized to serve community needs as an instrument for education, training, and information then a first step will be the deregulation of the airwaves by governments for community broadcasters coupled with appropriate administration fees. However, with deregulation comes competition by many stations for listening audiences at the local

level. In India, there are proposals to circumvent government regulations concerning community radio by rebroadcasting Internet streamed audio programming via speakers mounted throughout the village area (Metha).

If education for all is to be achieved, then the potential for radio, as an effective delivery device to disadvantaged groups, will have to be harnessed. This can only be achieved with the commitment of governments to allow for the development of community broadcasting. The benefits that radio can bring to the overall welfare of a nation are potentially great. It is economically the best solution for reaching large numbers of people with information and educational content. The tools for education for all and the infrastructure and skills for delivering education are readily available if governments are willing to allow radio to proliferate at the community level.

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Conclusion

Radio is an effective system for delivery of education to large numbers of people. It facilitates information exchange at the community level, acting as a "community telephone" and can be effective in literacy and formal/non-formal education. Analogue systems for radio will be supplanted by digital broadcasting in the coming decade, however digital radio will pose issues including cost of radio receivers and renewal of broadcasting infrastructure. Analogue radio systems, such as the portable solution that COL and others have utilized in community FM radio initiatives, can be effective in delivering education to the masses without the high infrastructure costs associated with radio broadcasting. With community broadcasting not only can broadcasters focus on addressing local needs through their own produced programming, but also have the choice among a tremendous variety of quality educational content that is available via rebroadcast from national and international sources whether it is delivered via satellite or the Internet. Rebroadcasting also should be balanced with the needs of the local community and the provision of appropriate and relevant programming content.

There is a marriage between the digital and the FM analogue systems that is taking place. The convergence also includes Internet streamed audio-based broadcasters that can effectively be employed by the community FM station in a rebroadcast mode.

Will we be able to say in ten years that radio's potential for educational delivery to millions of disadvantaged groups has finally been realized? With the many varied formulas for convergence of digital and analogue technology and the vast selection of content and tools to create original culturally sensitive material for education at the community level, we state clearly - yes. But will the bodies that regulate frequencies for community radio initiatives reform regulations to reflect the current technological developments and pressing need for mass media to meet the goal for education for all in the next ten years? We can only hope. The past ten years and the lack of fulfillment of Jomtien are a heavy burden to bear. The next ten should see the harnessing of radio, analogue, and more so digital, as the powerhouse for delivery of education. Governments should be prepared to adjust broadcasting regulations to adhere to technological developments and realities, and also consider community based mass media delivery as an effective solution for improving a nation's human resource development towards the goal of education for all.

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[*] Gajaraj Dhanarajan is President and Chief Executive Officer, The Commonwealth of Learning. David Walker is Education Specialist, (Educational Technology/Media), at The Commonwealth of Learning, Vancouver, British Columbia, Canada