



Students of a government primary school near Bangalore learning about the food chain through new group teaching software.

Using Technology to Train Teachers and Inspire Children

By RICHA VARMA

Wearing multicolored flip-flops, her hair tied up in neat braids, eight-year-old B. Shruthi hates being late for school—a far cry from the days when her teacher, H.S. Paramesh, had to coax and cajole her to study, at times even ferrying her to school on his rickety Bajaj scooter.

But things have changed at Shruthi's Government Primary School in Banjarapalaya village, 30 kilometers southwest of India's Silicon City, Bangalore.

Students are now learning English, math, science and social studies through radio, video and computer programs. Launched in 2002, Technology Tools for Teaching and Training, or T4, as the \$7 million initiative is called, uses interactive lessons to

enhance the children's learning experience.

This program of the U.S. Agency for International Development (USAID) is being implemented in schools in Karnataka, Chhattisgarh and Jharkhand. Madhya Pradesh came forward on its own, and Bihar is to be next.

"Shruthi keeps telling me she wants to ride the mystical flying horse that enralls students in the radio broadcasts every day. The horse comes in the dreams of a radio character, Putti, an inquisitive fourth grader, and takes her on a journey across continents, learning about new lands and new cultures," says Paramesh. The characters of Putti, Babu, Appu, Thimma (a pet monkey) and Akka have forged a bond with 5.7 million students in nearly 50,000 schools in the towns and villages of Karnataka, making learning exciting.

"A slow revolution is underway, changing the face of education," says S.N. Shylajamma, state coordinator of the Education Development Center, a U.S.-based nonprofit organization that is implementing the program for USAID.

Working with the Department of State Educational Research and Training and several other agencies, the program has introduced innovative applications of technology while lending support to the government's mammoth Sarva Shiksha Abhiyan or "Education for All" initiative. It is also courtesy the Sarva Shiksha Abhiyan that daily lessons are broadcast on All India Radio, which reaches even rural and remote areas.

"The aim was to exploit technology, building upon the state governments' investments in basic education, to improve the quality of education in India—and to do so on a large scale," says George Deikun, USAID mission director. "T4 has been very successful in improving the quality of education, as reflected by the substantial learning gains among students resulting

from the intervention. This is shown by pre- and post-testing of students."

Through uniquely designed programs within the school curricula, the system uses radio, television, computers and other digital media to revolutionize the way children are taught. "Unlike traditional classrooms, where rote is used and children are just passive listeners, the interactive programs prod students to participate through a variety of games, activities and even song and dance," says Shylajamma, who was a primary school teacher for more than two decades before she took on the task of helping to implement the initiative.

Besides improving the overall learning experience, the programs have added an element of fun to the staid classroom routine. So while tiny tots boogie to the catchy beats of "Chinnara Chukki," a half-hour educational broadcast that teaches first- and second-graders the basics of math, English and Kannada, the older ones try to make sense of concepts like decimals and fractions with a little help from the friendly radio teacher, Akka ("sister" in Kannada).

But students are only one half of the program. The other half—and there are more than 200,000 of them—are teachers. "The software works like a step-by-step guide. Before they started, I had doubts about amphibians. But after seeing the life-like animations, I have cleared all my doubts. Sometimes, I feel I am more enthusiastic than the children," says Kantha Raju, a social studies teacher at a primary school in Agara village near Bangalore. Raju utilizes the Group Teaching Learning software, forming groups of 10 to 12 students around one computer to explain concepts, living up to the program motto of "learning by seeing and doing."

Nearly 200 kilometers southwest of Bangalore, in Karnataka's



Right: Children engrossed in a video lesson relayed via satellite in Karnataka's rural Chamrajnagar district.

Below: After singing the hugely popular warm-up song broadcast at the beginning of each lesson, students settle down for some serious work with "Akka," the friendly radio teacher.

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Chamrajnagar district, a potholed dirt track leads to the Government School at Alahally village. Under a heavily overcast monsoon sky, the stone and brick structure is abuzz with the sounds of animated dialogue. A government-made televised documentary on the 1942 Quit India Movement is being broadcast through EDUSAT, the "education satellite" project, and the students are talking about interviewing a fellow classmate's grandfather who bore the brunt of a *lathi* or two.

Films on science, social studies and mathematics are an intrinsic part of this other side of the technology initiative. To make lessons more engaging, the Department of State Educational Research and Training has persuaded television stars to anchor the 30-minute lessons that are broadcast to 1,700 schools in Chamrajnagar and Gulbarga districts.

"These are familiar faces, favorite actors, who offer quick

recall. Some are role models and kids instantly pay more attention. It's a kind of stimulation, an encouragement to come and learn," says C.N. Raju, coordinator at the Block Research Center at Kollegal, who implements projects at the ground level and monitors quality.

Since 2004, the Technology Tools for Teaching and Training initiative has moved from its pilot stage, which covered some 900 schools and reached approximately 85,000 children, to an expanded phase reaching more than 200,000 schools and 13 million children in four states.

That it should spread its wings further is not in doubt, for school was never so much fun.



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