

Meeting the Needs of a New Democracy

Multichannel Learning and Interactive Radio Instruction in Haiti



KATHARINE YASÍN

EDUCATION DEVELOPMENT CENTER

YVROSE LUBÉRISSE

HAITIAN FOUNDATION FOR PRIVATE EDUCATION

Meeting the Needs of a New Democracy

Multichannel Learning and Interactive Radio Instruction in Haiti

KATHARINE YASÍN

EDUCATION DEVELOPMENT CENTER

YVROSE LUBÉRISSE

HAITIAN FOUNDATION FOR PRIVATE EDUCATION

ADVANCING BASIC EDUCATION AND LITERACY PROJECT (ABEL2)

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

— 1999 —

Contents

The Setting	5
Educational Needs in Haiti	6
Scenes from an IRI Classroom in Haiti	7
The Strategies	10
Multichannel Learning Strategies as a Response	10
IRI: New Approaches	11
Distance Education Challenges in Haiti	13
The Pre-Pilot	14
Testing the Waters: A Pre-Pilot Activity	14
Lessons Learned from the Pre-Pilot	18
The Pilot	22
Dissemination	24
Continuous Evaluation	24
Evaluation	25
Excerpt from S.O.S: Education for Haiti	26
CAAS Tests: The Issues of Speed and Accuracy in Learning	29
Transitioning to the Future	34
Reading Workshop	34
Education 2004	36
Conclusion	37

The Setting

This paper tells the story of how an educational innovation demonstrated to communities and educators alike its applicability to education systems in dire circumstances. These circumstances can only be understood if one is familiar with the unique context of Haiti. Haiti is the poorest country in the Western Hemisphere. The island nation's 6.9 million inhabitants live on extremely low wages in a land that has been nearly destroyed by deforestation. Haiti, however, has an extraordinary past. Once called “the pearl of the Antilles,” it was one of the wealthiest French colonies in the world. The only successful slave rebellion in the world earned Haiti its independence in 1804, but the economy has been in decline ever since. The United States almost ceased trading with Haiti after its independence, in part because it feared a similar rebellion could be sparked there as well. Furthermore, Haiti has never experienced an extended period of peaceful democracy.

In 1994, Haitian educators faced the task of rapidly rebuilding the education system of their fragile new democracy. The education sector was a rapidly growing enterprise. Astonishingly, 80 percent of all primary schools in Haiti were private, due in part to the unstable history of the Haitian government. Yet, the hope Haitian parents placed in the future was dramatically demonstrated by studies indicating that rural parents spend up to thirty percent of their yearly income on the education of one child.

After the return to democracy, individual Haitians as well as orga-

Meeting the Needs of a New Democracy

nized groups such as churches quickly responded to the need for increased access to schooling. While *access* has greatly increased due to the ever-growing private sector, it was still far from universal. Additionally, the *quality* of education was inconsistent. Teachers were often poorly trained or not trained at all. Educational policies, such as the use of Creole as the language of instruction, were often set but not followed. With the goal of improving the quality of education in Haiti, the Haitian Foundation for Private Education (FONHEP) was formed in 1989 with the support of the United States Agency for International Development (USAID). FONHEP's mandate was to "contribute to the organization of the private educational system...particularly in poor areas." Specifically, FONHEP would provide assistance to schools, carry out research and development of pedagogical innovations, and develop its capacity as an educational institution.

Educational Needs in Haiti

Given Haiti's unpredictable political situation, its hopes for the future, and lessons from the past, educators from both the public and private sectors sought a response that would be effective and sustainable. Sustainability has often met its demise in political instability. How could an innovation work toward a more stable situation? Educators also sought a response that would *prepare students for democracy*. In the early 1990s, FONHEP had explored the use of distance education under USAID's *Projet Bilateral d'Education* (PROBED) project. While some efforts at distance education in Haiti had been carried out

Scenes from an IRI Classroom in Haiti

Seated on benches of three to five children are the students of an urban public school. The children, from a lower socioeconomic background, proudly wear their blue and white uniforms with matching hair ribbons for the girls. They are alert and excited. The teacher has just informed them that they are about to hear a lesson on the radio. As soon as they hear the opening introduction of the theme music, they begin to sing without missing the first word.

As soon as the song ends and the lesson begins, the children quiet down to listen to the radio characters. During the lesson, the children listen to a story and dialogue, participate in an exercise, respond to questions posed by the radio narrators, and sing along to another song. Occasionally some students get a little lost, but the classroom teacher is generally able to get them back on track.

Students clearly enjoy their participatory role in the lessons. The short period of physical exercise is a clear break from the usual stationary nature of the other lessons. Even the shyest children seem to forget themselves and respond when questioned by one of the radio characters or the classroom teacher.

Meeting the Needs of a New Democracy

in the 1970s by the ministry of education and a church-related radio station (*Radio Soleil*), it had never been developed using the Interactive Radio Instruction (IRI) methodology that would be integrated into the classroom.

At a conference of international distance educators in Europe, FONHEP discussed new distance education strategies for Haiti. A request was submitted to the International Council for Distance Education (ICDE) and the International Multichannel Action Group for Education (IMAGE-Rapid-Ed) in March 1994, which described Haiti's problems and proposed ways in which distance education might respond.

In a followup to this request, Haitian educators expressed an interest in multichannel learning and IRI to representatives of USAID's LearnTech project. In November 1994, a LearnTech team went to Haiti to discuss the possibility of multichannel learning with members of the education sector. During these discussions, Haitian educators and LearnTech team members discussed the feasibility of launching a small pilot project to develop a program from conception to final evaluation, and explored the possibility of a larger multichannel learning experience in Haiti.

In February 1995, LearnTech staff again went to Haiti to develop an options paper outlining the "pre-pilot" activity. (It was called *pre-pilot* because a larger pilot activity was envisaged to follow.) The options paper was intended to gather feedback from various members of the educational sector, including FONHEP, the ministry of education, and other public and private sector representatives. This feedback would then be used to develop an action plan.

Multichannel Learning and Interactive Radio Instruction in Haiti

USAID agreed to finance the pre-pilot through its Advancing Basic Education and Literacy (ABEL2) project. ABEL2 had already assisted over twenty countries in Latin America, Africa, the Caribbean, Asia, and the Middle East by providing assistance in project design, policy support, evaluation, applied research, and pilot projects. ABEL2 had also helped provide continuity from previous USAID projects and carried out research (sometimes in the form of pilot projects) necessary to determine the need for future projects.

In the case of Haiti, USAID had already explored the possibility of educational radio through both the PROBEd and LearnTech projects. Because these projects had ended or were soon ending, USAID supported the pre-pilot through ABEL2 consortium member Education Development Center (EDC), which provided the technical assistance for the activity.

The Strategies

Multichannel Learning Strategies as a Response

What methods were Haitian educators seeking? Multichannel learning means using a variety of methods to reach students, e.g., lesson received via radio, posters, dramas, books, or any other form of educating via a medium. The multichannel approach attempts to reach learners in both the technical and pedagogical senses. There is often little assurance that all learning channels will function all the time. For example, if a country has a rainy season during which roads are impassable, print materials may not always reliably reach their audience. However, radio waves might. While it may be preferable to have many channels present, the multichannel approach does not depend on the presence of all channels to produce results.

Similarly, the multichannel approach recognizes that people have different learning preferences, as groups or as individuals. For example, many children respond to songs or other forms of oral communication better than they respond to text. An interactive radio program may use songs, texts, games, dramas, drills, and other types of segments to reach a variety of learners in ways they learn best. While one student may learn achieve a particular learning outcome through memorizing a song, another may achieve the same outcome through participating in an exercise.¹

¹See *Multichannel Learning: Connecting All to Education*. Washington, DC: EDC, LearnTech, USAID, 1995.

Such variety is also essential for the entertainment value of a lesson, a key to keeping the attention and active engagement of students. Students learn when they are actively involved. However, many traditional lessons, even those produced for radio broadcast, have focused too little on this aspect of learning. IRI, by definition as well as name, emphasizes *interaction* among the classroom teacher, the radio characters, and the students.

IRI: New Approaches

The IRI methodology has undergone many changes since its inception in 1974 with the Nicaragua Radio Mathematics Project. IRI emphasizes active learning through the use of a variety of lesson segments that facilitate interaction among radio characters, the students, and the classroom teacher.² The methodology is student-centered: the lessons are targeted directly to students and invite them to join the learning process. This invitation is generally issued from a “conversation” that takes place among the learner, the radio characters, and the teacher. Using solid methods of *instructional design*, scriptwriters incorporate appropriate pedagogical methods into each lesson. Such methods are generally *distributed* throughout each lesson and the series.

Students are encouraged to play an *active role* in each lesson. More recently, IRI lessons have included more *open-ended questions* that require *creative and critical thinking* from students. Lessons are *fun and engaging* so

²IRI: What it Is, How it Works and What Is Needed to Get it on the Air. Washington, DC: EDC, LearnTech, USAID, 1994.

Meeting the Needs of a New Democracy

that students willingly participate. Teachers, too, are able to hear how another teacher or instructor uses new teaching methods. Some scripts may include modeling as a method of encouraging teachers to follow the example of the radio teacher. The lessons also demonstrate how teachers can provide positive feedback to students.

Through sound formative evaluation, which begins with the instructional design process and continues throughout the life of the project, scriptwriters and producers are able to continuously improve and adapt lessons rather than evaluating a series only after it is finished and aired. This process saves time and money, and improves the actual product being broadcast. Scripts may be revised if learning is not taking place, if the directives are not clear, if they are not appealing to students, if the content is not appropriate for the setting, or for any other reason.

Another focus of most IRI programs is girls and other disadvantaged students.³ For example, IRI can help improve the types of instruction and the messages girls receive during a lesson. IRI can create female characters that, unlike the passive, complacent female characters found in many educational materials, are active and curious learners. IRI can also present girls and women in professional roles traditionally reserved for men. Teachers, too, learn how to better respond to girls and to encourage their participation in class.

Recently IRI has branched out into new content areas as well as

³Making IRI Even Better for Girls. Washington, DC: EDC, LearnTech, USAID, 1996.

more diverse target audiences. For example, in Bolivia (1994) and Nepal (1996), IRI is being used in multichannel learning projects designed for caregivers in early childhood development centers.

Distance Education Challenges in Haiti

The possibility of applying IRI and multichannel learning techniques in Haiti presented opportunities for two new uses of IRI. First, while other IRI projects had run into political instability (Nicaragua), or had begun during a period of great political change (South Africa), none had been launched in as uncertain a political situation as Haiti. How could sustainability be achieved? Second, the pre-pilot phase launched the first use of IRI to teach reading. Was this possible given the fact that reading is a visual medium?

In 1994 Haiti was just beginning to build a new democratic society. However, as democracy has found little expression in Haiti, it was evident to educators and donors that Haitians needed more information on just how a democracy functions. Civics education was clearly needed at all levels—and not just on political issues, but also on more practical issues such as health and community building. At the same time, it was evident that years of unstable governance had left the education system unable to provide basic education to all.

The Pre-Pilot

Testing the Waters: A Pre-Pilot Activity

A new team comprising members of the public sector (the ministry of education), the private sector (FONHEP), and EDC decided to proceed quickly with the first steps of the activity. Team members stressed the importance of capacity building while carrying out the activity. IRI was chosen as the key medium of instruction in the multichannel activity after key FONHEP staff learned of its merits in neighboring countries. A team of scriptwriters familiar with IRI was needed but did not exist due to the fact that this was the first IRI experience in Haiti. In order to build such capacity while producing the actual lessons to be tested, the team decided to provide scriptwriting training for potential writers. An IRI scriptwriting workshop was held, which gathered Haitian educators, teachers, writers, actors, musicians, artists, recent university graduates, and content specialists. The workshop's objectives were to produce eight sample lessons using environmental education (considered part of civics education in Haiti) for content. All the lessons dealt with environmental issues concerning water, e.g., building latrines, keeping rivers and other water sources clean, and decanting water in order to prepare clean drinking water.

The workshop team began by carrying out initial *audience research* with focus groups made up of students, teachers, and community groups to gather pertinent information needed to produce lessons with relevant content and appealing lessons. One hundred fifty-eight people participated in five focus

group discussions in the town of Thomazeau. The sessions sought to identify the knowledge and attitudes of the school communities towards the environment and community collaboration as well as their experience with development education and media habits. The following are excerpts from what was learned during the sessions.

Knowledge of the environment: The directors and children had a good knowledge of environmental issues. For example, both groups were aware of the link between cutting trees, erosion, soil loss, and drought. All groups mentioned the difficulty of taking action due to economic pressures.

Experience with environmental education: The participants had little knowledge of public campaigns or community development initiatives concerning the environment and related issues such as hygiene, sanitation, water management, and community agriculture. Some were aware of information on tree planting that was broadcast on the radio in the mornings.

School environment: There was much concern about the quality of the school environment among all groups. Poor facilities including overcrowded classrooms, leaking roofs, broken or uncomfortable furniture, no clean drinking water, and too few latrines. All groups expressed an interest in contributing collectively to improving the school environment.

Meeting the Needs of a New Democracy

Collaboration between directors, teachers, parents, and children: All groups expressed interest in collaborating with others on collective action to improve the environment. Though parents suggested forming parents' committees, the directors were less enthusiastic about the idea out of fear for being dictated to by parents. The groups shared a vision of progress being achieved through working together.

Media habits: There were almost as many different preferences for particular radio stations as there were participants. The morning between 5 and 6 A.M. was the preferred listening hour for men and children. Women said they were too busy to listen to the radio. Approximately one in five participants owned a functioning radio and one in ten a radio-cassette player. Others said they could not afford batteries.

Educational radio: The teachers and directors were aware of educational radio though they had no direct experience with it. All groups responded positively to the prospect of educational radio.

Characteristics of the children: The children had a good knowledge of the environment in general and were well aware of conservation and environmental problems and some solutions. They were receptive to music and songs and shared a common repertoire of songs, games, and stories. They were well aware of popular, religious, and traditional songs and culture.

With this and other information, learning objectives for both the

students and the teachers were established and mapped across scripts. During the workshop, representatives from the organizations mentioned above worked together and then actually recorded the lessons themselves. These lessons were then tested with a sample of children and adults.

Accompanying the lessons were print materials such as a poster and a teacher's guide. During the needs analysis, it was evident that Haitian classrooms had few types of learning materials on the walls, most classrooms consisting only of bare walls, chalkboards, and benches. Teachers used chalk and sometimes carried a stick or pointer to use at the board. This poster gave the teachers another channel to use—children could visibly see the poster that depicted the fictitious town in which the radio dramas took place. The posters, work sheets and teacher's guides were developed and printed by a local printing establishment. (Writers and artists from this printer had participated in the workshop team.)

The fictitious town was developed based on workshop participants' knowledge of Haitian towns and the information gathered in the needs analysis. The town was called Lakou Kajou. Not only did the story segments take place in Lakou Kajou, but the songs and print materials were based on the characters and places found there.

In the needs analysis, researchers noted that listeners wanted to hear concrete practical advice applicable to daily life. Thus, one of the segments was simply dedicated to practical advice.

Given the short time period of the pre-pilot (four weeks), the team

Meeting the Needs of a New Democracy

felt it would be best to disseminate the lessons via cassette rather than radio. Eight programs were played over the four week period. During the course of the programs, children sang songs, played games, colored educational posters, completed worksheets, and participated in other interactive activities.

The ministry of education aired a twenty-minute presentation on its television program dedicated to education, and the minister held a press conference to discuss the merits of this experiment.

Teachers, school directors, and monitors received a one-day training that covered communicative classroom methods and how teachers guide IRI lessons. Monitors were trained in filling out observation sheets.

Lessons Learned from the Pre-Pilot

In total, six hundred students from thirteen schools participated in the programs. Feedback was very positive. Due to the brief nature of the series, a systematic assessment of learning outcomes was impractical. Feedback on interest in the programs as well as general effectiveness was covered, however. The evaluation team, made up of scriptwriters and FONHEP school monitors, gathered information—primarily from focus groups—pertinent to deciding whether or not a larger multichannel learning experience should be pursued.

AN APPRECIATION OF CONTENT RELEVANCE

There was much positive feedback on the relevance of the *civics content* to listeners' lives. The learning process is more effective when the

knowledge being imparted builds on the knowledge of the student and is relevant to the student's life. The characters in the series were confronted with issues often found in their lives, and practical solutions to these problems were generally suggested. For example, the children in the programs learn how to clean drinking water to treat and prevent water-related illnesses such as diarrhea. Students learned about the relationship between hygiene and health, various practical issues concerning water, and about the concept of microbes. Feedback from students and teachers revealed that the audience appreciated the fact that many of the lessons were directly applicable to their daily lives. Students said that the programs gave them “practical advice that we can use in our lives” as well as “the opportunity to learn new things.”

Students strongly identified with the characters and setting. They were able to recount stories and names of characters. They said that the stories told were “pretty stories.” They also offered practical comments. For example, they felt that the male characters spoke loudly enough but that the female characters should speak louder. While they enjoyed participating in the lessons, they said that they would have liked “more time to think” during activities.

TEACHER AND MONITOR COMMENTS

Teachers had many positive and constructive comments. They felt that students were particularly attentive and able to answer questions regarding the happenings in Lakou Kajou. They said that students were so interested and attentive that they would “lean forward to hear better” and

Meeting the Needs of a New Democracy

some said that parents had come to school to talk about the changes they had seen in their children.

In terms of teaching, they felt that the multichannel method “helps teachers be efficient and participate.” Another said, “I’ve learned a new technique on how to communicate things.” They appreciated their participatory role in the multichannel approach and said it helped them to be more efficient. They expressed the desire to have more than one day of training to prepare them.

The monitors made note of technical improvements to be made in addition to the more qualitative feedback. For example, they noticed that students needed more time to complete their activities and that at times the programs were difficult to hear due to classroom noise. They also made note of the times that students listened well and when their attention faded.

Results of the evaluation provided the following list of recommendations for the programs:

- ▶ Teachers needed more time to explain lessons, and students more time to complete them.
- ▶ The level of difficulty should increase, with the first few programs containing simpler activities and later programs becoming more complex.
- ▶ Teachers needed clearer instructions on using the print materials and helping the students during activities. The instructions in the teacher’s guides should also be made more explicit.
- ▶ Teachers needed more training on the interactive approach, especially with being spontaneous, improvising, and using their imagination.

Multichannel Learning and Interactive Radio Instruction in Haiti

- ▶ Printed materials should have undergone a pre-test to ensure comprehension and effectiveness.
- ▶ Sound quality from the audiocassettes was sometimes poor, and students had difficulty understanding what was being said.
- ▶ More attention needed to be paid to institutional development and capacity building.

Such results inspired the team to continue their work through a larger pilot project. The pre-pilot had demonstrated that students and teachers alike thoroughly enjoyed and benefited from the experience—crucial factors when deciding whether such initiatives should be pursued. The cyclical manner of the formative evaluation process would ensure that those problems or challenges that arose during the pre-pilot would be directly addressed. A constant system of evaluation and improvement would take place throughout the life of the project. Step one, the pretest, had paved the way, and the team was set to carry on.

The Pilot

USAID/Haiti agreed to support the development of a set of lessons extensive enough to demonstrate the effectiveness of IRI in Haiti. During the pilot project, which took place between October 1995 and March 1997, forty math lessons and sixteen reading lessons (with civics content) were developed, produced, and disseminated. Participants attending a seminar in July and August 1996 selected the forty schools (twenty-eight private and twelve public) that would participate in the first phase of the project. Schools were selected from five regions: the west, north, south, center, and Nippes.

The pilot phase began with a training session held in Washington, DC. Members of the distance education team were particularly eager to improve their skills related to instructional design and scriptwriting for IRI. In Washington, they met with a diverse group of IRI experts. Five scriptwriters were trained during the two-week session. The team then decided to translate existing math programs developed for Nicaragua into Creole to serve as the basis for the math segment. They also began the master planning process by identifying the learning objectives for reading. The team chose the topics of *the environment* and *living with others* for civics education content.

The distance education team at FONHEP, along with FONHEP's Haitian consultants and occasional assistance from IRI specialists from EDC, began the scriptwriting process in January 1996. The process took longer than anticipated to master, and consequently the scripts were not finished until

August, which delayed the printing of the materials that accompanied the programs. The printed materials consisted of a teacher’s guide for mathematics and reading as well as a reading guide for the students. These guides were printed in October of 1996. Meanwhile, the first reading and math lessons were being pretested and revised using a formative evaluation process. After revision, the production process began. Actors and musicians were hired to record the lessons and songs.

Table 1: Educators Participating in Pilot Project

	Directors	Teachers	Inspectors	Monitors	Total
Public sector	12	12	11	–	35
Private sector	28	29	12	5	74
Total	40	41	23	5	109

The team wisely decided to train not only teachers in the use of IRI but also school monitors, inspectors, and school directors (see Table 1). The involvement of these educators from both the public and private sectors at all levels was deemed essential to the effectiveness and sustainability of the project. Sometimes directors, inspectors, or monitors (whose roles are similar to those of the inspectors) were intimidated by or skeptical of education innovations. Such activities may seem like “play” to them and they might consider them less important than traditional classes. However, once they are informed about IRI, many become ardent advocates. This support can be vital. Not only

Meeting the Needs of a New Democracy

are teachers encouraged to participate but often directors, inspectors, or monitors can act as substitutes if a lesson is about to air and a teacher is absent.

Dissemination

Beginning in November 1996, lessons were disseminated via broadcast and cassette. Schools in the north (except for one) and west (except for two) received broadcasts from a radio station. The schools in the center and Nippes followed using cassettes. For both forms of dissemination, schools followed a fixed listening schedule. Table 2 lists the departments, number of schools per department, and number of students per department involved in the project.

Table 2: Departments, Schools, and Students

Departments	No. of Schools	No. of Students
West	15	985
Nippes	3	152
South	7	347
North	9	486
Center	6	248
Total	40	2218

Continuous Evaluation

A process of formative evaluation took place from the start. Data was gathered from schools through regular visits from FONHEP monitors, inspectors

from the ministry of education, central staff members from FONHEP, and consultants from EDC. Data from focus groups with parents, students, and teachers was also essential. Feedback from these visits was integrated into revisions to the programs.

Evaluation

Both external and internal evaluations were carried out during the project. USAID requested an external evaluation of the project to gather unbiased feedback on results and recommendations. Under the ABEL2 project, Creative Associates International, Inc. carried out the evaluation with some logistical assistance from EDC and technical assistance from the University of Massachusetts. Pretesting of students took place in October and November 1996, and posttesting occurred in February and March 1997. Students were tested in the regions of Cap Haitian, Miragoâne, Hinche, Cayes, Port-au-Prince, Grand-Goâve, and Léogane. Ten treatment and ten control schools were randomly selected from both the public and private sectors. Five test administrators were selected, hired, and trained in October 1996.

The external evaluation consisted of paper and pencil tests given to students, a computer-assisted test for speed and accuracy, and interviews and observations.⁴ Approximately five hundred students were pre- and posttested (see Table 3), and a small number of students in each class were given the CAAS

⁴See Robert Morin. *The Haitian Distance Education Project—Evaluation of the Pilot Phase*. Washington, DC: CAII, 1997.

Excerpt from S.O.S: Education for Haiti

Proposal presented to Rapid-Ed through the International Council for Distance Education, February 1994

On the problems faced by the educational system in Haiti

These consecutive blows to the school system can only weaken it, without talking of the disastrous psychological effects on the actors: school administrators who have difficulties in managing financial resources as well as human and material resources and in adjusting themselves to an unpredictable school calendar; teachers facing galloping inflation and salary cuts; students and parents living in a permanent fear of the future and who accept enormous sacrifices in order to fulfill school requirements....

On the role of education in a new democracy

The only way to bring the Haitian people to democracy is through education. Civic education must reach all strata of the population, the masses, the middle class, as well and the well to do. At all levels, it is necessary to develop civic allegiance, respect for institutions and legality, concepts of transparency (accountability), and balance of power. It is also important to promote respect for life, the environment, a sense of planning, and compromise in case of conflict.

tests. Math paper and pencil tests were written at the Laboratory for the Assessment and Training of Academic Skills (LATAS) at the University of Massachusetts using third grade math curriculum objectives. The paper and pencil reading tests were developed using the Sentence Verification Technique. Project staff from EDC were trained in this technique at the LATAS lab and they, in turn, trained Haitian test developers to produce the reading tests in Creole.

The Computer-Based Academic Assessment System (CAAS) tests measure reading and math performance. Using a laptop computer, a tester sits with a student who responds to questions he or she reads on the computer screen into a microphone. The tester records whether or not the answer given was correct, while the computer determines how long it takes the student to answer. This is especially helpful with such skills as word-attack where it is important to understand how long it took a child to actually read a word. Among the topics tested using the CAAS tests were letter recognition, word recognition, concept activation, nonword recognition, addition, number naming, subtraction, and the semantic processing of sentences.

RESULTS IN MATHEMATICS PROGRAMMING

Results in the math programs were similar to those of other versions of the series used in other countries such as Nicaragua. The students following the IRI programs performed significantly better than those in the control group. As shown in Table 3, students who were weakest on their pretest made the most progress during the course of the programs. Using an analysis of variance

Meeting the Needs of a New Democracy

(ANOVA) that involved only those students who took both the pre- and posttests, the treatment group scored significantly higher in math than the control group, $F(1,435) = 8.42, p < .01$. Rural areas, which traditionally score lower than urban ones, showed the greatest gains in results.

Table 3: Math Pretests and Posttests

Groups	Pretest	N	Posttest	N
Experimental (total sample)	32.57	319	44.11	334
Control (total sample)	37.15	188	43.72	230
Experimental (students who took both pre- and posttests)	31.59	267	44.76	267
Control (students who took both pre- and posttests)	37.19	169	44.86	169

RESULTS IN READING

Results in reading were not as impressive, although this outcome was expected, given the new format (teaching reading via radio) and the limited number of lessons (sixteen). As Table 4 shows, there were no significant differences between the students in the experimental and control groups, $F(1,438) < 1$. Students in the experimental group significantly improved their comprehension skills compared to the control group students. Experimental group students also showed a significantly greater ability in concept formation (logic). This may in part be due to the fact that IRI lessons often incorporate many open-ended questions that require more than memorization as a response.

Table 4: Reading Results for Pre- and Posttest Treatment and Control Groups*

Task	Pretest	N	Posttest	N
Experimental (Total Sample)	41.79	321	44.25	336
	<i>17.80</i>		<i>13.28</i>	
Control (Total Sample)	40.65	202	45.26	229
	<i>16.93</i>		<i>13.69</i>	
Experimental (Ss having both pre and posttest)	43.24	262	44.81	262
	<i>17.260</i>		<i>12.64</i>	
Control (Ss having both pre- and posttest)	41.80	177	45.01	177
	<i>16.12</i>		<i>12.42</i>	

*standard deviations in italics

Further analysis of reading results revealed no significant difference when schools were divided by factors such as urban vs. rural, public vs. private, or by the various sectors.

CAAS Tests: The Issues of Speed and Accuracy in Learning

Results of the CAAS tests were mixed (see Table 5). Given the highly sensitive nature of the CAAS tests, the results showed changes that might otherwise have gone unnoticed in the paper and pencil tests. For example, Table 5 shows that the experimental group significantly improved response time in five of the six tasks. Accuracy scores in the Sentence Understanding task showed the greatest improvement (53.99 percent to 77.71 percent).

Meeting the Needs of a New Democracy

Table 5: Pre- and Posttest Accuracy and Response Time Performance on the CAAS Reading Tasks as a Function of the Treatment Condition*

Task	EXPERIMENTAL				CONTROL			
	Pretest		Posttest		Pretest		Posttest	
	Accuracy	RT	Accuracy	RT	Accuracy	RT	Accuracy	RT
Simple response	99.23	1.21	98.71	1.04	98.69	1.52	99.72	1.22
	<i>2.09</i>	<i>.39</i>	<i>4.91</i>	<i>.43</i>	<i>2.91</i>	<i>1.38</i>	<i>1.40</i>	<i>.55</i>
Letter naming	89.39	1.31	95.82	1.01	82.28	1.32	94.47	1.14
	<i>13.04</i>	<i>.39</i>	<i>7.09</i>	<i>.23</i>	<i>25.08</i>	<i>.56</i>	<i>5.95</i>	<i>.36</i>
Word naming	64.43	2.38	80.54	1.74	54.12	2.26	75.35	2.11
	<i>27.43</i>	<i>1.90</i>	<i>24.42</i>	<i>.64</i>	<i>33.45</i>	<i>1.33</i>	<i>28.67</i>	<i>1.18</i>
Nonword naming	70.98	1.96	73.56	1.92	56.25	1.69	69.42	2.23
	<i>26.62</i>	<i>.95</i>	<i>23.48</i>	<i>.68</i>	<i>37.00</i>	<i>.69</i>	<i>29.10</i>	<i>1.09</i>
Category naming	72.31	4.00	84.61	3.92	73.55	3.45	77.04	4.39
	<i>17.04</i>	<i>1.93</i>	<i>16.65</i>	<i>1.21</i>	<i>18.46</i>	<i>1.35</i>	<i>16.09</i>	<i>1.98</i>
Sentence understanding	53.99	7.14	77.71	7.35	49.25	6.34	59.15	8.00
	<i>49.25</i>	<i>2.98</i>	<i>20.27</i>	<i>2.83</i>	<i>22.93</i>	<i>2.95</i>	<i>27.60</i>	<i>3.16</i>

*Standard deviations are in italics; RT=response time.

Certain tasks on the CAAS tests were not expected to reveal significant changes due to the short time period of the treatment. For example, the Simple Task should only reveal changes due to the maturation of the student—it is not designed to determine changes due to instruction. However, the Letter Task should reveal changes that occurred as a result of instruction. The CAAS tests were useful in that the changes that might have taken place in such a short time period would most likely only show up on such a sensitive instrument.

Multichannel Learning and Interactive Radio Instruction in Haiti

Internally, FONHEP carried out both qualitative and quantitative assessments. Some of their findings included the following:

- ▶ Teachers were very pleased with the teacher training and the lessons.
- ▶ Teachers were present and capable of carrying out the lessons in 94 percent of the cases and students were present 92 percent of the time. Such attendance is quite high for Haiti.

In addition to the qualitative data gathered by FONHEP concerning the response to the programs, FONHEP received phone calls and mail from schools not participating in the project requesting materials that accompanied the lessons they were listening to on the radio. The lessons broadcast on the radio were selling themselves! This unexpected feedback was encouraging.

In summary, the distance education activities that took place during the ABEL2 pre-pilot and pilot activities in Haiti produced both immediate and long term results. One of the challenges of these activities was the immediacy of the needs: no one knew how long the new democracy would remain stable enough to implement such an activity. With an uncertain window of opportunity, the team was able to develop effective distance education materials using the latest IRI and multichannel learning techniques. In addition to positive learning gains, these activities also developed a pool of talent now capable of bringing such an activity to scale in Haiti. The activity also provided a framework from which to expand the activity so that the results could be multiplied, and the lessons could eventually serve as many Haitian children as possible.

Meeting the Needs of a New Democracy

The pre-pilot and pilot activities broke new ground for IRI. New techniques were explored in both formative evaluation and content. For the first time, IRI was developed to teach reading. Additionally, the content of the reading lessons had instructional objectives of its own: civics education. Thus, an integrated content approach enabled Haitian educators to use the precious time period for each lesson to its fullest degree. Children developed skills in how to read while learning lessons in civics.

The lessons were developed rapidly, and this condensed time period made the use of formative evaluation even more important. Various types of evaluation and review were explored so that the resulting full-scale IRI activities that follow the pre-pilot and pilot have one of the most exhaustive formative evaluation plans to date.

An additional result of the project was the public/private collaboration that took place over its life. That the overwhelming majority of primary and secondary schools are private has at times caused friction between the public and private sectors. In an effort to make this relationship productive, the project team worked hard to involve both sectors in a fruitful working relationship. For example, given that the vast majority of schools are private and due to political constraints on supporting the ministry of education, a large part of project management was carried out through FONHEP. However, the ministry of education, through *Radio Educative* (the educational radio branch of the ministry of education), participated in the production of sixteen reading lessons and five

publicity messages. Dissemination of the lessons was also carried out by both public and private radio stations, one of which was *Radio Educative*.

Finally, FONHEP collaborated with a local printing company on the production of the three thousand teacher's guides and student textbooks, while many other projects have had to depend on the printing of materials from foreign companies equipped with large-scale printing capabilities.

Transitioning to the Future

As a result of the pre-pilot and pilot activities, USAID/Haiti decided to include IRI and multichannel learning in its current education initiative in Haiti, Education 2004. Audience research, translation of math lessons into Creole, the development of a reading format for the radio, the pretesting in the field, and the capacity building that took place during the pilot have laid much of the groundwork for a larger scale use of multichannel learning and IRI as a means to improve primary schooling in Haiti.

Reading Workshop

In preparation for the challenges ahead, the distance education team requested further support from the ABEL2 project to strengthen the multichannel learning and IRI methodology for teaching reading. Teaching reading via radio had been one of the greatest challenges of the pilot project. Although the distance education team had made great strides in this untested field, they benefited from the expertise of reading specialists who not only assisted them in producing a master plan but also helped them explore new theories in the field.

The team was again brought to Washington to consult with two reading experts. A third expert attended, became familiar with their goals, and then traveled to Haiti to assist with the preparation of a master plan. During the course of the workshop, the reading specialists discussed the necessity of the certain elements necessary to effective reading instruction. They stressed that

both phonemic awareness and phonics instruction needed to be part of reading instruction. When teaching phonemic awareness, scriptwriters incorporate rhymes, sound matching, segmenting, blending (of sounds), or phonemic substitution. The experts also shared what happens psychologically when one reads and how the declarative, procedural, and working memories each play a role. The specialists also explained the various approaches being advocated in the field of reading instruction in order to make sense of the latest research that the distance education team might encounter.

In terms of strategies that gave the students what one expert termed a “gradual release of responsibility,” the team discussed types of practices that could be incorporated into scripts. This “gradual release” signifies ways in which an instructor can begin by providing much assistance to the new reader (*teacher directed*) and finally give more responsibility to the student to read independently (*student directed*). These suggestions gave the scriptwriters a clear list of ways they could work with readers. For example, a teacher (radio or classroom) might begin by *reading aloud* to the students. Then the teacher might *share reading*, following a written text in which they students and teachers see the words. Students might then participate in *guided reading*, during which they read and the teacher follows. Finally, students can carry out *independent reading* either in groups or individually.

With the reading specialist, the team worked intensely to develop its master plan that contained the elements discussed in the workshop. The high level of detail in the plan facilitated both an effective and

Meeting the Needs of a New Democracy

timely turnaround of scripts required to make the production targets for the Education 2004 project.

Education 2004

Education 2004 is a response to a variety of needs in the Haitian educational context, some of which can be addressed by multichannel learning and IRI. Among these needs are:

- ▶ strengthening math and reading instruction through IRI;
- ▶ providing support to teachers and directors;
- ▶ providing needed materials for basic education to students, classrooms and schools;
- ▶ supporting communities and schools with an aim at improving quality;
- ▶ creating a network of quality schools; and
- ▶ assisting in improving educational policy in Haiti.

The distance education role in Education 2004 is a major means for improving primary instruction. This component covers three grades and two key subjects—math and reading with a civics education content.

The team will also need to carry out the production, distribution, evaluation, and followup of these lessons. Distance education will also need to be integrated into the other elements of Education 2004 so that such aspects of the project as educational materials or community involvement would reciprocally reinforce the distance education aspect.

Conclusion

Educators in Haiti set out to explore distance education as a viable response to the needs of Haiti's schools. The outcomes of the pre-pilot and pilot activities under the ABEL2 project demonstrated that multichannel learning and IRI are, in fact, feasible and effective methods of improving educational quality. Teaching reading, math, and civics by radio has proved to be effective, producing significant gains in learning as well as a fervent following by listeners. Teachers, students, and directors all expressed their love of the programs.

One visit to an IRI classroom is a vivid demonstration of success. Each member of the class can be seen singing along, answering questions, or participating in some way—even if simply listening intently. This is the “interactive” aspect of IRI. Classrooms, whose “participation” may once have consisted of students chanting along to a memorized formula, are being transformed into stimulating learning environments. The process is long and labor intensive, requiring constant attention to quality control and continuous staff development. With the challenges offered by Education 2004, this process continues.

ABEL2 and Other Reports on Pre-Pilot and Pilot Activities

Produced by ABEL2

Distance Education Pre-Pilot in Haiti. Video. June 1995.

Distance Education in Haiti: The Transition in Technical Assistance from ABEL2 to ED2004. Report prepared by Stephen Anzalone. October 1997.

Distance Education in Haiti: The Transition in Technical Assistance from ABEL2 to ED2004. Final Transition Report prepared by Stephen Anzalone. June 1998.

Goldstein, Elizabeth. First Lessons from Lakou Kajou: A Report on ABEL2 Assistance Provided in Support of the Distance Education/Multichannel Learning for Civic Education. August 1995.

Morin, Robert J. And James M. Royer. The Haitian Distance Education Project—Evaluation of the Pilot Phase. June 1997.

Multichannel Learning in Haiti: Options for the Future. Submitted by ABEL2, EDC, and Real World Productions. February 1995.

Produced by FONHEP

IRI in Haiti. Video, French. Developed with support from ABEL2. 1998.

Rapport d'évaluation. Submitted by the Haitian Foundation for Private Education (FONHEP) and EDC. October 1997.

Rapport Final. (Pre-Pilot.) Submitted by the Haitian Foundation for Private Education. February 1996.



For further information or additional copies, please contact

ABEL Clearinghouse for Basic Education
1825 Connecticut Avenue, NW
Washington, DC 20009-5721

Tel: 202-884-8288
Fax: 202-884-8408
E-mail: abel@aed.org