



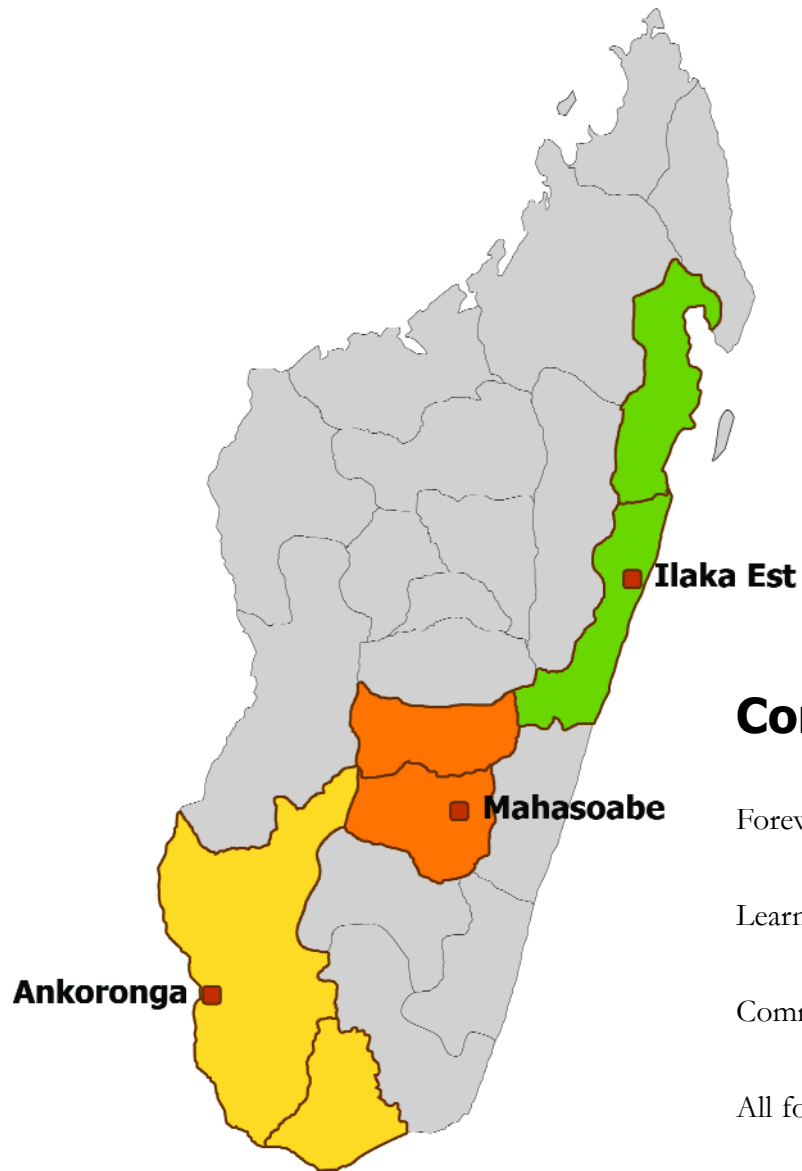
NEW PATHWAYS

- Stories of Educational Change in Madagascar -



USAID | **MADAGASCAR**
FROM THE AMERICAN PEOPLE





Contents

Foreword.....	2
Learning's Not Just for Kids : Interactive Radio Instruction in Mahasoabe.....	3
Communities Stand By Their Schools in Ankoronga.....	10
All for One and One for All : Teacher Professional Development Clusters in Ilaka Est.....	14

Foreword

Madagascar is well known for the uniqueness of its biodiversity-but its educational context is equally unique. The vast majority of elementary schools are situated in rural areas and have no access to electricity. One in five is "isolated", accessible only by footpaths. During the rainy season, many of the clay roads become impassable, isolating even those schools that are located near a population center. Schools are limited in terms of infrastructure, learning resources, and qualified teaching personnel. More than 60% of elementary teachers are community-based teachers, community members with no teacher training recruited to fill empty classrooms.

The significant rise in the number of community-based teachers attests to the success of the Ministry of National Education (MNE) in instilling in parents the value of education. Since 1997, elementary school enrolment has increased from 1.9 million to 3.8 million. Needless to say, the rapid growth in enrolment has stretched Ministry resources and compromised educational quality. Finding new, effective-and cost effective-ways of reaching isolated communities and teachers, and improving learning conditions for students has become a priority. It has also become a significant challenge. Madagascar, like many of its neighbors, seeks creative solutions to a perennial problem: how to ensure that all children, particularly those in isolated, rural areas, complete their basic education and develop skills and competencies required to be successful world citizens.

Between 2006 and 2008, the ATEC/STEP (**A**ppui **T**echnologique aux **É**ducateurs et **C**ommunautés/**S**upporting Technology for **E**ducators and **P**arents) program worked with the MNE and with regional and local educational authorities in six school districts to identify and pilot educational innovations adapted to Madagascar's unique situation and environment. Made possible through support from USAID and carried out by Education Development Center, Inc., ATEC worked to assist the MNE in achieving the goals of its Education for All (EFA) program. Educational innovations were designed and piloted in three areas critical to improving the quality of teaching and learning in

elementary schools across Madagascar:

- Distance education
- Effective school-community partnerships
- Decentralized teacher training

New Pathways : Stories of Educational Change in Madagascar tells the story of these innovations introduced by ATEC and their impact on teachers, students and parents.

First and foremost, the ATEC program is a story of partnerships - and of friendships forged. Without the unfailing support, guidance and wisdom of the Ministry of Education at the national, regional and local level, and USAID Madagascar, the stories described would never have unfolded as they did - and the successes would not have been as impressive. The story of the ATEC program is also one of dedication. At the end of this book you will see the faces of some of the individuals who experienced these stories firsthand, and who worked tirelessly with their Ministry of Education counterparts to ensure that teachers, parents and students had the support needed to make a difference. And finally, the ATEC program is a story of possibilities and potentials - of what can happen when good ideas meet devoted, committed people.

This book is dedicated to all of the students, parents, teachers, principals, local and regional educational supervisors and central Ministry authorities we have had the honor and extreme privilege to work with over the past two and a half years.

Norma Evans
Education Development Center, Inc. (EDC)
ATEC Madagascar

Learning's Not Just for Kids: Interactive Radio Instruction in Mahasoabe



Leontine winds up the radio to generate power for the morning radio lesson

On Mondays, Wednesdays and Fridays there is a certain excitement in the air in Mahasoabe, a town in the mountainous region of Fianarantsoa in central Madagascar. The Grade 1 and 2 students have a little spring in their step as they walk to school, and the teachers notice. Leontine Rafanjanirina, a community-based teacher at the public primary school, carefully places a bright blue radio at the front of her classroom. Her 40 students immediately settle in their seats and look expectantly as she turns the hand crank, generating power for the windup radio.



The Radio Characters

Mr. Lemazoto has over 10 years of teaching experience.

He is wise, kind and dedicated to his profession and to his students. He suggests different games and activities that the classroom teacher can try with his/her students. Sometimes he asks his students Faly, Mendrike and Vaviroa to help him explain new games or activities to the classroom students. At the end of each lesson, he reviews for the classroom teacher the different teaching strategies highlighted in the lesson, and proposes activities that the teacher can do before the next radio program to reinforce and extend students' learning.

But the excitement is not just because of the windup radio - Leontine's enthusiasm is contagious. She is one of 2,797 grade one and two teachers across Madagascar making learning more active, more engaging and more fun. How do they do it? Last year, she and 1,407 other teachers from Finanarantsoa attended a training on student-centered learning given by their local area supervisor. For three days, Leontine and her colleagues tried out the new approach - they sang songs, learned to play new educational games, and used easy-to-find local resource materials like sticks, leaves and bottle caps to solve mathematics problems. The training introduced teachers like Leontine to strategies associated with student-centered learning. It also showed them how to use the new



The night before each radio program, Leontine reviews the next lesson's learning objectives in her teacher's guide.

radio programs developed by the Ministry of Education for grades 1 and 2 that model these same strategies. At different points throughout the training, the local supervisor would play excerpts of audio segments from the radio programs. In these segments, a "radio teacher" guides the lesson, explaining to the classroom teachers how to organize different games and activities to engage students and put them at the center of the learning process. With

the help of this in-class teaching tool, called interactive radio instruction, or IRI, teachers learn new ways of asking questions, new games and songs, and how to ensure equal participation of girls and boys in all classroom activities.

After her initial training Leontine returned to Mahasoabe, armed with the radio and her teacher's guide, ready to test her new skills. The IRI series, called *Izabo koa mba te bahay!* (I want to learn too!) is broadcast three times per week for each of grades 1 and 2 on 19 partner radio stations across the country. One program focuses on Mathematics, another on French, and the third on Malagasy language. All of the programs were developed by Ministry of Education personnel, with technical assistance from Education Development Center, Inc. (EDC), and follow the national curriculum's learning objectives.



A first grade student in Leontine's class uses sticks to show a group of 12.



The Radio Characters

Ms. Maeva is Mr. Lemazoto's student teacher.

She has just embarked on a teaching career and is enthusiastic about learning and teaching. She loves music and loves to sing. During the radio program, Faly, Mendrike and Vaviroa are always begging her to sing to them, or to teach them a new song, which she does willingly. She also helps Mr. Lemazoto explain new games and activities.





Leontine coaching students through a counting exercise using sticks.

"I'm a community-based teacher. I'm new and still lacking experience. I attended some local trainings when I was first asked to take over one of the classrooms, but it wasn't understandable enough for me. But with the radio programs, the explanations are clear. It's an everyday training for the ears," Leontine explains.

The teacher's guide, which contains a detailed overview of each program and the different games, songs and activities in the program, is also a source of support: "Inside the teacher's guide there are many new and interesting things such as songs and stories. I prepare the next day's lesson at home with it," explains Leontine.

Over the course of a typical IRI lesson, Leontine plays different roles. As "information disseminator", she introduces the lesson to her students and explains the rules of different games and activities proposed by radio teachers Mr. Lemazoto and Ms. Maeva and their friends. As "facilitator", she guides them through the games and activities and notes their answers, reinforcing and correcting students' understanding where

necessary. After the radio lesson, as "coach", she repeats some of the games and activities to verify what concepts have been understood and which need more attention.

The pace of the IRI programs is steady, and lively. The radio characters live in a typical Malagasy village. Faly, Mendrike and Vaviroa, the three children on the program, are typical first and second graders. They are enthusiastic learners, asking questions, volunteering to explain things to the children listening to them on the radio, and participating eagerly in all of the learning activities. Outside the radio classroom, they explore their community and try to put into practice what they learned in Mr. Lemazoto's class, whether it be by helping Mendrike's mom sell fruits and vegetables in the market, listening to her elaborate stories, or by solving the intriguing mathematical puzzles posed by their old friend Kotomena, the village rice seller who always has a twinkle in his eye and time for his three young protégés.

All the characters joke, laugh, ask questions, make mistakes, tell stories, and sing - learning doesn't always have to be serious! The songs are original, composed by Ministry of Education personnel, and designed to reinforce the key Mathematics, Science, and French concepts presented in the radio lessons. The rhythms of the songs were also chosen with care. The Math and Malagasy songs use traditional Malagasy rhythms that get children up out of their seats and moving to the beat.



The Radio Characters

Faly is an avid and talented soccer player.

He is also an eager and enthusiastic learner who particularly enjoys games and riddles. He loves to go to school and to play with his best friend, Mendrike and her cousin Vaviroa. Meeting Vaviroa has motivated Faly to learn French so that they can better understand each other. When Faly, Mendrike and Vaviroa are not in class they spend lots of time together at the market with Mendrike's mother, helping her sell fruits and vegetables, or with their old friend Kotomena, the local rice vendor and mathematical wizard.



The French songs introduce children to new western rhythms. Songs in general play an important role in interactive radio instruction - not only do they liven up the classroom atmosphere and motivate learners, they also build the confidence of

teachers and students.

Leontine's colleague, Jeanine Andriatsoa, explains the impact of using music in the classroom: "For me, this program has dramatically eased the teacher's job... Listening to the songs makes children enthusiastic and they can easily learn the lessons. The songs and the lessons are put together as games and that facilitates their comprehension." Jeanine admits, "at first I was not keen on singing but, through the radio show, I could learn songs with the kids."

8 year-old Hanitra explains, "I prefer studying with the radio program because I'd also like to be clever ... I really enjoy listening to Dada Kotomena's story problems with my classmates. The Malagasy program is my favorite program."

The programs propose activities that engage and awaken children's curiosity about learning. Children are encouraged to speak freely, to play around with ideas, to come up with new, novel sentences using new words they just learned, to ask questions of their classmates, and to present and test hypotheses about how things work (how a word might be spelled, or what objects in the class measure five centimeters in length, for example). This changes the teacher's role from "informer" to "facilitator". Rather than a classroom dominated by teacher talk, with the IRI programs students learn by talking to the teacher - or to each other. The three students in the radio program, Mendrike, Vaviroa and Faly, model new behaviors for the classroom students, encouraging them to reflect and articulate ideas, to ask questions, to make connections, to explain their reasoning and generally to take risks with their learning. At the same time, the radio teachers model new roles and behaviors for the

Sample Math Activity : " I have...I would like to have... "

Objective : Students learn to identify the number of objects that must be added to make up the total number.

Materials required : Pencils or sticks

Rules of the game :

1. Tell the students that you have a certain number of sticks, 3 for example, but that you would really like to have more, for example, 5.
2. Ask the students to tell show you how many sticks to add to your bunch to have the total you would like.



The Radio Characters

Vaviroa just moved back to the village after 6 years.

Because her family was in France, she doesn't speak Malgasy, only French. But she is determined to learn, with the help of her friends Mendrike and Faly, and to teach Faly to speak a little French at the same time. Like her cousin Mendrike, she loves school, especially math. She often asks Mr. Lemazoto to do math problems using sticks and rocks. She also loves to listen to Mendrike's mother's interesting stories.



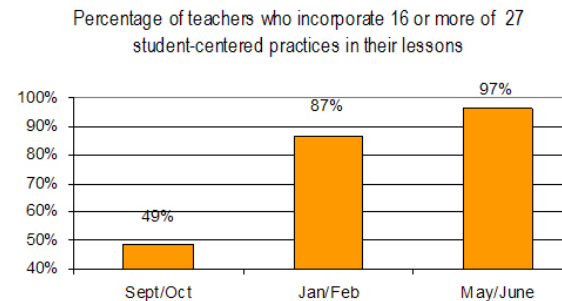
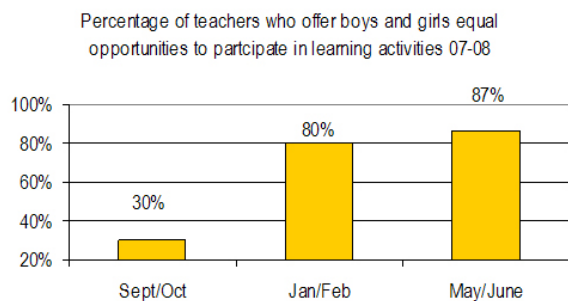
classroom teachers, showing them how to give positive feedback, and how to make children more responsible for their own learning. For example, if Mendrike puzzles aloud how to spell a word, one of the radio teachers will say "That's a very good question, Mendrike. Let's see if we can work together to figure that out!"

This new way of teaching has caught on. By the end of the year, 97% of teachers were regularly using at least half of the student-centered techniques they learned in their training in their own lessons - up from 49% at the beginning of the school year. Leontine sees a change in her classroom. "I notice that the kids concentrate more on the lessons, and are remembering the content. They have become more enthusiastic about their education because they've noticed their own improvement." More teachers are tuning in, too. In the first two months of the program, listenership averaged 79%. By the end of the year, that number had increased to 97%.

The *Izabo koa mba te bahay!* programs are not just for teachers and students; parents are also an important audience. At the end of every radio program, Mendrike's Mom and Dad talk directly to parents about what their daughter learned, and describe a simple activity they plan to do at home in the evening with Mendrike to reinforce what she learned during the radio program. The activities range from asking Mendrike to teach her new song to her younger siblings, to using simple, easy-to-find objects to review new math concepts. For example, one exercise has Mendrike locate all the objects in the house that are round or square; another has her estimate and then count out the number of pebbles in her mom's hand.



A parent makes counting sticks from branches for her son to use.



The Radio Characters

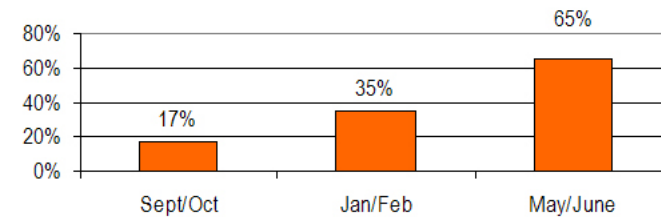
Mendrike is serious and studious, and hopes one day to become a doctor.

She is smart and loves to figure out Koutoumena's many puzzles and riddles. Her best friends are Faly and her cousin, Vaviroa, who has just moved back to the village after 6 years. She loves to help her mother in the market, and to listen to her mother's many intriguing and captivating stories.

For Leontine, the radio programs are helping reinforce the partnership between parents and teachers. "We often ask parents to follow up with their kids to talk with them about what they're learning, and see if the children use what they learned in class, at home," explains Leontine.

For Samuel Randriamalaza, President of the Mahasoabe Parents' Association, the programs have made a real difference. "We really want to help teachers as much as we can. The radio show has had a great impact on students' motivation to go to school and to repeat their lessons at home. As a consequence, Malagasy students' level is increasing and we hope that illiteracy will decrease."

Percentage of teachers who use everyday objects (sticks, pebbles, etc) to explain things or to have children represent their understanding 07-08



Sample Effective Teaching Practices Modeled in the *Izaho koa mba te hahay!* Radio Programs

- Valuing students' answers and giving them positive feedback on their thinking
- Ensuring that girls have the opportunity to take a leadership role in learning activities
- Having students represent their understanding of new mathematical concepts using common objects (pebbles, sticks, bottle caps)
- Asking students to justify their thinking
- Asking students to make and test hypotheses
- Asking students to create original sentences using a new word they just learned
- Encouraging children to ask questions of their classmates, or comment on their ideas
- Ensuring that children have opportunities to work in pairs or small groups to solve problems or to complete a task

The Radio Characters



Dada Kotomena is one of the village elders and much loved by the children in the village.

He sells rice in the local market and is renowned for his mathematical puzzles and riddles, and for his gentle wisdom. Faly, Mendrike and Vaviroa love spending time with him and impressing him with the new things they have learned in Mr. Lemazoto's mathematics class. Of course, Dada Kotomena always has a problem or puzzle to challenge or reinforce their new understandings. And when the children successfully solve the problem, he always has an orange or a banana on hand to reward their thinking!



Communities Stand By Their School in Ankoronga



Dakin Kolibory, Brick Maker, Facilitator of the Ankoronga Listening Group, Toliara.

My name is Dakin. I live here in Ankoronga Andatabo. Ankoronga Andatabo is a small village on the way to Toliara, on the RN 7. I was chosen by the elders of our village to be the lead facilitator of our listening group. These groups were put in place by the local school district and the ATEC program in 2007. The program donated some wind-up/solar radios to the listening groups. That is how we listen to *Rima* ("community action" in Malagasy), a radio show on parent-school partnerships, produced by the Regional Direction of National Education (DREN) of Atsimo Andrefana. We don't just listen to the show, we also discuss what we hear. We've dedicated much of our time to listening to this radio show and it has made us realize the importance of having a school improvement plan. So, after some time, we decided to develop one - a kind of contract between the school and the community to improve our children's education.



We began by meeting with other parents who weren't members of our listening group yet and encouraged them to get involved. We created 23 associations or "focus groups". For example, there is the Association of Mothers, the Association of Youth, and the Association of Teachers.

I met with each of these associations and asked them what their dreams or aspirations were for their children. That allowed us to get an idea of what everyone in the community thinks and what everyone wants. From what everyone said, we came up with a school improvement plan that included repairing the canteen. That particular idea came from the Mothers' focus group. The mothers had always prepared the students' meals and that's why they had the idea of repairing the canteen.

We also decided to repair the canteen because the school principal, the Ministry of Education's local area supervisor (Chef ZAP), and myself noticed that the student enrolment rate is still very low.

The Ministry's objective is to achieve an enrollment rate of 100% and to provide students with a better quality education. Malnutrition is something that prevents parents from sending their children to school.

We had three meetings, during which everybody could speak out. And at the end of these meetings, everybody agreed with the plan to build the canteen. It motivates parents to send their children to school because they know that their children will get something to eat there.

Once we had our school improvement plan developed, we elected a committee to manage the plan. The committee includes parents and teachers. Our entire school improvement plan will take three years to implement, starting this year. The plan was then sent to the regional and local education ministry authorities to be evaluated as part of a competition sponsored by ATEC and USAID. At the end of the competition, USAID awarded us AR 950,000.00



Dakin facilitates a discussion after the Rima broadcast.

465 community-based listening groups across Madagascar have been doing their part to improve their local schools. Made up of parents, teachers and other interested community members such as youth and elders, the groups meet regularly with their locally-appointed facilitator to listen to the radio programs, discuss issues and ideas presented and identify actions they can take, with the resources available locally to support education in their community. The programs are developed regionally, and reflect the educational interests, characteristics and priorities of each region. Stories, testimonials and songs help convey important ideas and experiences.

Prior to the launch of the listening groups, facilitators attend a three-day training to learn :

- The roles and responsibilities of listening group facilitators;
- How to facilitate a listening group (specific activities to do before, during, and after a listening group session);
- Techniques that can promote dialogue and debate during a listening group;
- How to ensure maximum community involvement and participation in listening group activities.

(approximately \$586 USD). The funding helped us carry out our plan. 60% of what was needed to build the canteen, which was a priority for us, came from the local population and the parents; the remaining 40% came from the USAID grant.

The local population has worked together to build this canteen. People here live on brick making and stone crushing for construction. Some of us transported the stones, others the sand, and some others the bricks. As I am a facilitator, I tried to encourage everyone, especially the youth, to respect the plan we agreed to.

The students and mothers were very happy that the canteen was repaired. Having this

place helps the students a lot in their study. It also taught them that we as a community can all work together to achieve something. Our goal is to keep improving our school.

We've noticed that parents are now more interested in development, especially in improving education. **It's because they've realized that their children's future largely depends on it.**

"Our ancestors said : what unites is solid, like a stone ; what separates is loose, like sand. We cannot hope for manna from heaven - we the parents' association must make an effort because it is our responsibility to improve the school. "

- Excerpt from a Rima broadcast



Villagers make bricks for the canteen.



The new canteen and the existing kitchen - the next renovation project in the Ankoranga community action plan.

Ankoranga was one of 75 communities to receive trainings on how to develop a multi-year school improvement plan. The trainings focused on how to:

- Help community members identify the aspirations they have for their children, and their school, as well as the resources available locally to help them meet those aspirations
- Translate those aspirations into measurable, multi-year performance indicators
- Develop a resource identification and management plan to support the implementation of the multi-year action plan
- Develop successful small grant applications
- Implement transparent and financial and administrative practices to manage the implementation of the action plan
- Involve the community in the monitoring and evaluation of the plan.

The trainings used an "appreciative inquiry" approach that encourages communities to recognize and use the human, financial and technical resources available in the local community to meet the goals they have for their children's education.



First of all, we - parents - are very happy because when I was a kid, I used to go to that school. I would go home for lunch, and sometimes lunch would be waiting for me at home but other times, there would be nothing to eat, so I would just go back to school without eating anything. Now, our children have lunch at school before going home.

- Josette, Mothers' group, Ankoronga village, Toliara.



We noticed the canteen was in a very poor condition. When it rained, our kids were wet through because the roof leaked. We decided to repair it. I offered some bricks as a contribution to the building of the canteen. It can also be used as a classroom in the future. We are satisfied with the result because all of us worked together.

- Martine, Mothers' group, Ankoronga village, Toliara.

Ankoronga village is located 7km from Toliara, in the arid SouthEastern region of Madagascar. The Ankoronga listening group's school improvement plan was among the best submitted. Because of the members high level of initiative, the World Food Program agreed to provide the food supplies needed for the students' meals.

The listening groups have made a significant impact across Madagascar. 94% of community members say that they have changed the community's attitudes about school-community partnerships. There are more frequent meetings of the parent teacher associations (FRAMs) and the local school boards (FAFs), and more parents attend. Communities are paying locally recruited teachers, more children are in school and fewer children are absent. 86% of listening group members have used community funds to improve the quality of the school by building new classrooms and latrines, buying blackboards, desks and doors and building housing for teachers. As a result of the listening groups, community members say parents have even reduced the number of chores their children do outside of school so that they can focus on their school work!



All for One and One for All: Teacher Professional Development Clusters in Vatomandry



Fideline prepares for her weekly cluster meeting.

For many teachers in rural Madagascar, life can feel isolated. Schools are generally small, so teachers have few colleagues with whom they can talk and share. Villages are spread apart and connected by a network of footpaths instead of roads. To visit a neighboring school, teachers go by foot, or if the mountainous terrain is not too daunting, by bicycle. In addition to the geographic isolation, the rainy season makes most of the clay roads impassable for four months out of the year, preventing teachers from attending trainings in regional centers or even at local district offices.

The sheer size and diversity of Madagascar poses an additional challenge: what may work in one region may not transfer easily to another. How to ensure that trainings are meaningful for all teachers, regardless of their location?



A group of teachers in the marshy, rice-producing region of Vatomandry have found the answer. These teachers - and 6,000 like them in six school districts across Madagascar - have organized their own kind of "teachers' lounge" where they share resources and ideas, work together to solve common problems and generally support and help each other. The Professional Development Clusters, also called Teacher Networks, bring together teachers from neighboring villages with a trained facilitator chosen by the teachers themselves.

How to Make a Cloth Whiteboard with Natural "Velcro"

Ingredients:

Cardboard, scissors, white cloth, burrs or seeds that stick to pant legs, glue.

Directions:

- 1) Measure and cut: Measure the cardboard, then cut it into like-sized pieces.
- 2) Write and cut: Draw the letters and numbers on the cardboard pieces, then cut them out.
- 3) Glue: Glue the seeds to the back of each letter or number.
- 4) Check your work: In a group, check the letters and numbers to make sure they are legible.
- 5) Place on cloth: Once the glue has dried and the seeds are secured to the back of the letters, place the letters on

Fideline is the Ilaka Est cluster's facilitator - and it's not a small job. As cluster facilitator, she's charged with helping her colleagues direct their own professional development. Fideline went through a series of 4 trainings to help her understand her role, the purpose of the cluster, how to help teachers identify their professional development needs and priorities, what local resources would help meet those needs, and how to capture all of this in a professional development plan, complete with a budget. Fideline worked with the teachers in her cluster to

develop their plan, which was then submitted to the local school district office (CISCO) and the regional teacher training college (CRINFP) for review. Once the plan was approved, the teachers received a small grant from USAID to support their activities.

"We're 24 teachers in this cluster. The purpose of the cluster is for teachers to share experiences," Fideline says. That is important in a region like Vatomandry's which, because of its isolation, has a hard time attracting experienced teachers. Beginning teachers have not benefited from the different trainings organized by the Ministry of Education over the past few years. Not surprisingly, "[they] feel that teaching is a burden for them..." she says. For that reason, at every meeting, Fideline encourages teachers to learn from one another, to work together and to feel free to share their ideas and experiences. This provides critical support for "rookie" teachers. They get a chance to learn from their colleague's experiences. For the veterans, it provides them with a chance to reflect on what works in their classrooms, what doesn't, and why. Jeanine, a longstanding teacher at the Morafeno Elementary School explains: "It's real sharing. There are many new teachers who are very happy to see us



Fideline and other cluster members make clay for a topographic relief to demonstrate different types of terrain.



Clay model of geographic terrain.



Cloth whiteboard with cardboard "velcro" letters.



A "scroll-by" television for reviewing addition exercises.



Giant dice for number games.

share what we know. We're as happy as they are to see what the students are now doing in their classes." Fideline has noticed that it's not just the younger or less experienced teachers who benefit: "...even senior teachers who were a bit 'sleepy' are now really 'awake'." Irma, a community-based teacher in Ilaka Est appreciates the environment created by the cluster: "Teachers working in schools that are close to each other can share ideas without feeling uncomfortable like in big meetings. The cluster allows everyone to express his opinion." Because teachers can interact honestly and openly with each other, they are able to reach a consensus on what they want to do as a group.

After several meetings, the Ilaka Est cluster decided to use their grant towards developing learning materials for the classroom that the children could interact with or even make themselves. Fideline explains, "Since children are fond of playing, they are most interested in games. So making them see, touch and play helps them remember things they learn. We have noticed that even if they seem to only play during the lesson,

when we ask them about the subject later on, they remember it, which means they learned something."

The cluster teachers did not hold back - they developed an array of learning materials, ranging from homemade clay for model making to felt boards and "stickable" cardboard letters, made using local burrs as "Velcro".

Jeanine even developed a kind of television! It has a paper scroll in the back that when rotated, shows different images and words related to a specific topic. With a bright smile, she enthuses, "Pictures are meaningful on their own. I'm good at drawing, so I drew some pictures about cleanliness for the television." Each teacher presented their resource materials to the other cluster members, demonstrated how it was made and used in the classroom. As much as possible, the cluster teachers use local, easy-to-find ingredients such as dirt, wood, bamboo, dyes and seeds. This way, other teachers can make the resources easily and cheaply.



The members of the Ilaka Cluster with their new learning resources.

Many cluster members notice that they are bringing the "cluster culture" of sharing and interaction with them into the classroom. "We divide classes into different groups, making it more participatory. We actually take care of every student. We organize contests in groups to see what the children understand and how willing they are to learn. We should keep this cluster going because it's an opportunity for teachers and students to share experiences."

At the end of the school year, Vatomandry and the five other school districts involved in the cluster project organized a "Festival of Teacher Networks" where networks from across the school district were invited to display the fruits of their labor. The Festival was attended by local and

regional government and school district representatives, mayors, religious leaders, National Directors of Education and USAID representatives. Each network had a chance to highlight their accomplishments and celebrate their successes. The event was covered by local and national media, giving parents across Madagascar a chance to see the efforts teachers are making to improve learning across the country. The Ministry of Education organized a competition to acknowledge the cluster in each school district that had the most innovative, creative and pedagogically sound project. The Ilaka Est cluster and its array of resource materials won first prize in the Vatomandry competition.

A research study conducted recently by the Ministry of National Education, with technical support from the ATEC program, showed that the majority of teachers feel they teach better as a result of their participation in the networks: they are more comfortable teaching subjects like Music and French, they are using learning resources more effectively in class, and they have an easier time developing and implementing lessons. Teachers report that they are better able to help students respond to questions, and that it is easier for them to draw out students' ideas and thoughts. Many of them say they see the biggest difference in the classroom - students understand more, are more creative, and participate more enthusiastically because they have the opportunity to use the new instructional materials developed in the clusters ... and their test scores are higher!

