

Ethiopia: Educational Radio and Television

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Background

Ethiopia has a rich experience spanning more than three decades in using radio and television to support primary, secondary and non-formal education. The Educational Media Agency (EMA) of the Ministry of Education, which has provided the leadership in this area, traces its origin to the Audio-Visual Center established 1952/53. The Center developed, produced and distributed audio-visual teaching aids, and even had a mobile team that traveled to villages and schools to show films and slides.

In 1965, a year after the introduction of television in the country, television became the first technology for broadcasting educational programs using the facilities of the Ministry of Information. In 1969, EMA started broadcasting from its own studio, an indication of its technical and production attainment. At that time, as a result of increased enrollment in schools, the multiple shift system was introduced, and EMA had to repeat the broadcast of lessons for each shift. Later in 1971, educational radio broadcasting was initiated after a humble experiment using audiocassette programs in a prison in Addis Ababa.

In 1967, the Audio-Visual Center was reorganized as the Educational Mass Media Center with its own TV studio that produced programs in eight subjects for senior secondary schools and in five subjects for junior secondary schools. TV programs were developed for primary schools as well. But the secondary school programs were interrupted in 1976 and the primary school programs stopped in 1980. TV programs returned for junior secondary schools in 1988.

Perhaps most importantly, EMA's radio and television programs are an accepted part of the school curriculum throughout the country.

Over the years EMA expanded greatly. It currently manages an extensive broadcasting infrastructure dedicated to supporting education. EMA has large facilities, employs approximately 160 persons, operates eleven transmitters, each with two channels, throughout the country, and runs 12 recording studios at the center and the regions, with more planned construction in the coming years.

Radios, including 500 solar-powered sets, have been distributed to almost all schools nationally, and 800 color televisions have been sent to almost all secondary schools. The radio and television programs enrich education in the fol-

lowing manner:

- supplement and enrich the regular curriculum;
- support the distance education secondary level program for out-of-school youth and adults;
- provide programs to a general audience on a variety of development issues; and
- develop new non-formal programs to upgrade the qualification and skills of primary school teachers.

Educational Context

Ethiopia is a large but poor country in the Horn of Africa. It has a long and rich history. The predominant religion is Orthodox Christian going back to approximately 400 AD. There is also a large Muslim population, and the two major religions coexist peacefully. Formal education began in the early part of this century, but didn't begin to expand in a substantial way until the 1950s. In spite of the importance given to education in Ethiopia, gross enrollment rates have never been high. Even now, after several years of strong increases in school enrollment, gross enrollment rate at the primary grades (grades 1-8) is only about 40%, well below the Sub-Saharan average. The country is now halfway through a five-year plan to expand access to and improve the quality and equity of education.

Educational media has been particularly important in Ethiopia for several reasons. First, the country is large and mountainous and travel is difficult. Educational broadcasting helps to ensure the delivery of quality programs throughout the nation. Second, it has helped to support classes with under-qualified teachers. This has been particularly true in the sciences in secondary schools. Third, it expands the experiences of the children. For example, in the sciences, the programs can demonstrate many experiments that would not be possible to do in regular classrooms or even in labs. Fourth, the programs provide general enrichment in a variety of ways.

The programs are produced after identifying important academic skills designated in the syllabus of each course. Then informative and imaginative programs are created, that suit each medium. By using both instructional and enrichment approaches, EMA widens the learners' horizon by applying the academic skills in a variety of ways and, thus, strengthens the teaching and learning process.

EMA's Program Support to Education

Between EMA and the regions, radio and television is used

to support formal education in the following ways. The programs:

- Improve the quality of primary education by producing at the regional level radio programs in local languages for all primary school grades in most subjects
- Strengthen the teaching of English through the development of an improved approach known as interactive radio instruction (IRI) (see article "Are You Talking to Me? Interactive Radio Instruction" in November/December Issue of *TechKnowLogia*)
- Improve the quality of secondary education and reduce regional disparities by producing radio and television programs in many secondary school subjects
- Increase access to secondary education by providing a distance education secondary equivalency program for out-of-school youth and adults
- Improve the qualifications of teachers by creating new distance education programs for upgrading underqualified primary school teachers

Primary level

In general, there is a 15-minute radio program per week for each major subject area at each grade level. EMA produces programs in English and Amharic; the regions produce programs in the natural sciences, social sciences, and local languages. One of the major consequences for education based on the new federal governance structure is that primary education is given in the mother tongue. Although there are approximately 80 languages in Ethiopia, currently about 15-20 of the languages are being used as the medium of instruction. Although most regions have only one or, perhaps two, languages of instruction, some regions have several languages. Therefore, the radio programs in each subject must be produced in each of the languages for each grade. This greatly complicates the production process as well as placing extensive demands on the transmitting capacity within the country. In secondary schools, the medium of instruction is English, so programs have only to be developed in one language.



Using Interactive Radio Instruction in Ethiopia

EMA has embarked on a new initiative that has the potential for improving the quality of its programming and, eventu-

ally, the programming in the regions as well. EMA is developing daily 15-minute English radio programs for grade 1 based on the IRI model. IRI programs for the higher primary grades are expected to be produced in subsequent years. IRI is noted for its systematic curriculum design and, particularly, for the way in which the children in the classroom become active participants in the learning process. Although IRI uses standard one-way radio broadcasting, the scripts are written in a way that actively engage the children in the lessons. Thus, anyone observing an IRI class can understand why the name "Interactive Radio Instruction" became associated with this type of broadcast. IRI is not a major departure for EMA, but builds upon and improves its systems for writing and producing other programs. (IRI programs in other countries including English, mathematics, science and health have been extensively evaluated and consistently show a strong impact on learning.)

Secondary level

EMA is producing both television and radio lessons. It is producing television programs for Grade 9 in Chemistry, Physics, Biology, English and Mathematics. In addition, it is developing Grade 9 radio lessons in Amharic, English, Biology, Chemistry, History and Geography. Over the next three years, it will expand these programs through Grade 12.

EMA has conducted for many years a *distance education secondary-level program* for out-of-school youths and adults. Currently 8,500 students are enrolled of whom 7,000 are active this year. The program is basically a correspondence course with students taking 5-6 courses at a time. There are, however, 20-minute weekly radio programs in English, Amharic, and Biology. Although this program is now under the control of EMA, the administration of this program will fall to the regions. EMA will remain responsible for the instructional materials and broadcasts.

Teacher education

EMA is coordinating a new initiative for *upgrading under-qualified primary school teachers* using distance education. Approximately 70% or 17,000 teachers in the upper primary grades (Grades 5-8) do not hold a teaching diploma and, thus, are unqualified. Staff of the seven teacher training colleges, two colleges and a university is writing the distance learning materials. EMA has provided training to all course writers in developing distance education print materials. EMA will also coordinate the implementation process on a national basis, although the colleges will be responsible for implementing the program in the regions in collaboration with the Regional Education Bureaus. EMA will also produce over 100 radio programs to support this new initiative – especially for language courses.

Non-formal education

Under the new decentralized structure, non-formal education

is the responsibility of the regions. Nevertheless, EMA will continue to produce prototype non-formal education programs in areas such as gender, AIDS, the environment, harmful cultural practices, and other development issues. These lessons will serve as a model and starting point for the regions. These prototype programs are targeted to specific communities and audiences, usually involving study centers.

EMA continues to develop some programs for a *general adult audience*. These informal programs relate to problems found in many communities such as early marriage of girls. The topics are determined after consultation with the regions.

Remaining challenges

In spite of the enormous experience in Ethiopia in using educational broadcasting and its full acceptance by educators at all levels of the school system, there remain challenges. With the decentralization and democratization of the education system, the number of programs has greatly increased and it has become difficult to distribute materials, radios and television sets. Sometime the radios and television sets are mishandled, kept in a storeroom, or left idle due to a shortage of batteries. Also, despite the fact that schools are advised to adjust their timetable to accommodate the broadcasting schedule, sometimes this schedule does not match with the teachers' schedule. In addition, with the introduction of multiple languages of instruction, there are increasing demands for broadcasting time that may be difficult to meet.

Increasing Access and Quality

EMA has increased its radio and television broadcast coverage through agreements with organizations like WorldSpace and the Ethiopian Telecommunication Corporation.

Digital radio

This year EMA is taking an innovative step to help meet the increasing demands for transmitting time as well as to provide high-quality audio sound in the schools. It has teamed up with WorldSpace, which has recently launched the AfriSat satellite that broadcasts digital programs from space. AfriSat covers the African continent using three transmitting beams, each of which has the capability of carrying 60 audio channels simultaneously. Although principally a commercial venture, WorldSpace Corporation through its Foundation has dedicated part of its broadcasting capacity for the nonprofit sector in areas such as education, health, the environment, and women's issues. As one initiative to help test the capacity of this technology to support education, WorldSpace is providing one broadcasting channel exclusively for use in Ethiopia. In addition, it has donated 50 digital receivers for a pilot program. EMA has already identified approximately 400 programs to be broadcast from AfriSat. These programs include harmful traditional practices, folk media, science subjects, gender issues, primary school teacher training programs, and English.

There are several advantages to this new technology:

- The programs can reach the most remote areas. The transmission signal is not bothered by mountains or other terrain as experienced with conventional radio.
- It provides a crystal clear audio signal, which is particularly important in instructional programs, especially for languages.
- The satellite not only has the capacity to broadcast audio programs, but since it uses digital technology, it can also *transmit* multimedia information as well. Thus, the satellite can download text, video, audio, and graphics to a radio, which in turn, can pass the file to an attached computer.

EMA will distribute the 50 digital receivers to schools for the pilot activity to begin next October. In addition, EMA has initiated discussions with WorldSpace to utilize the capacity for downloading multimedia information to support the new distance education program for primary school teachers. EMA is particularly interested in the capabilities of transmitting data directly to resource centers throughout the country via the satellite. This would provide an exceptional opportunity to send extensive multimedia information, even including copies of multiple Web sites and links, to resource centers where teachers will meet periodically as part of their upgrading program.

Television to secondary schools

EMA has widened its television coverage by using the TVROs (Television Receive Only) of the Ethiopian Telecommunication Corporation. Traditionally, EMA has been broadcasting its educational television programs using the transmitters of the Ethiopian Television to schools in 208 towns. However, this year EMA has entered an agreement with the Corporation to use their TVROs in 21 towns where the broadcast of Ethiopian Television cannot be received. Thus, EMA television programs can now reach 229 towns.

Summary

Ethiopia is fortunate to have a well-established and integrated system for using radio and television to support education based on over 30 years of experience. EMA and its affiliates in the regions provide extensive programming for primary and secondary schools, plus support to non-formal education and teacher training. EMA's role in Ethiopia is evolving as a result of the decentralized governance structure established in 1991. Its role has expanded from being the sole provider of educational programs to also providing extensive training and support to the new regional broadcasting initiatives. EMA is also expanding its role significantly in distance education and is looking for new ways in which technology can help support its objectives. Its new initiative with IRI and WorldSpace may lay the groundwork for exciting new opportunities in the future.