Interactive radio usage and its impact on Grades 1 and 2 teachers and students

Midterm Study of the *Appui Technique aux Éducateurs et Communautés* (ATEC) Program, Madagascar

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1.0 Executive Summary

Between June 2006 and February 2007, the Ministry of National Education and Scientific Research (MENRS, now the Ministry of National Education, MEN) in Madagascar developed 150 interactive radio programs for early primary classes: 75 for grade 1 and a similar number for grade 2. Ministry personnel also developed an accompanying teacher's guide for each grade level. The programs, entitled '*Izaho koa mba te hahay'*, were designed to be first and foremost a teacher training tool. Radio teachers would explain to their classroom counter parts different games, songs and student-centered learning activities for teaching Mathematics, French and Malagasy, and give them time to try out the activities with their students. The programs would thus provide structured support to primary teachers throughout the country, even those in the most isolated regions, in how to implement the active, intellectually engaging instructional practices generally associated with competency-based instruction, while at the same time ensuring that students learn more effectively.

In September 2007, the MENRS, with the support of the *Appui Technique aux Éducateurs et Communautés* (ATEC) program, embarked on a program to evaluate the effectiveness of interactive radio programs as a professional development tool. Data were collected three times in a stratified, random sample of nearly 180 elementary schools in 6 CISCOs. Data collectors conducted unannounced visits to grades 1 and 2 classrooms to determine the percentage of teachers who use the programs on a regular basis, to perform classroom observations to collect data on teachers' instructional practices, and to conduct interviews to ascertain teachers' responses to the programs. The study aimed primarily to answer two questions: Are teachers listening to the programs during class? Are they improving their teaching techniques?

The results demonstrate that the answer to both questions is a resounding "yes". During the first four weeks of the broadcast, 75% of teachers—and their students—were listening to the programs on a regular basis during class. **By April and May 2008**, during the eighth and ninth month of broadcasting, **the rate of teacher listenership had increased to 96%**.

Listening to the programs has encouraged teachers to adopt more engaging, student-centered teaching strategies. The number and percentage of teachers doing so by three different measures increased from September and October of 2007 to April and May of 2008 across grade level, teacher civil status, and teacher gender. When children participated in class, a full **70% of teachers increased the positive feedback they provided**, a practice which helps create a safe learning environment which encourages children's engagement in their own learning. When asking students questions, **80% increased the number of questions requiring students to go beyond memorizing and repeating information to use more advanced thinking skills.** Teachers asked one third more questions of the highest order measured, explaining or solving questions. The most complete measure used of teacher techniques was an index of 27 active learning behaviors encouraged by the radio programs. **Teachers made remarkable advances, with 96% of them using as least two thirds of the target techniques more than minimally, an increase from just 58% during the first four weeks of the program.** It is particularly notable that community-recruited and –supported teachers initially trailed their civil servant and community-recruited, MEN-supported colleagues in this measure, but that by the April-May period, they achieved similar results, even very slightly surpassing the other two groups.

Teachers clearly appreciate having the '*Izaho koa mba te hahay'* programs as a resource. In two rounds of structured interviews, 90% of teachers rated the quality of the programs as good or excellent, 90% opined that the programs had helped them learn new

teaching techniques, and 96% encouraged the Ministry of National Education to develop programs for other grades.

These encouraging results show that the '*Izaho koa mba te hahay'* programs are having an important impact on teachers and their practices throughout the six pilot CISCOs supported by the first phase of the ATEC program. As the program moves forward, seeking to increase its offerings and align the content of the '*Izaho koa mba te hahay'* programs to the competency-based curriculum now being introduced, serious challenges remain. These include maintaining consistent access to the broadcasts and thus their high listenership as well as taking a measure of whether improved teaching techniques are helping students learn the core competencies addressed in the programs. Clearly, though, the MEN and ATEC have a very solid foundation upon which to build.

2.0 Introduction

In 2006 the Ministry of National Education (MEN), with technical and financial assistance from USAID through the ATEC program (*Appui Technique aux Éducateurs et Communautés*), began developing interactive radio programs for grades 1 and 2 (CP1 and CP2) classes. The '*Izaho koa mba te hahay*' programs were designed to provide structured support to primary teachers struggling with implementing the active, student centered instructional practices generally associated with competency-based instruction. Radio teachers would explain to their classroom counterparts engaging activities for teaching Mathematics, French and Malagasy, and give them time to try out the activities with their students. In all, the MEN developed some 150 interactive radio programs: 75 for grade 1 and a similar number for grade 2.

In August 2007, all grades 1 and 2 teachers in six pilot CISCOs (Toamasina II, Vatomandry, Fianarantsoa II, Ambohimahasoa, Toliara II, Betioky Sud) participated in a 3-day face-to-face training on how to use the programs effectively. Broadcast began a month later, in mid September, on two national frequencies (MBS and RNM) and on 17 regional and/or local radio stations.

In an attempt to measure the effectiveness of the radio programs as a professional development tool, in September 2007, the MEN began collecting data on the radio programs. The evaluation program implemented sought to examine three key issues related to interactive radio usage:

- The extent to which grades 1 and 2 teachers use interactive radio programs in their classrooms;
- Teachers' perceptions of the quality of the programs, and their impact on students' learning;
- The extent to which regular usage of the radio programs encourages teachers to integrate into their own classroom teaching, when the radio programs are not playing, the student centered teaching and learning practices modeled in the programs.

This report summarizes data collected with respect to the three points outlined above in April and May of 2008, after approximately nine months of IRI broadcasts. The report also compares this final data with similar data collected during two previous periods: September-Octerober 2007, during the first four weeks of the broadcasts, and January-February 2008, after three to four months of briadcasts. It provides an indication of the degree to which teachers used the programs during the 2007-2008 broadcast period, the teachers' response to the programs, a measure of the types of teaching practices used during that period, and the magnitude of change in those three areas of measurement that took place during the period.

The report also summarizes, in an appendix, data collected in 2006-2007 on the nature of the schools, teachers and communities in the 6 pilot CISCOs. The information provides a context for understanding and interpreting some of the results.

3.0 Data Collection Procedures

3.1 Sample population

Although the '*Izaho koa mba te hahay'* programs are broadcast nationally, data collection for this study was limited to pilot schools in the 6 CISCOs mentioned. One hundred schools in each of these CISCOs (600 schools nation wide) were originally identified in 2006 as sites for ATEC-supported activities. The schools were selected by CISCO authorities, in accordance with a list of criteria established jointly by representatives of the Ministry of National Education and Scientific Research (MENRS) and ATEC personnel.[1] From this pool of 600 schools, the Department of Planning and Statistics, MENRS, established a stratified, representative sample of 30 schools per CISCO (180 nation wide) for program data collection purposes. These schools and communities have served as data collection sites for measuring the impact of all ATEC initiatives since the inception of the program.

3.1.1 Interactive radio usage

In the current data collection round, data on interactive radio listernership levels were collected for 176 schools[2] over a four-week period, between April and May of 2008. (See table below.)

TABLE 3.1.a: Number of classrooms, per CISCO, where data on Interactive Radio Instruction usage were collected

		Baseline (Sept.-Oct. '07)		January-February '08		Final (April-May '08)	
REGION	CISCO	Nbr of schools observed	Percent of sample	Nbr of schools observed	Percent of sample	Nbr of schools observed	Percent of sample
Atsinanana	Tamatave II	30	18%	27	15%	27	15%
Atsinanana	Vatomandry	28	16%	29	17%	29	16%
Matsiatra Ambony	Fianarantsoa II	28	16%	29	17%	30	17%
Matsiatra Ambony	Ambohimahasoa	29	17%	30	17%	30	17%
Atsimo Adrefana	Toliara II	30	18%	30	17%	30	17%
Atsimo Adrefana	Betioky Sud	26	15%	30	17%	30	17%
TOTAL		171		175		176	

Observers[3] conducted unannounced visits to some 534 grades 1 and 2 classrooms in these schools to determine whether or not students listened to radio programs on a regular basis.

Data on teachers' pedagogical practices was collected by conducting follow up classroom observations with 300 of these teachers. In total, 534 classroom observations were carried out during the four-week period, 226 (42%) in grade 1, 218 (41%) in grade 2, and a significantly smaller number, 90 (17%), in multi grade settings.

[1] Criteria included: accessibility, ability to capture national, regional and local radio signals, existence of early primary classes (grades 1 and 2), representation (in terms of ratio of private/public schools in the CISCO) and regional/geographic equity (within the CISCO/ZAPs)

[2] All visits by data collectors are unannounced, in order to ensure the objectivity of the data collection process. However, this prevented data collectors from contacting schools ahead of time to ensure that classes would be in session at the time of the visit. In the case of the data on IRI usage and teachers' classroom practices, four of the schools were not in operation the day the data collectors arrived at the school. A similar phenomenon had occurred during previous data collection rounds.

[3] Data were collected by independent data collection agents hired by the ATEC program, and trained jointly by program and Ministry staff. The decision to hire independent data collectors, rather than use MENRS personnel, was motivated partly by logistical considerations (CISCO staff would not have time in their schedules to carry out the intensive data collection activities required)[3] and partly by the desire to ensure as much objectivity as possible in the data collection process. Data collectors needed to spend 1 to 2 days in each school during each data collection period. As three data collection rounds were executed during the 2007-2008 school year, the time spent collecting impact data would have limited CISCO staff's ability to carry out other essential administrative and pedagogical responsibilities.

3.1.2 Teacher, school and community profiles

Data on teacher, school and community profiles were collected during the November to December 2007 period, in some 166 of the 180 schools in the sample.[4] The data from these visits is summarized in Appendix 7.1. Data was not collected on this domain during the April-May 2008 round.

TABLE 3.1.b: Number of schools, per CISCO, where data on teacher, school and community profiles were collected

REGION	CISCO	Nbre of schools	Percentage of sample
Atsinanana	Toamasina II	29	18%
Atsinanana	Vatomandry	25	15%
Haute-Matsiatra	Fianarantsoa II	30	18%
Haute-Matsiatra	Ambohimahasoa	30	18%
Atsimo-Andrefana	Toliara II	26	16%
Atsimo-Andrefana	Betioky Sud	26	16%

3.2 Data Collection Instruments

3.2.1 Interactive Radio Instruction usage

A number of different instruments were used to collect data on IRI usage and teachers' pedagogical practices:

- *Structured interviews* were conducted, in local language, with the school principal or head teacher to determine the quality of radio reception during broadcast times and the number of radios (wind up and battery powered) available to support radio instruction;

- *Structured interviews were conducted with each of the grades 1 and 2 classes* in the school to determine whether they listened to the *Izaho koa mba te hahay* programs. Classes who could name the primary characters in the radio programs and sing a song taught recently on the radio were deemed to be listening to the programs on a regular basis.

- *Observations of actual grades 1 and 2 mathematics, French and Malagasy lessons* were carried out in a sub sample of the classrooms to record:
  - the types of questions teachers asked,
  - the types of verbal feedback they gave to students, and
  - the degree to which teachers used the student-centered instructional practices modeled in the radio programs when the radio was not playing.

  To document the types of questions asked, each time teachers asked a question observers noted whether the question required students to repeat information they had previously been given (*memorization*), whether the question required them to apply information or procedures they had previously acquired (*recall*), or whether the question required them to think critically or creatively about an issue, come up with a novel solution, give an opinion or make and support a judgment (*explaining*). (See data collection form, Appendix 7.3.3.)

[4] For a variety of reasons, data collectors were not able to visit all the schools identified in Vatomandry, Toliara II and Betioky.

To analyze feedback, each time teachers responded to students' interventions observers noted whether the feedback provided was 1) positive/encouraging, 2) neutral (or absent) or 3) negative. (See data collection form, Appendix 7.3.3.)

In the last case, observers noted whether or not 27 instructional practices generally associated with active, student-centered teaching were evident in the lesson. In those cases where the practice was evident, observers assessed, using a four-point scale, the degree to which the teacher used the strategy, and/or used it successfully, during the course of the lesson.[5] (See data collection form, Appendix 7.3.3)

- *Structured interviews* were conducted, in local language, with the grades 1 and 2 teachers who participated in the lesson observations. The interviews were designed to elicit their perceptions of the quality of the radio programs, and the impact of the programs on students' learning;

The IRI data collection instruments were developed by ATEC Madagascar staff, in consultation with EDC Washington personnel. Some of the instruments (teachers' pedagogical practices, teachers' questioning and feedback techniques) were adapted from instruments used successfully in USAID projects in Egypt and Guinea.

3.2.2 Teacher, school, and community profiles

The data on school, teacher and community profiles were collected via structured interviews. The questionnaires were developed by the representatives of the DPEFST/MENRS, with input from ATEC personnel. Three different questionnaires were used:

- The *teacher profile* questionnaire was designed to collect information on the number of teachers in the school, their professional status and experience, their educational/academic background, the materials available in their classroom to support learning, and levels of student absenteeism.

- The *school questionnaire* collected information on the organization of the school, resources and infrastructures available to support learning, involvement of parents and the community in school operations, socio-economic background of students, geographic setting and levels of teacher absenteeism.

- The *community profile questionnaire* was designed to elicit information on the nature of the community, education levels of parents, resources available in the home to support learning (books, television, radio), languages used in the home, nutrition levels of students, extent to which children have responsibilities outside of school, level of parental involvement in the functioning of the school and parents' general degree of satisfaction with the school.

3.3 Data Collection Procedures

3.3.1 Interactive radio usage

Data collectors visited the schools in teams of two and administered the principal questionnaires during one-on-one interviews. Interviews were conducted in local language and participants' answers recorded directly on the questionnaires.

[5] Extensive training sessions were organized in September and December 2007 and in April 2008 to train data collectors on the use of the classroom-based data collection instruments. During the trainings, data collectors participated in inter rater reliability sessions where they observed video tapes of actual classroom teaching and evaluated teacher practices using the various tools. Comparisons were then done of the data collectors' appreciations in order to build a common understanding of how to identify, interpret and score different teacher practices.

Data collectors also visited each of the grades 1 and 2 classes in the school and interviewed teachers and students to determine whether or not they listened to the programs. The class questionnaires were administered orally, in local language, by one of the two data collectors and the responses recorded directly on the data collection forms.

Data collectors conducted follow-up classroom observations of a subset of grade 1 and one grade 2 teachers who use the radio programs on a regular basis. Observations were done during Malagasy, Mathematics and French lessons, at times when the radio programs were not playing.[6] During the observations, one data collector noted the teacher's questioning and feedback techniques, while the other completed the instructional practices inventory. Observations were recorded directly in the various forms in the data collection notebook.

Follow up interviews were then conducted with the teachers observed to determine their perceptions of the programs and the degree to which they thought the programs had an impact on student learning. As was the case with principals, the interviews were conducted orally, in local language, and the answers recorded on the questionnaire itself.

The completed questionnaires and data forms from each school were bundled into a single school data collection "notebook" which was subsequently turned over to the ATEC regional office for treatment.

3.3.2 Teacher, school and community profiles

Data collectors conducted one-on-one structured interviews with some 166 principals to collect data on school profiles. A similar number of parents (167) participated in structured interviews on the nature of the community. A slightly smaller number of grades 1 and 2 teachers (164) participated in interviews to elicit information on the profile of early primary teachers. Answers were recorded in the interview questionnaire by the data collectors and the completed questionnaires turned over to the regional ATEC office for treatment.

3.4 Data Analysis Procedures

3.4.1 Interactive radio usage

Information from the individual school data collection notebooks was entered into an Excel spreadsheet at the ATEC regional office. The flat files from each regional office were then compiled and exported into an Access data base for cleaning and treatment by the ATEC Monitoring and Evaluation Coordinator and Intern.

3.4.2 Teacher, school and community profiles

Data entry sheets were reviewed for completeness and accuracy. The information was then entered into an Excel spreadsheet at the ATEC regional office. The flat files from each regional office were then turned over to the DPEFST for compilation, treatment and analysis. Basic descriptive statistical analyses were then carried on both sets of data out to identify trends and patterns.

4.0 Level of IRI Listenership

Unannounced classroom visits were paid to some 343 grades 1 (CP1) and 2 (CP2) classes in the sample schools. As the table below shows, nearly 96% of classes regularly

[6] The decision to focus on these three subject areas was based on the rationale that if teachers were to integrate into their daily instructional practices the new student-centered teaching strategies and activities modeled in the programs, the transfer would most likely occur first in the subject areas treated in the *Izaho koa mba te hahay* programs.

listened to the *"Izaho koa mba te hahay"* programs during the April to May period. This represents an increase of 17 percentage points from the September-October 2007 period, at which time 79% of classes listened regularly, and of five percentage points from January-February. The 96% figure surpasses ATEC's target for this period of 80%.

Table 4.0.a: Level of IRI Listenership

4.1 Analysis of IRI Listenership

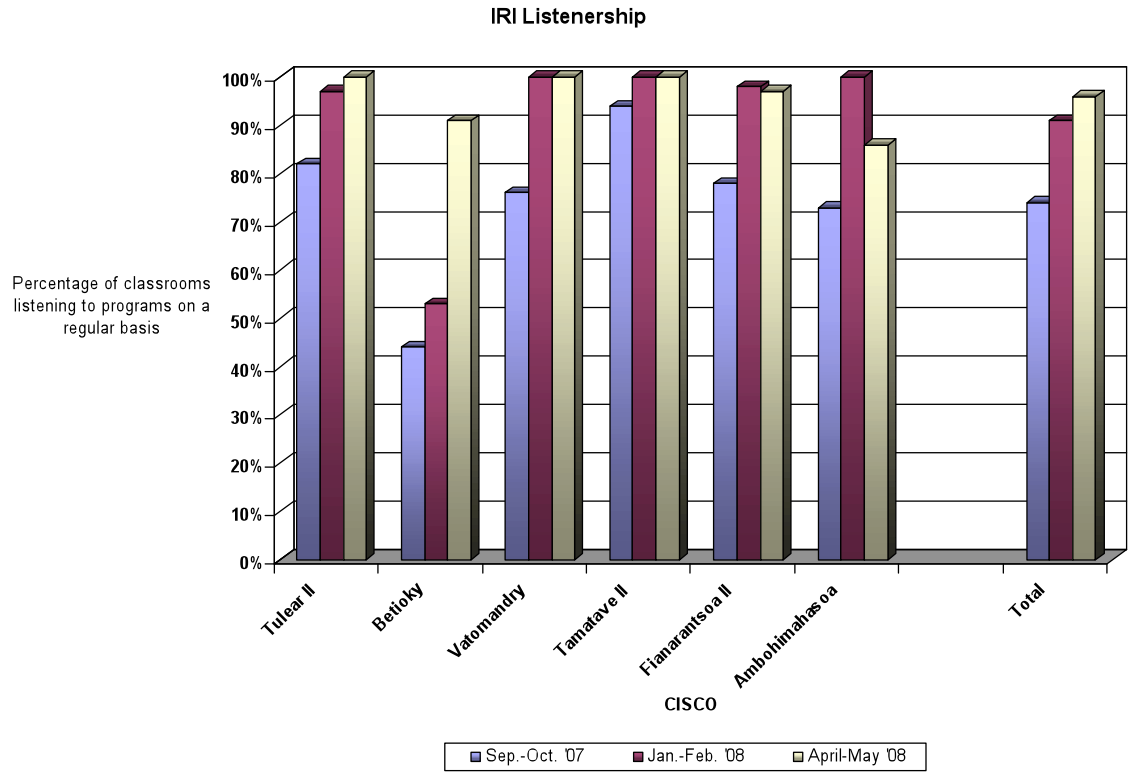
Disaggregated data show that listenership is high across grade levels, CISCOs, and teachers' sex. First-grade, second-grade, and multigrade teachers all improved their listenership as compared to September and October of 2007, with the increase ranging from 14 to 30 percentage points.

Listenership was remarkably high across the six CISCOs studied and surpassed the target in all six. In three of the six CISCOs, every single teacher visited was a regular IRI listener. Betioky Sud was slightly behind at 91%, though that was a vast improvement over the previous two data collections, when not all schools in Betioky were receiving the radio broadcasts. Ambohimahasoa teachers were listening at a slightly lower rate, 86%. Both male and female teachers listened to the program consistently.

The graph below illustrates each CISCO's listernship over time as well as the total listenership, reflecting the increase in listenership over the three data collection periods.

Graph 4.1.a: Level of IRI Listenership Over Time, By CISCO

Grade level	Nbr of classes observed (April – May 2008)	Nbr that listen to the programs (April-May 2008)	Percentage April-May 2008	Percentage Jan.–Feb. 2008	Percentage Sept.-Oct. 2007
CP1	156	152	97%	95%	83%
CP2	145	135	93%	90%	63%
Multigrade	42	41	98%	81%	78%
Total	**343**	**328**	**96%**	**91%**	**74%**
CISCO					
Tulear II	42	42	100%	97%	82%
Betioky Sud	46	42	91%	53%	44%
Vatomandry	50	50	100%	100%	76%
Tamatave II	53	53	100%	100%	94%
Fianarantsoa II	93	90	97%	98%	78%
Ambohimahasoa	59	51	86%	100%	73%
Total	**343**	**328**	**96%**	**91%**	**74%**
Sex					
Male	102	97	95%	84%	73%
Female	241	231	96%	94%	74%
Total	**343**	**328**	**96%**	**91%**	**74%**



4.2 Factors that contribute to high listenership levels

The level of listenership is high and has increased throughout the nine-month broadcast period. This may be due to the novelty of the programs as an instructional tool, or the fact that the teachers in the sample had been trained in its use. Teacher interviews revealed that 86% of them had attended a three-day training on the effective use of the radio programs three to four weeks prior to the first broadcast, and that 67% attended a training between February and the third data collection period in March and April.

High listenership levels may also be linked to the quality of the programs. During the first round of data collection, nine out of 10 of the teachers interviewed rated the programs as being either excellent or good. The level of satisfaction was highest for the Malagasy programs (90% of teachers rated them as excellent or good) and lowest for the French programs (85% excellent or good rating). The mathematics programs were judged to be excellent or good by 88% of grades 1 and 2 teachers. In the April-May interviews, 96% of teachers said that the Ministry should develop IRI programs for other levels. Additionally, high levels of teachers responded "yes" when asked if the *"Izaho koa mba te hahay"* programs had helped them learn new games (83%) or songs (82%) to use with their students, reinforce *their own* French (91%) and Malagasy (91%), involve students in their own learning to a greater degree (91%), use group or pair work with their students (91%), make learning more interesting for students (85%), and generally learn new teaching techniques or strategies (90%). Teachers also reported that the programs help them to reinforce *students'* knowledge of French (97%), Malagasy (93%), and mathematics (99%).

4.3 Constraints to the effective use of the radio programs

Although the percentage listenership is high and teachers respond favorably to the programs, the ability to sustain a satisfactory level of listenership over time may

compromised by a number of factors, including infrastructure and resource limitations and broadcast practices.

4.3.1 Infrastructure limitations

The lack of geographic coverage. As the graph above shows, listenership varied somewhat by CISCO, particularly during the first four weeks of broadcast. Early on, usage was highest in CISCOs located closest to regional capitals (Tamatave II, Toliara II, Fianar II) and lowest in CISCOs located in more isolated areas (Betioky Sud, Ambohimahasoa and Vatomandry). Listenership has increased to high percentages in all CISCOs, but Betioky Sud and Ambohimahasoa remained at the lowest levels with 91% and 86%, respectively, in the April-May 2008 round of school visits. In that respect, listenership seems to align to some extent with quality and reliability of radio reception; the national broadcasts (RNM and MBS) do not reach Betioky Sud (though Vatomandry is a notable exception with 100% listenership despite receiving a signal from only RNM, not MBS). This is despite the fact that both RNM and MBS bill themselves as national radio stations, with nation-wide coverage. In reality the coverage is far from complete. Many regions and sub regions are unable to capture a signal, or to capture a signal strong enough for clear reception. In fact, in April and May, only 67% of teachers interviewed described the radio signal on which they listen to *"Izaho koa mba te hahay"* as "good" or "excellent", while 13% characterized it as "weak". In addition, the various regional affiliates of RNM and MBS often act as independent bodies, and do not always transmit the programs sent by the central levels. As a result, the broadcast schedules are frequently interrupted or suspended.

In some areas, schools are only able to capture one radio frequency, a situation that limits potential listenership. As schools were only allocated one wind-up radio each, this usually means that in schools that capture only 1 radio frequency, a maximum of one grade 1 class and one grade 2 class can follow the programs on a regular basis, unless teachers or parents contribute a second radio (and, presumably, batteries to enable the radio to function). Schools in zones that capture more than one radio frequency can offer IRI to more than one grade 1 or grade 2 class, even if they only have 1 radio, **IF** the radio stations in the zone broadcasting the programs at different times. Unfortunately, it has not been possible to put in such an arrangement in all regions of the country.

The absence of an ongoing maintenance program for radio equipment. Much of the existing radio equipment is old and in need of repair or updating. Unfortunately, funds are not always there to carry out the repairs – or if the funds are there, administrators are not always able to locate and purchase the necessary parts. As a result, radio stations can suddenly stop broadcasting the programs, until an external solution is found. The low listenership levels in Betioky Sud for the first two rounds of data collection can be attributed largely to the two regional stations there not functioning for a time.

Congested broadcast schedules on both the national stations, as well as on some regional and local stations. Currently, MBS broadcasts the three grade 2 programs once a week. RNM broadcasts the three grade 1 programs once a week. Neither radio station is able to broadcast **both** the grade 1 and grade 2 programs, due to prior commitments with other clients. In areas where schools do not capture **both** RNM and MBS, this means that only one grade level is able to benefit from the programs. The same is true of regional and local stations. Although a few are able to broadcast both the grades 1 and 2 programs, most choose between grades 1 and 2. As a result, there is not uniform access throughout the country to both the grade 1 and the grade 2 programs.

4.3.2 Resource limitations

The limited number of radios. In the 2006-2007 profiles study, only 20% of schools reported having access to a radio to support learning. The data collected in September

and October of 2007 showed that all but 2 of the 166 schools (99%) had access to a wind-up solar radio, thanks in large part to the MEN's decision to distribute radios to all elementary schools in the country. Although the distribution was welcomed, many schools have more than one grade 1 (CP1) or one grade 2 (CP2) class. In order to ensure equal access to all students, either the programs need to be broadcast more than once in the run of a week, or schools need to have more than one radio.

4.3.3 Broadcast practices

The lack of reliable broadcasts. Both RNM and MBS have had difficulty respecting the negotiated broadcast schedules. Sometimes they broadcast the right program at the right day and time, sometimes they do not.[7] In the latest teacher interviews, 60% of teachers indicated that stations always respect the broadcast schedule, 24% said they usually do, and 13% responded that the radio stations do not respect the broadcasting schedule (16% in grade two and multigrade classrooms responded "no"). For teachers trying to maintain some coherence of classroom planning, the failure to respect the broadcast schedule is both problematic and frustrating. Without reliable radio broadcasts, it is difficult to imagine teachers continuing to use the programs over the medium or long term.

Overall, the local and regional radio stations have proven to be far more reliable in terms of respecting negotiated broadcast schedules. However, their coverage zone tends to be far more limited. In order to reach all schools in a given region it is necessary to negotiate – and coordinate - contracts with a large number of different radio stations. This is a task better delegated to regional or local education authorities.

It should be pointed out that average listenership levels in the 6 pilot CISCOs is not necessarily representative of levels of listenership nationwide. Only teachers in the 6 pilot CISCOs received the initial 3-day training in how to use the programs and the accompanying teachers' guides, and have benefited from ongoing inservice on how to use the programs effectively. Without initial (or follow up) training on how to use interactive radio programs, and without the accompanying teacher's guides, it is less likely that teachers listen to the programs on a regular basis, or use them effectively. As well, ATEC regional staff monitor the broadcasts on regional and local radio stations and intervene when necessary to correct the broadcast schedule or assist with technical repairs. That level of support is not offered in other regions.

5.0 Teachers' Pedagogical Practices

Does listening to the *"Izaho koa mba te hahay"* programs encourage teachers to integrate into their daily classroom practices teaching strategies generally associated with active, student-centered learning? In an attempt to answer that question, during this round of data collection, collectors observed grades 1 and 2 French, Mathematics and Malagasy classes and recorded the types of teaching strategies used. This data can be compared with data collected in the same classrooms at two previous points during the school year (September/October and January/February) to measure the change in teacher practices over time.

The data were collected in 176 of the 180 schools in the sample, and from some 288 teachers. Of the teachers observed, 129 (45%) taught at the grade 1 level (CP1), 118 (41%) at the grade 2 (CP2) level, and a significantly smaller number, 41 (14%), in multi grade classes (CP1/CP2).

[7] For example, they may broadcast a math program when the schedule calls for a French program, or broadcast a program that was already broadcast that week. Or they broadcast a grade 2 program during the grade 1 time slot. Or they broadcast at 9:30 rather than the agreed upon 8:30.

Of teachers observed, 139 (48%) were recruited by communities (specifically, by *Federation . . .* or FRAM*)* and paid by the Ministry of National Education (MEN). The next largest group (86, 30%) were civil service teachers. The remaining 63 (22%) were FRAM teachers recruited and paid for by the community.

Table 5.0.a : Number Of Teachers Observed By Cisco, Level And Civil Status

CISCO	Number of schools	Number of teachers observed					
		Grade 1 (CP1)	Grade 2 (CP2)	Multi grade	FRAM (MEN)	FRAM (community supported)	Civil servant
Toamasina II	27	18	17	6	15	6	20
Vatomandry	29	20	19	7	31	1	14
Fianarantsoa II	29	20	20	9	25	12	12
Ambohimahasoa	30	24	23	5	22	20	10
Toliara II	30	28	20	3	21	15	15
Bétioky Sud	30	19	19	11	25	9	15
TOTAL	**175**	**129**	**118**	**41**	**139**	**63**	**86**

Data collectors observed slightly more French classes than math classes. Malagasy was the least observed class. As the teachers' daily time table and the day and time of the unannounced visit dictated which of the three lessons would be observed, it is unclear as to why this is so.

There were more lesson observations than teachers who participated in the data collection process. This is because data collectors were encouraged to observe, where possible, more than one lesson per teacher. Data collectors observed 534 classes in total.

Table 5.0.b: Number of Classes Observed By Subject and Grade Level

Class observed	Grade 1 (CP1)	Grade 2 (CP2)	Multigrade	TOTAL	Percentage
Mathematics	82	80	31	193	36%
French	84	79	34	197	37%
Malagasy	60	59	25	144	27%
Total	226	218	90	534	

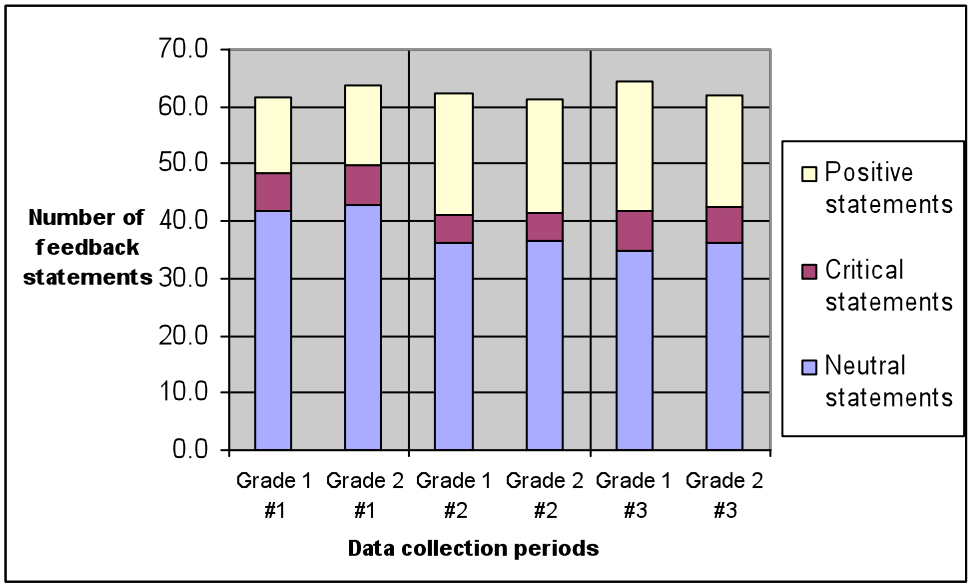
5.1 Feedback offered to students

Data collectors collected information on the quantity and the quality of the feedback offered to elementary children. Each time children intervened in the lesson, the observer noted whether the feedback offered by the teacher was positive, negative, or neutral.

The information is a critical indicator of the type of learning environment established in the classroom. The type of feedback offered to students can have an impact on students' level of participation in the classroom, their confidence levels, and their willingness to take risks in their learning. Children who are encouraged and who receive positive feedback on the quality of their thinking or intervention are more apt to consider themselves successful students and to take risks with their thinking.

During the *"Izaho koa mba te hahay"* radio programs, the radio teachers model positive feedback for classroom teachers by complementing the students on their answers and on their participation levels. The modeling is purposeful and designed to help primary teachers adopt language that builds students' confidence levels, pride in their work, and desire to engage in class activities.

GRAPH 5.1.a: Number and type of feedback statements, by grade level



From September-October 2007 to April-May 2008, grade 1 teachers increased the amount of feedback they gave students, with the average number of feedback statements per class rising from 61.47 to 64.55; grade 2 teachers slightly decreased the number of feedback statements, from 63.85 to 62.12. Much more importantly, however, this graph demonstrates that teachers in both grade 1 and grade 2 increased the percentage and number of positive feedback statements. In both grades, teachers' percentage and number of critical feedback statements decreased during the second data collection period and then returned approximately to their baseline levels during the third.

Grade 1 teachers increased their positive statements from 22% to 35% over the data collection period, with grade 2 teachers making a similar improvement from 22% to 31%. After seven months of participating in *"Izaho koa mba te hahay"*programs, children in ATEC-supported classrooms were more likely to hear their ideas and responses praised.

The program also measured the progress of individual teachers in improving their feedback. A full 70% of teachers increased the level of positive feedback, with first-grade teachers being the most likely to make that stride.

Table 5.1.a: Number And Percentage Of Teachers Increasing Positive Feedback Given

Level	Number of teacher observations	Number of teachers who increased the percentage of positive feedback they give to children	% of Teachers who increased the percentage of positive feedback they give to children during a typical lesson
Grade 1	127	96	76%
Grade 2	118	81	69%
Multigrade	41	24	59%
Total	286	201	70%

5.2 Questioning techniques

As is the case with feedback offered to students, data collectors were asked to record the number of questions asked by teachers in the run of a lesson, and classify each question into one of three categories:

- *Memorization* type questions, in response to which students merely repeat information that the teacher has just transmitted;
- *Recall* questions, which require them to recall information given to them in a previous lesson or earlier on in the lesson (a definition, a formula, a procedure, etc.)
- *Explaining, or solving* type questions, which require students to apply new information or understandings to solve a problem, explain a phenomenon, provide an opinion or a judgment, or discover a pattern or solution.

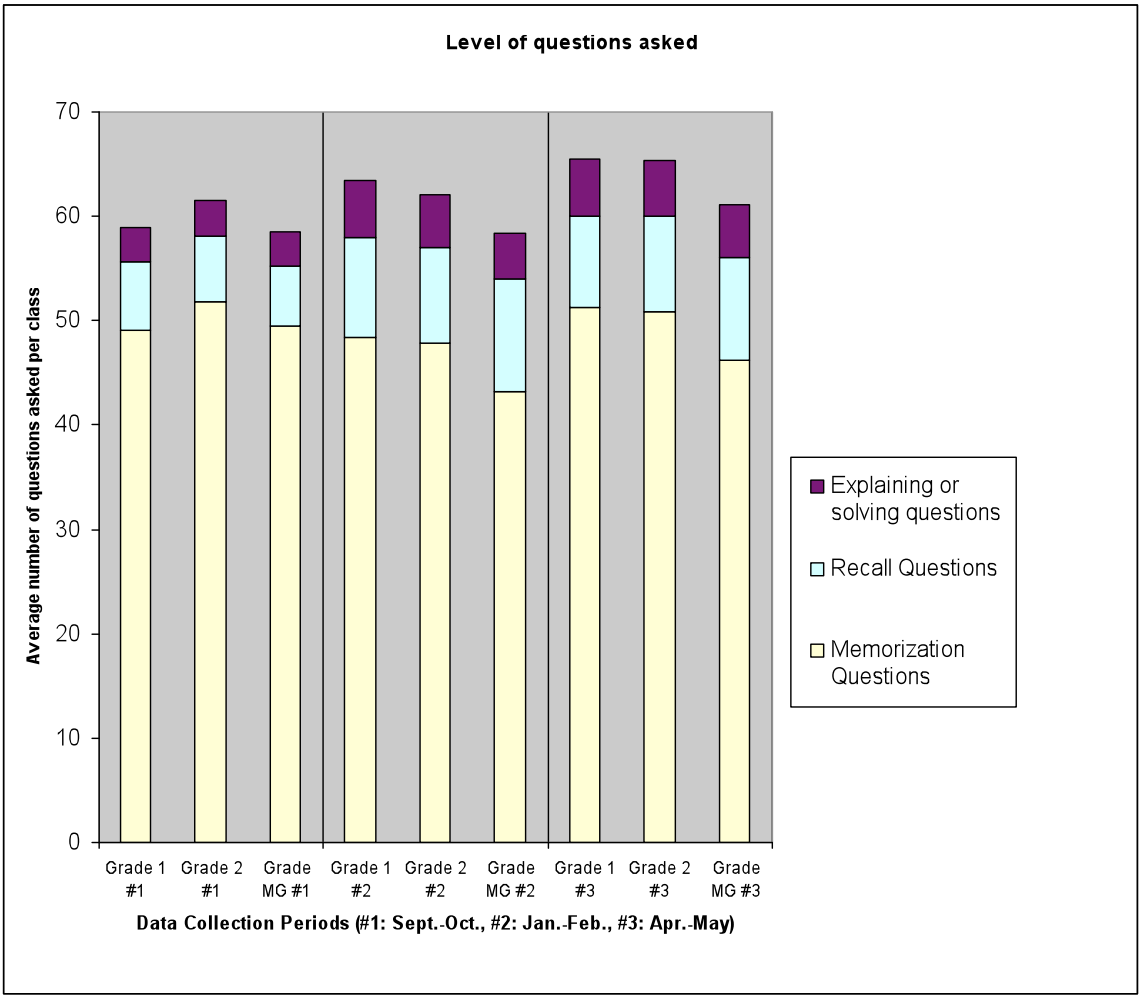
The coding allowed for both qualitative and qualitative analysis. This is important, as the type of questions asked during a typical lesson determines to some degree what children learn and is reflective of what is valued in the learning environment. Children who are asked higher level thinking questions develop deeper understandings than children who are asked predominantly memorization questions.

The weighting of question types is also indicative of what teachers feel is important. Teachers who frequently ask students to explain their thinking, to propose potential solution paths, or to apply their understandings in new, novel situations communicate to their students that these things are important. In classrooms were teachers ask predominantly repeating or memorization type questions, students come away with the understanding that it is important to accumulate facts and information and repeat them verbatim.

In the *'Izaho koa mba te hahay"* radio programs, a conscious effort is made to model higher level thinking. Teachers ask students to solve problems, to explain their thinking, to propose potential solutions, to make and defend hypotheses. The goal is two fold: to engage students in rich learning situations and to model for teachers the types of questions that extend students' thinking.

At the beginning of the school year, prior to or immediately after the start of the radio programs, teachers asked about 60 questions in a typical lesson. There was very little difference among grade 1, grade 2, and multigrade classes in the number of questions asked. The number of questions asked per class increased over the course of three data collection periods, with both grade 1 and 2 teachers asking just over 65 questions in a typical lesson by April-May 2008 and multigrade teachers asking about 61 questions.

Graph 5.2.a: Number and level of questions asked, by grade level



More importantly, the number and percentage of higher level thinking questions asked increased in all three grade levels. Grade 1 teachers increased their incidence of asking explaining or solving questions by half, going from 5.5% in the first data collection round to 8.3% in the third. Grade 2 and multigrade teachers increased nearly as much, with each group moving from 5.6% to 8.2% of questions requiring students to explain an idea or solve a problem. In all grades, the number and percentage of recall questions increased over time and, while the number of memorization questions remained close to the same, their percentage decreased. This suggests that the new questions that teachers incorporated into their lessons were primarily recall questions or explaining or solving questions, an important improvement in encouraging higher level thinking among their students.

As with improvements in feedback given, the percentage of individual teachers improving the level of questioning practiced during class was high, 80% overall with 90% of multigrade teachers making such an improvement.

Table 5.2.a: Teachers Increasing the Level of Questions Asked

Grade	Number of teachers	Number who increased the percentage of higher level thinking questions they ask in a typical class	Percentage of total number of teachers
Grade 1	127	103	81%
Grade 2	118	89	75%
Multigrade	41	37	90%
Total	286	229	80%

5.3 Instructional practices

The 27 practices listed in the classroom observation tool are all instructional practices generally associated with active, student-centered learning. The practices center focus on six areas:

- *Classroom management and organization* (the type of teacher-student interaction that is established in the classroom and the degree to which all students are involved in the learning process)
- *Communication* (the nature of the communication between the teacher and the students, and the degree to which students initiate communication with the teacher or with each other)
- *Classroom practices* (the degree to which the teachers uses practices that engage young learners in the learning process – games, songs, drawings, gestures, manipulatives, objects, physical activities – checks students' understandings though out the lesson, or provides them with opportunities to apply, in novel or original situations, the new concepts targeted during the lesson)
- *Classroom practices in language classes* (Malagasy/French) (whether or not the teacher integrates all 4 language skills during the run of a lesson)
- *Student evaluation* (whether the teacher gives children objective and specific feedback on their thinking, attempts to help them understand, or has them summarize, at the end of a lesson, what they have learned)
- *Gender equity (*whether the teacher values equally the participation of girls and boys and encourages each group to the same extent).

All of the practices listed are modeled by the radio teachers during the "*Izaho koa mba te hahay*" programs and encouraged among classroom teachers both in face-to-face training and via the modeling in the radio programs.

During observations, data collectors were to indicate whether or not the practice was evident in the lesson. If the practice was evident, data collectors then had to indicate, using a four point scale, the extent to which it was evident and well mastered. A rating of 1 indicated that practice that was barely present or not well mastered and 4 indicated that the practice that was used considerably throughout the lesson and/or was well implemented.

The tables below report the percentage of teachers observed using the practices in each of the six areas more than minimally (i.e., receiving a score of 2 to 4 on the observation scale). For example, three practices were listed under "classroom management and organization". In September and October of 2007, an average of 51.2% of teachers used those three practices more than minimally. In January and February of 2008, that average increased to 74.9%, while in April and May of the same year, an average of 86.3% of teachers were observed using the three target practices more than minimally. Tables 7.2.1 and 7.2.2 in Appendix 7.2 list percentages for each individual practice.

Table 5.3.a: Percentage of Teachers Performing Student-Centered Practices More Than Minimally, Grade 1

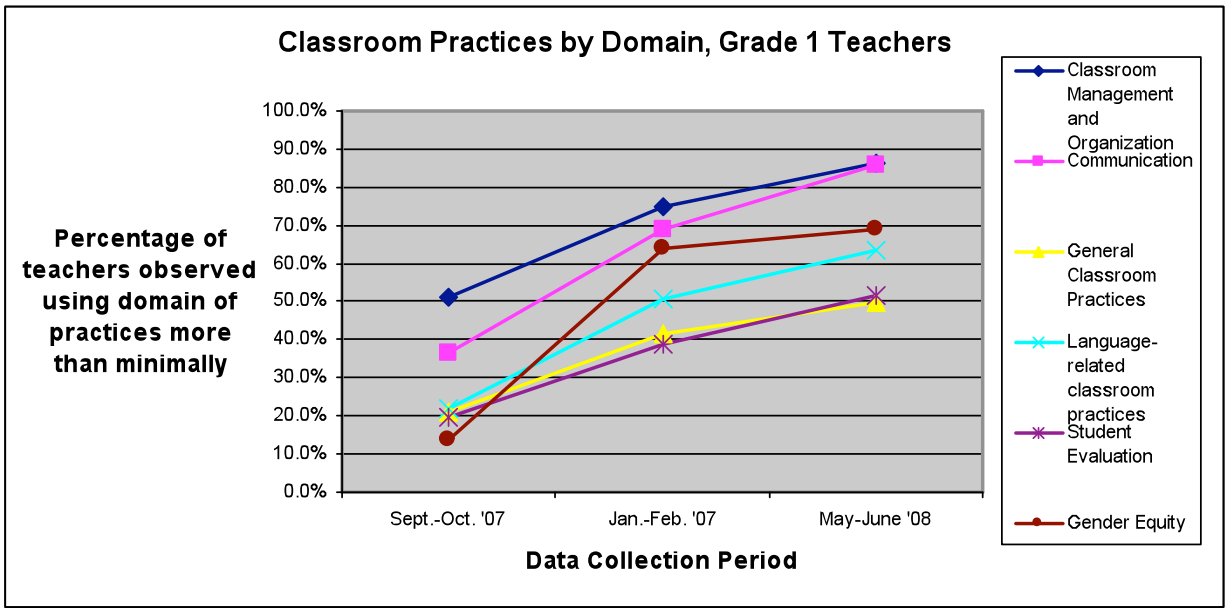
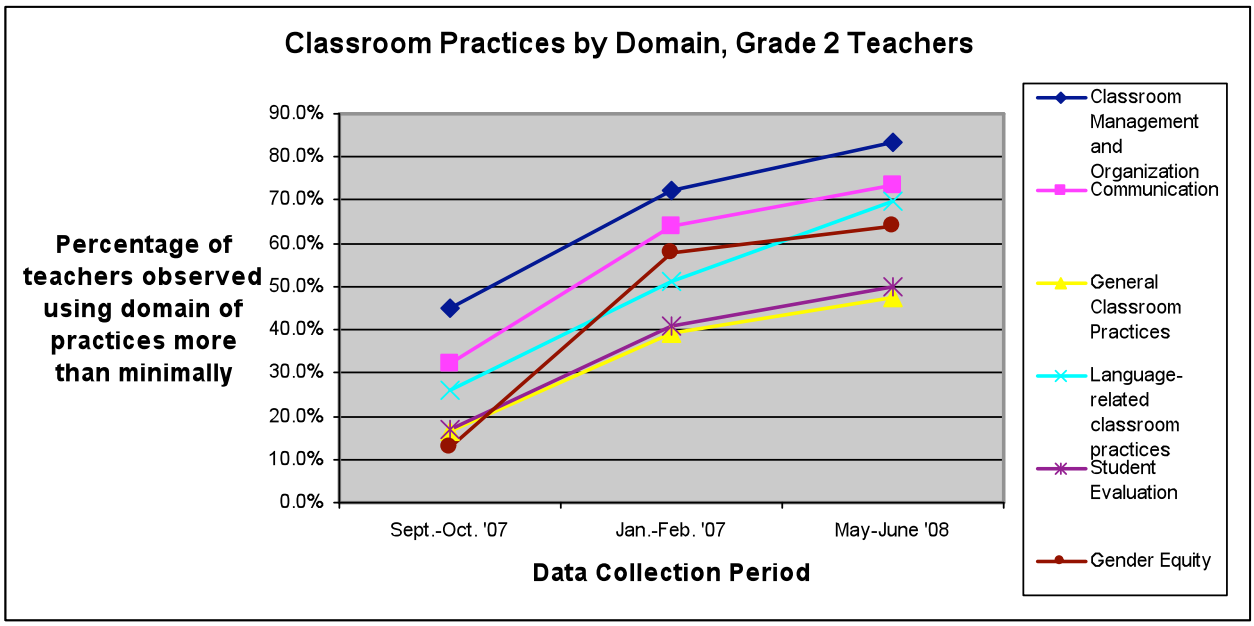


Table 5.3.b: Percentage of Teachers Performing Student-Centered Practices More Than Minimally, Grade 2



The graphs clearly demonstrate a significant improvement in all six areas of teacher practice among teachers of both grades one and two. Grade 1 teachers improved by a minimum of 31 percentage points in each of the six areas, with the most marked improvement of 51 percentage points coming in the area of gender equity. In September and October of 2007, the five items used to measure gender equity were more than minimally present in an average of just 13% of lessons. By April and May of 2008, those same measures were present over 64% of the time.

Grade 2 teachers improved in all six areas by at least 29 percentage points. Their most dramatic improvement also came in the area of gender equity, in which an average of just 14% of lessons exhibited the five targeted behaviors in September and October of 2007, while nearly 69% of lessons did so in April and May of 2008.

In general classroom practices, the area that captures the most individual behaviors with 12 items being observed on the classroom observation form, and thus captures the widest range of student-centered teaching practices, teachers of both grades showed dramatic improvement. Grade 1 teachers improved from demonstrating the 12 observed practices in just under 17% of classes to doing so in just under 48% of classes, while grade 2 teachers improved on the same measures from just over 21% to just under 50%.

In addition to the percentage of lessons in which each practice was observed as more than minimally present, ATEC measured the progress of individual teachers by analyzing how many demonstrated at least 60%of the student-centered practices (16 of 27) more than minimally. Consistent with the data on individual teaching practices, there was dramatic improvement in this measurement.

Of the grade 1 teachers observed, 61% demonstrated 16 or more student-centered practices more than minimally in *either* the September-October data collection round *or* the January-February 2008 round. That percentage rose to 97% in April-May 2008. Among grade 2 teachers, 62% had achieved the standard of 16 student-centered practices utilized before April-May 2008, while 95% did so during that last data collection round. Only teachers who were observed during at least two of the three data collection rounds, including the April-May one, were included in this analysis, totaling 129 grade 1 teachers and 118 grade 2 teachers.

As in the baseline study, female teachers were slightly more likely to use student-centered teaching practices than were men. That difference is accounted for entirely by grade 2 teachers, and it should be noted that just three more male teachers employing at least 16 of the 27 student-centered practices would have put the men on par with female teachers.

Table 5.3.1.a: Number And Percentage of Male and Female Teachers With More Than 16 Observed Behaviors, By Grade Level

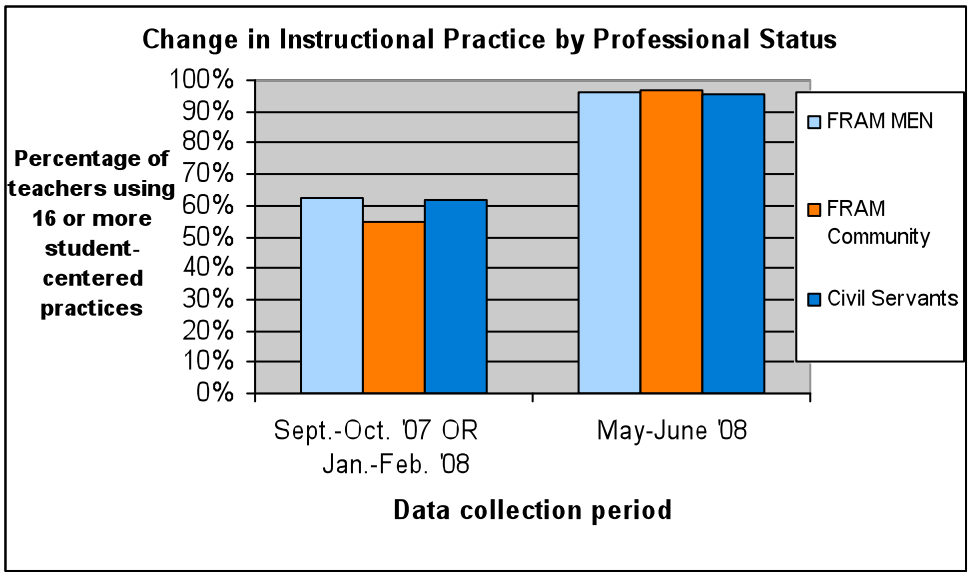
Grade Level	Sex	Nbr of teachers with 16 or more observed behaviors	Nbr of teachers observed	Pct of teachers with 16 or more observed behaviors
CP1	Male	29	30	97%
CP1	Female	96	99	97%
CP2	Male	34	38	89%
CP2	Female	79	80	99%
MG	Male	20	20	100%
MG	Female	21	21	100%

Given the different levels of training and professional development undertaken by the different groups of teachers according to their civil status (MEN FRAM, community-supported FRAM, and civil service teachers), it is important to measure the impact of the program on each group. The baseline report observed the following:

> Professional status does seem to have some bearing on the degree to which student-centered learning strategies are used in the classroom, although the difference between MENRS FRAM teachers and Civil service teachers is not that pronounced. Interestingly enough, where a difference does exist, it favors MENRS FRAM teachers. These teachers are more likely than their Civil service counterparts to provide opportunities for students to put into practice new understandings, using visual supports during the lesson, and have students summarize what they learned in a lesson.
> . . .
> Differences in instructional practices are more pronounced between Civil Service (fonctionnaire) teachers and community-recruited FRAM teachers. Fifteen of the 27 student-centered practices are considerably more evident in lessons led by Civil service or FRAM (MENRS) teachers. **Community based FRAM teachers are less likely, on the whole,** to use student-centered teaching strategies than are FRAM (MEN) or Civil service teachers.

In the following graph, that lower likelihood of use by community-based FRAM teachers of student-centered practice is evident in the percentage of teachers using 16 or more observed practices in either of the first two data collection rounds. The data reflected includes both grade 1 and grade 2 teachers.

Graph 5.3.2.a: Changes In Teacher Practices By Professional Status



All three groups of teachers showed a remarkable increase in the percentage of their members using at least 16 student-centered practices more than minimally. Most notably, community-supported FRAM improved from 55% achieving that standard to 97% and surpassed both of the other groups of teachers. The percentage of FRAM MEN teachers achieving the same standard improved from 63% to 96%, and the percentage of Civil servant teachers from 62% to 96%. Thus, while the most salient observation emerging from this data is the significant improvement across status groups, it is important to note that FRAM community teachers using the *"Izaho koa mba te hahay"* radio programs are now performing approximately on par with their FRAM MEN and Civil service colleagues.

6.0 Conclusion

The data presented thus far clearly indicate that , over the course of one academic year during which they used the *"Izaho koa mba te hahay"* programs, Malagasy grades 1 and 2 teachers used more student-centered pedagogy, asked more intellectually challenging questions of their students during class, and gave more positive feedback to students, thus creating a more positive classroom environment. The supporting data is based on a collection sample--as described in section 3 of this report—consisting of nearly 180 of the approximately 600 ATEC pilot schools.

To measure the scope of ATEC's impact, we have extrapolated these numbers to caclulate the number of teachers participating in the ATEC program, the number of them incorporating student-centered practices in their teaching, and the number of students in those teachers' classrooms. Based on these calculations, we estimate that out of 1,309 teachers in the six pilot CISCOs, about 1,255 are listening to the radio programs on a regular basis and about the same number are incorporating student-centered teaching practices. That means that more than 65,000 children in those six school districts now attend classes taught by teachers using improved techniques. As ATEC is now slated to continue its work through November of 2010, the program has an opportunity to build on that success and to continue working with the MEN to improve basic education in the six ATEC CISCOs and beyond.

7.0 Appendices

7.1 Nature of ATEC Pilot Communities

The vast majority (92%) of Grades 1 and 2 children in the ATEC pilot schools live in rural areas. Three quarters live in regions that are accessible by road or dirt track, and one in five lives in a relatively isolated area, with limited access to transportation or electricity. Despite this relative isolation, access to schooling is not a major issue for 90% of students. It takes children on average 10 minutes to reach their elementary school.

The home
In spite of this, principals estimate that 26% of parents do not send their children to school, or do not send them on a regular basis. The situation is particularly problematic in the CISCOs of Betioky, Toliara and Vatomandry. The main reasons cited are financial (principals report that 80% of their students come from homes that could be qualified financially as either 'rather poor" or "poor") , a lack of appreciation of the value of education, and the need to have children help out in the home or in the field.

The latter is an important consideration, given that four out of five children in the sample come from families involved in farming, raising livestock or a combination of both. Almost all the children (95%) help out at home by working in the fields or doing domestic chores. As is the case in most agricultural communities, families are relatively large and children have, on average, five siblings. Parents (70%) have at most a primary school education and one in five comes has not had any formal schooling.

The language of communication, both in the home and in the community, is Malagasy (regional or local variety) None of the families in the sample use French in the home, or in the community and only a small percentage (4%) report using 'official Malagasy' to communicate. Although less than 10% of children come from homes that have access to electricity, over half of homes have a radio as well as some books (school books or other reading materials).

The school
The average school has 230 students and 5 teachers. Most children (76%) are enrolled in schools that offer the full elementary program (5 years). Of the children who don't have access to the full five years, half live in the Betioky region.

On average, schools have 1.25 grade 1 classes and 1.3 grade 2 classes. More than one school out of three (37%) has multi grade classes, generally at the early primary level (CP). The average class size for grade 1 (CP1) is 33, for grade 2 (CP2) 26, with equal numbers of girls and boys.

The schools are limited in terms of infrastructure and learning resources. Even though class size appears to be reasonable, only 60% of teachers maintain that all or almost all of their students can comfortably sit in the classroom. Only one teacher out of three rates their classroom has having the required levels of light, sound insulation, space and aeration for an effective learning environment. An insignificant percentage (4%) has a library or a medical kit (5.4%) and only one out of three schools has a playing field. The vast majority (98%) does not have electricity and only one out of three has a water source. A slightly higher percentage (66% or 1 out of 3) has latrines.

Interestingly enough, despite the infrastructure limitations, one out of ten schools (11%) offers a free lunch program for students, attesting to the relatively high level of community involvement and support. (See section below.)

One encouraging note is the presence of radios to support distance education. In 2006-2007, only 21% of these schools reported having a radio. By September 2007, that percentage had risen to 99%, in large part as a result of the MENRS and the USAID-supported distribution of wind-up and solar powered radios.

The teachers
Half of the teachers in the sample are FRAM teachers, a percentage that aligns with the overall national trend. The salary of the majority of FRAM teachers is paid by the MENRS (80%), the remaining positions are financed by the community. Only 37% are members of the civil service.
More than half the teachers (56%) have been teaching for six or more years, and one out of three has been teaching for than 10 years. A significant percentage of grades 1 and 2 teachers (39%) have been teaching early primary for at least 4 years.

Most teachers (88%) have completed 10 years of schooling (BEPC), and one out of three has completed a teacher training program. The vast majority (92%) have participated in inservice sessions over the last two years. Of the trainings attended, those on competency-based instruction were considered the most pertinent, with 84% of teachers rating them as "useful". Trainings on multi-grade and large group instruction were considered useful by half of the respondents. The fact that a significant percentage of teachers (between 20% and 30%) abstained from commenting on the multi-grade and large group instruction workshops (compared with 6% in the case of competency-based instruction), begs the question as to whether they had actually attended the trainings. This despite the fact that the trainings were supposedly delivered nation-wide to all elementary teachers.

Very few teachers (29%) use French regularly in their daily lives. A full 62% maintain that they rarely use French in day to day conversation, and one teacher out of 10 (9%) reports never using French outside the classroom.

Only one out of three principals in ATEC pilot schools is a full time principal, with no teaching responsibilities. This limits the amount of supervision and support principals can offer to teachers attempting to integrate pedagogical innovations, like radio instruction, into their classroom. One out of three schools (36%) organizes regular monthly meetings to discuss teaching issues. However, a similar percentage holds meetings at most one a semester, or not at all.

Principals report that teachers are absent on average 1.5 days a month, generally to collect their salaries or for health reasons.

School-family-community connections
Only one out of three parents reports having regular communication with their child's teacher. Regardless of this lack of contact, all parents describe their relationship with their children's teachers as very good or good. Despite this, half maintain that they would send their child to another school, if the option was available.

All schools but one have a parent teacher association (FRAM), although only 60% of these associations are described by principals as 'active'. Regardless of this, the majority of principals (80%) maintain that parents respond willingly to requests for assistance. Half the schools (45%) also receive support from the local government ('mairie') in the form of donations of furniture, classroom construction, contributions to teachers' salaries, and physical labor. Principals do maintain, however, that most (75%) of the FAF/ management committees are actively or very actively involved in the school.

Conclusions

The picture that emerges from the above is that of children whose parents are generally committed to education, but who do not always have the resources required to support their children's learning. The demands of an agricultural lifestyle leave little in terms of energy or resources to actively follow children's learning, or to ensure that children participate regularly and fully in classroom instruction. A lack of familiarity with French, the language of instruction in the vast majority of schools, has also left parents ill equipped to help their children with their studies.

A picture also emerges of a teaching population that has not benefited extensively from formal instruction in teacher training. Most are "learning on the job", and have been doing so for at least 4 years. The majority have limited opportunities to use French, the language of instruction, outside of the classroom. Opportunities to learn from other teachers or from local supervisors are hampered by geographic isolation, by the inability to attend trainings held during the school year. Most teachers are, however, able to participate in workshops offered during the holiday period, and also all have access to a wind up radio to listen to interactive radio broadcasts.

The conditions described above point to the need to bring teacher education closer to the target population, so that all teachers are able to participate in ongoing professional development. Distance education, and in particular distance education delivered via radio, is a very viable and powerful way of doing so.

7.2 Additional Data

Table 7.2.a: Percentage of Teachers Performing Targeted Practices More Than Minimally, Grade 1

Grade 1 Observation – Class room instructional practices		Percentage of teachers observed where practice was more than minimally evident (i.e., score of 2, 3 or 4)			
		Sept.-Oct. '07	Jan.-Feb. '07	April-May '08	Difference from Sept.-Oct. '07 to April-May '08
A. Classroom management and organization					
1	The teacher exhibits appropriate and respectful behaviors towards the children in the class	51.3%	81.7%	93.9%	+25.3%
2	The teacher calls upon all or almost all the children in the class in the run of a lesson	52.8%	78.6%	85.3%	+60.4%
3	The teacher has the children participate actively throughout the lesson.	49.5%	64.4%	79.7%	+24.7%
B. Communication					
4	The teacher encourages the children and values their answers and comments	23.4%	45.0%	68.0%	+38.4%
5	The teacher encourages children to ask him or her questions or to initiate communication with him/her or with other students in the class.	7.3%	13.4%	9.1%	+46.7%
6	The teacher encourages children to ask questions of other students or to comment on the answers or opinions of other students.	5.7%	10.5%	8.7%	+6.6%
C. General classroom practices					
7	The teacher begins his/her lesson with an activity (song, game) designed to activate students' prior knowledge (ie, to bring to the forefront what they already know about the topic to be examined or information they will need to access in order to understand the new concepts to be presented)	15.0%	32.1%	40.3%	+25.3%
8	The lesson addresses different learning styles and modalities (audio - songs, story, rhymes, explanations; kinesthetic - physical activities; tactile - touching, manipulating objects; visual - drawings, images; textual - writing on blackboards, slates, textbooks, etc.)	25.7%	66.3%	86.1%	+60.4%
9	The teacher has the students work in pairs or in small groups	19.9%	32.2%	44.6%	+24.7%
10	The teacher checks children's understandings throughout the lesson.	36.8%	55.8%	75.2%	+38.4%

11	The teacher has the children apply or put into practice the notions presented (by organizing role plays, by having them solve problems, by having them write new words or sentences, etc.)	32.5%	74.6%	79.2%	+46.7%
12	The teacher uses games during the lessons	14.2%	19.2%	20.8%	+6.6%
13	The teacher uses story, drama or puzzles.	6.8%	18.8%	9.5%	+2.7%
14	The teacher uses gestures to help students understand.	27.1%	45.4%	49.1%	+22.0%
15	The teacher uses drawings or illustrations.	18.0%	33.6%	38.5%	+20.5%
16	The teacher uses songs or rhymes.	14.4%	30.4%	23.8%	+9.4%
17	The teacher incorporates activities that give students the opportunity to move around (standing, sitting, clapping, etc.).	25.0%	57.2%	67.0%	+42.0%
18	The teacher uses objects (rods, pebbles, classroom objects, objects from the market place, etc.) to present or reinforce concepts.	17.2%	35.4%	65.2%	+48.0%
D. Classroom practices in Malagasy and French language classes					
19	The teacher integrates, in the same language lesson, oral expression, phonetics, writing and reading (or at least two of these elements).	21.9%	50.5%	63.5%	+41.6%
E. Student evaluation					
20	The teacher gives objective and specific feedback on students' answers and work, so that they will know whether they have understood the targeted concepts.	18.3%	41.0%	61.0%	+42.7%
21	The teacher helps children to find or to understand the right answer.	29.1%	52.5%	58.9%	+29.8%
22	The teacher ends the lesson by having students summarize or explain what they learned.	11.5%	23.0%	35.2%	+23.7%
F. Gender equity					
23	The teacher offers boys and girls equal opportunities to answer questions, to do board work or to recite.	29.5%	80.3%	86.5%	+57.0%
24	The teacher encourages boys.	8.9%	63.8%	65.2%	+56.3%
25	The teacher encourages girls.	10.9%	61.3%	62.6%	+51.7%
26	The teacher values girls' answers.	9.3%	56.5%	64.3%	+55.0%
27	The teacher values boys' answers.	9.3%	57.9%	65.2%	+55.9%

Table 7.2.b: Percentage Of Teachers Performing Targeted Practices More Than Minimally, Grade 2

Grade 2 Observation – Class room instructional practices		Percentage of teachers observed where practice was more than minimally evident (i.e., score of 2, 3 or 4)			
		Sept.-Oct. '07	Jan.-Feb. '07	April-May '08	Difference from Sept.-Oct. '07 to April-May '08
A. Classroom management and organization					
1	The teacher exhibits appropriate and respectful behaviors towards the children in the class	46.5%	74.2%	90.2%	+43.7%
2	The teacher calls upon all or almost all the children in the class in the run of a lesson	44.4%	79.0%	83.4%	+39.0%
3	The teacher has the children participate actively throughout the lesson.	44.4%	63.9%	76.1%	+31.7%
B. Communication					
4	The teacher encourages the children and values their answers and comments	19.0%	42.5%	59.0%	+40.0%
5	The teacher encourages children to ask him or her questions or to initiate communication with him/her or with other students in the class.	6.0%	12.4%	7.8%	+1.8%
6	The teacher encourages children to ask questions of other students or to comment on the answers or opinions of other students.	7.1%	9.0%	6.8%	-0.3%
C. General classroom practices					
7	The teacher begins his/her lesson with an activity (song, game) designed to activate students' prior knowledge (ie, to bring to the forefront what they already know about the topic to be examined or information they will need to access in order to understand the new concepts to be presented)	8.9%	31.8%	37.6%	+28.7%
8	The lesson addresses different learning styles and modalities (audio - songs, story, rhymes, explanations; kinesthetic - physical activities; tactile - touching, manipulating objects; visual - drawings, images; textual - writing on blackboards, slates, textbooks, etc.)	17.8%	61.2%	85.9%	+68.1%
9	The teacher has the students work in pairs or in small groups	24.0%	32.3%	38.5%	+14.5%
10	The teacher checks children's understandings throughout the lesson.	31.7%	51.5%	73.2%	+41.5%
11	The teacher has the children apply or put into practice the notions presented (by organizing role plays, by having them solve problems, by having them write new words or sentences, etc.)	29.6%	73.0%	80.5%	+50.9%

12	The teacher uses games during the lessons	13.2%	12.0%	17.1%	+3.9%
13	The teacher uses story, drama or puzzles.	3.6%	14.7%	5.4%	+1.8%
14	The teacher uses gestures to help students understand.	20.4%	43.3%	49.8%	+29.4%
15	The teacher uses drawings or illustrations.	12.0%	26.3%	31.2%	+19.2%
16	The teacher uses songs or rhymes.	10.9%	32.2%	23.0%	+12.1%
17	The teacher incorporates activities that give students the opportunity to move around (standing, sitting, clapping, etc.).	14.5%	57.8%	71.7%	+57.2%
18	The teacher uses objects (rods, pebbles, classroom objects, objects from the market place, etc.) to present or reinforce concepts.	14.0%	34.5%	56.1%	+42.1%
D. Classroom practices in Malagasy and French language classes					
19	The teacher integrates, in the same language lesson, oral expression, phonetics, writing and reading (or at least two of these elements).	26.2%	51.1%	69.6%	+43.4%
E. Student evaluation					
20	The teacher gives objective and specific feedback on students' answers and work, so that they will know whether they have understood the targeted concepts.	11.2%	39.9%	58.0%	+46.8%
21	The teacher helps children to find or to understand the right answer.	29.9%	55.0%	53.4%	+23.5%
22	The teacher ends the lesson by having students summarize or explain what they learned.	9.2%	28.1%	38.9%	+29.7%
F. Gender equity					
23	The teacher offers boys and girls equal opportunities to answer questions, to do board work or to recite.	25.0%	76.4%	83.4%	+58.4%
24	The teacher encourages boys.	9.5%	54.9%	58.5%	+49.0%
25	The teacher encourages girls.	11.3%	55.4%	57.1%	+45.8%
26	The teacher values girls' answers.	9.5%	50.6%	61.0%	+51.5%
27	The teacher values boys' answers.	8.9%	51.5%	61.0%	+52.1%

Table 7.2.c: Changes in Teacher Practices by Grade and Professional Status

	Number of teachers observed	Percentage of teachers who incorporated more than 16 student-centered practices in their lessons in Sept-Oct 07 or Jan-feb 08	Percentage of teachers who incorporated more than 16 student-centered practices in their lessons in May 08	Change from Sept.-Oct. '07 or Jan-Feb. '08 to May '08
Grade 1 teachers				
FRAM MEN	53	56%	98%	+42%
FRAM Comm.	30	60%	93%	+33%
Civil Servants	46	67%	98%	+30%
Total Grade 1	**129**	**61%**	**97%**	**+36%**
Grade 2 teachers				
FRAM MEN	67	69%	94%	+25%
FRAM Comm.	21	50%	100%	+50%
Civil Servants	30	57%	93%	+37%
Total Grade 2	**118**	**62%**	**95%**	**+33%**

7.3 Data Collection Instruments

7.3.1. Cover sheet (summary of data collected per school)

CAHIER DE COLLECTE DES DONNÉES – EMISSIONS EIR

CISCO :_____ ZAP : _____

Nom de l'École :_____ Code de l'École : _____

Date de la visite :_____Durée de la visite :_____jour(s)

Jour/mois/année

Nom des évaluateurs: _____

_____

Sec	Instruments	But	Modalité d'utilisation	Responsable	Cocher si effectué	Sinon, expliquer pourquoi
A	Fiche d'évaluation du taux de participation des élèves à l'écoute des émissions	Déterminer le pourcentage de classes du CP qui écoute les émissions EIR - Izaho koa mba te hahay»	Entretien avec les enseignants et les élèves		☐	
B	Fiches d'observation – Classes de CP1 et CP2	Recueillir des données sur les pratiques de classes des enseignants et leur perception de l'impact des émissions	**Enseignant, numéro 1 - Niveau _____**			
			Leçon 1 Matière observée : _____			
			• Pratiques de classe		☐	
			• Interactions cognitives		☐	
			• Appréciations affectives		☐	
			Leçon 2 Matière observée : _____			
			• Pratiques de classe		☐	
			• Interactions cognitives		☐	
			• Appréciations affectives		☐	
			• Entretien		☐	
			Enseignant numéro 2 - Niveau_____			
			Leçon 1 Matière observée :			
			• Pratiques de classe		☐	
			• Interactions cognitives		☐	
			• Appréciations affectives		☐	
			Leçon 2 Matière observée :			
			• Pratiques de classe		☐	
			• Interactions cognitives		☐	
			• Appréciations affectives		☐	
			• Entretien		☐	

7.3.2. IRI Listenership Record

SECTION A : Évaluation de la participation des élèves à l'écoute des émissions EIR, « Izaho koa mba te hahay»

Protocole :

- Visitez chaque classe de CP1, de CP2 et de classe multigrade.
- Faites l'entretien avec chaque enseignant. Si l'enseignant dit qu'il écoute les émissions « Izaho koa mba te hahay » demandez à ses élèves de chanter une des chansons apprises pendant le 2e ou le 3e bimestre. Notez les réponses.
- Complétez la fiche récapitulatif à la page suivante de ce cahier.
    - Colonne A : Notez le nom de l'enseignant
    - Colonne B : Notez le prénom de l'enseignant
    - Colonne C : Notez le niveau enseigné (CP1, CP2 ou multigrade)
    - Colonne D : Notez le sexe de l'enseignant (F=Femme, H=Homme)
    - Colonne E : Demandez à l'enseignant s'il écoute les émissions Izaho koa mba te hahay avec ses élèves. Notez oui ou non, selon la réponse donnée.
        - Si la réponse est non, notez les raisons évoquées dans la colonne F et remerciez l'enseignant. La collecte des données est terminée.
        - Si la réponse est oui, passez à la colonne G.
    - Colonne G : Demandez aux élèves de chanter une des chansons apprises lors des émissions « Izaho koa mba te hahay » du bimestre 2 ou 3. Vérifiez dans le guide de l'enseignant qu'il s'agit effectivement d'une chanson des bimestres 2 ou 3. Si la chanson chantée figure parmi celles listées dans le guide, notez « oui » dans la colonne. Sinon, notez non.
    - Colonne H : Notez
        - « oui » si vous avez noté « oui » dans la colonne G
        - « non » si vous avez noté « non » dans la colonne G

Commentaires : _____

No.	A	B	C	D	E	F	G	H
	Nom de l'enseignant	Prénom de l'enseignant	Niveau enseigné (Cp1, CP2 ou Multigrade)	Sexe (F= Femme H= homme)	L'enseignant déclare-t-il écouter les émissions ? (notez oui ou non)	Si l'enseignant répond « non » à la question E, notez les raisons évoquées	Les élèves, peuvent-ils chanter une des chansons des émissions des bimestres 2 ou 3 ? (Vérifiez que la chanson figure dans le guide d'accompagnement et notez oui ou non)	Cette classe, suit-elle les émissions Izaho koa mba te hahay? (Notez oui, non, ou peut-être)
1								
2								
3								
4								
5								
6								
7								
8								
9								

7.3.3. Classroom Obervation Protocol and Instruments

SECTION B - Fiches d'observation des classes de CP1 et CP2 qui utilisent les émissions

Protocole :

Avant l'observation

- Demandez au directeur de l'école d'identifier un enseignant du CP1 et un enseignant du CP2 (ou des classes multigrades) CP1/CP2 qui utilise les émissions « Izaho Koa Mba Te Hahay » ou qui va les utiliser à l'avenir. L'idéal, c'est d'observer 1 enseignant du CP1 et 1 enseignant du CP2.
- Observez au moins 1 leçon enseignée par chaque enseignant ciblé. La leçon doit être une leçon de mathématiques, de français ou de malgache.
- Expliquez aux enseignants sélectionnés qu'il ne s'agit pas d'une évaluation, ni d'une inspection, mais tout simplement d'un projet de recherche mené par le MENRS pour déterminer l'impact des émissions « Izaho koa mba te hahay » en salle de classe. Le but est de prendre le portrait de la salle de classe – et des stratégies d'enseignement – à plusieurs moments au cours de l'année pour déterminer si les enseignants appliquent en salle de classe les stratégies d'enseignement mises en relief dans les émissions radio.
- Expliquez que les résultats sont confidentiels et ne seront communiquer qu'aux personnes chargées de les analyser. Les résultats ne seront communiqués ni au directeur, ni au Chef ZAP, ni à la CISCO.
- Fournissez à l'enseignant une copie des fiches d'observation et expliquez-leur comment se fera la prise de notes.
- Expliquez aux enseignants que l'équipe des observateurs reviendra à plusieurs reprises au cours de l'année pour refaire les mêmes observations.

Pendant l'observation

- S'installer au fond de la classe, pour avoir une vue d'ensemble de la classe.
- Pour chaque leçon observée, un observateur complète la fiche de pratiques pédagogiques, un autre complète les fiches d'interaction.
- Ne pas intervenir dans la leçon ou communiquer oralement ou par le biais du langage corporel un jugement sur la qualité de l'enseignement. Notez tout simplement les observations objectives.
- Ne pas communiquer avec les élèves ou avec l'autre observateur.
- Ne pas bouger ou circuler dans la classe pendant l'observation.

Après l'observation

- Remerciez l'enseignant et les élèves.
- L'observateur ayant noté les interactions recopie ces observations dans le cahier

ENSEIGNANT Numéro 1

Nom de l'enseignant :_____Prénom :_____

Sexe : Homme___ Femme___

Classe enseignée : CP1___ CP2___ Multigrade___

Leçon 1

OBSERVATION DES PRATIQUES DE CLASSE - Programme ATEC

Renseignements sur l'enseignant (e)	Renseignements sur la classe et la leçon
Nom de l'enseignant(e) : Prénom:	Nom de l'observateur(trice): Prénom:
Sexe: (Cochez) Femme _____ Homme_____	Date: Durée de l'observation: de ____ h ___ à __ h____
Age: _____ ans	Classe : (Cochez une option) CP1 _____ CP2_____ Multigrade_____
Statut : (Cochez une option) Enseignant FRAM, subventionné par l'état_____ Enseignant FRAM non subventionné_____ Enseignant Titulaire_____	Effectif total : _____ Filles :_____ Matière observée : (Cochez une option) Mathématiques _____ Français _____ Malgache _____

Degré de présence ou de maîtrise….

1 Faiblement évident ou maîtrisé → 2 Moyennement évident ou maîtrisé → 3 Fortement évident ou maîtrisé → 4 Exceptionnellement évident ou maîtrisé

	Présent ?		Degré de présence ou de maîtrise….			
	Non	Oui	1	2	3	4
A. Gestion et organisation de la classe						
1. L'enseignant(e) **manifeste des comportements appropriés** et respectueux envers les élèves dans la classe.						
2. L'enseignant **fait appel à tous ou à presque tous** les élèves au cours de la leçon.						
3. L'enseignant(e) **fait participer, de façon active, les élèves** tout au long de la leçon.						
B. Communication						
4. L'enseignant(e) encourage les élèves et **valorise leurs réponses et commentaires**.						
5. L'enseignant(e) **encourage les élèves à lui poser des questions** ou à initier des communications avec lui ou avec la classe.						
6. L'enseignant(e) **encourage les élèves à poser des questions à d'autres élèves**, ou à commenter les réponses ou les avis de leurs amis.						
C. Pratiques de classe - générique						
7. L enseignant(e) commence sa leçon par une activité (chanson, jeu, etc.) pour **activer les pré requis des élèves** (c'est-à-dire, pour sortir ce qu'ils savent déjà au sujet de la notion visée, ou pour faire appel aux anciennes notions dont ils auront à se servir pour bien accéder à la nouvelle notion)						
8. L'enseignant(e) utilise plusieurs canaux au cours de la leçon (**auditif** : chanson, récit, comptine, explications – **physique** : activités physiques - **tactile** : toucher, manipulation d'objets – **visuel** : dessins, images - **écrit** : tableau noir, ardoise, texte, etc.)						
9. L'enseignant(e) utilise **le travail en pairs** (en groupes de 2) ou en **groupes restreints** (plus de 2).						
10. L'enseignant(e) vérifier **la compréhension** des élèves tout au long de la leçon.						

	Présent ?		Degré de présence ou de maîtrise....			
	Non	Oui	1	2	3	4
11. L'enseignant(e) demande aux élèves de **mettre en pratique les notions présentées** (en faisant des jeux de rôle, en complétant des problèmes, en écrivant des mots ou des phrases, etc.)						
12. L'enseignant(e) se sert de **jeux**.						
13. L'enseignant se sert de **récits, drames** ou **de devinettes**.						
14. L'enseignant se sert de **gestes** pour aider les élèves à comprendre (le langage gestuel).						
15. L'enseignant(e) utilise des **dessins** ou des **illustrations**.						
16. L'enseignant(e) se sert de **chansons** ou de **comptines**.						
17. L'enseignant(e) prévoit des activités qui donnent aux élèves l'occasion de **bouger** (se lever, s'asseoir, taper, etc.)						
18. L'enseignant(e) se sert **d'objets** (bâtonnets, cailloux, objets de la salle de classe, du marché etc.) pour présenter ou renforcer les notions.						
D. Pratiques de classe – (**a compléter uniquement s'il s'agit une leçon de malgache ou de français**)						
19. L'enseignant **intègre, dans la même leçon,** l'expression orale, la phonétique, l'écrit et la lecture (ou au moins 2 de ces éléments)						
E. Evaluation des élèves						
20. L'enseignant **apprécie de façon objective et spécifique les réponses** et le travail des élèves pour qu'ils puissent savoir s'ils ont bien compris les notions ciblées						
21. L'enseignant(e) **aide les élèves** à trouver ou à comprendre la bonne réponse.						
22. L'enseignant(e) clôture la leçon en **faisant faire la synthèse** par les élèves ou **en leur demandant ce qu'ils ont appris**.						
F. Équité du genre						
23. L'enseignant(e) offre **les mêmes chances aux garçons et aux filles** pour répondre aux questions, pour réciter ou pour aller au tableau.						
24. L'enseignant(e) **encourage les garçons**.						
25. L'enseignant(e) **encourage les filles**.						
26. L'enseignant(e) **valorise les réponses des filles**.						
27. L'enseignant(e) **valorise les réponses des garçons**.						

Commentaires : _____

_____

_____

_____

_____

_____

Fiche de collecte des données - Le niveau cognitif des interactions Enseignant-élèves

Matière observée (cochez) : Mathématiques ___ Français ___ Malgache ____

M = Mémoriser, répéter
SR = Se rappeler des informations fournies antérieurement
EDR = Expliquer, découvrir, résoudre

1	M	SR	EDR	**26**	M	SR	EDR	**51**	M	SR	EDR
2	M	SR	EDR	**27**	M	SR	EDR	**52**	M	SR	EDR
3	M	SR	EDR	**28**	M	SR	EDR	**53**	M	SR	EDR
4	M	SR	EDR	**29**	M	SR	EDR	**54**	M	SR	EDR
5	M	SR	EDR	**30**	M	SR	EDR	**55**	M	SR	EDR
6	M	SR	EDR	**31**	M	SR	EDR	**56**	M	SR	EDR
7	M	SR	EDR	**32**	M	SR	EDR	**57**	M	SR	EDR
8	M	SR	EDR	**33**	M	SR	EDR	**58**	M	SR	EDR
9	M	SR	EDR	**34**	M	SR	EDR	**59**	M	SR	EDR
10	M	SR	EDR	**35**	M	SR	EDR	**60**	M	SR	EDR
11	M	SR	EDR	**36**	M	SR	EDR	**61**	M	SR	EDR
12	M	SR	EDR	**37**	M	SR	EDR	**62**	M	SR	EDR
13	M	SR	EDR	**38**	M	SR	EDR	**63**	M	SR	EDR
14	M	SR	EDR	**39**	M	SR	EDR	**64**	M	SR	EDR
15	M	SR	EDR	**40**	M	SR	EDR	**65**	M	SR	EDR
16	M	SR	EDR	**41**	M	SR	EDR	**66**	M	SR	EDR
17	M	SR	EDR	**42**	M	SR	EDR	**67**	M	SR	EDR
18	M	SR	EDR	**43**	M	SR	EDR	**68**	M	SR	EDR
19	M	SR	EDR	**44**	M	SR	EDR	**69**	M	SR	EDR
20	M	SR	EDR	**45**	M	SR	EDR	**70**	M	SR	EDR
21	M	SR	EDR	**46**	M	SR	EDR	**71**	M	SR	EDR
22	M	SR	EDR	**47**	M	SR	EDR	**72**	M	SR	EDR
23	M	SR	EDR	**48**	M	SR	EDR	**73**	M	SR	EDR
24	M	SR	EDR	**49**	M	SR	EDR	**74**	M	SR	EDR
25	M	SR	EDR	**50**	M	SR	EDR	**75**	M	SR	EDR

Fiche de collecte des données – Appréciation des enseignants des réponses ou commentaires des élèves

Matière observée (cochez) : Mathématiques ___ Français ___ Malgache ____

P = Appréciation ou commentaire <u>positif</u>
N = Aucune appréciation, ou appréciation ou commentaire <u>neutre</u>
C= Appréciation négative ou <u>critique</u>

1	P	N	C	**26**	P	N	C	**51**	P	N	C
2	P	N	C	**27**	P	N	C	**52**	P	N	C
3	P	N	C	**28**	P	N	C	**53**	P	N	C
4	P	N	C	**29**	P	N	C	**54**	P	N	C
5	P	N	C	**30**	P	N	C	**55**	P	N	C
6	P	N	C	**31**	P	N	C	**56**	P	N	C
7	P	N	C	**32**	P	N	C	**57**	P	N	C
8	P	N	C	**33**	P	N	C	**58**	P	N	C
9	P	N	C	**34**	P	N	C	**59**	P	N	C
10	P	N	C	**35**	P	N	C	**60**	P	N	C
11	P	N	C	**36**	P	N	C	**61**	P	N	C
12	P	N	C	**37**	P	N	C	**62**	P	N	C
13	P	N	C	**38**	P	N	C	**63**	P	N	C
14	P	N	C	**39**	P	N	C	**64**	P	N	C
15	P	N	C	**40**	P	N	C	**65**	P	N	C
16	P	N	C	**41**	P	N	C	**66**	P	N	C
17	P	N	C	**42**	P	N	C	**67**	P	N	C
18	P	N	C	**43**	P	N	C	**68**	P	N	C
19	P	N	C	**44**	P	N	C	**69**	P	N	C
20	P	N	C	**45**	P	N	C	**70**	P	N	C
21	P	N	C	**46**	P	N	C	**71**	P	N	C
22	P	N	C	**47**	P	N	C	**72**	P	N	C
23	P	N	C	**48**	P	N	C	**73**	P	N	C
24	P	N	C	**49**	P	N	C	**74**	P	N	C
25	P	N	C	**50**	P	N	C	**75**	P	N	C

7.3.4. Teacher Interview Questions

ENTRETIEN – Enseignant numéro 1

1. Les stations de radio dans votre zone, respectent-elles le programme de diffusion des émissions ? (C'est-à-dire, les émissions sont-elles diffusées le jour et l'heure prévu ?)
   - ☐ a. oui, toujours
   - ☐ b. la majorité du temps
   - ☐ c. non, il y a souvent des perturbations

B. Qualité de la réception

2. Comment qualifierez-vous la qualité de la réception au moment que les émissions « Izaho koa mba te hahy » passe ?
   - ☐ a. excellent – tous les élèves peuvent entendre
   - ☐ b. bien
   - ☐ c. passable
   - ☐ d. faible – nous avons beaucoup de difficultés à entendre les personnes et les consignes

3. Avez-vous pris des mesures (par exemple, installation d'une antenne) pour améliorer la qualité de la réception ?
   - ☐ a. oui
   - ☐ b. non

C. Participation aux formations sur les émissions « Izaho koa mba te hahay »

4. Avez-vous assisté à une formation sur les émissions « Izaho koa mba te hahay » depuis février?
   - ☐ a. Oui
   - ☐ b. Non (passez directement à la question 9)

5. Combien de formations avez-vous suivies ? _____(écrivez le nombre)

6. Quand avez-vous suivi cette/ces formation(s) ? (cochez tous les moments mentionnés)
   - ☐ a. Durant les JP d'octobre
   - ☐ b. Durant les JP de décembre
   - ☐ c. Autre : _____

7. Qui a assuré cette formation (qui a animé la formation) ? (cochez toute les personnes nommées)
   - ☐ a. Un directeur d'école
   - ☐ b. Un Chef ZAP
   - ☐ c. Quelqu'un de l'équipe pédagogique de la CISCO
   - ☐ d. Autre personne (indiquez qui)_____

C. Appréciation des émissions « Izaho koa mba te hahay »

8. Les émissions 'Izaho koa mba te hahay' vous ont-elles permis de :

a. apprendre de nouveaux jeux à faire avec les élèves ?	Oui ☐ Non ☐
b. apprendre de nouvelles chansons à faire avec vos élèves ?	Oui ☐ Non ☐
c. renforcer votre français ?	Oui ☐ Non ☐
d. renforcer votre malgache commun ?	Oui ☐ Non ☐
e. apprendre comment impliquer les élèves plus dans leur apprentissage ?	Oui ☐ Non ☐
f. apprendre comment faire des activités de groupe ou de paire avec les élèves ?	Oui ☐ Non ☐
g. apprendre comment rendre l'apprentissage plus ludique, plus intéressant pour les élèves ?	Oui ☐ Non ☐
h. apprendre de nouvelles techniques ou stratégies d'enseignement ?	Oui ☐ Non ☐

9. Selon-vous, les émissions 'Izaho koa mba te hahay' ont-elles permis à vos élèves de :

a. renforcer leurs connaissances de la langue française ?	Oui ☐ Non ☐
b. d'améliorer leur prononciation du français ?	Oui ☐ Non ☐
c. renforcer leurs connaissances du malgache commun ?	Oui ☐ Non ☐
d. de renforcer leurs connaissances des mathématiques ?	Oui ☐ Non ☐

10. Selon vous, le MENRS devrait-il développer des émissions interactives pour d'autres niveaux (CE, CM, etc.)

☐ a. Oui. *Demander à la personne d'expliquer pourquoi* :_____
_____
_____
_____
_____

☐ b. Non *Demander à la personne d'expliquer pourquoi*_____
_____
_____
_____

11. Quelles actions le MENRS pourrait-il prendre pour vous aider à mieux utiliser les émissions 'Izaho koa mba te hahay' en salle de classe ? _____
_____
_____
_____

12. Quels sont les éléments des émissions que vous appréciez le moins ? _____
_____
_____
_____

E. Participation aux autres formations organisées par le Chef ZAP

13. Avez-vous assisté, depuis février, à des formations autres que les formations « Izaho koa mba te hahay », initiées ou animées par le Chef ZAP ?

☐ a. Oui (passez à la question 14)

☐ b. Non (remercier la personne)

14. A combien de séances de formations initiées par le Chef ZAP avez-vous assistées depuis février? Notez le nombre _____