Are You Talkin' to Me?

Interactive Radio Instruction*

WHAT IS IRI?

Interactive Radio Instruction, IRI, a methodology developed to turn a typically one-way technology into a tool for active learning inside and outside of the classroom, continues to be an attractive educational strategy in developing countries twenty-five years after it was first used. IRI may be described as interactive lessons in which an external teaching element, delivered by a distant teacher through the medium of radio or audiocassette, is carefully integrated with classroom activities carried out by the classroom teacher and learners. Within this structure, the distant teacher carries the main weight of the teaching, and directs learning activities (such as exercises, answers to questions, songs, and practical tasks) that take place during carefully timed pauses in the audio script. The classroom teacher's role is often to facilitate the lesson, give individual assistance to learners, and provide follow-up support after the audio component is finished. In some programs, such as those for language instruction, the classroom teacher's role is expanded to include periods of teaching.

WHY USE IRI?

IRI can be used as an alternative instructional methodology when:

- subjects or topics are not taught by conventional methods *(use of media as the sole means of instruction);*
- subjects or topics are not currently taught well, or students require reinforcement or remedial instruction *(use of media to improve quality);*
- subjects or topics are studied by only a small number of students, and larger textbook development and teacher education programs cannot be justified *(use of media as a last resort);*
- there are not enough teachers for a subject or topic *(use of media to increase access);* or
- there is a need to reinforce direct instruction by providing practice to the student, or motivation to persevere, in a mix of media and conventional instruction *(use of media to enhance learning).*

The original *raison d'être* for IRI is contained in the above set of conditions, but over the years this perception has changed to the point where teachers recognize IRI as a valuable tool in itself, providing inputs that are both unique and effective in capturing and holding learner interest.

WHERE HAS IRI BEEN USED?

Table 1 lists the IRI projects that have been implemented or are being developed in over 20 countries.

HOW IS AN IRI PROGRAM DEVELOPED?

The development phase involves planning, scriptwriting, radio production, and piloting of the programs. Investment during this period requires financing a development staff of scriptwriters, radio technicians, actors, musicians, producers, trainers, evaluators, and management personnel; purchase or rental of radio production facilities; purchase of production supplies; purchase and distribution of radios to schools and tapes to radio stations; printing and distribution of trial materials; staff and teacher training; transportation and per diems for promoters, trainers, and evaluators; transmission time for radio broad-casts; and often, purchase of technical expertise.

Table 1: IRI Programs That Have Been Implemented Or Are In Development

Country	Principal funder	Year Begun	Project title
Nicaragua	USAID	1974	Radio Math
Kenya	USAID	1980	Radio Language Arts (English)
Bolivia	USAID/Bolivia	1987	Radio Math
Bolivia	USAID/Bolivia	1992	Radio Health
Bolivia	USAID/Bolivia	1994	Early Childhood Development I: AJARI
Bolivia	USAID/PVO	1995	Early Childhood Development II: AJARI
Bolivia	USAID/Bolivia	1997	Maternal Child Care
Lesotho	USAID/Lesotho	1987	Let's Learn English
Dominican Republic	USAID	1981	Radio Assisted Community Basic Education
Dominican Republic	USAID/DR	1993	Mental Arithmetic - COEDUCA
Dominican Republic	World Bank	1993	Teacher Training
Dominican Republic	MOE	1997	English in Action
Costa Rica	World Bank		
Costa Rica	USAID	1989	Mental Arithmetic: The Numbers Family
Costa Rica	USAID/Costa Rica	1991	Environmental Education
Honduras	USAID/Honduras	1987	Mental Arithmetic: The Numbers Family
Honduras	USAID/Honduras	1992	Adult Basic Education
Papua New Guinea	USAID/PNG	1986	IRI Science Education
Ecuador	USAID/Ecuador	1988	Radio Math Pilot
Ecuador	ABEL/Plan Int'l	1997	Early Childhood Education
South Africa	USAID/SA	1992	English in Action
South Africa	USAID/SA	1995	Early Childhood Education
Cape Verde	USAID/Unesco		Radio Math (pilot testing in Mozambique,
(PALOP countries)	UNDP/Dutch Govt		Angola, Guinea Bissau, Sao Tomée Principe, and Cape Verde)
Haiti	USAID/Haiti	1995	IRI Civics, Creole, Math
	ABEL/USAIDHaiti		
Guatemala	USAID/Guatemala	1990	Radio Math and Radio Spanish
El Salvador	USAID/El Salvador	1992	Mental Arithmetic
	IADB	1996	Radio Spanish program to begin in 1998
Pakistan	USAID/Pakistan	1992	English in Action
	Asian Dev. Bank	1999	Radio Math program
Thailand	Thai Government	1980	Radio Math
Venezuela	Mendoza Found.	1991	Radio Math
	CENAMEC/Wld Bk		
Bangladesh	BRAC/Aga Khan F.	1994	English, Math (no information)
Indonesia	ADB	1993	Civics, Math, Teacher Training
Nepal	Unicef	1996	Early Childhood Education
Nepal	USAID/Nepal	1997	Rural Health Worker Training

HOW IS THE IRI PROGRAM SUSTAINED

To have significant impact on this endemic problem, IRI needs to be sustained until it is no longer merely a supportive element in maintaining quality education, but becomes such an integral part of the system that it no longer invites separate scrutiny. A very important indicator of success of IRI as a methodology, therefore, lies in how well a project is *sustained* until quality teaching and a conducive learning environment is the norm for all learners. Without this long-term sustainability, impact on the intrinsic quality of the system may be localized and short lived. Table 2 lists the factors that govern sustainability.

Table 2. Factors governing sustainability

External factors	Internal factors
♦ Appointment of consistent, high quality, caring leadership ♦ Financial security ♦ Political support ♦ Integration of the program into the ♦ administrative and professional fabric of the education system ♦ Training of teachers and program facilitators	♦ Management ♦ Technical coordination ♦ Timely inputs ♦ Training, supervision, and nurturing ♦ Evaluation ♦ Long-range planning and budgeting

FINANCIAL SUSTAINABILITY

Program sustainability in general and financial sustainability in particular are related to the quality of leadership and commitment. While the affordability discussion showed that IRI is affordable in most developing countries, the cost is nevertheless still substantial, particularly when compared with non-personnel budgets in primary education. Thus, financing IRI through the government budget when donor funds are no longer available requires sustained political and institutional commitment. There are, however, three specific financial sustainability issues that merit discussion and can be used to bolster the arguments
for government financing of IRI.

Economies of scale and lumpiness of investment

IRI programs, especially those of relatively small size that have not invested substantially in continuing radio lesson development, ultimately face large costs for new scripts, lesson production, and preparation of printed materials. One reason that the required investment may not be forthcoming is that it is often quite "lumpy." Large investments at periodic intervals are not as easy to obtain as an investment program that is more evenly—and predictably—distributed. This argues for continuous program development to maintain teacher interest, and a relatively even annual investment schedule that allows for a constant commitment of resources by the government. It suggests a phased investment schedule involving several instructional subjects so that a relatively even investment program can be combined with the necessity to realize economies of scale in lesson production. Such phased investment can be sensibly incorporated into a government budget plan.

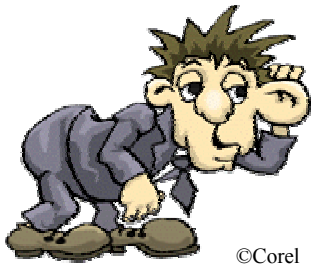
Support from broadcasters

One key aspect of ministries of information and public and private broadcasters as funders of IRI is that they respond to different incentives from Ministries of Education and schools. While broadcasters are often sensitive to their role in public service, helping schools provide instructional programs is just one opportunity among many. At the political level, they are responsive to a variety of constituencies, and education agencies are just one among many. At some point, they may come to regard their IRI obligation and other kinds of public-service broadcasting, as onerous and try to restrict the amount of concessional air time or the availability of time during the school day. The implication of this is that funding from broadcasters may be unreliable and decrease over the life of an IRI program. IRI programs dependent on free airtime from government broadcasters, and even IRI programs that purchase airtime from private broadcasters may face increases in rates or decreases in availability and usability of time slots.

For all these reasons, IRI programs need to recognize the problems of financial sustainability that can arise on the broadcast side and plan ahead to minimize them through long-term contracts, close attention to political support (which may affect the willingness of government broadcasters to support IRI), and financial provision for increased broadcasting expense. Managing the financial side of broadcasting thus may be one of the key elements of program success and long-term survival.

Support from parents and others

Cost recovery can be an effective means of protecting IRI programs from threats of closure. Threats to radio instruction from an inability to obtain radio batteries, radio repair, or student workbooks because of budgetary shortfalls can be overcome by charges and voluntary contributions from parents as well as through donations from teachers and other community sources. These charges and contributions are made possible once the IRI program has generated strong parental, teacher, and community support. Building some level of cost recovery into an IRI program from the beginning can potentiate this source of financing and create fertile conditions for growth when necessary.



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DOES IRI HAVE A FUTURE?

Education has reached a watershed. Computers and the Internet promise to make learning accessible in a multitude of formats to anyone anywhere in the world. Modern media packages for distance learning incorporate print, color pictures, audio and video images, and are designed to be interactive with the learner. Access to this form of distance learning is already available globally where the connective technology exists — and the degree of connectivity is rising exponentially. We believe very strongly that IRI has a future in this evolving scenario. IRI is not merely a low cost, stopgap measure for financially strapped countries, nor is it solely for countries with a limited pool of trained teachers. Evaluation in many countries and contexts has shown that significant learning gains can be achieved through IRI, meriting its inclusion as one of a compendium of tools for *any* classroom.

In countries where teachers are unqualified, IRI provides a rich teaching medium that not only reaches large numbers of students, but also indirectly affects the classroom teacher and stimulates improvements in the teaching of other classes when IRI is not present. This aspect of IRI is exciting, because it promises at least part of the solution to the problem of improving teacher quality.

In an increasing number of countries, children are exposed to the rapid-fire approach of commercial radio and television, and the teacher is challenged to make the classroom learning environment just as lively, exciting, and flexible through his/her own delivery methods. The classroom environment is being transformed from a teacher-centered information source to a mosaic of sources, each appropriate to a particular learning context. Carefully designed IRI programs can form an important part of this mosaic.

Most educational radio programs fail for two main reasons. First, to appeal to a large audience, program content tends to be broad and not closely linked to specific curriculum objectives. Second, individual teachers and classes move at different paces through the curriculum, and the content of the radio program is often not appropriate for a particular classroom. An IRI lesson sequence, on the other hand, *governs* to a large extent the pace of the learning process in the classroom through its design, thus ensuring that all the classes it reaches are in lockstep.

The growth of computer-based learning is not limited to the field of distance learning. Many countries are experimenting with this technology in the classroom. It is already clear that the technology will provide a powerful learning tool, but it need not supplant other forms of reaching students, such as IRI. Multimedia computer-based learning programs, delivered from a storage device or via the Internet, focus on individual or small-group learners due to the high cost of terminals, software, etc. IRI, however, is essentially a large-group tool. Class group teaching has an intrinsic merit—it helps create a web of understanding and provides group support as individuals advance their own learning. For these reasons and the others stated above, IRI will continue to be a valuable option for educational planners.

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*This article is derived, by permission, from the following study: Alan Dock and John Helwig (editors), ***Interactive Radio Instruction: Impact, Sustainability, and Future Directions.*** 1999. A joint publication of the World Bank and USAID's ABEL Project, Education Development Center.