Five Myths about Educational Radio

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The COVID-19 pandemic has sent education into a crisis. From Los Angeles to Port-au-Prince to Mogadishu, too many students have gone missing from educational systems due to their inability to connect. The longer-term consequences for school attendance, nutrition, and health are alarming.

In response, educational authorities are scrambling to identify viable ways to reach the 1.5 billion students who are now homebound.[1] The possibilities of providing educational opportunities remotely are constrained by the digital divide. With the rise of the smartphone, the number of households having access to the Internet now surpasses those with computers but no Internet access.[2] In developing countries, only about 47 percent of households have Internet access,[3] with

rates for women lower than for men.[4] Unfortunately, even when one member of a family has a phone, connectivity often fails to reach the rest of the family. Children must compete with parents and siblings for access to the device and the electricity or battery needed to power it. In some countries, young people in urban settings with a device would often connect at a local park or shopping mall to download educationally related programs or information. The COVID-19 pandemic has shut down those options. Even in the U.S., school systems are finding that many students do not have Internet access at home.[5] The reality is that only a small minority of students in the developing world will have access to a connected device suitable to follow the kinds of programs many ministries of education are seeking to provide.

It is not surprising that in the face of the pandemic, educational leaders are re-discovering the power and reach of audio and radio, including interactive audio instruction or IAI. Education Development Center (EDC) pioneered the work of IAI in the 1980s and has since reached 100 million learners across 24 countries, providing educational content in various languages and a range of subjects, such as literacy, math, social studies, and life skills. IAI differs from traditional, often unidirectional, educational programs in that IAI programs require constant interactivity between the audio lesson, the student or students, and a teacher or caregiver. Donors and ministries of education are turning to IAI due to the availability of proven programs that have already been produced and are ready to be broadcast with little or no changes.

EDC's COVID-19 Resources site lists audio learning resources, including a catalog of EDC's IAI programs, for countries looking for programs that have already demonstrated, through rigorous impact evaluations,[6] the ability to produce significant learning outcomes.

Yet, despite this renaissance of interest, several myths about IAI still exist.

MYTH 1

Radio or audio programs are your grandmother's medium. The nimble-fingered smartphone generation isn't interested in just audio.

False. While it is true that children and youth are digital natives and early adapters of the latest technology, audio is an extremely popular medium, as indicated by EDC's experience with nearly 100 million enthusiastic IAI students during the past four decades. Well-produced audio can free the imagination in ways that no video can by requiring the listener to fill the visual void with their own personal interpretation. Studies have demonstrated that children between 7 and 13 years old have more creative responses to audio than they do television.[7] Youth are quickly becoming avid podcast listeners: in one month in 2019, 53 percent of 12–24-year-old-Spotify users listened to a podcast.[8] In that same year, the top four fastest-growing podcast markets in the world were in Latin America.[9] According to

a recent survey, the majority of Americans now listen to podcasts, and listenership among young adults is one of the fastest-growing demographics.[10] Besides audio's appeal to the imagination, young people today are far more likely to multi-task. Audio provides easy access to entertainment when exercising, doing chores, or even doing homework. No matter what device is used, audio has been reborn as cool.

MYTH 2

Radio lectures can provide an excellent substitute for classroom instruction.

True. But who wants that? Who wants to replicate classroom instruction that has been shown to be failing? In country after country, performance in primary-school reading and math is dismally low—resulting in what the World Bank calls *Learning Poverty*.[11] Radio should not be used to reproduce poverty in the classroom.

It is important to note that all educational radio programs are not alike. Some countries have histories of "radio on the air" programs that were basically recorded lectures. Many countries are currently recording lectures of teachers for broadcast during the current school shutdowns. These lectures can reach students via television or radio. However, this strategy puts teachers at risk of getting ill when they come to record each evening at the studio and students of less-stimulating lecturers at risk of falling asleep. The lecture method when used with primary school students in a live classroom can be dull, more so when used on television, and far more so on the radio.

Education is most effective when the process is engaging and not simply an act of passive listening. IAI, which can be broadcast on radio or delivered through a media player, differs from traditional educational radio in that it involves constant interaction between the student and a teacher or co-learner and the audio lesson. Producing programs that emphasize student-centered instruction for use in a classroom or at home requires a complex process of master planning, scriptwriting, production, and formative evaluation. This process can take, at minimum, one year to produce one year of lessons. Clearly, most ministries of education have neither the time nor the expertise to do this quickly enough to address the closures caused by the COVID-19 pandemic.

Well-designed IAI programs coach a teacher on how to guide student-centered instruction. As such, the radio provides in-service training for teachers or facilitators, regardless of how much previous professional development they have had. Through a variety of segments, including songs, dramas, activities involving materials from the environment, and ongoing verbal interaction with the person facilitating the lesson and the radio characters, students become actively engaged.

In schools that use IAI, if a teacher is absent, students often stand up and lead the IAI lessons themselves. They don't want to miss out on their favorite (educational) *reggaetón* or miss what is happening next in the drama. During the pandemic, that classroom teacher can be replaced by a parent, a caregiver, an older sibling,

or anyone else in the home who can guide instruction with help from the audio lesson. Enabling both students and family members to be involved in leading instruction through the coaching provided by the IAI program offers many benefits, even in situations of extreme conflict.

MYTH 3

Radio is best used for rural audiences because they often do not have access to online programming.

False. Studies on IAI have revealed significant learning gains in urban and rural settings alike. It is important to note, however, that often rural students are starting at lower levels of attainment as demonstrated on standardized tests. Thus, even greater learning gains from rural populations has meant that the programs were simply leveling the playing field. Audio programs, delivered through radio or as an Mp3, have demonstrated true cost-effectiveness in all settings. The lesson here is that ministries investing in distance learning are wise to study the cost-effectiveness of IAI as it compares to online options, especially when access and feasibility are factored in. For example, one study compared IAI with classroom materials and teacher training and have found that IAI/IRI (interactive radio instruction) proved to be far more cost-effective.[12]

MYTH 4

Multimedia programs, such as found online, are educationally more powerful than single-media options, such as radio.

False. Two of the key elements of language instruction and reading are the oral and aural components. Most of us learn to speak through speech. Parents start saying things like, *Mama! Papa! Hot!!!!* from the time children are born. Everyone learns to hear these sounds and form the words that will eventually be part of the essential building blocks of reading instruction. Children play with these sounds when reading and writing words. Finding ways to simply listen and appreciate the sound, whether in language learning or reading instruction, is crucial. As noted in the *Landscape Report of Early Grade Literacy*, oral language instruction is often overlooked.[13] Audio lessons offer aural support by modeling—in ways that textbooks cannot—how to listen for and pronounce the sounds that are the building blocks of words. One of the great concerns in pedagogy today is that today's digital natives who have grown up with smartphones will be so enamored with the screen that they won't take the time to savor those important steps such as the sounds of sounds.

This step in reading instruction is particularly critical when the language of instruction is not the same as the mother tongue of the students and/or teachers. Enabling teachers to teach students in languages that have often been marginalized by a more dominant language of instruction has demonstrated greater learning gains by those students, not only in reading instruction but also

in subjects such as math and science.[14] From the early days of IAI math in Bolivia to science in Papua New Guinea[15] to the Tikichuela early childhood math programs in Paraguay,[16] learning by IAI has provided highly significant benefits. Why? The most likely explanation is that IAI walks teachers and students through daily lessons that are not only carefully researched, designed, and guided but also highly entertaining. Engagement of learners is crucial. As Benjamin Bloom noted when interviewing highly successful piano students about their very first piano teachers, "The effect of this first phase of learning seemed to be to get the learner involved, captivated, hooked and to get the learner to need and want more information and expertise."[17] This is a tall order for anyone to carry out on a constant basis—but that kind of engagement is possible with the help of carefully designed IAI.

MYTH 5

Interactive audio instruction is a fine substitute in times of crisis, but it will never replace a good teacher.

True. However, IAI is an effective tool for both teachers and students. Just like any helpful teaching material, the combination of a good teacher and effective materials can truly transform a classroom. Many students, however, do not have access to a "good" teacher, even when schools are in session. Teacher professional development (PD) is sorely lacking in many places. IAI provides PD in-service, as it is generally embedded into each lesson, which is why the program coaches the teacher to instruct rather than speaking directly to the students.

Pre-COVID-19, nearly 72 million school-age students were out of school. Many countries had high student enrollment, but the reality was that students were not actually attending school, or classes were disrupted due to emergencies, such as the current pandemic. IAI offers the opportunity to provide access to education in these situations, and potentially, a bridge back to schooling.

Conclusion

Yes, countries should invest in online learning opportunities, webinars for teachers, increased mobile access, and blended learning that brings in the best of all worlds. They should follow a multichannel approach, because channels can break down: a teacher might be sick one day, the dog may eat the exercise book, or the Internet connection may go down. However, in the search for short-term options to assist parents during school closures, countries must plan wisely. It makes sense to begin with a delivery channel with a proven track record of educational benefits and the capacity to withstand disruption. That channel is audio—whether broadcast on radio, downloaded, or distributed on Mp3s.

With all of the uncertainties arising during the COVID-19 pandemic, it is reassuring to look at the evidence that IAI is able to provide the consistency needed for students to continue following the same, well-planned course of study, whether in school or at home. Additionally, the attributes of IAI lend themselves to the types of community mobilization that will be needed to get students back in school when the time comes. IAI can also provide the kinds of messaging necessary to address the mental and physical health consequences that will surely accompany this crisis. It has done so successfully in the past and can do so in the future—if given the opportunity.

Endnotes

1   Strauss, V. (2020, March 27). Answer sheet: 1.5 billion children around globe affected by school closure. *Washington Post*. Retrieved from https://www.washing-tonpost.com/education/2020/03/26/nearly-14-billion-children-around-globe-are-out-school-heres-what-countries-are-doing-keep-kids-learning-during-pandemic/

2   ITU. (2019). *Measuring digital development: Facts and figures 2019*. Retrieved from https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf

3   ITU. (2019). *Measuring digital development: Facts and figures 2019*. Retrieved from https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf

4   UNESCO. (2019). *I'd blush if I could: Closing gender divides in digital skills through education*. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000367416.page=1

5   Blume, H., Kohli, S., & Esquivel, P. (2020, April 22). Getting free internet is hard for poor students despite provider promises, survey finds. *Los Angeles Times*. Retrieved from https://www.latimes.com/california/story/2020-04-22/getting-free-internet-hard-for-poor-students-despite-provider-promises

6   Ho, J., & Thukral, H. (2009, February). *Tuned in to student success: Assessing the impact of interactive radio instruction for the hardest-to-reach*. Retrieved from https://www.edc.org/tuned-student-success-assessing-impact-iri

7   Valkenburg, P., & Beentjes, J. (1997, June). Children's creative imagination in response to radio and television stories. *Journal of Communication*, *42*(2), 2–38. Retrieved from https://doi.org/10.1111/j.1460-2466.1997.tb02704.x

8   Edison Research. (2019, March 6). The infinite dial 2019. Retrieved from https://www.edisonresearch.com/infinite-dial-2019/

9   Grey, G. (2019, April 17). Top growing podcasting countries – March 2019. Retrieved from https://blog.voxnest.com/top-growing-podcasting-coun-tries-march-2019/

10 CBS News. (2019, January 20). CBS News poll: The jump in popularity in podcasts. Retrieved from https://www.cbsnews.com/news/cbs-news-poll-the-jump-in-popularity-in-podcasts/

11 World Bank. (2019, October 15). Learning poverty. Retrieved from https://www.worldbank.org/en/topic/education/brief/learning-poverty

12 Dock, A., & Helwig, J. (Eds.). (1999). Interactive radio instruction: Impact, sustainability, and future directions. *Education and Technology Technical Notes Series, 4*(1). Retrieved from http://documents.worldbank.org/curated/en/198821468779129452/pdf/multi-page.pdf

13 Kim, Y.-S. G., Boyle, H. N., Zuilkowski, S. S., & Nakamura, P. (2016). *Landscape report on early grade literacy.* Washington, DC: U.S. Agency for International Development.

14 Heugh, K., Benson, C., Bogale, B., & Yohannes, M. A. G. (2007). *Final report study on medium of instruction in primary schools in Ethiopia*. Addis Ababa, ET: Government of Ethiopia, Ministry of Education.

15 Olsson, M. (1994, April). Institutionalizing radio science in Papua New Guinea: A response to teacher demand for interactive radio instruction. *LearnTech Case Study, Series No. 2*. Retrieved from https://files.eric.ed.gov/fulltext/ED372735.pdf

16 Naslund-Hadley, E., Hernández-Agramonte, J. M., Martínez, E., & Ludlow, C. (2012). *The making of little mathematicians: Fostering early math understanding in Paraguay*. Washington, DC: Inter-American Development Bank.

17 Bloom, B. S., & Sosniak, L. A. (1985). *Developing talent in young people*. New York, NY: Ballantine Books.