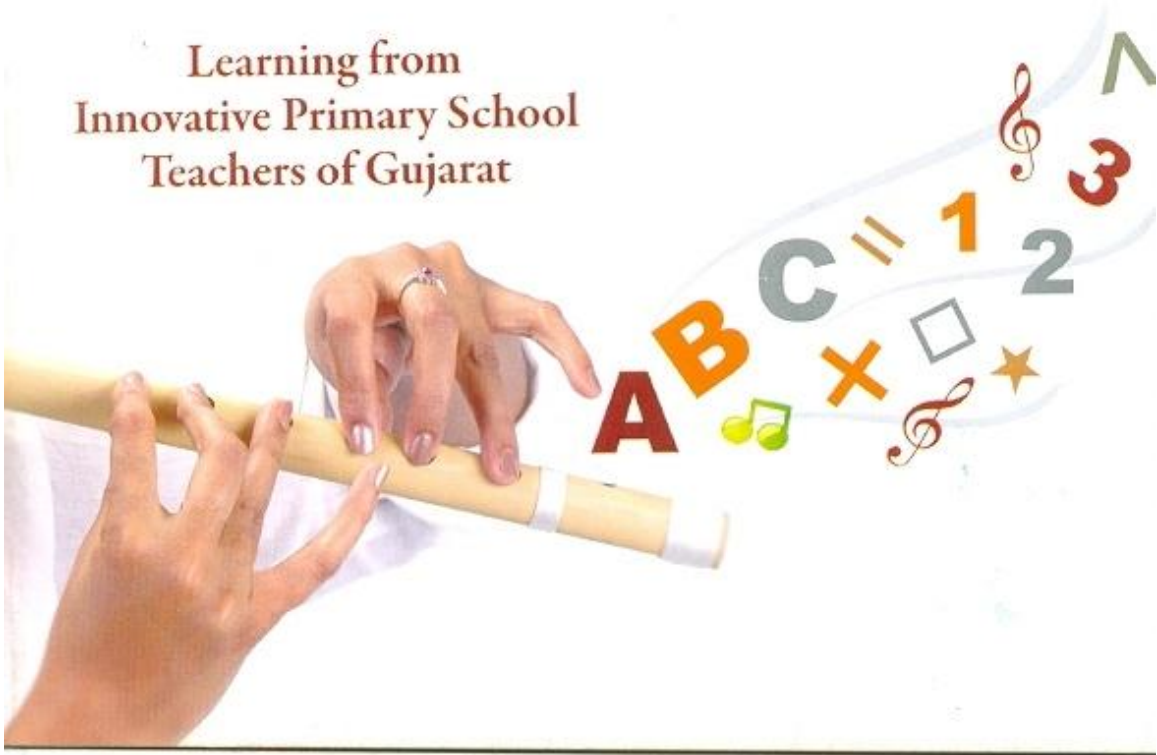


Learning from
Innovative Primary School
Teachers of Gujarat



પ્રાથમિક શિક્ષકોના
નૂતન પ્રયોગો



LEARNING FROM INNOVATIVE PRIMARY SCHOOL TEACHERS

A Casebook for Teacher Development

Vijaya Sherry Chand

(with)

Geeta Amin Choudhury

Samir D. Joshi

Umesh M. Patel

Gujarat Educational Innovations Commission

Government of Gujarat

and

Ravi j. Matthai Centre for Educational Innovation

Indian Institute of Management, Ahmedabad

September 2011

Introduction

There is a general perception that we have not performed as well as we could have in ensuring that our public schooling system provides quality basic education. Surveys of various kinds highlight poor learning levels – when a fifth standard child is reported to be unable to read a Class 2 textbook, there is brief but pointed media scrutiny. The issues of access and retention in school continue to be problematic in many areas; they attract greater visibility nowadays, thus adding to the perception of poor performance in the public system. Thus it is not surprising to see various prescriptions for privatization of primary schooling. An extreme view is that people have already voted – they are shifting to private, often unrecognized, primary schools as they are unhappy with problems like teacher absenteeism, poor infrastructure, weaker stress on English, and so on, in the public system. This view, therefore, would recommend a rapid transformation of the public nature of primary education. However, this recommendation downplays the reality represented by the reach of the public schooling system and the constituencies it serves – the various nooks and corners of this country and the vast majority of our population. Nearly 80 percent of the children who attend school are served by this system; close to 93 percent of the schools in this country are in the public system. This picture is not going to change in the near future, in spite of the trends which indicate that private primary education is now spreading to the village level and to precariously-placed socio-economic strata which are willing to make sacrifices in order to pay the fees demanded by private providers of basic education. The continued role of the state in ensuring adequate levels of basic education is beyond doubt. What is perhaps needed is a sharper focus on governance that ensures effective delivery at the cutting edge of the public schooling system. Is the average school able to function as a well-defined autonomous institution in a community context, meeting the educational needs of that context? Is it spearheaded by relevant leadership from within the school and the community? This monograph is set in the context of these questions.

These questions are underpinned by the proposition that the leadership that is exercised on a school determines the success with which educational breakthroughs are achieved, and more importantly, how positive educational practices get institutionalized. A second proposition that can be stated is that this leadership evolves out of an interaction between the school's leader (the teacher) and the local context. Teacher training, as traditionally understood, can only have a limited effect in promoting this kind of leadership in the public system. A new kind of teacher development is required to help teacher-leaders develop their skills and abilities to promote their schools as well-defined institutions that achieve certain educational goals. How have outstanding primary school teachers promoted their schools as institutions which are achieving their purpose? What can we learn from those teachers who have achieved their educational goals in spite of formidable socio-economic constraints – the same constraints that confront many of their colleagues in our public schooling system? Do the practices they have evolved offer us insights – insights that other teachers can apply to their own situations? Can we appreciate the strengths within our system that these teachers and the practices reflect? What does learning from innovative teachers and their work mean for teacher development policies and educational reform? These are some of the specific

questions that underpin the discussion of the work of 26 outstanding teachers of Gujarat in this volume.

Who are these teachers? They constitute a very small sample of innovative teachers working in the public (*panchayat*) primary school system. They have passed through a long selection process that involved identification of outstanding work, and the screening and validation of such work. The identification was done by inviting nominations from a variety of sources, including teachers' associations, the DIETs and the state's education department. The accounts prepared by the identified teachers were then screened by expert teachers who assessed the teachers' work for novelty and uniqueness of the work, the severity of the socio-economic context in which the work was carried out, the scope of the innovative work and its spread effect. The short-listed teachers were then invited to participate in workshops in which they presented their work to other teachers and experts. Based on the outcomes of these workshops, a final list of teachers was prepared. Visits were then made to these teachers to enable observation of their practice. The 26 teachers represented in this volume constitute a sample from a much larger pool of innovative teachers, the work of many of whom was published in a series of three volumes of cases.¹ The accounts of the 26 teachers presented here were finalized in 2009.

This monograph is aimed at teachers and teacher trainers working in the public schooling system. Each teacher's work is presented as a case – that is, an account of the work is first given, and this is followed by a list of discussion questions. Teacher-readers may read the cases for what they have to offer. They are sure to draw their own conclusions and lessons. They can also try to answer the discussion questions, in order to systematize their learning. The collection can also be profitably used in teacher development workshops where a reflection on or visualization of effective work that teachers can do in difficult socio-economic contexts is desired. We also believe that pre-service teacher training colleges can use the cases presented here as teaching material to support the educational theories they teach their students.

While teacher developers would surely devise their own ways of using these cases, we recommend that a match be first made between the objective of the training and the case selected. For instance, some cases illustrate innovative ways of promoting education of girls. A few others offer lessons on developing an identity for a school. Some deal with school-community relationships; a few others address the issue of education of migrating children. Participants may be asked to read the assigned case individually, and then discuss it in a group, using the discussion questions as guidelines. The trainer or a participant volunteer can then summarize the discussion and draw lessons that link the practice with educational theory. With larger groups, the discussion could be

¹ The three volumes, (a) *Universalisation has to be from the village upwards: Primary school teachers' innovations – First yearbook*, (b) *Aren't four grades enough? Primary school teachers' innovations – Second yearbook*, (c) *Open a school, close a few jails: Primary school teachers' innovations – Third yearbook*, were brought out by the Ravi J. Matthai Centre for Educational Innovation, Indian Institute of Management, Ahmedabad in 2005, 2006 and 2007. The work that resulted in these volumes was supported by the Sir Ratan Tata Trust, Mumbai.

assigned to smaller sub-groups, with each sub-group being asked to make a presentation.

What do the cases highlight? In difficult socio-economic contexts, should a teacher be concerned only with pure educational practice? One theme which emerges from these cases is that to be successful, teachers need to be socio-educational entrepreneurs. That is, they need to go beyond a narrowly defined educational practice to include extra-educational interventions if they are to achieve their educational goals. Teachers thus are forced to become innovative in their search for solutions. They are compelled to experiment to find out what works. These solutions are not confined to just school-community relations. They also extend into various in-school activities designed to address specific problems like irregular attendance, value education and poor science learning.

In the rest of this introduction we introduce each teacher very briefly, pointing out certain key features which readers would find interesting. While most teachers play multiple roles, inside the school and outside it, we have grouped the teachers according to what they considered their most important mission.

A number of teachers have focused on shaping the difficult socio-economic contexts in which they have been compelled to work. Dharmesh Ramanuj has played a significant community development role with his out-of-school development activities and “night group school”. His “parents’ term” (*vaali satra*) initiative is a good example of initiating school-community linkages. He also focuses on the need for clear plans and maintaining contact with the parent community. Jitubhai Boricha’s efforts with the Devipoojak community are very instructive. His initiative with one differently-abled boy illustrates how educational breakthroughs happen. The school preparedness program he devised to induct children unused to schooling is a well-thought and patient initiative. Munjalkumar Badmaliya’s experience is a moving account of how one can bridge a divided village. Harshadkumar Joshi’s ‘Timetable for working in the fields’ illustrates how one can adapt to difficult contexts. Kailashben Patel’s experience of handling drunkenness among school children may shock some readers, but this is a reality that teachers working in certain areas face quite regularly. Her successful efforts in partnering with a public sector company and a cooperative are also instructive. Rajeshkumar Sakariya addressed the problem of seasonal migration of children through a residential camp. Though this initiative has had its problems and is no longer operational (as of 2009), the lessons it offers are significant. Shankarbai Sendhav illustrates how other non-conventional resources like National Service Scheme participants – college girls and teacher trainees – can be roped in to build an environment for education. His community development activities like eye camps also highlight the socio-educational entrepreneur role that teachers often adopt.

There are some teachers in this volume who have come up with many innovative activities inside school to address problems like poor infrastructure, irregular attendance or learning difficulties. Though Babulal Prajapati has been successful in using local customs like ‘ravanu’ to build community linkages and in motivating religious leaders to support education of girls, his use of incentives to motivate children to attend

regularly, the 'Matchbox label activity' to teach letters of the alphabet, the 'Swinging library' in which older children help younger children to read, are innovative efforts. Bhavesh Pandya's 'Gamti Nishal' ('preferred school' or 'what I like to see in school') is a detailed account of how one can work with children to improve the school. His outstanding effort to develop stories without conjunct consonants is also worth studying. Bhavesh Dadhaniya's focus on cultural activities in the school, and his efforts to produce children's literature ('Bal Tarang'), helped him achieve his educational objectives. In addition, his de-addiction campaign, and 100-Activity Plan, are worth a closer look. Harjivandas Patel's very innovative idea of using unclaimed food in a government scheme meant for nutrition of pregnant women, for educational purposes, is an example of how opportunities can be spotted in difficult contexts. Ramesh Dhodakia's 'My Card' experiment was designed to help girls develop an identity for themselves. His 'self-administered attendance board', and 'Sakhi' experiment, in which girls learn from each other, are worth studying for their impact on helping girls manage their own affairs.

Jayesh Patel's use of local customs for saving trees in the school provides an amusing example of what teachers do to improve the surroundings of their schools. But more importantly, his efforts to develop a sports-based identity for motivating girls to take up schooling are commendable. Girls' education is closely linked to women's empowerment, and his support for a dalit woman sarpanch illustrates how social and educational issues cannot be de-linked. His threats to withdraw ration cards to ensure regular attendance, and his 'Kanyakelavani Kumbh' experiment to mobilize donations provide examples of what teachers are forced to come up with in adverse socio-economic contexts. Karshanbhai Patel's belief in "keeping the community informed of what is happening in the school," and his letter writing experiments and dramatization to develop speaking skills, helped him in achieving his educational goals. Dinesh Prajapati's use of village walls to write slogans from the textbooks and his post-card writing experiment in which he used three different kinds of cards to develop different competencies, make for interesting reading. Another of his activities, book-selling, has been successful in making low-cost books available to a larger audience.

The examples of Nanji Janjani, who has used his *Radio Club* to enrich his children's educational experience, and Anilkumar Vaishnani, who has used his extensive collection of coins for educational purposes, show how teachers can build on their personal hobbies to provide a qualitatively different educational experience to their children.

Jayantilal Jotani's efforts to educate girls and Prerna Mehta's planned approach to tackling the problem of poor education of girls illustrate the results of systematic planning and tapping into the resource base that children themselves have to offer. Thus, Jotani's 'children's committees' – especially his communication committee – and Mehta's eco-club have added value to the schooling experience of children. Bhadabhai Borkhatria's work with the youth and with the Ahir girls shows how poor levels of education among certain communities falling under the Other Backward Classes can be tackled. Similarly, Harjibhai Prajapati's educational breakthrough with one girl, Lasu, who belonged to one such community, is very instructive. His efforts to use well-conducted secular functions to build school-community relations and his use of

educational tours to improve attendance are noteworthy. Dhanji Vadher's attempt to add Class 7 so as to make a 'full' school had a positive impact on the education of girls, and is an example of how a good understanding of local aspirations can help in making educational breakthroughs.

Laljibhai Prajapati's 'peer inspection system', his experiment to connect a Class 1 child with a Class 7 child, and his work in de-addiction or plastic removal, illustrate an individual's involvement in the community. Ramanbhai Patel's 'Khatla Parishad', Team Leader for Quality Improvement project and Science Improvement Project are all school-based projects which achieved their educational purpose. Shantilal Patel's focus on using gardens to make his schools educational centres, and his science room experiments, illustrate a teacher's single-minded focus on a particular aspect of educational development. Likewise, Prakashchandra Suthar's *Vignan mate Tirthyatra* (pilgrimage for science) indicates what can be done to improve science education in our primary schools.

In brief, these 26 cases illustrates how relevant leadership – the product of the interaction among teachers, local leaders, the youth, the parents and other socio-economic contextual factors – can shape institutions that have a clear purpose. This purpose, simply stated, is overcoming educational barriers and making basic education attainment a reality for people who need it most. We hope our readers enjoy reading the 'stories' presented in this monograph and request them to get in touch with the teachers.

DHARMESH M. RAMANUJ

Dharmesh Ramanuj obtained a B.Ed. degree (with English) and joined a high school in Talaja in 1994. His mother was a primary school teacher, and has been a major source of inspiration for him. Inspired by her work, and building on his desire to contribute to the real challenges in primary schools, he gave up the high school teaching job and joined as *vidyasahayak*, opting to work in a very difficult village. When he joined the school, he encountered almost all types of challenges. He studied them under four categories: problems inside the classroom; problems of the school; teachers' problems and problems related to the village. He listed about 100 questions and made a separate file for action and follow-up. He also discussed the file with a few social workers.

He started with the community. He held *gram sabha* meetings and informed the villagers about what he was doing and wanted to do. Also, he maintained systematic contact with the village community outside school hours. The village was a little way into the sea and during high tide could not be reached. No official was prepared to visit it; the bad reputation of the village was also a problem. Dharmesh spoke to the TDO and DDO and got sanctions for new rooms. These were built. During this time, only *Vidyasahayak* teachers (para teachers) were being recruited. He requested the authorities that he be allowed to talk to the potential teachers. The DPEO saw that he was serious. Dharmesh explained his proposal to the group of recruits, honestly described the challenges and asked for volunteers. Seven young men from prosperous regions of the state volunteered. He took them to the village, before they could even be formally appointed. A newly recruited teacher, Rajesh, heard about this, and he also requested that he be transferred to the new group. In short, these young teachers gave up more comfortably situated locations, and agreed to undergo some struggle. This generated a new enthusiasm in Dharmesh and his students.

There were students who avoided the school as they had to walk long distances. They used to leave home for school but go off to play in the sea. Some of them had stopped studying for five years. Many of them were addicted to different tobacco products. Parents were indifferent to their education. The teachers' first task was to regularize such children. They listed all of them, and then visited every child. They talked to the parents, and agreed to come to their houses to collect the children. Dharmesh also targeted the more mischievous students, and divided mentoring responsibilities amongst the teachers. All this meant that the teachers had to leave their homes at 5.30 in the morning. No one minded. They also had to spend Sundays and other holidays on community work. This was their first major success. As they went along, the list of problems or questions to be addressed increased to 250. This detailed problem identification, and the attempt to solve related problems together, have helped the teachers deal with close to 150 in a matter of a few years. A few illustrative ones are described below.

Cleanliness and Student Uniform

Given the background of the village, Dharmesh decided to redefine the understanding of a student. The usual assumptions about home support could not be made. He took up

the responsibility of giving a bath to these children, combing their hair, cutting their hair and nails, and stitching torn clothes or buttons. After school teaching hours, some time was formally set aside for hair cutting and baths. This created curiosity among the villagers. Sometimes the stitching work went on into the night. Some older students of the upper primary classes began to do such work on their own – this was Dharmesh's intention, the students did not need to be told. This was important in creating an identity about which the students would be proud. It attracted everyone's attention in the village, and the work became well known in the entire district.

The children frequently required a lot of attention in health matters. They required regular treatment for different ailments like cold, cough, eye inflammation, mouth ulcer, toothache, pus in the ear, boils, and minor injuries caused by some accident or thorns. Dharmesh used to give primary treatment for such problems in the school itself. This was a great relief to the children as well as parents. This facility of first aid is now available for the villagers also. Now, "If you have headache, go to the school teacher." In the absence of health facilities, such a social worker role from a teacher has a great impact on educational performance.

Confusion of Class 1 Students

Dharmesh used to teach children letters and numbers using different shapes. But the problem was that those who knew numbers 1 to 100 did not know the letters and those who knew the alphabet did not know numbers. He thought this problem over for about two weeks and evolved a simple method to teach numbers and the alphabet. He wrote numbers 1 to 9 in one column. Now the alphabets were grouped according to their shapes and these groups were written before the numbers. For example:

1 - th (as in thaliyo), dh (as in dhol), th (as in thor)

2 - kh, g, ch, jh, t (tali), n (nagni fen), r, sh, s, gn

3 - gh, chh, d, dh (dhiraj)

4 - j, m

5 - p, y, v, sh

6 - k, d, ph, h, kh

8 - t, n, l (nal)

9 - b, bh, l

Thus the children could learn both numbers and alphabets.

About the Classroom and the School

There was a great need for constant backup support for students. Dharmesh decided to evolve a timetable for 'homework' in the teachers' houses, since parental support was not available. Due to this intensive teaching, the academic standard improved to some extent. In these 'night group schools', the focus has been on extending topics in mathematics, science, Hindi and English which have been taught in school. One outcome was that the children started to collect information related to the various subjects on their own, and made models and charts for display.

The school needed to be equipped for good teaching. Hence, the teachers decided to collect five rupees from each of the roughly 200 households as a donation. But the people had already assessed their work, and much to their surprise, Dharmesh and his colleagues collected Rs. 25000! Elders whose memories went back to pre-independence times pointed out that this was the first time that the villagers had collectively pooled some money. The resources were used to buy sports equipment, books and some laboratory instruments for science. With this breakthrough, the village school was on the road to achieving sustainable outcomes. Dharmesh was then requested by a neighbouring village to revive a school that was on its deathbed. The village was a two square kilometre island. He prepared a plan, and since 2001 he has been stationed there. Here also he has done something similar, combining school and children's identity development, creative teaching, and community mobilisation. He also spotted opportunities which would enhance the identity and reputation of the school, and worked in that direction. When he came to know about a science fair in the area, he was determined to participate and secure first place. The children worked hard for 40 days and secured first place in four events out of seven, second place in two events and third place in one event. In the district level science fair, the school stood second in two events and a boy of the school secured the first position in the elocution competition. The model and presentation of underground irrigation systems in arid areas attracted the attention of the District Agriculture Officer who came down to visit the exhibition. Such events have added to the children's motivation and desire to do something different and recognizable.

Thus, both in the Chanch Bandar Prathmik Shala (from 1999 to 2001) and Siyalbet Prathmik Shala, Dharmesh has taken up many activities which apparently look like social welfare and family welfare. But he believes that all of them have direct or indirect implications for classroom and school affairs and that they are essential for school development and building bridges between school and community. Through his schools he has successfully worked on issues like alcoholism, and addiction to gambling, tobacco and opium. He has facilitated the creation of alternative livelihoods for local liquor producers, and considers these the "most blessed moments of my life." Since 2003, Dharmesh has been part of a new education program, under which he has been appointed as a traveling teacher for Rajula block. So he is able to work in all the schools of block.

Work at Machhipura

In 2007 Dharmesh was transferred to Machhipura Primary School at Khambhat. There were 16 teachers and 545 students. The teaching was focused on in-class instruction and most of the teaching-learning material was lying unused. The children belonged to the scheduled castes or other backward classes. They were mainly interested in becoming polishers in the gems industry. Primary education did not enthuse them; even their parents did not seem to be interested. Dharmesh repeated his earlier experiment of maintaining cleanliness. He made a time table and planning sheet, which described the places/areas to be cleaned, time, number of children, and tools to be used. The children had to come 30 minutes before school and do these activities. The response was extraordinarily good. Dharmesh then added several daily activities like school

decoration, arranging the bulletin board, *rangoli*, writing a thought for the day, decoration of stage for prayer assembly etc.

With this success, Dharmesh decided to tackle the parents. The biggest hurdle was deciding a venue for the meeting. Each community wanted the meeting to be held at its locality. Finally, he fixed the school as the venue and persuaded the parents to come for a meeting. The meeting became a complaint session. Dharmesh and his co-teachers realized that many of the complaints had a past history and were genuine. During their reflection on this meeting, the teachers also started complaining about the parents and the children. Finally, one of the teachers intervened and helped the group adopt a positive attitude to improve the school.

Dharmesh then made a series of educational plans and called a second meeting with the parents. This meeting was attended by the leaders of different communities, parents, presidents of school-related committees, teachers, BRC and CRC coordinators, an educational inspector and some students. The school principal, Kanuben welcomed the invitees. Dharmesh then referred to the problems the parents had raised earlier and presented the solutions. The school would implement the period system; every teacher would be responsible for teaching one subject. In return, the parents were expected to spare some time from gem cutting and polishing, control television viewing at home, ensure regularity of the children and take an interest in checking the children's notebooks. After 40 days there would be a review; daily reports maintained during this period would be the basis for the review.

The manner in which the agreement was reached made the students, the parents and the teachers more diligent. The improvement was noticed in a few days time. The educational inspectors also took an interest and visited the school more often. The 40-day period came to be termed as *vaali satra* (parents' term).

From their side, the teachers took the following initiatives:

1. *Free tuitions*: Dharmesh taught the younger students (Class 1-4) in school and the older ones at his home, for five hours a day (7-10 am and 5.30-7.30pm), so that their learning levels could go up in a short time. He used tests of letters, numbers, words, sentences paragraphs, science experiments, essay, and mathematical formulae to motivate the children. He also paired a bright student with a slow learner. Children responded well. He called the older children to his home to keep them away from their parents who would have otherwise forced them to work on gem polishing in the evening.

2. *Checking the notebooks*: Since some errors were common to most children, and teachers did not have the time to write down their comments on all notebooks, Dharmesh prepared rubber stamps of comments/instructions. The parents found this approach interesting. The children were also made to check each other's notebooks.

3. *Night rounds and home visits*: These visits were carried out between 8.30 and 10 in the evening. The math and science teachers accompanied Dharmesh on these visits. The parents found this initiative novel.

4. *Voluntary ban on use of tape recorder, TV:* Dharmesh persuaded on parent to disconnect his cable TV connection for 10 days when children had to study for their exams. Other parents followed this example. Another problem was that the parents used to play songs very loudly on tape recorders while doing their home-based gem cutting and polishing work. This problem was also solved.

The local MLA came to know about the school, and decided to spend some time with the children. He attended one of Dharmesh's classes and then met the Class 7 children privately. He was impressed and later provided a computer to the school.

The second meeting with the parents, after 40 days, was successful. There was more open discussion, and parents agreed to help out in a variety of ways. After this breakthrough, Dharmesh decided to focus on the quality of education. All the TLM of the school was reviewed and organized. One room was allotted for science, since it was becoming difficult to carry the equipment from room to room. Two iron tables were obtained from the people. A list of all the tools needed was made, and students motivated to collect whatever they could.

One key lesson that Dharmesh learned as a result of these activities was the need for having clear plans. He and his co-teachers made two kinds of plans:

1. *School's educational plan:* The educational plan covered the term-wise schedule of the syllabus, annual planning, six monthly planning, term planning, monthly planning, weekly planning, daily planning, unit test schedule, schedule/planning of activity based evaluation and oral tests, planning/schedule of projects, TLM development, planning of essay writing, planning of co-curricular activities, and the Math-science activity schedule.

2. *Physical development planning:* Plans were made for the infrastructure required. The teachers decided to approach a few donors for the funds needed. One person donated Rs. 15000. Others gave smaller amounts. Though these funds were not sufficient, a beginning had been made.

The results of the educational plan are evident in the systematic use of the computer, which is used to show songs, games, science documentaries, games, cartoon films etc. The functioning of the various school committees is another indication. These committees include committees for cleanliness, prayer, yoga, science, sports, decoration, math, language, health, gardening, celebration, library, tours /picnics, parental communication, and report writing. Projects, about 100 a year, are also carried out systematically.

Dharmesh attributes most of the success obtained to the night meetings with parents which he initiated. "All of our planning and achievements were always discussed with parents and community leaders in such meetings. We also invited the MLA, teachers of PTC colleges, CRC coordinators, BRC coordinators and social workers to these meetings."

Discussion Questions

1. Describe in your own words the profile of a teacher like Dharmesh.
2. When does a teacher have to become a social worker? How can a teacher combine the in-school role of an educator with an out-of-school community development role?
3. Comment on Dharmesh's strategy of asking for co-teachers. If no one had volunteered, what would Dharmesh have done?
4. Play the role of a student of a "night group school" and describe what students would perceive as the impact of the work of Dharmesh and his colleagues. Keep in mind the socio-economic context of the village.
5. Study Dharmesh's initial strategy in Machhipura. What were the key success factors?
6. Study the *vaali satra* initiative. What is innovative about this initiative? What are the key factors which made this initiative a success?
7. Dharmesh focuses on the need for clear plans and maintaining contact with the parent community. Using his Machhipura experience, identify what a teacher should do to implement these two principles.

JITUBHAI C. BORICHA

Jitubhai Boricha studied in institutions that were based on the Gandhian philosophy of *nai talim*. This, according to him, has influenced his career choices. He joined the Moti Kherali Primary School towards the end of 1997. This village was very close to his native village, Babariyadhar. It was dominated by the Darbar community; women's education was very poor in this community. This situation posed a challenge to Jitubhai. He realized that the first task was to create a link between the school and the community. So he formed a School Development Committee – a first of its kind in the taluka. This provided an opportunity to the elders and the teachers to discuss a variety of issues – religious matters, village matters, and of course, education of girls. Gradually, Jitubhai was able to change the educational profile of the village. But the situation of the Devipoojak community bothered him. Even as a child he had noticed that children of this community did not come to school. Now, this issue once again occupied his attention. He travelled to school on a cycle, and as he left his home, he had to go through the Devipoojak locality which was just outside the village. Invariably he would run into the children. They would stand aside and shout 'Master, O Master'. They enjoyed teasing him and would wait for his arrival every morning and evening. Jitubhai also enjoyed this game, but he was worried about their educational deprivation. Whenever he tried to stop his bicycle, the children would run away.

Jitubhai was looking for an opportunity to establish some contact with them when he noticed a handicapped boy who appeared to be about 12 to 14 years. This boy was not afraid to approach him. His name was Najo. The boy knew that Jitubhai was a teacher. After a few days, Jitubhai told the boy about the pass that the government provided for handicapped persons. The boy wanted one. Jitubhai got an application form for the pass. But the boy did not know what his birth date was. He also did not have any document that mentioned his age. Jitubhai requested the Babariyadhar school's head teacher to issue a school certificate for Najo. He refused saying that these children had never come to the school. Jitubhai requested him to at least enrol the younger children (there were seven of them) in the school. His reply was not at all encouraging. Jitubhai took Najo to the taluka office, got an affidavit made by a lawyer, and got a pass issued. This was his first concrete effort with the Devipoojak community.

Jitubhai then talked to the Sarpanch and took him to the Devipoojak locality. This led to a number of discussions with the community on the education of their children. The parents were thus persuaded to agree to enrol their children. The Sarpanch then talked to the head teacher of the school. But there was no progress on the enrolment issue. The school reopened after the vacation; Jitubhai was by now staying at his school, since there was a shortage of teachers. But he came to know from some teachers of Babariyadhar that they had decided to enrol the children only the following year. Jitubhai was aghast. He went to the school and had arguments with the head teacher. He met the other teachers of the school and argued for attention to the Devipoojak community. A woman teacher came forward to help in bringing the children to school. Such meetings and arguments took a lot of time. Examinations intervened, and there was a lull in Jitubhai's social development efforts. In the meantime, he received an order from the taluka for a survey of out-of-school children. Jitubhai went to the woman teacher and reopened the

discussion. This time, another woman teacher joined them. They went to the Devipoojak locality. The children simply vanished when they saw the teachers. Jitubhai came to know later that the children thought the two women were nurses come to give them some horrible medicine. The teachers' efforts with the parents were frustrating. One man told them bluntly, "Master, our children never go to school." Many people seemed to echo this sentiment. The two women teachers were disheartened and were on the point of giving up. "You have tried. Now when they do not want to educate their children, why do we bother so much? You look after your school and leave them to their fate." But Jitubhai made one last attempt. He went along with Najo to a community leader. He poured out his disappointment and wondered why the community was not ready to see where its own welfare lay. The leader told him that his people would listen only to the police.

This gave Jitubhai an idea. He visited the Jamadar and told him about his failure. The policeman responded positively and was ready to visit the community and participate in an 'enrolment effort.' A week later, Jitubhai and the Jamadar went to the Devipoojaks and organized a meeting. It was as if some magic had removed all the reservations of the parents. Those who were in the habit of running away or placing obstacles gathered around the two visitors and were constructive. Perhaps the people were afraid of the Jamadar. The Jamadar started by asking, "For how long has this teacher been coming here?" The people replied, "For about one and a half years, trying to enrol our children in school." Najo's father intervened, "This teacher is a very good person. He filled the form for my son and got him a pass. But these people are not listening to him." The Jamadar was waiting for such a response. He gave the people a piece of his mind and ordered them to put their children in school. The people responded positively, but tried to blame the children, "They are not ready to go to school." Jitubhai immediately told the parents to leave that issue to him. Thus, a policeman's help was required to make the initial breakthrough.

The vacation period had begun, and so Jitubhai had time to prepare the children for school. He gathered five children near a shrine with the help of his faithful assistant Najo. Jitubhai wanted to take the children to school, but they were not enthusiastic about the idea. So he said, "I will bring the school to your doorstep." The next day he went to the shrine with some chocolates and balloons for the children. He announced that these were only for those who came to the shrine school. The following day there were 20 children, many of them not of school-going age. Now he started telling the children stories and playing games with them. Many other children saw these activities, and joined in. Now Jitubhai had to buy more chocolates, and even biscuits and toys. He made a timetable.

First week: jingles, songs that children can sing, stories, nursery kit, games based on puzzles, learning while playing, outdoor games, snacks. The shrine was the location of the school during this week. The Balwadi camp experience that he had undergone in his teacher training college was particularly useful at this time.

Second week: some activities of the first week, like one song, one story, use of TLMs, clay work, paper work, visits to places. This involved some moving around. Children began to enjoy the activities.

Third week: songs, stories, drawing, *toran* making, number cards, alphabet cards, balloon bursting. This week was more structured.

Fourth week: children's songs, action songs, games, drawings, writing in the soil, filling in colours, clay work on a board, writing in clay, revision of previous activities. By this time, Jitubhai noticed that the children had become very comfortable with the activities, and were even showing signs of having developed a liking for studying.

The vacation came to an end. One day, Jitubhai told the children that he would not be able to come from the next day. They immediately replied, "We want to join the school." This was the reaction Jitubhai was waiting for. He was delighted and felt that his efforts had not been in vain. He took the children to the Babariyadhar primary school. This time, the head teacher was happy to see the children and enrolled them. The children wanted Jitubhai to stay with them. He spent one week in the school, introducing the children to the school and to schooling. He visited them in the morning, told them stories, played games and then left. Eleven children thus joined school for the first time. Three children later migrated with their parents to another area; of the rest, seven are still in school. One child dropped out since he was a lot older than the others and felt uncomfortable.

When the time for enrolment came the following year, there was no problem. This time, the Babariyadhar head teacher took the lead. Jitubhai, however, remained in the school during enrolment time. The community's respect for Jitubhai went up. Teachers who used to mock him by calling him a 'teacher of the Devipoojaks' changed their attitudes. Jitubhai now works for children in other villages who have been deprived of education.

A few years ago, Jitubhai was transferred to a girls' school, the Uchhtar Shikshan Kanya Shala No 3, Rajula. He found the girls very shy and afraid to talk to the teachers. He encouraged them to address him as 'bhai' or 'Jitubhai'. This brought about a different kind of relationship; the other teachers followed suit. These same girls used to be irregular, and involving them in a variety of cultural activities like drama and singing solved the problem. They would also shun the mid-day meal scheme, citing poor quality as a reason. Jitubhai, with the help of his wife who also taught at the same school, started training the cook and helping out with tasks like peeling vegetables. Jitubhai often ate with the children, and this helped in achieving full utilization of the scheme. Taking the girls on farm visits also helped. On holidays, he organized visits to various farms. The girl living on that farm would be informed in advance. During the visit, all the visitors would help the farm owner and also find time to write some essays on topics like the river, mountains or temples. Parents have responded very enthusiastically to this holiday farm visit initiative; now, Jitubhai does not have to carry food and snacks since the parents provide these. A similar friendly approach has helped Jitubhai deal with problematic children. A girl of Class 4 did not talk with anyone and never participated in any of the classroom activities. She never did any homework either. She

never called out her roll number, so Jitubhai started calling it out and saying, “My little sister Zarna must be present?” whenever it was her turn to call out the number. Soon, the other children started addressing her as “sir’s sister.” He then started arranging her school bag, and taught her with word cards and several other simple TLM. Gradually she improved. Her father was very surprised.

Discussion Questions

1. In his efforts with the Devipoojak community, Jitubhai had to finally rely on a resource not usually associated with education, and on one initiative with a differently-abled boy. Are there similar examples in your experience?
2. Analyze the situation of the Devipoojak community prior to the educational effort. What were the barriers to improving educational performance?
3. Comment on Jitubhai’s school preparedness program. Can you suggest any improvements?
4. Study Jitubhai’s efforts to establish a rapport with girls in the Rajula school. Identify the innovative principles in this set of efforts.

MUNJALKUMAR B. BADMALIYA

Munjalkumar Badmaliya graduated from a *Gram Vidyapith* (rural college), and influenced by this kind of education, opted to work in a small remote village, Ganjavadar, in Rajula taluka. He became a teacher in December 2004. The village was situated between a hill and a river, and the school appeared to be old and worn out. The two co-teachers were rarely seen at the school. Because of the frequent flooding by the river, the village was now divided into two parts, a new part on the slope of the hill, and the older part. About 1.5 km separated the two parts. Ten families remained in the old part and 12 families had moved to the new settlement, which also had the school. All the families belonged to the Ahir community. The village had one *kachcha* road which could be used by carts and motorcycles, but during the monsoon, the village could be approached only on foot. Surprisingly, there was no electricity.

The school had one room, seven classes, 26 students and three teachers. The irregularity of the older teachers had contributed to a breakdown of communication with the village. The parents had complained frequently, but in vain. As a result, the villagers appeared to have given up. Munjalkumar therefore decided to contact parents regularly and restore their faith in the school. Some parents started sending the children to school and even liked to visit the school. Munjalkumar's colleagues did not like this and asked him to discourage people from coming to the school. He decided to ignore them. Munjalkumar found out that the children were uniformly poor and had been placed into different classes according to their ages. He brought this to the notice of the authorities, but was told to carry on in the same fashion. Munjalkumar decided to do something on his own. He first taught the children the basics for some time and then took a test to identify their learning levels. Based on the results, he allotted them to various grades.

Before the beginning of the new term, the CRC Coordinator asked the school to carry out a survey of the out-of-school children for purposes of enrolment. Munjalkumar knew that by now no child in the new part of the village had been left out. It then occurred to him that all the teachers had neglected the old part of the village. His co-teachers and even the CRC Coordinator advised him that the old part was under no one's jurisdiction. Munjalkumar was not satisfied and gathered information about the old part from the children of the new part. He realized that about 20-25 children of school-going age may be out of school. He was also told that some children from the older part used to come to school earlier, but for the past two years relations had broken down. The chairman of the school committee, Falabhai, was young and literate, but even he advised Munjalkumar not to take an interest in the old part. Munjalkumar once again decided to do something on his own. One day he crossed the river and reached the older part. He did not know anyone in that village. The children seemed to be afraid of him. He then met a few old people, who plainly told him, "Get lost. We don't want to educate our children." They warned him not to visit the village again. They discouraged any further talk and shut their doors.

Munjalkumar did not give up and came to know that a leader called Anabhai Bhikhabhai would help him, if he was convinced. Meanwhile, an NGO, which had taken up a water resources management program in the coastal area, organized a meeting.

Munjalkumar had to present the problems of the village. Anabhai Bhikhabhai and other village leaders from the older part of the village also attended the meeting, and were interested in Munjalkumar's work. But when it came to discussing the issue of their children's education, they were silent. After a lot of persuasion over a few weeks, they finally agreed to a village meeting. Munjalkumar requested his co-teachers to accompany him but they bluntly refused. They even warned him that he would be physically assaulted. Finally, Munjalkumar had to go alone. The villagers spoke bitterly, saying, "You teachers are all the same; you are careless about our children. You people are not present at school regularly and hence we have to take our children back home as soon as we have brought them to school." After a long discussion they agreed to send their children to school provided they had a separate facility within their locality. Munjalkumar told them to make an application for a new school. Immediately, Anabhai took out a few papers from his pocket and handed them over. They were copies of the applications that they had submitted to the taluka and district level officials. They added that they had not received any replies. One of the elders, Mutata, bluntly said, "Sir, many others like you have visited us before; they made big promises and went away. People like you can simply talk, they cannot do anything concrete. And now we are determined that our children will study only if a school is opened in our part of the village. Let our children remain illiterate; we won't send them anywhere else to study."

Hearing this Munjalkumar changed his strategy. He began to visit the village everyday in the evening. He gathered the children, told them stories and made them play. Seeing this, the parents softened their attitude. Munjalkumar then decided to hold a meeting to push the idea of making the children attend school, and this time he convinced the CRC Coordinator to attend. The meeting ended in failure as the people were adamant about their demand for a new school. The CRC Coordinator was annoyed and told Munjalkumar that there would not be any school in that village.

Meanwhile, Munjalkumar's colleagues were transferred. He took advantage of their absence and noted down the 25 children of the old part of the village as 'out of school' in a report to the BRC Coordinator. These 25 children immediately came to the notice of the BRC Coordinator, who summoned Munjalkumar to the taluka headquarters and asked for an explanation. "Up to now there were no out-of-school children in your village. From where have these 25 appeared?" Munjalkumar explained the entire story. The BRC Coordinator immediately talked to the district officials, who asked for a detailed report. The BRC Coordinator took an interest and wanted the villagers to come to the taluka headquarters and make a representation. The people, however, refused to do anything of the sort. Munjalkumar then found out that Bhagwanbhai, the elder brother of Anabhai, who lived in Rajula town, would be able to exert his influence on the people. So, he met Bhagwanbhai and laid out the facts before him. He immediately arranged for the village leaders to represent their case at the taluka office. Finally, a school was sanctioned. Since the new school had no building, it was run on the banks of the river, under a *pipal* tree, and a teacher from an adjacent village was temporarily placed here. After a couple of months of regular effort, a school was finally functioning. Soon, a vacant room in the village was cleaned, white washed and repaired and given the title of 'school'. There were 21 children on the first day. Soon a full time teacher was appointed at the school.

Munjalkumar continued to monitor the school, and introduced it to teaching through games, stories, rhymes and plays. Then he started a post card movement to solve the problems of lack of electricity, roads, drinking water, bus transportation etc. He got the students to write post cards to the relevant taluka and district offices. Due to frequent submissions, the officers and authorities paid attention to the problems and solved them. This initiative is seen by the people as a very effective and successful effort that has addressed some basic issues like power, roads, transportation and sanitation.

Discussion Questions

1. Read through Munjalkumar's story and describe the situation of Ganjavadar when Munjalkumar first entered the village, in your words.
2. What would you have done to address the problem of the divided village?
3. Comment on Munjalkumar's strategy to provide schooling to the old village. What were the critical success factors?

HARSHADKUMAR R. JOSHI

Harshadkumar Joshi began his career as a teacher in 1980 in a village that had about 2000 people belonging to many educationally backward communities. Although he stayed here for only one year, he made a simple change that ensured regularity of attendance. He noted that children had to help out with farm work. Since he could not do much about this, he proposed to the parents a plan, for the children of the upper primary classes. Helping out on the farm would also have a timetable. He would go with the children to the farms according to the timetable, early in the morning. When it was time for school, he would move with the children to the school. The parents liked the idea. For instance, when it was cotton picking season, Harshadkumar and the children would reach the farms at six in the morning. Their main job was to collect cotton pods. They would finish by 9.30 in the morning. The children enjoyed the schedule, and soon the school was crowded. Surprisingly, this tradition of full enrolment got established very quickly, and continues.

Co-curricular Activities at Kharaghoda Junagam Primary School

In 1981 he was transferred to Kharaghoda primary school. The village had Patel and Koli families (with a total population of about 3000), and there was a lot of religious activity. He used to go with the villagers to sing *Bhajans* in their *Bhajan* society. The school did not have any musical instruments. Harshadkumar's participation made the people realise that musical instruments were necessary for the school, and so they arranged for some instruments. These proved to be very useful in teaching the children poetry. They also helped Harshadkumar train the children in acting, action songs, children's songs, drama and *garba*. There came a time when the school's show became an essential part of any government-organised cultural programme or any religious programme conducted in the village. Since Harshadkumar made the training a regular part of the prayer assembly, the children came to the school on time without any instructions or goading. They used to rehearse on their own to present such events. Not one child of the school-going age group stayed at home.

Harshadkumar believes that "music is my winning edge. I can play any musical instrument easily." Over the last 20 years, many children have become experts, especially in playing the harmonium, the *tabla* and the *manjira*. The cultural events on national festivals used to be so entertaining and so long that they lasted three hours. Many of these programmes have been video recorded and are available for viewing. Some children have also won prizes in *garba* and *ras* competitions. The school has a large collection of *ras* and *garba*, welcome songs, *dhun*, farewell songs.

Harshadkumar is also fond of physical exercise. He has been in charge of a 'school of exercise' for about 30 years, and takes the children to this school every Saturday so that they can undertake various aerobics exercises, indigenous exercises, and also use the equipment available there. The children are given gram (*mung*) and *jaggery* as snacks.

The school did not have a single tree in 1981. There are about 30 huge trees now. Most of them are *neem* trees. The children even today prepare the extract from the new leaves of

neem in the month of *chaitra*, and drink it, since it is supposed to increase the resistance power of the human body. They also collect the seeds, prepare oil and sell it. Thus the school has created a source of income. (Note: The seeds and oil are sold to an Ahmedabad-based company, Nimka Oil.)

Working for the Community

Most of the villagers work in salt production units. These people are badly affected by skin diseases. With the help of the school children, Harshadkumar prepared protective footwear with cushion-like soles. These handmade shoes were given to the parents of the children studying in the school. The shoes proved to be a blessing. Such activities helped him win their trust and affection. Fortunately, shoe making became a tradition with the passage of time. The community learned to make the shoes he had designed, on their own.

In the school, using locally available resources, Harshadkumar undertook a project to demonstrate how salt is prepared. When the students presented this project in a science fair, they won the first prize. First they gathered saline ground water in a tin. The tin had a hole at the bottom through which the water could flow on to an iron plate with a wide surface. Alum was added to the water to gather the impurities. The water was kept in the sun for one week. It evaporated, leaving a thick viscous layer of salt. This was cut into pieces. Through this activity the students also covered information on how bromine, magnesium and sodium bicarbonate are made. This learning was then extended into symbolic representation like 'NaCl' (sodium chloride or salt).

During the monsoon, water from a few rivers used to gather in the desert, stopping all transportation to and from the village. The desert would become a marsh with pockets of deep water, for long periods of time. Since this was a hazard, Harshadkumar trained children in swimming and rescue. There have been instances of trained school children saving drowning people. Such activities have been linked to lessons in environment and physical education.

Physical Development at Shri Raghueversinhji Primary School

In 2001 Harshadkumar was transferred to another school. This place did not have a single tree. Today there are 50 trees and a garden with a variety of flowers like jasmine and *champa*. The special feature of this garden is that there are many useful herbs – *vamjo* for diabetes, *shankhpushpi* for mental alertness, *asopalav* and *kel* for auspicious occasions like weddings, *garmalo* for fever, *ardusi* for coughs and aloe vera for burns. There is a drip irrigation system in the garden. The students of Classes 5-7 are so familiar with the herbs that they know their names and medicinal uses. They use this knowledge whenever needed. Vegetables are also grown in the garden; these are made available to the children.

Navchetna Shibir and Art Excel Course

Harshadkumar has devised an all-round training programme for children in the 8 to 15 age group. This was motivated by the complaints he had collected. "My son does not move away from the television." "My daughter hates study. If you ask her, she gets angry." "My son does not put anything in the right place. If you say something, he disobeys." "My son does not like any vegetables." The key assumption Harshadkumar makes is that children are an endless source of energy and enthusiasm. His objectives are therefore to encourage children to express their joy and enthusiasm, guide them towards creative activities, sensitize them to good and bad habits, develop their self-confidence and teach breathing exercises and yoga. These six-day courses have become very popular and many children claim they have been helped.

Discussion Questions

1. In his first school, Harshadkumar made a timetable for working in the fields. Identify the features that make this initiative an innovation.
2. Harshadkumar's skill in music provided him with a starting point to organize school activities. How important is it for the teacher to have some such skill which can be used for educational purposes? List some such skills.
3. Note how Harshadkumar's work was shaped by the local context in Kharaghoda. Comment on how innovation is shaped by the context; in this case what did the innovations achieve?
4. If you were to present Harshadkumar's educational strategy, what are the key features of his practice that you would highlight? Comment in about 10 sentences.

KAILASHBEN M. PATEL

Kailashben Patel started teaching in 1978. In her first school (Tadwadi village), all the children came from families of agricultural labourers. The school had a single hut-like room. There was no bell, nor were there office records or attendance registers in the school. She was shocked to find the school in such a pathetic and disorganized state. This was her first exposure to school teaching. When she was unable to mark even the attendance, she lost courage. But she soon realised that fear was not going to help her. She visited each household, and prepared a list of 55 children. She needed to get a picture of who was in school and who was out of it. She started 'school' by gathering the children. But she needed to build something fast. When she could not think of anything else, she organised a cultural programme that surprisingly raised Rs.3000. But this was a very small amount. She met the District Education Officer, and explained her problems. He approved one room immediately. He went further and got the Asharam Ashram in Surat to sponsor construction of three more rooms. Finally, the school had four rooms and Classes 1 to 4. With one teacher joining her, she worked hard for seven years to build up that school. The initial steps were actually a series of incidents and strange experiences which only contributed to her resolve. "This gaining of strength, as part of a teacher's development, is absolutely necessary if one wants to overcome the problems of primary education in difficult areas."

Here are two incidents as illustrations. Just after she had started teaching, a drunkard entered without permission, and said, "Teacher, teach me also." She was very scared and retreated into a corner. The more she was afraid, the more he became fearless. Children were also confused and did not know what to do. The man, who was drunk, moved towards her. Now the children acted. One of the students pushed him from behind and he fell down. All the students thrashed him. This incident taught her that her paralysis was a block, and she was able to handle similar incidents much better after that. Another problem was the menace of poisonous snakes. Once she found some of the children playing with a snake's eggs. She decided that poisonous snakes in the school compound and premises had to be killed. She contacted the villagers and they underwent training on identification of snakes and how to get rid of them. They also collected information on the life cycle of snakes. After this, any poisonous snakes that entered the school were killed. This was important to her, since "the safety of the children was paramount, especially when medical facilities were just not available."

Over a seven-year period, the school was revived. Her goal was not limited to just enrolling children, but to see to it that they moved into a career track. Thus, the school now has a full strength of 850 children and 15 rooms; many students completed their graduation and are today in a variety of professions. The school works two shifts, and has a nice garden.

After a brief period teaching Class 7 (when she had only taught Classes 1-3 earlier) she was transferred to the Ichchhapor Primary School, where she worked for 14 years. The HM of this school was very strict. She taught in Class 2 for a couple of months, but was then given Class 7, since this class had been left without a teacher. She taught this class for 12 years. Though she liked the strictness of the HM, she did not like his rigidity

regarding an exclusive focus on classroom teaching. The school neither held nor participated in cultural programmes or sports festivals outside the village. She decided to open the doors to cultural activities as she believed that “such activities are very important to explore the hidden potential and skills of children.” The teachers decided to keep the HM out, initially. Kailashben started to train her students for different events behind closed doors. It was a very painful experience for her to be secretive when she was doing something creative and worthwhile. But she felt there was no sense in arguing when the opponent had authority. She decided to achieve results first and then argue. Even her colleagues were not ready to help her openly.

The CRC coordinator saw her work and helped out. On the day of the cultural event, she managed to hire a tractor-trailer and wanted to take the children out through the back of the school. But at the last moment the CRC Coordinator panicked and the plan was exposed to the HM. He tried to prevent the children from going, but Kailashben decided to disobey him for the sake of the children. They went and to the surprise of all, won in nine events out of 13. This was what she had wanted to achieve; the HM came to her house and congratulated her. But he did not allow them to compete at higher levels. She decided to fight him. Officials of the department intervened, and ruled that what she proposed was within the school’s legitimate activities. The HM was transferred. Other teachers refused to become HM and she was given the responsibility.

The transferred HM was administratively very effective; his records and accounts were well maintained. Kailashben did not have to face any problem on the technical side. The only limitation was that the school had only about Rs.1000. However, a bigger challenge was to improve the academic output of the school. She started to work in this direction, and introduced songs, jingles, stories, thoughts for the day, into the prayer assembly. This worked and the school introduced group academic activities as part of its calendar.

When she was transferred to another remote school (village Bhatpor), she again found the school building in a pathetic condition. The faces of the children did not show joy. The community was by and large illiterate and alcoholism was rampant. Out of five rooms, four were closed. There was a snake hill on the school premises. What was most unbearable for her was the fact that most of the children were addicted to liquor. The school surroundings were an open air toilet. This compelled them to keep the windows closed. Drunken children wandering here and there used to throw stones at the closed windows and doors of the school. Because of this, the doors were all broken. The school walls were covered with obscene graffiti. There were hardly 35 to 40 children. The single teacher working here used to lock herself with these children into a single room. She was very caste-bound and would not even drink water given by others. She used to remain on leave for long periods. In short, there was no one to look after the school and students, or to give a hand to the community to emerge from its living hell.

One day, as soon as she had joined, Kailashben was talking to the class, and found that a girl of Class 3 was unable to stand. Initially she thought that the girl was not well and tried to talk to her. But instead of answering the questions, the girl just kept smiling with saliva oozing from her mouth. When she asked the other girls what was wrong, they told her, “Teacher, she is drunk.” It was a terrible moment, and the question that came

up with force was, "How can this be possible?" Other voices came in response, "Teacher, I am also drunk. Last night we did not have anything to eat. So my mother and father gave me local liquor to drink." Out of 55, 27 children were drunk. She thought to herself, "What is this school and where is the education we talk about?" "Life imposed this on me, and I accepted my share. I took this neither as a test of my life nor of any abilities. I just began with the simple realisation that I should try to move them from darkness to light."

Her previous experience at Tadwadi, where the children had been from the same community but had been in better shape, came to her assistance. She helped them prepare a schedule for daily activities of bodily cleanliness. She taught them to take up some cleanliness work at home, like cleaning the home, the verandah, to prepare Rangoli at the door step with flour (as they had never seen soil normally used to prepare Rangoli). These children did not know what sweets like *Penda* and *Barfi* tasted like, and so she prepared sweet *prasad* for them. She scheduled street cleaning campaigns every ten months.

The school surroundings needed much work. The liquor outlet nearby, youngsters gambling, and their generally filthy state, did not help at all. One day she came out of the school and went to meet a parent (a liquor producer) whose daughter studied in my school. She greeted him. He was shocked to see her there. Despite being drunk, he offered her a seat. But without giving him any time she asked him, "How can you live in such a dirty place? School is the temple of goddess Saraswati. Do you think it is good to have a temple in the middle of filth? Why do you allow people to spoil the place?" This outburst had the desired effect. He gathered people from the village. Half of them were drunk. But they went to work immediately and made a five-foot hedge of *babool*. They then controlled the children who were throwing stones. The parent then started to ask her if there was some way he could help. She requested him, "Can't you move the liquor shop a little further away from the school towards the river bank?" He was so affected that he closed the shop.

Developing the Bhatpor school

Kailashben planted trees behind the school building. She put subject teaching aside and collected about 40 songs which could be sung, and made the children play local games till they got tired. She got some sports equipment from a public sector company, GAIL. The school now had three teachers, and the teachers played games like badminton, volley ball, *ambli pipli*, *saat thikdi*, with the children. The children were also made to clean lice from each other's heads.

The public sector company also built good toilets for the people, but the outlets were choked with stones, pieces of glass and soil. I wrapped a plastic bag around my hand and cleaned one toilet outlet. When the children and teachers saw this, a teacher (who had just joined the school) and the children cleaned the others. The school had water storage facilities but there was no water, since there was no meter. She acquired one. One teacher donated five fans. Thus were arrangements made for water and fans. One day the teachers thought that since they were spending so much time in school, there

should be better physical conditions. She contacted a cooperative society in Hazira. The entire belt of schools got donations of Rs.11,111 each. The school building was painted with distemper. Now the school building looked much more pleasant.

Even after rigorous efforts of six months to keep the children away from liquor, there were some children who came drunk. When she again tried to find out the reason, Kailashben found that their parents sent them to buy liquor. And of course, when food was in short supply, liquor was handy. She again met the parent who had helped her previously. He intervened and took upon himself the task of educating the parents not to send children to buy liquor, or give liquor to children. But this posed a new challenge. Due to irregular supply of mid-day meals, a crucial input into schooling in such areas, the children were getting irregular meals. Again Kailashben asked GAIL for help. With their help she could provide sweet milk to the children. Often she herself made *doodhpak* (rice and sweetened milk). However, this help was dependent on an officer, and when he was transferred, the milk stopped. However, Kailashben is very proud of the fact that once the liquor habit had been broken, the children quit drinking completely and began to enjoy their childhood.

The final result has been that the villagers themselves look after the school building when she was on vacation. The youth who used to deface the school have now dumped 10 tractor loads of soil to level the school ground. There is no disturbance in teaching during the day. A seating arrangement has been made under the banyan tree outside the school compound. Now the people are more ready to help, and if she tries to give money for something, they say, "No teacher, we cannot take your money." With the children, their self esteem has grown. They understand that liquor and tobacco addictions are bad. Five students have progressed to secondary school level. Since classroom activities became regular, it was easier for the children to participate in school science fairs, at the block level, and once at the district level. The school has won many prizes and has also secured second and third places at the state level.

It took four years to achieve all this, but Kailashben thinks it will take some more time for overcoming the obstacles to academic achievement and make schooling sustainable. Even now, though students of Class 5 are able to read and write, they cannot speak well.

One factor that has helped Kailashben is her participation in the activities of a socio-religious group, the Swadhyay Parivar. On one of her visits to her home village, she found out about this group, joined it, and learned to tell stories from scriptures like Ramayan and Mahabharat and how to involve children in different games. She has applied this learning in her educational practice. She also learned the value of self reliance and this she has tried to communicate to her children. She attributes her attitude to community and children's welfare to the influence of a religious guru.

Discussion Questions

1. Kailashben notes that the initial "gaining of strength, as part of a teacher's development" is necessary to help the new teacher overcome educational problems in difficult areas. Study this comment to understand what that

strength means, and list ways in which a teacher can build such inner strength.

2. Could Kailashben have handled her relationship with the head master of Ichchhapor differently? How would you have acted in her situation?
3. Study the way in which Kailashben tackled the problem of drunkenness among children of Bhatpor. What were the factors which helped her, and how did she use them?
4. The efforts with the public sector company and the Hazira cooperative were successful. However, the milk initiative, which depended on an officer's goodwill, failed when he was transferred. How could this have been avoided?
5. Kailashben thinks that the time has come to tackle the obstacles to academic achievement in Bhatpor. What plan or strategy would you recommend to her so that she can achieve this purpose?

RAJESHKUMAR R. SAKARIYA

Chanch Bandar village of Rajula taluka in Amreli district is a peninsula that juts into the Arabian Sea. When Rajeshkumar Sakariya joined the school in 1999, there were about 500 students enrolled in school and seven teachers. The villagers suffered from the fairly common problems of lack of drinking water, poor roads, and so on. The village was large, with about 12,000 people. It was geographically disadvantaged; there was no scope for agricultural or any other economic activity. Hence most of the people migrated in search of livelihoods. They took their children with them, and when they returned the children had either to be admitted into the same class or they dropped out. The teachers were, however, very popular, and the school had a number of co-curricular activities.

The periodic migration was an issue and Rajeshkumar discussed this problem with his colleagues. They were of the opinion that migration was something not in their control and that the parents had to decide whether they wanted their children to study or not. Most of the villagers went out as labourers for about seven to eight months in a year. They moved from place to place in search of work and hence the scope for educating their children in other schools was non-existent.

Rajeshkumar and his colleagues then initiated discussions with the parents. Though many of them wanted their children to get educated, they were worried about the food, shelter and care of the children if they had to be left behind. Rajeshkumar offered to become responsible for 10 students who were in Classes 5-7; they were fairly good at their studies and had no else apart from their parents. A few of his colleagues joined him and took responsibility for three children. Meanwhile the older teachers were transferred out, and Rajeshkumar took charge as head teacher. He and his colleagues made a determined attempt to find a more permanent solution that did not have to rely on teachers adopting children. They organized a parents' meeting and came up with a plan for converting the school into a hostel. The year 2003 saw the beginnings of the first residential camp. Seventy students became inmates of this camp. The village youth, the teachers and their friends were partners in this venture – contributing to the food. Two women were engaged as cooks. The fuel for cooking was wood obtained from surrounding villages. Students were provided with breakfast and meals at mid-day and in the evening. Extra coaching was provided beyond school hours. During regular school hours they studied in their respective classes with other children. At night the teachers organized various activities like *bhajans*, competitions, games, cultural programmes and story telling. Younger children who found it difficult to bathe, wash clothes, and dress on their own were helped by a woman volunteer from the village.

The following schedule was followed at the residential school:

	Time	Activity
1	6.00 am	Getting up – cleaning and morning routine
2	7.30 am	Prayer
3	8.00 am	Breakfast
4	8.30 am	Cleaning
5	9.00 am	Multi-grade teaching (by teacher)
6	10.00 am	Recess

7	10.30 am	School-academic education
8	12.00 noon	Mid-day meal
9	5.30 pm	Games and playing on the sea shore
10	6.30 pm	Cleaning
11	7.00 pm	Prayer, story telling, roll-call, and discussion
12	8.00 pm	Supper
13	9.00 pm	Multi-grade remedial teaching (by teacher)
14	10.00 pm	Sleep

The following extra-curricular activities were organized: visiting religious places on Sundays or holidays, sports competitions, creating a library, games, cultural competitions, plays and drama, essay competitions, cleanliness competitions, cricket, educational games, drawing competitions, compiling *bhajans*, rhymes and children's songs, prayer collections, general knowledge collection, *ras-garba* competitions.

As shown in the time-table students who had problems were identified and given extra coaching after school hours in order to promote them to a grade suitable to their age. They were classified and each teacher was assigned one class. At the end of the academic year, the students were examined and were promoted to the appropriate class. Thus they had the opportunity to be with their old class-fellows.

Number of students promoted in the first three years:

Standard	Number of students	Class to which promoted
1	2	2
2	3	3
3	4	4
4	6	5
5	3	6
6	3	7
7	1	8
Total: 22		

Through extra coaching, 22 students benefited. Gradually the problem of stagnation was solved because of the residential school. It started with 70 students in 2003; there were 100 students in 2004 and 128 in 2005.

For the first two years, the residential school was run with the people's support. After two years, the District Education Committee noticed the venture; the Committee visited the school and recommended it for a grant under the 'Sarva Shiksha Abhiyan'. Inspired by this endeavour, residential camps at Patwal and Rajula, on the coastal strip, have been established.

At the end of the first season, when the parents came back at the onset of the monsoon, they were extremely happy to see their children in good health; they were surprised to see the children's progress in studies as well as their cultural development. They began to praise and thank the teachers and prepared to settle down in the village for the

monsoon; but the children preferred to stay on in their residential school. All the teachers felt happy at this outcome.

However, sustainability has been an issue. Rajeshkumar was transferred in August 2006. The other teachers who had helped run the hostel found it difficult now. So, after a lot of discussion, the head of a nearby ashram school, the Sarvjanik Kelvani Mandal, accepted responsibility for the children studying in the residential program.

In his new school (since late 2006) Rajeshkumar addressed drinking water shortage by getting a pipeline installed with the school development grant and a community fund. He also revived his previous experiment in residential education. There were about 200 Agariya (saltpan) children in the school. Many of them migrated along with their parents for a few months during the year. There were about 40 children who would benefit from a residential education program. Rajeshkumar proposed this idea, but the headmaster and co-teachers felt it would be too heavy a responsibility. He then talked to community leaders and the parents of the 40 children. As a result, a parental consent document was prepared, and this was presented to the headmaster. Rajeshkumar took up sole responsibility for the venture. Getting electricity supply became critical, but the school did not have the required Rs 8000. The people promised to collect the funds, but in the meanwhile an old woman staying next to the school agreed to supply power from her domestic connection. The camp was run for a year, but Rajeshkumar found it difficult to run it alone and so wound it up. He got some of the children enrolled in a residential hostel at the block centre. Rajeshkumar, however, has not given up the idea of a residential school and has applied for a permanent facility to the government (December 2009).

Discussion Questions

1. Rajeshkumar implemented the residential camp as a solution to the problem of seasonal migration of children. What other initiatives are you aware of to address the problem of children who are away for 6 to 8 months in a year?
2. From the experiences narrated here, what do you find are the critical factors for the success of a residential camp?
3. What were the objectives of the Chanch residential camp? What made it a hostel, and what made it a school?
4. After Rajeshkumar was transferred out in 2006, the others found it difficult to continue. What should he have done to ensure that the camp continued even after he left the village?
5. Looking at the success of the first two years, the government stepped in with finances. How could this have been leveraged better to ensure the sustainability of the camp?
6. Rajeshkumar is trying to repeat the camp idea with Agariya children in his new school. What would you recommend to him as a strategy for establishing a sound and sustainable residential camp and school?

SHANKARBHAI M. SENDHAV

Shankarbhai Sendhav works as a teacher in the Krushi Adarsh Anupam Prathmik Shala, Tuwad of Sami, Patan, Gujarat. His schooling experiences were pleasant, and two of his teachers influenced him a lot. One of them used to play the harmonium everyday before and after school hours. The music was so nice that Shankarbhai used to stand at a distance and listen to the music. One day the teacher called him and offered to support him. Over time, Shankarbhai became his assistant. He learned to play the tabla, dhol and harmonium by the time he reached Class 7. Today, according to him, “the key to my teaching success has been music.” A secondary school was started in Shankarbhai’s village and so he could continue to study. The HM of the school was often insulted by the villagers and the school staff as he belonged to a so-called lower caste. Caste discrimination was very prevalent in the village. He could not understand why these people were so harsh to a teacher who was so kind to his students and had profound knowledge of Gujarati. He was the one who inspired Shankarbhai to develop the courage to speak in public. He always appreciated his public presentations. Shankarbhai decided that when he became a teacher, he would organise such cultural programmes, invite him and honour him publicly. He does this even today. Another teacher was very good at science, and he developed in Shankarbhai a liking for science. He also believed strongly in educational activities like tours and excursions. This teacher would monitor his students carefully. During the weeks before the final exams, he used to move around in the village at night, sometimes as late as midnight, just to ensure that the students were studying. In case he found a student sleeping, he would wake up the student and sit with him. If any student had any content-related difficulty, he used to solve it.

Shankarbhai also attributes his formation to Lok Bharati Sanosara, where he studied. In this institution there was a Balwadi, in which the trainees used to present activities like stories, jingles, poems and action songs—a legacy of Gijubhai Badheka. This Balwadi taught him child centred pedagogy. Today he has a collection of about 400 children’s songs, 100 jingles and a number of stories.

Shankarbhai asked to be posted in his own village, since the village had become divided along caste lines, the school was in bad shape and the committed teachers had left. The school was barren and deserted. The instruments of the laboratory and furniture had been sold. The trees had been cut down. The HM and the villagers were equally responsible. Once known as a great school, it was now stigmatized. He was asked to work in the school for 15 days, and if he still wanted to enter this difficult place which was now a ‘punishment posting’, he could take it up. When he reached the school, it was deserted. Only animals, and their urine and dung, were present. Some children came around 11 o’clock. The HM came a little later. Since Shankarbhai did not have an official order, the HM did not allow him to work. His plea that he was on trial for 15 days did not work. Shankarbhai had to go to the Block Officer and get a permanent order, cancelling the 15-day arrangement. He was asked to teach Class 2. When he entered the classroom, he found the children scattered all over the place and shouting at each other. But he visualized the happy children of the primary school of Lok Bharati and that motivated him to deal with the situation. He started his first day with a story. The next day he took a nail cutter with him, cut the nails of all the children and told them a story

about the importance of cleanliness. The next day they all came with washed arms and legs. They were clearly distinguishable from the other children; the other teachers had sarcastic expressions, but Shankarbhai was satisfied.

Another problem was the irregularity of the students and very poor education of girls. He thought persuading parents was the only solution. The fact that he belonged to the same village helped, contrary to the advice he had received. However, progress was slow. He remembered the continuous education camps that he had participated in as a teacher trainee. So he organized an NSS camp through the Principal of a college, who happened to be married to a woman from the village. This camp focused on school cleaning and cultural programmes for the education of girls. The girls from the college stayed for only three days but their impact was good. Shankarbhai then met the shepherds and extracted from them a promise that they would not use the school as a stable. The HM appreciated his work, and asked Shankarbhai to go to the different classes one after the other, every evening. He did so, just singing action songs and telling stories. In Class 5 he found out that there was a boy who was regularly absent. He visited the boy at his home, and found him quite bright. Shankarbhai made that boy a minister (*mantri*) in the school, which not only made him regular, but also increased his motivation. He used to attend to tasks like classroom cleaning, getting the bell rung at the right time, and so on. Shankarbhai revived the library by collecting membership charges from some enthusiastic youngsters of the village. He also took charge of the public library, since it had children's books, and the same boy was asked to manage the library. He was given an issue book. He did a good job and the entire school benefited.

Shankarbhai wanted to plant trees, show some results and then ask the villagers for donations. Initially the idea was not liked. There was no water, and even tough trees found it hard to survive. He met the youth of the village, explained the idea and asked them for one week's labour support. One person lent his tractor, others helped in digging pits and filling them up with organic manure. About 1000 saplings were obtained from the government; these included flower bushes and hedge plants. The children supplied water from a nearby lake. This went on for a year, and the trees alone changed the appearance of the school.

The following year was a good year for agriculture. Shankarbhai met a former student of the school who was now doing well in the town. The student told him, "Every year I donate one-eighth of my income for religious work, what could be more religious than education," and donated Rs. 21,000. The school building was painted with distemper, quotations were written on the school walls, paintings of national leaders were made, and educational pictures were prepared. Then a flow of donations started. When the collections reached rupees one lakh, the school got a new office. Every classroom was equipped with tube lights and fans and electrification. Another Rs. 1.5 lakh was collected through small donations. Shankarbhai wanted a *Bal Mitra Varg* for Classes 1 and 2. With the approval of the school committee, and a donation from one member who wanted to do something in memory of his dead brother, Shankarbhai worked for two months and completed the room. All the paintings were made with oil paint. To open the room, they invited the local MLA and the Primary Education Officer, and all the teachers of the block. The MLA announced a donation of Rs.50,000 for a science

laboratory. Some of the youth who had left the village had also been invited, and they donated some money. With this amount, the teachers and students collectively made TLMS. Benches for the upper classes were added, and a pipe line and electric motor for water facilities installed. Sports equipment was also bought. Thus, with community participation, the school prospered physically.

Academic Improvement

Over the years Shankarbhai has also been involved in various experiments to improve academic performance. For instance, to improve the reading and writing skills of children in Classes 1-3, he has grouped the letters of the alphabet according to their shapes. To remove stage fear, he has used prayer gatherings which involved students playing music and singing songs.

He introduced another experiment to retain children in school. This experiment had two objectives, one was to achieve retention and the other was to give children knowledge of real life and practical learning along with subject knowledge. He started a movement called 'Garden Library' and appointed five students of Class 7 as implementers. These children would place some children's books in the garden under some tree. Whenever the teacher was absent or during the recess, all the children would go there and sit in whatever manner they found comfortable and read these books. Similarly, he has used celebration of festivals to achieve the same purpose. Taking children who had never been outside their village on a visit to Nal Sarovar, a bird sanctuary, was yet another initiative that helped create a fondness for schooling.

Girls' Education, Enrolment and Retention

Driven by a desire to achieve cent percent education of girls, he worked out an arrangement with the Principal of the DIET under which teacher trainees would stay in the village. The villagers were happy; their previous experience with the girls of the NSS camp had given them some idea of how to organize such a visit. Fifty girls of a Primary Teachers Training college came to the village. The school children and the villagers welcomed them warmly. The girls went around the village in the early morning, then made the children exercise and practise yoga. They also organized a number of cultural programmes for the children. The girls met the villagers individually in the evenings and gave their own examples, "Look at us! We are also young, but our parents have encouraged and allowed us to study up to the college level. Today we are moving in your village without any fear. This is because of education." Such examples were very effective. A grand cultural programme was organised on the last day. Even today some of them write letters to the village; for the girls it was a good experience. Within one year, by late 1999, there was no girl out of school. This strategy of working with a large number of women teacher trainees to mobilize the village has been adopted by many other schools in the area. A follow-up done after five years indicated that there had been significant improvement in retaining the girls in school up to the end of their primary schooling.

Once the issue of primary education of girls had been addressed, Shankarbhai decided to focus on further education for the girls of his community. Many people did not send their girls to distant high schools since it meant staying in a hostel. When a few educated community leaders (like a university vice-chancellor and a professor) wanted to start a residential school, Shankarbhai decided to involve all the primary schools in the 52 villages where his community had social relationships. He organized cultural programs in these schools, and encouraged the children of these schools to perform a play he had written on the education of girls. This motivational program lasted a month, and managed to convince the parents to send their girls to high school. The program was followed by a *Jyotirath*, a drive to collect donations. A high school with two hostels, one for boys and one for girls, was started in 2003 on the Patan-Deesa highway. By 2009, the school was showing cent percent results in the board exams.

Community developmental work

Many parents did not attend to the eyesight related problems of their children. The government conducted free eye camps at the taluka town, but the parents did not go there. Shankarbhai persuaded the doctor to visit his village and agreed to bear the costs of transportation. The first such camp in the village was conducted in November 2008, and 150 children were identified with problems related to the eyes. About 100 of these children just needed spectacles. Shankarbhai prepared a format to monitor the usage of the spectacles. During the second camp which was organized in October 2009, he found out that 35 children who were using the spectacles regularly had improved eye sight; many others had broken or lost their spectacles. Some were just not using them. This is a problem which is yet to be solved. The camp was extended to adults, but since cataract problems had to be checked, the costs were more. Six people including two teachers shared the cost. Six people who were in urgent need of attention were identified.

Shankarbhai has also extended his development work to community marriages or '*samuh lagna*'. He realized that people were spending a lot of money on marriages and getting indebted. In 2006, Shankarbhai met a factory owner and persuaded him to organize a community marriage – 23 weddings were carried out in one go. What was significant was that this event cut across caste lines – there were scheduled castes, Muslims and Hindu non-scheduled castes who participated.

Discussion Questions

1. In his first posting, how did his pre-service teacher training preparation help Shankarbhai? List 10 action points that pre-service programs should do to prepare teachers better for socio-economically difficult conditions.
2. Shankarbhai used the NSS college girls to do his work; later on he had teacher trainees doing some good work. What are similar ways in which youth can be motivated for primary education work?
3. Study the finance mobilization strategies of Shankarbhai. What are the factors which may have helped him?
4. Study the initiative with the girls of the primary teachers' training college. This has been successful, as indicated by the fact that a number of schools

have adopted this strategy. What factors should be kept in mind while organizing such initiatives?

5. For high school education, Shankarbhai decided to focus on his community and the villages where his community had social networks. Why did he take this approach? When is it advisable for teacher to focus on one community?
6. What impact would the eye-checking camps and the community marriage have had on schooling? Try to visualize the effect on the teachers, the school and the children.

BABULAL P. PRAJAPATI

Babulal Prajapati served in his first school for just three months. On the first day in his second school, he stood near the school gate waiting for the head master since he had to report to him about joining the school at 10:30 am. By 11:30, two or three students came. No sign of the teacher. The students told him that the teacher would be coming soon. The school had only one room; there were babool trees around the school. The school had been established only about two years earlier, in 1991, and hence education was only up to four grades. The head master arrived at noon. The four students who were present shouted joyfully, "The teacher has come." On seeing Prajapati, the head master explained that he had gone for some work at the centre school. Then he shouted at the children, "Open the window, go and bring water, take the chair out of the room and clean the room." Then he told Prajapati that he had been transferred to another school and was just waiting to hand over the necessary documents and attendance register. This was a bitter experience for Prajapati. The registered number of students in classes 1 to 4 was 18, while the actual presence was only 7; one girl had come from a remote field. It occurred to Prajapati that bringing the children to school should be his first step.

To bring the children to school

On the second day he checked all the school records, and began to meet the parents. Very low literacy levels, scattered houses situated on the farms, people working as labourers, were some of the situational factors. The parents criticized him. But, ignoring all the criticism, he continued with his work. Even after some amount of trust had been gained, some children did not come citing reasons like no money for slates, pens, school bags, the need to look after younger siblings, and the need to help with domestic work. He declared that all who were regular at school would be provided slate, pen and books. He also told them they could come without their uniforms. With this announcement many children started visiting school with their younger siblings. He allowed all of them into the school. As a result about 16 children started coming to school. But the problem was to make them stay throughout the day and make them come everyday. So he planned the following:

- * Allow frequent recess
- * Introduce a period of sport and play after 3 pm
- * Find out the reason for the absence
- * Stock medicines for boils, fever, headache or cough
- * Give medicines to sick children at their homes and in case of severe problems send them to the dispensary
- * Praise the children occasionally in the presence of their parents
- * Give sufficient food as mid-day meal.

Attracted by these activities, the children who were not registered in the school also came to school. The very young children, who disturbed the others were provided with toys. After sometime he could persuade the parents to take care of younger ones. This way about 90% remained present for 90% of the time.

Everyday Prajapati used to walk around the fields to know more about the people. He came to know about a custom called 'Ravanu'. According to this custom if some good event happened in someone's house, the family invited the elders of families staying in neighboring farms for a get-together. For example, if there was a guest from a distant place, the family threw a party. Prajapati thought of bringing the elders to school by organizing such a 'Ravanu' and then convincing them about the need for education. The first such Ravanu was arranged on Republic day of 1993. It was communicated through the school children, two days in advance. Everyone was invited. Some parents were invited through other parents. Thus, on 26 January Prajapati held a party at his cost and discussed the concept of education. All liked it, and they praised the effort. They gave an undertaking that at the opening of the new academic year no child would be deprived of education. In fact there was no national flag with the school and Prajapati expressed his sorrow. One parent brought a flag the next week.

Thereafter, the distance between the school and the community decreased. Prajapati collected information about the children eligible for schooling by contacting the parents. During frequent and informal meetings he used to ask about the status of their crops or business and gently reminded them about registering their children at school. As a result, the registered number of students in July 1993 increased to 39—19 were girls. After another two years the number reached 50. By 2001 all 87 children were studying and the school had been extended to class 5.

Retention and activity based education

Prajapati started bal geet, action songs, drawing in classes 1 and 2 so that the children could develop an attachment to the school. At first he was not successful. The children could not be motivated. He therefore changed his method and began with playing, but within the classroom. To identify appropriate games, he discussed with the children the games that they liked, and the games that they played after school hours. He introduced those games inside the classroom. For example, playing with match box labels was popular. He asked them to bring their collections to school. The students began to play the next day. They would form teams of two and sit facing each other. Each one would put down the print with him/ her alternatively. When two prints of same figure come together in the heap the person/ player who played the last would be considered winner and would collect the heap. Prajapati also joined them. The students were surprised. He told them, "You are able to identify the same prints; now we shall play with the reverse sides of the prints." They laughed and said, "There is no print on the reverse side, it is blank." He agreed and said, "We will create a print." He took out a sketch pen and wrote an alphabet on each of the match box labels. Though they didn't know the letters, they enjoyed matching the 'new' prints which were actually letters of the Gujarati script. Thus he went on writing all the alphabets in a graded fashion, explained these to them and all the students learned the alphabet.

Children found the change interesting, so they played the same way at home. He also expanded the field of play, from the alphabet to words, numbers, addition and subtraction and so on. Thus the learning and retention were achieved while playing. An

education inspector, Nafisa Mansuri, who saw this, praised him in a meeting and this motivated him further.

Subsequently, he extended this activity to all the subjects of all the classes. As a result about 2500 match box cards were collected in the school. Enthusiastic teachers from the neighboring schools visited to observe this activity and to see the overall change which was the result of a 5 rupee expense on a sketch pen. This activity was then taken up in almost all the schools of the centre which had multi-grade situations.

Swinging library

The school where Prajapati worked was a single teacher school. Hence keeping students engaged when he was occupied with administrative work or during recess hours was a problem. He formed a 'swinging library'. He took a long wire and strung it up. On that wire he hung some storybooks with the help of clips. The students of the upper classes had to take the books during the recess and the children of the lower classes would sit with them. The older students would read out the story and the others would listen. The books had to be replaced at the end. The books were changed every third or fourth day. With this experiment, reading skills improved. Also, the students started singing songs and telling stories during prayer time. There was no complaint related to mischief during the recess hours. Thus the children became familiar with Panchtantra, Ramayan and Mahabharat and began to tell the stories to their parents.

Students' consumer stores

The children of the farm labourers did not have sufficient education material. Hence they did not complete their home work and avoided coming to school. It struck him that material like pens, pencils, erasers and notebooks should be stocked and provided to whoever required them. Some students did not ask out of hesitation and shame whereas a few others asked too frequently. Prajapati was puzzled. He used to cite an occasion from Gandhiji's life to make a point that 'nothing should be taken more than what was required'. The problem was not solved fully. So he prepared a stand in the corner of the classroom at such a height that children could reach up and keep material on it. A board indicating the price of each item was hung on the side of the plank. It was declared that the material required should be taken and the price indicated for that should be deposited in the box kept beside the plank. Those children who did not have money with them should note their names and the material taken in the notebook kept for the purpose. He also said that such children should bring the money whenever they got it and deposit it in the box. Children were happy. They enjoyed purchasing the items. Every Saturday the box was opened in the presence of the children and the remaining stock and amount to be collected were tallied. Therefore the children were very careful. In the beginning, Prajapati purchased the material on his own and provided it at subsidized rates. Then he put up the matter to a well wisher of the school, who donated Rs.200 since he liked the activity. Prajapati purchased the material at wholesale prices. So, now the sales price remained higher than purchase price. The question was what to do with the profit? He bought a picture of Goddess Saraswati and distributed slates and pens free of cost to some very needy children. After that, the children started to look

after the store. He just helped them in purchasing the material. The children learnt basic operations like addition, subtraction much before he taught them these formally in the class. At the beginning of the new academic year, the parents wanted him to buy the educational material for all the children because he could get the material at the lowest possible rates.

Girls' education

The Thakor community showed very low levels of educational achievement. The parents felt that the culture in the community did not allow them to send the girls to school; they would be looked down upon by the community if they sent their daughters to school. Prajapati was familiar with their customs, thinking and behavior. So first of all he tried to win their confidence. He visited them often and talked about crops and other things. He knew that after a hard day's work the people gathered to sing Bhajans in the evenings. They had a 'Bhajan Mandali'. He had often been invited but did not go since he could not sing nor could he play any musical instrument. Once, he went there and to his surprise the people gave him a special seat, saying you are a Guru for our children. Then he noticed that they had placed a photo of their Guru, Sadarambapu, at the centre. This gave Prajapati the idea of meeting this Guru, to request him to persuade the community to send girls to school. One day he heard the children saying that Sadarambapu was to come to the bhajan program. Sadarambapu came, he was warmly welcomed. People were overjoyed. For the people, Sadarambapu's word was 'the word of God'. All were bowing before him; Prajapati followed suit. Then all took their seats. He gently introduced himself and told the guru, "Guruji, through your goodwill the families can be uplifted in society, the community would improve and develop, the educated daughters will silently bless you; what social service could be greater than this?" The Guru realized the genuineness of his submission. He conveyed Prajapati's desire to the people. Wherever he went for lectures, he mentioned what Prajapati had suggested. At Bhajans, people used to tell Prajapati, "Now even our guru preaches about girls' education." As a result, the total number of students reached 53, out of whom 23 were girls.

Prajapati's survey indicated that only seven girls were deprived of school education. These girls were ashamed of coming to school because of their age. In 1998 he got the school extended up to class 5. He knew that these girls were not going to get a chance to study further, and so wanted them to be familiar with some basic topics in English, Hindi and Social studies which are introduced at that level. The teachers of nearby schools criticized him: "Weren't four grades enough?" But Prajapati enjoyed handling all the grades.

Cleanliness

Cleanliness was a major issue in the school initially. Prajapati initiated a series of activities to communicate the importance of school cleanliness as well as children's hygiene.

The first experiment was called *Jalkundi* (water pot). Prajapati noticed that for wiping their slates clean, children used to spit on the slate and then erase with their sleeves. For the children, this was quite normal. Apart from being unhygienic, this spoiled their clothes; often, the clothes would also tear. He brought a small earthen pot filled with water and placed it in a corner of the classroom, and taught every child how to clean the slate using it. This worked. A similar effort resulted in a dustbin for the school. More important for Prajapati was the doormat experiment. The children had no idea of a doormat; the absence of a doormat was a problem especially in the monsoon. Children would come to the classroom with dirty feet. Some of them would clean their feet using the school bag, some would just let them be. This made the classrooms very dirty. Prajapati collected some empty gunny bags, big needles and strings from the villagers. One day, in the presence of children, he cut the gunny bags into squares, sewed them together and prepared functional doormats. He then taught the children how to use these mats. The interesting outcome was that children, on their own, made such mats for their homes as well. To teach personal hygiene, Prajapati had to buy nail cutters, a mirror and combs for the school. Older children were taught how to use the nail cutter on themselves as well as on the very young. Hair cutting continued to be a problem. Prajapati worked out a deal with the village barber – the barber would charge two rupees less, if the cutting were to be done at school. The parents were told that were saving two rupees and the money that would have to be spent to persuade their children to agree to a haircut. The experiment was also a chance to demonstrate a profession being practised.

Mobilizing land for a school

Prajapati was transferred to another school (Goliya Vakha Primary School) in 2003. The school had only two rooms for five grades, and it did not have land for additional rooms. Efforts to convince the owner of an adjacent plot of land had failed. Prajapati organized a Satyanarayan Katha in the school. The objective of the Katha was kept secret; only a handful of village youth knew what he wanted to do. When the Katha was over, he asked them, “If you leave your land to your descendants, in the long run how much would each of your great grandchildren get?” The people responded, “A patch the size of a bed.” But if some land were to be donated to future communities of children, the donors’ names would be remembered for generations to come, and the act would benefit all children. This approach worked. One landowner donated 2400 square feet for the school; the person who owned the land adjacent to the school also donated that bit.

Community participation in the new school

The school also faced the problem of children from low-income groups quitting schooling due to financial constraints. Prajapati thought of supplying education kits to such children and rang up a villager settled in Ahmedabad, Rameshbhai Kasturji. Rameshbhai asked how many kits were required and landed up in the village after a few days with 147 kits.

Similarly, some individuals donated Rs.5000 for utensils for mid-day meals in memory of their father. Prajapati thought of introducing sweets as part of the mid-day meal, and proposed the idea to the Parents Committee. They decided to supply sweets on the death anniversary of grand parents or on birthdays of the children. Donors for each month were identified, and now children get sweets once or twice in a month.

Postscript: Inculcating the right values in children is important. Prajapati asks children to bring a handful of grain and add it to a pot kept in the school. The grain is fed to birds. The activity is intended to create compassion for birds. The school has a regular tree plantation program. In order to maintain the trees during the vacation, each child is made to adopt a tree. That tree is then the child's responsibility.

Discussion Questions

1. Study how Prajapati used local customs and religious leaders for educational purposes.
2. Examine Prajapati's community mobilization strategies. What important features do you notice?
3. Prajapati used slates and pens to motivate children to attend regularly. What other motivational tools can you think of for the same purpose?
4. From your experience recall activities similar to the matchbox label activity. Why did the matchbox label activity succeed? What are the educational principles that Prajapati used?
5. If you want to study the impact of the swinging library, what questions would you put, and to whom?
6. What are the threats to the students' consumer stores, and what preventive action would you recommend to Prajapati?

BHAVESH N. PANDYA

Bhavesh Pandya became a teacher in 1999. He worked for four years in his first school, and then went to his second school at Dedol, a remote village, in 2004. Here he found 40 children, sitting around two teachers, on a verandah. Looking at the deprivation, he remembered the first day at the school where he had worked first. His father had come with him; he looked at the school and then he said, "If you are a true son of a teacher, then this is the place for you to work." Bhavesh found the usual problems in the second school: lack of proper facilities, compound full of thorny babool trees which covered the school as well, the pathetic condition of the classrooms, poor presence of children, poor attitude towards girls' education, the community's apathy towards the school, the remoteness of the village, poor literacy and socio-educationally backward communities.

He wanted to do 'school improvement' quickly. There were only about 10 children who were good in studies in the entire school. "Why are children irregular in school? Why do children who can study well leave the school in between? What should I do so that the 'temple of the village' becomes lively? What should I do to get villagers' support?" These were the questions that he began with. The children loved cricket. A boy named Vishnu said, "There are so many babool trees, they grow fast even after we cut them." Another boy, Hareesh, suggested, "Teacher, for now we can cut just a few to create a playground; even if they grow fast, we can cut them easily." A few other children nodded as if in agreement. The five children and Bhavesh surveyed the ground to decide how many babools had to be cut. The assistant teacher joined them along with the younger kids that she taught. Looking at them Bhavesh stopped, sat down near one tree and made a small house with the soil. The kids were happy and started to make small houses. Then he asked all the forty children who had gathered to form five groups of about 8-10 children. Then he asked them to make small houses. After about an hour's work each group was ready with its house. Three of the teachers went into the babool to see the houses. The children had made beautiful houses, but Bhavesh suggested that the thorns of the trees were stealing the beauty.

All of them returned to the shattered veranda. Bhavesh said, "Bharti's house is very nice, but that big babool..." Immediately the assistant teacher said, "We can remove it." "The house would look nice but it can also have a cricket ground." The future players readily agreed. Bhavesh said, "Not today, we can do it tomorrow and whoever has an axe should bring it." He told them to nominate a leader for their respective groups and instructed them to write down whatever they had done at school. "What if we don't know how to write?" asked Mamta, a Class 4 student. "Such a child can write his/her name on a blank paper and give it to the group leader," he replied. Actually, Bhavesh wanted to know how many children did not know writing.

On the next working day, children brought axes. After the prayer Bhavesh collected the papers from the leaders. One thing he realized was that the group leaders were probably the best as far as writing was considered. More than 50% papers were blank; most of the rest had incorrect writing. Then Bhavesh and the others cut down 10 thorny trees and cleared the land. In the afternoon he realized that the older girls had not joined in the activity. When he asked them the reason, they said, "The boys have already barred us

form playing cricket. Why should we do anything? We want to do something for ourselves; we would also like to get involved in some activity." Bhavesh suggested, "What about a space where you girls can sit together and call it your own?" One girl immediately queried, "Behind the anganwadi?" Bhavesh said, "That part is hot the entire day because of the sun." Then he told them to make a floor space between two rooms. The girls ran to see the place. They told him that they would need cow dung and soil. By evening, the girls had already spread the soil on the ground. By the next evening the work was completed. That day he gave the children homework: "Bring one pan of soil and one of cow dung, for the school." With this they repaired the cracks and made a floor for the school. White washing followed. The teachers and the children dug a 4 feet x 6 feet, and 3 feet deep pit, and dumped papers, dry leaves to make fertilizer. All this attracted the villagers' attention. When the thorns had been cleared, a big ground, though unlevelled, was visible. Bhavesh was targeting a 'gamti nishal' (liked school) for the children and 'amari shala' (our school) for the villagers.

Bhavesh had listed the children of school-going age; he contacted the parents of those who were enrolled but did not come to school. He asked the regular children to talk to other children about the interesting activities done in school. He also asked the regular ones what they liked in school and told them to note them down under the heading 'gamti jaruriyato' (liked needs). He was planning to use walls, doors, windows and the floor for educational purposes and wanted to come up with something before the January 26 celebration which was only a few weeks away. He and his wife made a list of words, pictures and other interesting things, and started painting them on the walls. Bhavesh painted about 130 words. The words selected were such that they would test the 'skill of reading' completely. He had to struggle for five days to finalize the list. He also painted national symbols, pictures of leaders, names of the days and months, a picture depicting the importance of trees, cartoons, traffic signals and the picture of a 'girl and her younger brother going to school together'.

He also had to work fast for the 'gamti jaruriyato' (preferred needs): a garden, urinals, drum, slides, swings, drinking water facilities, compound wall around the school building, gate. Actually this list was the children's wish list. So he had to get the things done through them. For the garden they had been preparing from the beginning; they had initially used thorn fencing, but now made better boundaries with wooden poles and iron wire. The urinals had to be made, and these were made by the children with three asbestos sheets. Each sheet was cut into two C shaped halves and inserted into the earth. Channels were then dug and thus two urinals were made for the boys and the girls. They bought a musical instrument, a drum, from the school grant. This helped them prepare better for our cultural program. Bhavesh then enquired about the slides; he was told that it would cost about Rs.3000. So he bought two suitably shaped smooth-surfaced cement stones and made two small slides for Rs.150. The children started to use them immediately. The swings were also expensive. So he got used tyres and made swings with strong rope. This was a problem for the younger children who were not comfortable on the swing. So he went to a cycle repair shop, brought some waste tyres, bought a 50 meter rope, and fashioned a swing seat which was like a chair. Six such swings were made. Another target was drinking water facilities. The government had given the school a water tank but the pipe line from the village bore well was not

working. Bhavesh took the help of village youth to open up the line and it was easy to spot the banyan tree root that was creating the problem. The garden also flourished as a result.

The most expensive demand was the compound wall. After removing the trees, the ground had also become bigger. A proper wall would have cost a lot, so they decided to go in for natural fencing. The children dug the boundary channel and planted trees. There was no money for a gate, but they fashioned one from an unused hand pump which was lying in the school compound. For the first time in forty years, the school had a gate.

Bhavesh wanted to do something different for the Republic day celebrations. The rehearsals were going on one day when suddenly Asha, who was physically challenged, shouted at Rekha, "You are supposed to clap while the hands are down." This gave Bhavesh an idea; "She can't walk properly, but remembers all the actions." Then he planned a welcome song with actions which were feasible for Asha to do. When this was presented after the flag hoisting, people were amazed to see her performing. Her parents cried. This was followed by various events. That day the school got Rs.4000 from the people to buy various things that were needed. The earlier balance had been just Rs.37.

Thus in one month's time, a 'gamti nishal' was created. To sustain this activity, Bhavesh initiated several activities and now these have become regular.

Daily activities: Musical prayer assembly, story telling during the long recess, productive activities like making greeting cards, masks and puppets and discussion on things done during the day at the end of the school's day. He also plays six audio cassettes given by the government to each school. These are played during school cleaning, recess, and play time.

Half weekly activity: The school brings out a handwritten newsletter of various school activities on every Wednesday and Saturday, so that the children can evaluate the work done by them. There are four sections: News, if the children have expressed something personal or someone has done something special; songs, usually children's own creations; good news, any activity which children enjoyed very much (an example: "Today we had to clean the water tank. It was half full. After ten children had bathed, we tried to empty it ... and it suddenly started rolling away from us ... we laughed a lot." Finally, there are simple riddles. The editorial team is changed every month. The results have been very good.

Weekly activity: Every Friday the children make a 'statue' of one well known person. Children collect information about this person and display it near the statue. This task of making the statue and collecting the information is given to different groups of children each week.

Every Saturday Bhavesh cuts the hair and nails of children. The nearest village with a hair cutting facility is about 20 km away. Interestingly some of the older children who are no longer in the school also come to him on hair cutting day!

Fortnightly activity: Mahendi designs by the older girls.

Monthly activity: The first day of the month is a planning day for productive activities. The previous month's income is checked and plans for buying things for the school's 'gamti dukan' (liked shop) are made.

Gamti Dukan: The things are sold at half price here, with the rest being subsidized by the sale of the products the children make. Individual donations are also made to this shop. Bhavesh has used the income to buy accident and mediclaim policy for all the children.

The outcome is that school has really become a gamti nishal and now the attendance is consistently over 90%. As part of the 'gamti nishal' idea, girls are trained in self-defence. Since the number of enrolled children also went up, Bhavesh had a problem in the mid-day meal arrangement, which was based on the previous year's figures. He had to arrange for food for about 30 new children with the help of donors. There was a break in the scheme, but two visiting doctors were impressed by the work, and supported the children for 75 days. The villagers have now started donating money for cluster level activities as well.

The Gamti Nishal activity has taken root over the years. In recent years, with money generated from cultural programs and government grants, the infrastructure has been completely revamped. The self-built toilets and mud plastering are things of the past. Bhavesh now helps other schools adopt some of the ideas contained in that concept. About 22 schools in the taluka now prepare invitation cards from waste paper that are sent to parents. The making of swings with discarded tyres is perhaps the activity which has been copied most widely. What has helped in the spread is also the widespread coverage in local newspapers and private television channels (ETV Gujarati, TV9 and Zee News). Since Bhavesh is now a State Resource Group member at GCERT, he has had a number of opportunities to introduce the TLMs he uses to other schools. Some of the activities of the Gamti Nishal have been incorporated in the self-study primer of Classes 3-7.

Stories without Jodakshar (conjunct consonants)

A particular problem that Bhavesh faced early on was the poor reading ability of the children. He realized that the available reading material was of no use. Children could not read even simple words. The Gujarati language also had a number of conjunct consonants which posed difficulties. Bhavesh decided to write his own stories without the problematic letters, exclusively for the purposes he had in mind. But before that, he had to teach these children basic reading. Hence he started with simple words with just two letters. Gradually he increased the number of letters. Finally, he wrote sentences, but without the *matra* (vowel symbols) of standard writing. He began with an incorrect sentence, for example,

મર ગામ ડડલ છે.

Mar gam Dadul chh.

This sentence is grammatically incorrect. But he just wanted to teach them how words form a sentence. Once they learned this, he introduced only one *matra* of Gujarati. For example,

માર ગામ ડડલ છે.

Maar gaam Dadul chh. The aa extension is introduced.

Then one more *matra* was introduced.

માર ગામ ડડલ છે.

Maar gaam Dadul chhe. The é sound is introduced.

Like this, one after another, *matras* get introduced. And there came a stage when children were able to read simple sentences. For example,

મારુ ગામ ડેડોલ છે.

Maaru gaam Dedol chhe. Dedol is my village – the correct sentence.

This was only part of what he wanted to do. He wanted the children to read stories. He began to write stories that would avoid conjunct consonants. It was quite difficult to achieve this as such letters are very much an inherent part of this language. Still, he managed to change words, phrases or sentence patterns, even though it made the story a little less smooth. Once the stories were ready, he prepared a small booklet and left it in the class. And it worked. Children used to take the book on their own and read stories from them. Gradually they reached to the level where they were able to read comfortably.

Now was the time to introduce conjunct consonants. They were also taught in the same phased manner and the same system was followed to introduce them one after another. And Bhavesh felt satisfied only when the children were able to read the regular story books on their own, without any problems. The development of story reading ability naturally helped the children read their textbooks better.

Bhavesh wrote 50 stories for this project. The entire program spanned a three-month period. He was motivated by the queries of some fellow teachers who wanted to know how to write such stories, and by the founder-editor of a local newspaper “Rakheval”, Shri Amrutlal Sheth. He agreed to print the stories in the children’s section; the stories have been published regularly since April 2000. Writing stories and songs without conjunct consonants continues to be an on-going activity. As of 2009, his collection contains more than one thousand songs and stories – Bhavesh has also found a place in the Limca Book of Records for this achievement.

Discussion Questions

1. Comment on the manner in which Bhavesh related to the children during the month-long Gamti Nishal preparation. From your learning, identify some of the principles that seem to underpin the teacher-students relationship in this story.
2. What is the significance of calling the activity 'Gamti Nishal'. Discuss from the points of view of the children, parents and teachers.
3. Study the conjunct consonants experiment carefully. Try to write one paragraph on your own using the principles underpinning this experiment.

BHAVESH R. DADHANIYA

Bhavesh Dadhaniya started his primary school teaching career in 1997 at the Vadod Primary School, Jasdan, Rakjot, Gujarat. The village was medium-sized, with about 2500 people, but the adult literacy rates were very low. No adult had managed to complete schooling. The people were mostly agricultural labourers; many raised cattle. Most of them belong to the *Koli* and scheduled caste communities. Paradoxically, the primary school was fairly large, with 400 students and six teachers. Yet, the educational situation seemed to be depressing. The first weakness that struck Dadhaniya was the absence of any cultural activity. Though sporadic efforts had been made in the past, there was no systematic effort to inject some life into schooling. He used his first Independence Day in the school as an opportunity to organise a series of cultural programmes. This proved to be a breakthrough, with the students making full use of the opportunity to express themselves.

Compilation of *Bal Tarang*

During his activities in the class he realised that the general knowledge levels of the students were poor, and that if something were to be done to link reading and general knowledge development, classroom processes would benefit. Around this time he read Dr. Ishvar Parmar's *Shikshan na Sitara* (The Stars of Education). The life and work of great teachers became a source of motivation for him, and strengthened his resolve to bring out a compilation on general knowledge. He began by reading children magazines and books for one to two hours every day. Based on this reading, and with the inspiration of his teacher friends, he produced a book '*Bal Tarang*', which had 20 sections on general knowledge, prayers, *Dhun-Bhajan*, patriotic songs, inspirational songs and poems, puzzles, math quiz, information about computers, new developments in science, and so on. With guidance from the DPEO and DIET, he published the first edition in 2000. All the 1000 copies were sold out in just two months. The cover price of '*Bal Tarang*' was Rs.30, but it was sold at a discount of five rupees to teachers and poor students. The production cost came to Rs.20. Here comes the crucial initiative: he set aside the margin for a series of de-addiction campaigns, since addiction to tobacco was a serious problem among the young. So we see an educational goal resulting in generation of resources for a social initiative. Within a few years, more than 6000 copies were sold. A brief assessment of the book indicates the following uses:

- It is used in many schools to provide a focus to the prayer assembly.
- The book has been used by children to prepare for tests and competitive examinations like *Bharatiya Gyan Kasoti*.
- With the improvement of the general knowledge of the students, some positive impact has been seen in the classroom.
- A major outcome has been the generation of resources for de-addiction campaigns.
- Inspired by this effort, two teacher friends of Dadhaniya are also compiling story and quiz books.

Vyasanmukti (De-addiction) Campaign

When he joined the school, Dadhaniya was shocked to find about 60 children of Classes IV to VII addicted to *panmasala*, *gutkha* and other tobacco products. Their parents were also addicted to such products. They used to ask their children to buy these things for them, and the children also started to consume tobacco. Two of the six teachers were addicted as well. Dadhaniya studied the surrounding villages and mapped the extent of the problem, and documented the physical damage to children and the financial burden of addiction. This activity strengthened his resolved to initiate a de-addiction campaign.

He first called a meeting of the parents and the children at the school. His initial intention was to only create awareness about the harm caused by addiction. Interesting he adopted a catchy slogan for his campaign: “*Bidi mautni sidi*” (cigarette is the ladder to death). He focused on cancer of the mouth, lungs and stomach, and on the economics that he had worked out. The Rs.3600 spent by an average small family every year on tobacco products were more productive if spent on things their children needed – clothes and educational material. There was sustained follow up and monitoring, and after a few months, he found that about 70% of the addicted children had given up tobacco. A few parents, but not the majority, also cut down on the addiction. At least, with the children, the effort had been reasonably successful and worth the while.

He decided to extend this campaign to other schools and teachers of the *taluka*. Meanwhile he happened to go to the Asharam Ashram in the city of Ahmedabad for training in Yoga. During this visit, he saw a CD on de-addiction. He bought two of these CDs. They had content recorded from the cancer hospital at Ahmedabad, and highlighted the adverse effects of addiction. Over a period of 16 months, he ran a campaign in 10 schools of his cluster. Many children, as well as a few teachers, were de-addicted during this campaign. A positive impact has been that three teachers have now become determined to prevent addiction among children. To aid in his follow-up, Dadhaniya prepared a list of 150 children from these schools, about 20 parents and ten teachers, who have managed to stay away from tobacco.

Dadhaniya continues with his efforts. He is now head teacher in another school; but the addiction problem follows him. In this school as well, he identified students in classes 1 to 4 who were addicted to tobacco, and repeated his earlier strategy of having a meeting, giving motivational talks and showing his CDs. Crucial to his strategy have been house to house visits and making people take pledges to free themselves. This effort has built up his credibility with the parents. He now runs the campaign, which has been going on for years, with the help of three teacher friends. Dadhaniya also monitors the influence of the children on their parents, and makes special note of those parents who have been persuaded by their children to give up tobacco.

He has now initiated a ‘cleanliness campaign’ in his school (at village Kalasar). The village is inhabited by the Koli community. Most of the families live on their farm land, often in temporary houses built during the agricultural season. Children are highly vulnerable to diseases caused by a lack of cleanliness. Once, a girl developed high fever, and the diagnosis revealed that lack of cleanliness was at the root of the problem. This

case inspired him to undertake a cleanliness drive. Another teacher, Ramesh Dhodakia, had already done something similar with a school-based cleaning kit. Learning from him, Dadhaniya prepared a cleanliness kit for the school. It includes three to four combs, soap, napkins, nail cutters, scissors etc. Every Monday, he checks the children's cleanliness. If a child has not cut his/ her nails, he cuts the nails in the presence of all the children. He has also organised a rally to explain how to keep drinking water places clean and about the need to cover the food properly. The campaign has been quite successful, and has managed to make the parents and children part of the cleanliness campaign. The positive results are increased frequency of bathing, improved cleanliness of clothes, drink water from a shared glass (in the school) without letting the mouth touch the rim of the glass to prevent infection, and encouragement to the children to talk about the cleanliness campaign during Bal Melas.

At Kalasar, Dadhaniya decided to structure the school's activities in the form of a 100-Activity Plan. This plan is in the form of a table containing the broad theme, procedures and other details. An extract from the table is reproduced at the end. Many teachers, especially in the Lilapur Cluster (a total of 19 teachers) have tried out the Activity Plan. Students of a teacher training college have also used it as a guide. Dadhaniya has also devised a one-day exposure for the children, incorporating visits to eight places at the taluka head quarters – post office, the police station, the Block Resource Centre, the taluka panchayat, a diamond factory, the court, a bank and a hospital. This kind of exposure is reported to have resulted in a great deal of learning. Initially, Dadhaniya faced some problems like the resistance of some parents to the idea, financial constraints, and the obstructive behaviour of some in the local educational bureaucracy. However, overall, he believes that such an activity once a year will help the children.

Discussion Questions

1. Why was the cultural activity initially seen as important? How will you assess the 'cultural life' of your school? How can a teacher plan for introducing cultural activities in the school? How should a teacher select the content of the cultural activities? What resources should the teacher tap into? How will you know whether the cultural activity that you are introducing is having the positive results that were expected?
2. Why did Dadhaniya decide to compile the Bal Tarang? What other alternatives to Bal Tarang can you identify? Discuss the use of profits from these to fund a social activity. Can you identify other activities which have both an educational goal and a financial goal?
3. Is the de-addiction campaign just a personal interest of Dadhaniya? Why should a teacher take up a de-addiction campaign? What are the campaign's educational implications? Are there similar social problems that you can identify, which a teacher may be expected to address?
4. Comment on the strategy of expansion of the de-addiction campaign from one school to a cluster of schools. Identify the effects of this larger activity on the teacher's image, on the children, on parental perceptions of schooling and the teacher's standing among his peers.

5. The de-addiction campaign has been going on for years, with reasonable success. What should Dadhaniya do now to make it less dependent on him?
6. What modifications would you suggest to the 100-Activity Plan if you were a teacher who wants to implement the activities?
7. Comment on the exposure visit planned by Dadhaniya. If you were to replicate this idea, how would you plan the exposure visit? Prepare a plan document that can be submitted to the relevant authorities for obtaining permission.

#	Name	Subject/ Theme	Grade s	Objective	Duration/ frequency	Place	Procedure	Material, reference book
97	'Aarogyamidhi'	Physical education	All	Getting physical check up done regularly and getting medicines from nearby trust	End of term	School	To get the check up done at the end of each term and file the reports.	First aid kit, weighing machine, health chart
98	NGO relationships	Innovatio n + creativity	All	To know about activities of various NGOs	-	As per need	To establish contacts with the good NGOs working in education, to build relations and exchange ideas and work. E.g. <i>Lokmitra Dhedhuki</i>	Monthly newsletters of various organizations
99	Children's money Bank	To learn about bank administr ation	5-7	To know about banks, money transactio n, counting.	-	Daily	Children manage their own bank. The children appointed as bank manager, cashier etc. prepare the balance sheet, give pass book the children and maintain the savings accounts.	Register, drawing sheet, passbook

HARJIVANDAS V. PATEL

Harjivandas Patel started his career as a primary school teacher in Bhanpur Primary School, Zalod, Gujarat, in 1964. He found the presence of children in the school very poor. After discussing the matter with the villagers, he realised that teacher irregularity was one reason for the poor performance; parents wanted their children to work on the farms and in homes; and sometimes, superstition came in the way of further education. He sought the help of the Police Patel and other influential people in improving the educational status of the village. He started to take the children out on short excursions to places like the river, farms, nearby schools, and used such excursions as instruments to teach specific subjects. This increased the attendance and regularity. He also made the timings flexible, since the tribal community to which they belonged was severely deprived and children had to help their parents out. So whenever children had to go out of the school during the day, they came to his place in the evening and he used to teach them there. Slowly children more than 14 years old also started coming to the “evening school” at his home. He used to tell them stories, and also tried to wean them away from liquor and other addictions. The community’s respect for him went up. Within a year about 15% of the village’s children had started coming to school regularly. This situation rapidly improved, so that by the time he left in 1968 for his teachers’ training course, a lot had been achieved. The parents were more aware, and they briefed the new teacher on what had been done and what they expected from him. The teacher responded positively, the school progressed to Class 7, and now there is a high school.

After his training Harjivandas worked in Nani Sanjeli for ten years from 1970. This tribal village had 1200 people. Alcoholism and superstitious beliefs were rampant. Every year there were a couple of murders. The school used to be closed for months at a time. The teachers had left in disgust, and the village community despised the teachers. He started by taking the *Sarpanch*, Police Patel and a few respected elders into confidence, exhorting them to work for the cause of education. The people were very aggressive. When people observed his calm behaviour with the children, they changed. But the children’s presence in the school was not regular. He started taking them to the nearby river, farms and hills for excursions. During such walks, he used to accomplish his teaching work. Real objects were used to teach concepts of environment and mathematics. Oral expression was an important goal. Now the question was about writing ability. For this, he used to take small opportunities to introduce the alphabet, using flowers, fruits, grains, seasons to introduce letters.

He then made a timetable.

- Every Friday, they used to visit the river for a bath (cleanliness of the body).
- Different competitions like songs, stories and sports at regular intervals (interclass competitive spirit).
- *Lok Mela* on all national and local festival days (discussions on social problems and social development).

He also noticed that the children felt happy when they were of some help to the teacher. He used to ask children to bring him some fruit or vegetable available at that point of time. Here, receiving a mango or a maize cob was not important. But children felt very happy. They used to come to the school running all the way. It made his bonds with them very strong. This helped in maintaining attendance up to some extent. But still 100% attendance was difficult, as children had to work for some income. He therefore started small activities in the school so that children did not have to remain outside. Examples include collection of seasonal fruits and berries and making plates from leaves of *Butea monosperma*. These were sold in a nearby market. Some money was spent on giving the poor children study material or clothes. This improved the presence in the school. Since the children maintained accounts of all these transactions, their work was linked to math teaching.

The manner in which Harjivandas used a government scheme for educational purposes is given below. In this tribal area, the government had started a scheme to provide nutritional food for pregnant women and girls below six years of age. Since the school was the local centre for the scheme, the women used to come to the school. This gave him an opportunity to orient them to the importance of education. This worked and many of the women began to send their daughters to school. On the other hand, there were some women who did not come forward to take advantage of the scheme. The food meant for them remained unused, and Harjivandas stored it carefully. The initial days of the monsoon were terrible days for the poorer families since the crops were not ready and there was a shortage of edibles. He began to provide the unused food to such poor families. This in turn attracted the girls of such families to the school; they also began to bring their siblings with them to school. Harjivandas allowed this, since it got the under-age children accustomed to the school.

Harjivandas was transferred to Moli village in 1980. The situation was similar to what he had faced a decade earlier. He started with community relationship building and a comprehensive survey of the families of the village. The survey was also a motivational tool. He prepared the children who were in school for cultural programmes, and on Independence Day held a show for the parents. They were very happy, and one old man suggested that the school hold flag salutation twice a year, and that each house contribute two rupees on each occasion. With the amount, he bought books, notebooks and pencils for the children who participated in competitions that the school held. This increased the presence to some extent. Besides this, the village used to hold a gathering for *Bhajans* twice or thrice a month. Villagers used to remain present in high numbers in such gatherings. Harjivandas used this forum to raise schooling issues. During one such meeting, he proposed an educational tour to Pavagadh, a religious centre. The difference was that parents could also come. His responsibility for the children was thus reduced, and resistance from the parents was overcome. The tour was accomplished at a very low cost, and had a magical impact on the community. The parents respected the school so much that they were now ready to execute any work of the school.

In his next school, Harjivandas put his previous experiences to work. What he added to the survey was a rally and a public declaration that the school would open on a particular date. This was to remind the surveyed parents about school attendance. Every

school-going child was motivated to bring one child who was out of school, drawing on the survey results. This enhanced the enrolment remarkably. To keep the children in the school, he relied on activities that the children liked. Songs, stories, games, short conversations with the children helped remove their fear of a new environment. The prayer assembly remains a major attraction for children. They also enjoy participating in different competitions. Later he made children participate in science fairs at different levels. They won prizes at all levels, including the state level. He took care to keep the community informed about the achievements of the school. This came back as community support. It has added to the motivation of the children also. To enrich the prayer assembly, he and his colleagues have introduced many activities. The teachers are given a topic as a project – for example, ‘vegetation is a natural resource’. The project consists of 14 points like the identification of a plant, its uses, its classification, its parts, seasonal growth etc. Every month one project covering one subject is put up. This deepens the knowledge of the children and improved the quality of education in the school. In addition, Harjivandas has undertaken experiments to improve the handwriting of children.

Discussion Questions

1. What the common features of the strategies adopted by Harjivandas in his first two schools?
2. Study the use to which Harjivandas put the unclaimed food under the government scheme for nutrition of pregnant women. What strikes you about this initiative? Can you identify similar schemes in which loopholes in implementation allow the schemes to be used for educational purposes?
3. Harjivandas believes that children felt happy when they were of some help to the teacher, and so he used to ask children to bring him some fruit or vegetable available at that time. Comment on this belief. When does such a well-intentioned belief become a problem?
4. Note the survey that Harjivandas used in 1980. What did it achieve? How was it modified in a different context?

RAMESHBHAI A. DHODAKIA

Ramesh Dhodakia started teaching in 1993 in Mangalpura Prathmik Shala in the tribal district of Godhra. The school had classes 1 to 4. The village was small, with only 500 people, but as is the case in many tribal villages, the homesteads were very scattered. Dhodakia had to handle all four classes. It was an unfamiliar situation for the young teacher; the local dialect was also difficult to follow. Dhodakia drew inspiration from his Guru and decided to deal with all his 70 students to the best of his abilities. He initially felt very sorry for these innocent children from poor families, trying desperately to come to school. He identified two challenges: making children attend regularly and managing the inside-school activities. First, he made a class-wise seating arrangement for all the children in the lobby, in the compound and in whatever open space was available. The reason for using the open place was that the school had only one room, only half of which was covered by a roof. He made an application for one more room and devised a 3-stage system of multi-grade teaching: interaction among the students, individual lesson work to be done by the students, and the teacher's checking. He met the elders and leaders of the village and discussed his initiatives with them. Gradually the irregularity of children reduced; this was a great motivating factor. Then he collected information on all out-of-school children of school-going age and enrolled them in Class 1.

After about a year, in 1994, he was exposed to some child-centred pedagogical techniques through in-service training. He immediately started to teach through songs, games and made his own teaching learning material. This helped greatly in improving the academic situation of the school. It definitely helped change the atmosphere inside the classroom. In the village, he tried to help out with information on agriculture and spoke about the advantages of secondary education. He also opposed some customs like animal sacrifices. People were receptive since they saw he was doing a good job with their children in the school. Dhodakia then planted about 2000 eucalyptus trees near the river bank and celebrated *Van Mahotsav*, and also initiated literacy classes with the help of volunteers, for the village adults. All these activities helped him build very good relations with the community.

Meanwhile he came to know about the educational situation in a nearby village, Malvan, which was scattered over a semi-forest area. In one part of this village, inhabited by the Naik tribe, there was no school. People of this community worked as labourers, some of them cultivated maize. He thought of involving the people from the village where he was working. So, along with five people from Mangalpura, he went to Malvan, and initiated a series of discussions. Finally, he succeeded in bringing about 40 children of varying ages to his school. That was a great success both for Dhodakia and the villagers. Within a period of six years, enrolment and keeping children in school disappeared as problems.

At this time, he was transferred to a fairly well-off village in another district, Kamalpura girls school of Jasdan, Rajkot district, and started teaching Class 5. The school had 61 girls. His first experiment was aimed at improving the academic environment through a Bal Mitra Varg. He made a folding Bal Mitra Varg using velcro strips and hard board

pieces of 4"x6". The Bal Mitra Varg turned out to be quite useful in learning various competencies.

He realised that though the village was not that badly off, the girls were careless about the environment and their health. Also, there was a belief that one of the classrooms was haunted. This was a distraction. He prepared for many days with a friend and finally called all the girls of Classes 1 to 7. He and his friend then held a magic show programme and demonstrated different tricks like bringing out a ring from a brinjal, showing a pumpkin broken from inside, passing an iron rod through the tongue, pulling out rice from a coconut, lighting a lamp without a matchstick, invisible writing, and so on. Finally they showed the girls how to bring a 'ghost' out of a bottle. All these were of course tricks. They discussed the phenomena with the girls and illustrated the power of illusion and the harm of believing something which may not be true. To Dhodakia's surprise, the effort was very successful.

Having done this, he made two girls responsible for checking the cleanliness of all the other girls every Monday. Sometimes, he shocked them by checking their school bags himself. Usually he found waste like torn paper, stale snacks, and peels of nuts. He then declared in the prayer assembly, "Teachers of the other classes will visit your classes and check their cleanliness," and point out the "dirty room". The words "dirty room" acted like magic since not having the "dirty room" became a prestige issue for the students. It generated a spirit of competition among the girls. The girls kept a dustbin in each class and saw to it that their classroom remained clean. When these systems of checks had regularized, an incident took place which showed him that the system had been institutionalized. The girls included the teachers also as targets for inspection. One Monday, a group of teachers was walking with their students. The nails of teachers were also inspected, and one teacher was ordered to cut her nails. Dhodakia was happy that the girls had developed the courage to express themselves thus.

Developing Self-esteem of Girls

Dhodakia believes that if students are made to realise that teachers have an interest in their personal likes and dislikes, the problem of distance between the teacher and the learner can be removed, and that learning about the students' family background, and their economic and social conditions, would obviate the need for punishment. With this in mind, he introduced the idea of "My Card". A card for each girl was prepared. It had the following information:

Name, Father's name, Mother's name, Mother's education, Father's occupation, Total members of the family, My favourite dish, My favourite game, My favourite colour, My favourite song, My favourite friend, I want to become...., Signature.

When all the cards had been filled up, he made a garland of the cards with a string and hung it in the classroom. Later on, Dhodakia developed an identity card which is based on the above 'My card'. The identity card has additional information about the most educated family member and other family details.

He also made a Happy Birthday Board for the prayer hall. If a particular day happened to be the birthday of some well known figure or leader, his or her name would be written on the board. If it was some girl's birthday, her name would be called out in the prayer assembly. She would be asked to get up and all the others would greet her. She was privileged to wear a cap for the whole day. Dhodakia found that these girls were smiling and happy throughout the day. This indirectly contributed to the presence in the school. Every girl waited eagerly for her birthday. The girls talked to their parents about such greetings.

Self-administered attendance board: This was another interesting innovation designed to help the girls develop self-management skills. A hard board with roll numbers and one hook for each number has been created. Each child has been given a card with her roll number on it. As soon as the children enter the classroom, they hang their cards on the appropriate hooks. The teacher has the attendance at a glance. The students call out their roll numbers – on Mondays and Thursdays in Gujarati, on Tuesdays and Fridays in Hindi and on Wednesdays and Saturdays in English.

***Sakhi* Project: Learning with Each Other**

In order to develop reading skills, Dhodakia thought of a scheme called '*Sakhi* Project'. First, he divided the entire village into nine sections--zunpadivadi, Ahirvadi, vanghani vadi etc. Lists of girls living in these nine sections were made. After this, for each section, he identified the girl who was the best performer in academics. She was made the group leader. All the girls of that particular section were to gather at her place for one hour in the morning and practice reading, writing and counting. The teachers monitored the activity. This project has continued for many years now. It was obviously liked by the girls, since it gave them an opportunity to get together to learn something in an informal environment. They not only carried out the educational activities, but also started decorating their centres. They invited teachers to visit their centres. Because of this project, the students became regular in their homework, the attendance increased and the rapport between the school and the community was strengthened. This forum was perhaps instrumental in achieving the very high levels of regular attendance that Dhodakia was able to show.

The *Sakhi* project informally helped parents learn something about the educational activities of their girls. He thought of communicating to the parents the regularity of their girls formally. Many parent took their girls along with them when they went out of the village; the girls would have liked to come to school. Whenever a child was absent, the parents were sent a letter saying, "Out of ___ days, your daughter was absent for - ___ days. We hope that you will send your daughter regularly to the school now onwards."

Dhodakia further enriched the educational experiences of the girls with books which he gathered from various places. These were made available to the parents as well. He therefore combined the school library with the village library. Other activities included a 'Value Cultivation Week', drawing competitions, *Rangoli* and *Ras* competitions, and other cultural programmes. With the increased activities he thought of adding some

facilities to the school. He gathered Rs.5000 from the community members for an amplifier. Speakers were placed in each class. The youth association of the village did the fitting of the instruments free of charge. Dhodakia also insisted on an identity for the school through uniforms. This was appreciated by the girls. But he felt that teachers could not be exempt. After some discussion, the teachers designed a dress code: black trousers and pink shirts for male teachers and pink saris for female teachers.

Another attempt at enriching the academic experience was the Picture Notice Board. Dhodakia has given a file of pictures to one student. This student selects one picture daily and puts it up on a separate notice board. The students then write their thoughts about the picture, and submit it along with their homework.

His appointment as CRC Coordinator in 2002 gave him an important opportunity for discussing educational innovations with a huge pool of 60 teachers from seven schools. He held meetings of the teachers every Saturday and took up various ideas for educational development, novel concepts, techniques and strategies. He organises about 30 such meetings every year. For instance, one idea which has been appreciated involved the group preparing a checklist of the qualities of an ideal school. Each school then had to identify which qualities were missing in their schools, and make an action plan to develop them. The Sarva Shiksha Abhiyan has further provided a platform for making village associations active and he has used this opportunity to organise a variety of competitions and activities like origami, puppet shows, letter-learning activities for Class 1 students, and so on, in the entire area.

As CRC Coordinator, Dhodakia has also tried to counter the problems that arise out of labeling children. He found that children usually moved in small groups, each of which would have a history of labeling as 'bright', 'stupid' or some other adjective. He has devised a questionnaire that has questions like: Do you like school? Do you like games? Do you like songs? Do you like stories? Do you like to draw? How many good friends do you have? Do you like to make toys? Do you like homework? With whom you are not on talking terms? Based on the answers he talks to the children and parents, and tried to focus on their special skills or talents.

Discussion Questions

1. Dhodakia initially notes that he felt very sorry for the poor children trying desperately to attend school. How important is it for a teacher to have an emotional reaction like this as a motivational source? When can such an emotional reaction become a hindrance or burden?
2. Comment on the multi-grade approach that Dhodakia adopted in Mangalpura. What other ways of multi-grade teaching can you list?
3. Why did Dhodakia have to intervene in Malvan village? Discuss the implications of his decision to seek the assistance of parents of Mangalpura. What would have happened if the Malvan enrolment drive had failed?
4. Discuss the “dirty room” trick. Are there other such powerful motivational labels that you are aware of?
5. The “dirty room” experiment led to the teachers coming under scrutiny. How should teachers be prepared for this possibility? Did Dhodakia fail to anticipate this development? What would have happened if the lady teacher had reacted negatively? What does this incident tell you about how teachers should handle student empowerment?
6. The ‘My Card’ experiment was designed to know more about the girls. What are the features of this experiment that strike you? How can it be extended?
7. What were the objectives of the self-administered attendance board? Can you think of similar ideas to develop self-regulation among children?
8. Identify the features of the ‘Sakhi’ initiative. What are its plus points and what are the factors which could have made the initiative a failure? How would you safeguard against such failure? What other examples of out-of-classroom learning that you can think of?

JAYESHBHAI N. PATEL

Jayesh Patel's first appointment as a state teacher was in the Bhensal Primary School, Deodhar, Banaskantha, Gujarat, in February 1991. This pocket was very backward. He had earlier worked as a teacher in a private school for five and a half years. In Bhensal he initially felt that he was "standing before a wall." The biggest problem was that the school children spoke a variety of Rajasthani. They were unable to understand standard Gujarati and he was unable to understand the mix of Gujarati and Marwari that they spoke. For a month he worried about not knowing how to go about his work; colleagues were not of much help either.

Meanwhile he happened to visit his parents. He discussed his problems with his father, who heard him out patiently. The only sentence that his father spoke proved a turning point. "Son, courage requires no weapons." He realized he had to overcome his fear of talking to the children. He returned to the school, started to call the older children over to his house in the evenings, and made them talk to one another. He listened carefully and gradually asked them for the meanings of the words he did not understand. He did this in the classroom as well. Gradually he became very comfortable in the local dialect.

Improving the physical environment

Initially the school had four rooms and nine teachers. Some children had to sit on the *verandah*. The school had a ground but there were only two *Acacia* trees. Two classes used to sit under these trees and one of these was Jayesh's class. During the recess, children used to throw stones at these trees to get the pods which they ate. Once, a boy of Class 3 threw a stone which fell back on his own head. He was badly injured and had to be taken to a doctor. Jayesh then suggested that the trees be cut down. The reaction of the other staff members was severe. They said, "If they throw stones, let them suffer the consequences. Why do you bother? Don't you know we do not have sufficient classrooms? Where will you sit if these trees are cut down?" Five days later, another child injured his head. The teachers' reaction was, "The village deserves this."

Jayesh then decided to grow trees in the school. With the help of his students, he dug pits in the school compound, and filled them with clay brought from a lake and manure. Then he planted 150 saplings of *neem* brought from a government nursery. His colleagues were not happy, and one of them even tried to uproot the saplings. Jayesh had to re-plant some trees. This went on for quite some time. The disgruntled teacher started to instigate the children to damage the plants. Jayesh approached a village elder, Shri Raymalbhai. He had a simple solution. "Bring some lemons and green chillies from the town. Smear the lemons with *kumkum* and tie one lemon and one chilli on every plant. No child or adult will touch your plants." He was playing on the superstitions of the villagers; lemon and chilli are symbols used in magic. Jayesh accepted the idea and agreed to use these "undesirable means" since he had no choice. The strategy worked; children began to take care of the plants, and the saplings have grown into huge mature trees. Out of the 150 saplings, 120 survived. The disgruntled colleague had a change of heart after the trees started growing, and cut down the *Acacia* trees himself. (The

strategy of using lime and chilli to protect and nurture trees has been adopted by some other schools in the area.)

Girls' enrolment

When Jayesh joined the school, there were only 32 girls in all the classes (1-7). The total population of the village was approximately 1500 then. The average daily presence was only 12 to 15 girls. When he went home during the school vacation in his very first year of work in the school, he asked his maternal grandfather why he educated all his five daughters, when he himself had studied up to class 4. His grandfather's reply provided the spark that Jayesh was looking for. "An educated girl will not feel dependent and helpless." Jayesh returned to the school when there were still 12 days of vacation left, and with the help of four of his students, started to meet the people. About 75% of the village lived on scattered farms. He visited every house and collected information about all the girls of the 6 to 14 year age group. He specially targeted some parents who seemed to be willing to educate their girls. He then took the parents of the girls who studied in the school along with him while visiting other parents. He considers these 12 days the most successful days of his career. He could enrol 50 girls of the 6 to 11 year age group after the school re-opened. Another 20 girls, who had dropped out, were re-enrolled. He kept building on this initial success for seven years. By 1999, the enrolment had reached almost complete levels: there were 242 girls regularly attending, in contrast to the 12 to 15 out of 32 enrolled in 1991.

In 1999 he became a CRC Coordinator, and in his new role continued to focus on increasing the attendance of girls in his cluster's schools. He bought a shield on his own, and declared it as a revolving shield to be given to the school with the best enrolment and attendance of girls in the cluster. This was a very successful initiative. In 2002, he selected one girl from a very poor family from each of the 19 schools of his cluster and provided them notebooks, books and uniforms—all bought with his own money. Motivated by this, all the teachers of the cluster adopted one girl each and provided them textbooks, notebooks and uniforms. "My principle of implementing any idea first in my own life helped me a lot here."

Sports as a medium for change

Jayesh Patel is primarily a physical education teacher, and became a primary school teacher on the strength of his degree in physical education. He initially tried to train his students in kho-kho, but wasn't very successful. Meanwhile he came to know that none of the girls' kabaddi teams from the schools of Deodhar had been able to compete at the Block level during children's sports festivals. He sensed this as an opportunity. Since the girls of the Marwari community in the school (the majority community in the school happened to be Marwari) were of strong physique, he decided to train them in kabaddi. Some girls of Classes 4 to 7 were identified and trained every day. There were nine girls who performed quite well. However, he was worried whether the parents would allow the girls to participate in tournaments in distant places. There were girls from other communities like Vankars (a scheduled caste), Suthar (artisans) and Patels. He met every girl's parents personally and took responsibility for their daughters. After much effort,

they agreed to send their girls. He went with his team to a block-level competition in July 1992. For the first time, the girls were going out of their village. They won. The next year, the team won the district level tournament. This was a memorable moment. The parents came to see Jayesh in the school and thanked him. He then took the girls to the state level competition. The girls stood fourth in the state. All were thrilled. The team stood first in 1995 and was runners-up up to 1998. Ever year two to three girls of the team were selected for the state team. The state team of 1995 was captained by a girl from the school. The game created such a strong motivation and attraction that the girls became highly regular in attending the school. Due to their excellence in the sport, the girls became academically focused. Almost all the girls in the village now complete at least their elementary education.

However, behind this success is a story of coping with a negative social tradition. A girl engaged to be married wears a heavy silver band, locally called *kadla*, around her ankles. The *kadla* cannot be removed. Most of the good players wore *kadlas*, and the inter-school tournament rules did not allow them to participate. Taking the girls into his confidence, he removed their *kadlas* with the help of a smith, and re-fixed them when the girls returned. The parents of these girls were not aware of this. The girls also never informed their parents as they were interested in participating in competitions. This went on for four years. Even when the team won the state competition, the parents did not realise this was happening. Such was the secrecy and the desire to remain in school among the girls. Finally, the parents came to know about Jayesh's practice. They did not say anything. On the contrary, a couple of parents came to see him and told him that he could continue with this practice, but they could not allow him to remove the *kadla* in the village on account of their social norms. When Jayesh became a CRC Coordinator in 1999, the school was outside his cluster, but the parents requested him to go along with the team. The tradition has continued in the village, and the school still specialises in *kabaddi*, with the girls going to national level competitions. Interestingly, the girls who have passed out now train the new girls in *kabaddi*. The hard foundational work lasted only three years, but the tradition that has been left behind is very strong indeed. Jayesh is no longer actively involved in such sports activities, but he does guide any teacher wanting to use sports to bring about change in education.

Other efforts for women's empowerment

A critical incident in Jayesh Patel's practice illustrates the social role that teachers are often called upon to play. When preparations for the 1997 Republic Day celebrations were on, Jayesh felt that the unfurling and salutation of the flag should be done by the woman *Sarpanch*, Smt. Shardaben Taraji Vankar. Women *Sarpanches* of this region are usually dominated by their husbands, who operate on their behalf. His colleagues were worried that if a woman *Sarpanch* and that too a *dalit* woman were to be invited, there would be trouble. When Shardaben came to meet Jayesh, he put the idea to her. She replied, "How can a woman like me unfurl the flag? Are you in your right senses?" He explained that a *Sarpanch* performs this task and has every right to do so. Jayesh met her husband and explained what he wanted to do. He agreed with Jayesh, and Shardaben was persuaded to officiate. The other teachers were informed. When the news spread in the village, some leaders were not pleased. Though the parents respected him for his

work, they could not accept the flag unfurling idea; a few unpleasant words and abuses were said. But Jayesh stood firm.

On January 25 Shardaben told Jayesh that she would not come for the flag ceremony. She said that she wanted to live in the village. This broke his courage. Again he met her husband and a few other villagers who were not averse to the idea. Seeing this resolve, Shardaben decided to abide by the original plan.

The day began on a tense note. The members of Shardaben's community were very happy, but they did not express their happiness. The villagers gathered in the temple. Everyone was talking about the ceremony. Shardaben came to the school on time. Jayesh told his colleagues that they had to attend the programme, since as zilla parishad servants if they did not attend the programme, it would be considered contempt of the national flag. They understood quite well. At 8.15, the children were arranged in rows and Jayesh invited Shardaben to unfurl the flag. Gradually one after another the villagers came into the school. They were also interested in the cultural programmes; they had realised that he would not give in. Those who had opposed the idea but came to the school admitted later that they were wrong. The cultural programme then started. The Talati of the village called the Taluka Development Officer over the phone and informed him about what had happened. The TDO, Mr. Nayak, came to the village immediately in a jeep. He reached midway through the programme. In the presence of all the villagers, he appreciated what had happened and presented Jayesh with a garland. More importantly, the incident had a great impact on the villagers.

Abolishing absenteeism by hook or by crook: The Ration Card story

When the crops were harvested, the parents of the village tended to keep their children at home to look after the household affairs. Because of this, absenteeism increased in the school. Jayesh studied 42 students who faced this problem. Persuading parents did not work. He discussed the problem with the then *Mamlatdar*, Shri A. B. Shah. They decided that a letter, written by Jayesh on his behalf, to the parents of these children would help. The *Mamlatdar* was agreeable to the idea, since there was nothing illegal about the idea. The letter stated that the child would be removed from the school's records if attendance continued to be irregular, and in extreme cases, even the ration card of the family could be cancelled. The letter was sent to the parents through other children. This 'trick' had a great impact. Within a few days, 36 children out of 42 became very regular. When some of the parents went to meet the *Mamlatdar*, he also scolded them and warned them that if they did not send their children regularly, their names would be sent to the Collector's office and they would not be given any government benefits. Thus, with the help of the *Mamlatdar*, Jayesh could overcome this problem successfully. Another benefit of this trick was that irregular children of other classes also became regular. If parents needed to take leave for some reason, they came to the school personally to ask for leave for their child. The biggest benefit of this 'trick' was that "these children improved a lot in their academic performance." Two boys of these 42 students became engineers, and two girls became members of the *kabaddi* team that played at the national level. Absenteeism today is negligible.

Interestingly, Jayesh, now a BRC Coordinator, repeated this experience in 2008. A survey had identified about 1200 children who had dropped out of the 178 schools in his taluka, Deodhar. Jayesh spoke to the SDM and Mamlatdar, and requested their help. According to the plan, the teachers of the block were to give the names of dropped out students to the relevant Ration shops (*Din Dayal Sasta Anajni Dukan*). The Mamlatdar's office directed the staff of these shops to talk to the parents of such children whenever they visited the shops. Also, the lists were displayed at public places like panchayat offices, village dairies etc. The staff who ran the shops did the persuading of the parents. Whenever there was a recalcitrant parent, the staff even hinted at the possibility of withdrawal of the ration card. The shopkeepers followed up their persuasion with short talks on the need to use government facilities. As a result, slightly more than 1100 children were re-enrolled. About 76 could not be re-enrolled and are still out of school.

Mobilizing resources

Jayesh has been successful in mobilizing resources for his schools. Independence and Republic Days were occasions for mobilizing donations. In Bhensal, funds so collected have made possible two additional rooms, a prayer platform with pucca flooring, a variety of sports equipment, uniforms for poor children, fans, tube lights, chairs, tables, whitewashing, and a variety of educational aids. As a CRC coordinator he was active in building relations with VECs, MTAs, PTAs and NGOs of the 17 schools in his cluster. In his first year as CRC Coordinator (1999-2000) he mobilized a drive to collect Rs.3,37,800 for improving infrastructure, uniforms for poor students and student prizes for students. He followed this up with another drive to collect Rs.1,75,000 the following year.

The government's 'Vidya Laxmi Bond', under which an incentive was given to girls who completed primary schooling, had a community participation conditionality attached to it. In 2007 Jayesh collected Rs. 1,67,000 for this scheme. In 2008, Jayesh came up with an innovative idea called 'Kanyakelavani Kumbh'. He directed the schools of his block to prepare a 'kumbh' – an earthen pot, covered with a cloth, which is used for an auspicious ritual or for worship. Each school prepared a kumbh, and the children and teachers moved from house to house, asking people to donate to it. He thus collected more than Rs. 3,00,000 – the highest contributor was his old village of Bhensal.

Discussion Questions

1. Comment on the efforts of Jayesh to improve the physical environment and his use of lemon and chilli to protect plants. In what ways does the physical environment contribute to educational goals?
2. "An educated girl will not feel dependent and helpless." This provided a strong motive for Jayesh to work for education of girls. Can you think of similar statements, which in your experience, have inspired action for education?
3. Study the entire kabaddi and kadla story. What were the risks that Jayesh took? Prepare a list of these risks and the possible steps to be taken to counter each of the risks.

4. Girls' education is closely linked to women's empowerment. Study Jayesh's role in the episode concerning Shardaben. What do you learn from this case? What were the risks Jayesh took and what would have happened if they had not paid off? Reflect on how development of women and education of girls are linked, and write a short note on the barriers that need to be overcome in a typical setting to achieve women's empowerment through education of girls.
5. Study the Ration Card story. Do you know of similar initiatives to address the problem of children's education? Comment on how the Ration Card idea can be used without using the threat of withdrawal of the Card.
6. Are you aware of any ideas that are similar to the Kanyakelavani Kumbh? List these with their advantages and disadvantages.

KARSHANBHAI J. PATEL

Karshanbhai Patel became a teacher in 1986. After a brief stint in his first school, he has been working in another school for a long time.

Earning the Respect of the Community

Early on, his enthusiasm for teaching children was dampened a little when he realised that the Padar community whose children he taught always remarked that teachers were useless people who 'took a salary for doing nothing.' His resolve to do something new arose from a desire to eliminate such criticism. He first visited some good high schools, which included the school where he had studied. The HM of the school was a national award winning teacher who gave him useful guidance. The main lesson he learned was that it was necessary to keep the community informed of the activities going on in the school in order to increase their participation in school affairs. He thus focused on women's gatherings and parents' gatherings. This brought the school and community closer together. Using government grants and community support, he and his co-teachers began to make TLMs in the school. These were used in the classroom and were also exhibited in public programmes. Other items performed for the benefit of the parents included dances, parades and patriotic songs. Such performances helped the school gain the community's attention. Over time, the school environment became congenial for education. Some teachers expressed a willingness to get trained in cultural activities; Karshanbhai therefore set aside weekends for this sort of training.

Developing Writing Ability in Children

Karshanbhai used to be bothered by the spelling mistakes and other errors that his children made. Their handwriting was also poor. In 1995 he initiated an experiment to improve the writing ability of students.

He started with Class 4. He obtained the addresses of some children from the neighbouring villages. He then talked to his own students about writing to the other children in order to make friends. The novelty of the idea attracted the children; within ten days, an exchange of letters was underway. He advised them not to write more than once a month, since writing would then become routine. He arranged for a letter box for the received letters. Every letter was given an incoming code and all the received letters were reviewed once a month. Every student was given one letter to read. The children had to decide which letter was the best. Which letter had how many and what kinds of mistakes? What should be done to rectify those mistakes? This resulted in the children's taking the responsibility to learn correct ways of writing and to improve their handwriting. (Since they found it hard to read other people's writing, they realized others would have similar problems. Some also got feedback that their handwriting was not legible.)

Students' Store for Mathematics Learning

In order to teach math through practice, Karshanbhai started a students' store, "*Vidyarthi Grahak Vastu Bhandar*" in the school. The children looked after purchases and sales and all accounts. In order to make them alert, a coordinator was appointed. The activity was reviewed every month. The outcome was that the students developed the habit of keeping accounts. The financial management was discussed by the children and all of them participated very actively in the process. Their use of the arithmetic they learned in the classroom was monitored. The success of this activity made them think of starting a savings scheme. The school then formed a cooperative savings "bank".

Dramatization of Lessons for Oral Skills

Karshanbhai noted that children were unable to give a simple narrative of the events in their lives. He, therefore, decided to dramatize the Class 1 lesson entitled "*Shak no raja kon?*" (Who is the king of vegetables?) Children had to take on the characters of the lesson, for instance, the potato, the tomato, the brinjal, the cabbage, the onion, and so on. He asked them to prepare notes on the special qualities, features and popularity of each vegetable. Then this unit was presented during the prayer assembly. The competitive feeling of the participants made the programme very interesting. One after another, all of them presented their items. The experiment taught them the unit through entertainment. The results of this experiment were amazing. Children who used to hesitate to answer a question could now express themselves very comfortably. Inspired by this success, he prepared such dramatized performances on a variety of topics like birds, animals.

Calendar making

Another activity to develop students' ability to express themselves was the calendar management activity. Children were given cardboard and scissors. They were asked to make cards for the months and dates, both for the Gujarati and the English calendars. When this was done, the cards were placed in a box near the blackboard. Everyday, one child would be responsible to arrange the calendar according to the date and the day. The same child had to call out the date and day at the beginning of the day. Later on, an addition was made. The child also had to inform the school what the special features of the day were. (The teachers had to provide this input the previous day.) Initially, this activity was restricted to Class 4, but later on it was extended to Classes 2-7.

Karshanbhai's work has helped him address infrastructure problems as well. The school's seven rooms were distributed into three groups, separated by distances of about 100m. The main group which had three rooms was in good condition; four rooms were in a dilapidated state. He obtained permission to bring down these four rooms, and set about acquiring some land near the main group for new classrooms. He took the entire school to meet the owners of the land and explained the need for the school to be seen as a community asset. The three owners agreed to donate the required land, and now the school is in one place. The donors have been honoured with plaques. In 2009, Karshanbhai introduced the Scouts and Guides activity, a new activity in this area.

Discussion Questions

1. One principle evident in the early years of Karshanbhai's work is "keep the community informed of what is happening in the school." How would you implement this principle in your own work?
2. Read the letter writing experiment carefully. Identify the educational principles that constitute the design of this experiment?
3. The dramatization work was designed to develop speaking skills. Identify similar activities in your context that can achieve the same purpose.

DINESH B. PRAJAPATI

Dinesh Prajapati is a young man who became a teacher at the age of 20 in 2002. He initially worked for a few months in a private school but then joined as Vidyasahayak at Mithagodha in Surendranagar district. The village is situated at the edge of the little *Rann* of Kachchh, and the entire area is part of a wild ass sanctuary. Most of the village land is saline, and farming is poor. However, the production of salt is high in the salt making units. The village is also subject to frequent dust storms in summer. The population in the village is fairly mixed, made up mainly of communities like Thakor, the scheduled castes, Rabari, Darbar, Brahmin, Bavaji, Kumbhar, Luhar and Jain Baniya.

When Dinesh joined the school there were five teachers, and he happened to be the youngest. His colleagues encouraged him. But the social and educational conditions of the village and the school distressed him. Things did not seem to be right. He studied the conditions of the village and in a couple of months had a study which told him the following:

- The village community did not trust the teachers
- The teachers did not trust the village community
- Lack of educational awareness in the community
- Educational initiatives, celebration of national festivals did not receive community support
- Poor attendance (hardly 50 percent of the students were present)
- Due to the earthquake, the educational level of the students had gone down to the extent that the class 7 students were unable to read properly
- Not a single student had ever passed the class 10 exam with English.

Initially, he used to commute from his own village, which was nearby. Then Dinesh decided that he had to stay in Mithaghoda if he were to achieve his goals.

Educating the village through textbook slogans

Dinesh was struggling with the problem of how to make the children come to school, when he and colleagues got fresh messages from the Taluka headquarters about writing educational slogans (about girls' education, cleanliness, literacy and enrolment) on the village walls. These instructions used to come regularly, and according to Dinesh, "We all were sick of such instructions." A new idea struck him. Instead of writing the same slogans again and again, why not write slogans from the textbooks. Since the community had become immune to old slogans, the teachers decided to try the new idea.

Dinesh recalled that when he was very young, he invariably read the slogans written on the walls, hoardings, and shops, and looked for something new. It was this childhood habit which gave him the idea of writing textbook material on the walls. He felt that the parents, who never took an interest in their children's textbooks, would get some exposure to their children's schooling. He began to write textbook content on the village walls.

He first prepared a list of slogans from the textbooks of Classes 5-7 with the help of his colleagues. Then he and a friend started to write the slogans. The villagers at first thought that the same old drill was being enacted. But as they began to notice that things were different, they began to take an interest. They asked the two painters what they were doing, and listened carefully to the replies. A youth of the village joined the two teachers. When the painters reached the centre of the village, there were some respected village elders gathered there. There were some community leaders sitting there. Dinesh wrote on the wall before them, "Air too has weight." One of the elders who could read and write asked, "Master, can the air have any weight?" "Of course, yes." He expressed disbelief and the people sitting around had a lot of fun. Dinesh was confused and felt that he had failed in his community relationship building. That evening, he went to the same place in the evening with a large motorcycle tube and air pump. He borrowed a set of sensitive scales from a shop and weighed the tube twice, once empty and the second time after filling it with air. The difference of a few grams surprised the elders. This was a crucial turning point. After this, Dinesh demonstrated other experiments and instruments like the compass, the telescope and the thermometer. One experiment which provoked a lot of interest was the attempt to show that no two thumb impressions were alike. The effect of the slogans was obvious, because whenever a villager met a teacher in front of a slogan, there would be a question about something in the slogan.

This experiment according to Dinesh changed parental attitudes to education because parents and the elders started to seek answers to their questions related to the slogans from the children playing nearby. Another change was that students of Classes 3-4 saw something from Classes 5-6 on the walls and were prepared to encounter what they had seen later in their schooling. The teachers noticed that whenever the slogans were changed – the slogans were changed every three months – many children used to note down the new ones in their notebooks. "The village walls have become a school blackboard."

Over time, the teachers made some modifications. They observed that slogans written on the lower portions of the walls did not last, so the slogans were painted higher up. They began to use colours – non-permanent colours that were easier to erase. Classes 3 and 4 were also included. Initially only English and Science, which Dinesh taught, contributed to the content of the slogans; then mathematics and social studies were added.

The broader impact has been felt in the way parents relate to the teachers. When the parents had to go to work in the salt units, they used to take their children along with them. When the school started a hostel with a government grant and with the support of the CRC, the parents had no hesitation in leaving their children behind so that schooling did not get affected. This hostel is a temporary hostel and is closed when the parents return to the village. Overall, educational change is happening faster now.

After this experiment, Dinesh turned his attention to the poor reading skills of the children. The children were not motivated enough to read the textbooks. He thought of putting the school library to better use. He re-classified the books according to their

colourfulness and font size. It was now easier for him to offer a set of the most interesting books to the weakest group of children. He found children reading these books and re-telling the stories they read. The magazines '*Maru ramakadu*' (My toys) and '*Bal srusti*' (Children's world) were very popular. The latter was so popular that Dinesh had to subscribe to an additional copy at his own expense. He requested the head-teacher to give books as prizes on various occasions. Children enjoyed owning these books received as prizes.

Dinesh then decided to use post-card writing to improve the children's writing skills. Writing about real life experiences was easier for the children. They had to write three letters every month. The first was to a pen-friend. For each child, a student studying in the same grade in the schools of neighbouring villages was a pen friend. Many of the children received replies from their pen friends. In these letters, the children narrated the activities they had done during the month. A second letter was written to a relative; this letter covered family matters. Through this exercise children helped the elders of the family maintain their social contacts. The children were given the freedom to write a third letter to a person of their choice. For example, they could write to a writer of a story or a poem that they read in *Bal srusti*. Or they could write to the personnel of an organization they had visited, like a doctor or a bank manager.

Dinesh wanted to replicate his library experiment in other schools. Unfortunately, most schools did not possess good libraries. He came into contact with a local publisher, the Lok Milap Trust Bhavnagar, and undertook to sell a set of five books it had published, '*Roj roj ni vachan yatra*'. He sold 500 sets to the schools around Patdi and Bahucharaji towns. Shri Gunavantbhai Shah, an educationist and a noted columnist in Gujarat, came to know about this and put him in touch with a publisher who gave 33% discount on good educational books. Dinesh used 5% on his travel and passed on the remaining 28% to his customers. He has been doing this activity for the last four years. Dinesh then came in touch with the Sahajanand Rural Development Trust which was ready to support a 50 % discount, provided the entire benefit was passed on to the customer. Dinesh agreed, and he and his friends decided to spend their own money for travel, just to take advantage of the heavy discount. They organized a book fair at the temple town of Bahucharaji, and sold books worth Rs. 25000 in one day. Many children and teachers were the buyers. They then organized such book fairs at places like Patdi, Surendranagar, Mehsana. This is an on-going activity and now such fairs are also held at teacher training camps. Thus Dinesh and his colleagues have been successful in making books easily available to schools. So far, through such fairs, in a matter of just three years, they have sold books worth more than Rs.5,00,000.

Dinesh was transferred to Himatpura primary school in 2009. This village is even closer to the desert and is dominated by labourers for whom survival is the main issue. The children in the school used to get textbooks from the government, but could not buy notebooks. Meanwhile, the government declared an aid of Rs. 900 for each school of the district to purchase books. Dinesh talked to the head-teachers of other schools and arranged for books at a discount of 10%. Actually he received a slightly higher discount from the seller, and used the difference to buy notebooks for the children of his own school. But there were problems. Some sellers offered head-teachers of other schools

bills of Rs. 900 for books worth only Rs. 600. But, to their credit, the head-teachers preferred to get books worth Rs. 1000 for Rs. 900 from Dinesh. Another problem he faced was telephonic threats from people who wanted him to stop his book selling. One person who threatened him changed after listening to Dinesh's explanation and is now a good friend. Dinesh continues to believe strongly in marketing published books at a discount to build up school libraries, and in selling notebooks at the best discount possible. He uses the surplus he generates to help poor children with free books. The main benefit of the activity, according to him, is that he has made many new friends.

Discussion Questions

1. What was the trigger for the textbook slogan writing experiment? Can you think of similar personal experiences that have triggered innovation?
2. What was the objective of the textbook slogan writing activity, and how did Dinesh know that it was working? Can you suggest some formal methods to Dinesh to help him evaluate this activity?
3. An innovation always evolves; it needs to be modified to continue being relevant. Illustrate this with the textbook slogan writing experience. Think of other examples from your experience in which an initial innovation has been modified over time to improve it.
4. Study the post-card writing experiment, and identify the principles that Dinesh has used. What did the three different letters aim at, and what different competencies would the three have developed?
5. Comment on the book-selling activity of Dinesh and his colleagues. What were the main objectives of this activity? What is the medium used to reach the objectives, and how has it been used? Can you think of other educational products for which this medium is suitable?

NANJIBHAI J. JANJANI

Nanjibhai Janjani became a teacher in 1986, after studying throughout with state support. His father was a cobbler, and faced severe economic constraints, but one of Nanjibhai's primary school teachers, Shri Ratilal Rathod, inspired him to become a teacher.

Radio Club at the Narayansarovar Primary School

The village was populated by the Thakkar caste which was relatively better off, and the Harijan, the Bhadala and the Kumbhar castes which showed very poor educational achievement. The registered number of students in the school was 87. The children of the three socially weak castes received scholarships from the government. Usually the parents were called individually and the scholarships handed over. Nanjibhai decided to make this handing over a public occasion. He invited the community leaders to distribute the scholarships. This made an impact and within a month, the enrolment increased to 114, the entire increase coming from the three castes.

Nanjibhai had always been fond of the radio. From listening to songs, he had graduated to following the news on the BBC and English language programmes. Once he heard the voice of Dhananjay Vyas, an announcer with Radio Moscow; he also heard a Gujarati *ghazal* sung by Mohammad Rafi (*Divaso judai na jay chhe*) on the same station. These incidents had a great impact on him and he got in touch with Radio Moscow. They replied with a letter, postal stamps, cards and a calendar. The response enthused him no end. He extended his scope to Radio Berlin International, Radio Japan NHK, Radio Deutsche Welle, Germany, Radio Beijing (China), Radio Tehran (Iran), and Voice of America. He became aware of the variety of things one could learn from programmes like 'Russian life style', *Aap ka patra mila* (Received your letter), *Mahila Jagat* (World of women), *Gyan-Vigyan*, *In se miliye* (Meet these people), *Vigyan Jagat* and the various foreign language programmes. He also came into contact with many similar people in India. His students found the letters he received fascinating. Nanjibhai started a Radio Listener's Club with 11 friends. He followed this up with a School Radio Listeners' Club for the school children. They used to have formal listening sessions after school hours. Some of the children received letters from Germany and Japan. The Club became a major attraction in the school, and many children who were earlier not interested in the school now became regular members of the Radio Club. Nanjibhai made a display board on the school wall and began to write down the schedules for the educational programmes of different radio stations. This innovation generated much interest and attracted the children to the school. Nanjibhai owned a very good radio which was used in the school. Later, the school received another good radio from the state government.

A teacher of a school which was situated 125 km away heard about Nanjibhai's activity. He quietly took down the names of ten of Nanjibhai's active children and passed them on to his students. When the Narayansarovar children received letters from the other school's children, at first they did not understand what was happening. Later on, they established a good rapport with the other school. Then Nanjibhai planned a joint

meeting of the two schools, but a severe cyclone disrupted the plans, and the meeting did not take place.

Nanjibhai has now developed a blog (www.jajani.blogspot.com) on which he describes his various radio club activities. This has also helped like-minded teachers get in touch with him.

Other Activities

Nanjibhai has also organised, with the help of an NGO, the Mehsana Madhyasth Samiti, many drawing, *rangoli* and 'good writing' competitions. The NGO's audiocassettes of the various poems from the textbooks have been used in such activities. Nanjibhai has also prepared a display of the stamps that he received from different radio stations and this has been an important educational aid. Another educational aid that Nanjibhai has used with effect is the school's literature. This school was very old; it was started on August 18, 1897. Over time, it had collected some literature, like Pruthviraj Raso, Arabian Nights and very early volumes of *Harijan Bandhu*. Nanjibhai rescued this neglected treasure and started to read out excerpts during the prayer assembly. For example, he used Alladin's Lamp and Lavanyavati Dasi as 'serials' for six months, with each episode encouraging the children to look forward to the next. This activity is reported to have increased school attendance. Nanjibhai followed this up with a Children's Library called Madhusudan Children's Library, managed entirely by the students.

The old school building and the furniture were in a sorry state. The corrosive winds from the sea added to the problems. The building suffered extensive damage during a severe cyclone in 1998. This was an opportunity to mobilise money from a particular community which distributed sweets to the school children every year. Within six months, as a result of sustained effort, the members of that community had managed to collect Rs. 13 lakhs. Along with other donations, this amount resulted in wonderful infrastructure for the school—six rooms, a central hall, toilets and bathrooms, water facilities, benches, tables, chairs, cupboards, play equipment and a compound wall.

During an in-service training programme, Nanjibhai was exposed to the use of puppets in teaching. He immediately decided to take it up. Though there were difficulties initially, with the support of his colleagues and the help of a village tailor who stitched beautiful clothes for his puppets, Nanjibhai became adept at teaching his lessons and poems through puppets. He converted one of the rooms into a puppet theatre. The puppets have been used for other programmes like a Road Safety Programme of the Lions' Club, and DIET training programmes. He trained the students as well and now they hold puppet shows on important village occasions.

Developing a Centre for Learning the Kachchhi Language

Nanjibhai was transferred to a girls' school in June 2000. In January 2001 a devastating earthquake struck. The school building was destroyed, and the teachers had to use tents for the children for almost one year. From this school, he was transferred to a

neighbouring school in mid-2002. Here Nanjibhai has initiated a centre for learning the Kachchi language. About 103 children were enrolled. The head teacher of this school and Nanjibhai's co-teachers contributed significantly to running this activity smoothly.

Discussion Questions

1. What are the lessons you can draw from the experiment with the *Radio Club at the Narayansarovar Primary School*.
2. A teacher's personal hobby can be a powerful tool for achieving her educational goals. Comment on this statement, and list any other examples of teachers using their personal interests to enrich the educational experiences of their children.
3. Identify the important steps Nanjibhai took to enhance the quality of his radio club.
4. What do you think should be the goals of the radio club for the future? What steps should Nanjibhai take now to reach these goals?
5. Nanjibhai managed to rescue some of the literature in his school. Think about the resources, especially in old schools, that remain neglected and wasted.

ANILKUMAR V. VAISHNANI

Anilkumar Vaishnani, who teaches at the Rodhel Primary School of Jam Kadorona taluka of Rajkot district, Gujarat, is especially interested in taking “a practical approach to teaching, whether it is in Math, language or social studies.”

Dramatization and Costumes

In order to build on the children’s instinct is to imitate and perform actions, Anilkumar thought of using what he calls the “action play” which would be enriched with appropriate fancy dresses. The ease with which children remembered dialogues from movies gave him enough confidence to embark on this experiment.

First, he listed those units from the curriculum of Classes 1 to 7 in Gujarati, Social Studies, History, and Environment Studies, that could be played out in drama or dance or mono-acting form. The identified units were then played in the daily classes as and when they came up for instruction. The dialogue was in simple language. The base for some of the plays were obtained from “Bal Shristi Sangraha” which was available in the school, while others were taken from the Parag Pustakalaya, Dhoraji. Anilkumar prepared the dialogues during the recess hours in school and dramatized them. Gradually he constructed a ‘Natya Sampoot’ (a collection of plays/drama). For dresses, the parents of school children, who belonged to different castes, and hence had different dress codes, were taken into confidence and dress materials for local dresses like Chorni, Gamchho, Fento, Safo, Zabha and strings of beads and other material were obtained through donations. Some articles like coats and caps of different kinds, colourful cloaks, and wigs were bought at nominal rates from the weekly markets held at a nearby town, Dhoraji. Larger pieces of clothing were stitched at home, and many girls were involved in preparing the dresses for elephants, hares, tigers and other animals. Masks representing rabbits, bears, jackals, bulls were also prepared. Plastic items were bought at fairs. Some masks were prepared by the children from cartoon and film posters. Ploughs, bows-arrows, spears and wooden crutches were prepared from the waste material of the school. These things were then decorated by covering them with coloured paper.

The units were first acted out using simple dialogues and regular dresses.

As and when the special dresses were prepared, the plays in the curriculum or the poems became more complex since drama or dance were involved. These plays were also presented specially on Saturdays, so that the entire school could benefit.

These activities were accompanied by Anilkumar’s own system of evaluation. This included questions and answers, asking the children for descriptions of the characters and events in the drama in their own language, speech competitions on the characters and events, the use of questions like "who is this?" or "what is this" associated with the drawings and pictures. This was followed by asking children to organize plays on themes like “Who am I?”

Students began to enjoy the units of the curriculum. Their linguistic expression improved. Children used to discuss the dialogues and characters of plays among themselves. In general, he obtained about 80-90% achievement as evidenced by the various oral and written tests that were conducted.

The drama, action plays and songs motivated the village people to donate money to the school. Beginning with a small donation of Rs. 1611 collected during the Republic Day function of 2001, the school collected an MP3 and CD player, a stereo system and a tape recorder and Rs. 12000 in cash in 2005.

The units dramatized into action plays have included the following:

Gujarati, Class 3: Khadbad Khadbad Khodat Hai; The Lion and the Hare; Welcome to the Lion; The True Pilgrimage

Gujarati, Class 4: Incidents from Gandhiji's life; Elephant, O, elephant; the Brown King

Gujarati, Class 5/6/7: Nagdaman; Satyavrat; Andherinagari; Panch Dana; Veer Bhamashah; Vrishabhavatar; Shibi Raja; The Echo; Ghardivdi (Little Lamp of Stone); Gandhiji; Jivram Bhatt; Upmanyu

Social Studies, Class 5/6/7: Meeting of Lord Ram and Bharat; Karna and Kunti; Krishna Sudama ('Mane Sanbhare' poem); Akbar Birbal; Maharana Pratap; Chhatrapati Shivaji; Devotion of Dhruv; Revolutionaries of India; Culture of India.

Use of Coins

Anilkumar has developed a variety of teaching aids for Mathematics education, like magic games for numbers and signs, and a Geometry Shaktiman, a multipurpose toy to teach angles, types of triangles, squares, rectangles, parts of angles, lines, rays, line segments etc. But his major activity is using a collection of ancient coins for educational purposes.

Anilkumar has also established his own collection of modern and ancient coins (about 2500 coins in all) in the school, in order to teach history. He has focused on the curriculum of Classes 5-7, which includes kings and dynasties like Chandragupta Maurya, Sidhharaj Jaisingh, Aurangzeb, Shivaji, the Mughal kings, Tipu Sultan, the Nizams of Hyderabad and the Britishers. This collection has been very useful in his educational work.

Now, if a student comes across a new type of coin, he or she deposits it in the school's collection. Anilkumar started with his own collection. He used to source his coins from dealers of copper and brass scrap, goldsmiths, traveling Sadhus and saints, and scrap markets in cities like Ahmedabad, Jamnagar and Junagadh. He has spent his own money on the collection; sometimes he exchanges duplicates with other coin collectors. He has also prepared notes on the coins in his collection by drawing on library information, books on the subject, research catalogues on coins imported from abroad and numismatics monographs. He is a member of the Saurashtra Numismatics Society, Jamnagar. Each coin in his collection has its own plastic pouch. Below the coin, information such as weight of the coin, the obverse and reverse faces descriptions, the

value, the time of its currency, the king-state, the identifying name of the coin, are presented. All the coins are arranged in photo albums so that a drawing of the king concerned can be placed alongside. The coins in the collection are made of a variety of metals and alloys – gold, silver, copper, brass, nickel, lead and even paper-board. Most of the coins are from the erstwhile princely states. The oldest coin in the collection was minted about 2000 years ago. Some of the dynasties and the periods covered are the British East India Company, the Portuguese in India, the Mauryas, the Kshatrapas, the Guptas, the Mughals, and the Satavahanas. Some of the more valuable insignias include those of Akbar, Babar, Jehangir, Ahmed Shah I (Gujarat Sultanate), Mahmood Begda (Gujarat Sultanate), Bahadur Shah Zafar, Chhatrapati Shivaji, Tipu Sultan, Apalhut, Nizams, Gaikwads, Mahadev Shinde, Deshal-Vishal Khengarji etc. The coins have different currency values and are named accordingly; for instance Ahas gadhaiya, Ahat hasti, Khadagdhari, Parch Markand, Mashak of Jampads, Larin, Dhinglo, Kori, Diwanshahi kori, Sital, Falus, Daukada, Tranbiya, Dhola, Pai, Paisa, and Rupee.

He uses the coins regularly to teach history to Classes 5-7. However, he also introduces metals (science) through the coins. He also teaches “classification” (a competency of Class 5) by allowing children to group the coins using various criteria, like type of metal, shape, countries, kings and the language used for the coins’ inscriptions. The relevant coins also come in useful when a fact like the Nawab of Ayodhya paying Rs.40 lakh to Warren Hastings in 1773 to conquer Rohilkhand has to be illustrated. The origins of the words used in relation to the coins (Paise, Kawadiya, Kori, Daukada, Tarribiya) is another area for exploration. While teaching the geography unit ‘Asian countries’ in Class 6, the coins of Asian countries come in useful.

The evaluation of children has usually focused on coin identification skills, the metal-related knowledge, skills in classifying coins and questions on related historical information. Anilkumar is “generally satisfied with the evaluation – the children are exposed to an alternative way of learning; many of them have taken up hobbies on their own.” He has exhibited the collection in the schools of Amreli and Rajkot districts, teachers’ trainings institutes and other institutes, and at the Second Sir Ratan Tata Educational Innovations Conference, Madurai. This collection has also been used by historians, archaeologists and research fellows.

Discussion Questions

1. Study the “action play” initiative. What are the factors that would make such an activity successful?
2. How would you evaluate the action play activity? How can Anilkumar improve his system of evaluation?
3. Anilkumar has used his personal hobby of collecting coins for educational purposes. Can you come up with similar examples where teachers have used their hobbies to enrich their educational practice?
4. The coin collection example sounds like a rare instance of unusual material being used for education. Identify the various ways in which the collection has been used. Try to think of new uses for Anilkumar’s collection.

JAYANTILAL D. JOTANI

Jayantilal Jotani began his career as a primary school teacher in 1979 at the Bavli Primary School, Dhrangadhra, Gujarat. Here he tried to develop the school with just student support. He planned a small cultural programme and told the children about the needs of the school. He suggested they could contribute one-day's pocket money every month to the school. The students happily accepted the suggestion. It was decided that students of Classes 1 to 4 would donate 25 paise and those of Classes 5-7 students would donate 50 paise every month for the school. These amounts were small, but the idea was meant to show an example. The amount started to grow into a good sum, and the money was used regularly to pay electricity bills, buy tables and chairs, and paint the door and windows of the school. The parents were attracted and their support was assured.

Jotani then prepared a list of the former students of the school whom he knew were doing well. He identified their birth dates from the registers of the school, invited them to come to the school on their birthdays, and when they visited, welcomed them with a small bouquet. These alumni have been very helpful in providing for some of the school's needs.

Establishment of a Separate School for Girls

In 1984 he was transferred to the Vadgam Primary school, in another *taluka*. At that time, due to a shortage of rooms, there were two shifts in the school. He wanted to do something about this problem but nothing was possible immediately. With the help of the other teachers and the headmaster, he made the school participate in a Best School competition in 1985. He invited the leaders and the other educated people of the village to the school and explained the rules of the competition to them. The villagers helped out in painting the school, and mobilised some money for wall pieces, maps and charts. The school won the competition. This recognition helped increase the motivation of the villagers. Immediately, he presented the idea of a separate school for girls to the Chairman of the District Education Committee. The *Gram Panchayat* then got involved. A girls' school was started in June 1986.

Jotani and his colleagues prepared a list of the girls who had quit education because of coeducation in the higher standards. They met the parents of the girls, and discussed with them the advantages presented by the girls' school. They also held a meeting with the parents of girls who were not enrolled in the school at all. This campaign worked, and within a few months, the number of girls regularly attending the school went up from 145 to 240. This momentum was maintained the following year, and in a few years, girls' education disappeared as a problem. The teachers monitored attendance very strictly, since this was a better indication of a school's performance than enrolment. Among the Thakore community especially, enrolment in Class 1 used to be high, but that was it. Absenteeism would undo all the initial good work. Jotani mobilised the community leaders for attendance. He would regularly acknowledge the role of Mr. Chonda Chhatrotia, a local leader of the community, without whose help it would have been impossible to regularise attendance and to bring back those girls who had left the

school. "A teacher's motivational efforts have to be supplemented by a local leader championing the teacher's and the school's cause."

Change in the Timings of the Girls' School

Because of the shortage of rooms, the girls' school worked from 7.15 to 12.00. However, the older girls often stayed back at home in the mornings for household jobs. Jotani passed a proposal to change the timings of the school and give the afternoon shift to the girls. The *Gram Panchayat* passed the resolution and this was submitted to the District Education Officer. The shift timings were changed. This single act helped a lot in regularising the attendance of the girls. The school followed this up with meetings with parents of those children who were showing signs of irregularity or weak performance. This developed live and intimate relationships with the parents; they felt happy about the teachers' efforts to reach out to them. These efforts have resulted in the institution of an annual parents' meeting, during which suggestions for the year and feedback are gathered.

Celebration of *Shala Pravesotsav*

Jotani and his colleagues prepare a list of children during the summer vacation and then celebrate the school opening event on the day of *Rath Yatra (ashadhi beej)*, which falls towards the end of June. This day is considered auspicious, and is believed to be good for beginning something. So parents enroll their children on this day. The newcomers are first gathered at the centre of village. The children of Classes 5-7 put *tilak* on their foreheads and caps on their heads. The children are then taken to school. Drums are played all along the way. Finally they arrive in the school compound where the older children present a small cultural program (action songs, fancy dress etc.). This program makes the young kids happy and removes the fear of school. At that moment the sarpanch of the village presents a school bag, slate, pen, pencil and other items to each child. These things are bought from funds collected from the community. The parents of new comers usually donate a token amount to the school. Every year, on that day, about Rs.2000 are collected.

Learning through Teaching Aids, Games and Other Techniques

Eight crucial years of a child's life are spent in elementary education. To make the primary level methodology interesting, Jotani uses activities, self-made teaching aids, drawings, charts, maps, flash cards and other equipment. In addition to the usual games, stories and songs, picnics are used as an educational tool for lower primary children. The students learn about the crops and the plants during farm visits or nature walks. They enjoy the outings. Similarly, they are also taken to visit the post office, the local bank, a cooperative society, and the *Gram Panchayat*, so that they can learn about the functions of such bodies.

The students are also encouraged to appear in external examinations. Every year, the good students of Class 5 are made to appear in examinations for scholarships and in the

Navodaya Vidyalaya entrance test. After school hours, extra classes of about 90 minutes are organised in the school for the willing students. All this is at no cost to the students.

When he noticed that the students found the topic of fractions very difficult, Jotani decided to do some research. Fractions, addition and subtraction of fractions, were his concerns. He took a pre-test, and divided the class into two groups, each comprising 17 girls.

At the outset, he confirmed that the girls knew the concept of numbers well. Then, giving real life examples, he tried to establish the concept of fractions. Like, if there is only one apple, how it is divided among the children, with a single piece becoming smaller than the whole fruit. The next step was to use different charts to teach the formal notations for fractions. Along with this he also explained how a fraction is read. The same method was used to teach $1/2$, $1/3$, $1/4$ and so on. After this, he gave an idea of the figure in the numerator and the figure in the denominator (*ansh* and *chhed*). For teaching the difference between smaller and bigger fractions, he used a ruler-like strip with marks on it. Different strips indicate different proportion with coloured marks. For teaching addition of figures with the same *chhed*, he has made squares with two lines crossing each other in the centre, making four squares within it. Differently coloured inside squares are shown and then the answer is shown in the form of a third square. The same system is followed to teach subtraction of fractions.

Some of the teaching aids he has made with the help of his assistant teachers and the community are:

Place value game: to teach the concept of place value in Classes 3 and 4.

Educational ludo: to teach the Gujarati alphabet.

Educational elephant and Number wheel: a toy to teach the identification of numbers from 1 to 9 and 0.

Gujarati alphabet board: Gujarati alphabets are written on hardboard with oil paint colours. This board is used to play many games and teach alphabets in a joyful manner.

Marble stand: We have made a big marble stand using big plastic marbles. Students can learn numbers 1 to 100 using this aid.

Along with Manjibhai Prajapati, a teacher who is well known for designing and making educational toys, Jotani has co-authored two books on TLMs. These books deal with the teaching aids and games that are useful in teaching mathematics and Gujarati in a joyful manner. These books have received a good response from the teaching community.

The math and science teaching activities have resulted in the formation of an association. As part of this group, children participate in science fairs, prepare albums on topics related to science, carry out experiments, organize and participate in a variety of math competitions, and read math books supplied by Jotani. There is an Eco Club which takes care of planting and nurturing trees. The children also run a library with books obtained through the Sarva Shiksha Abhiyan and other government sources.

There is a system of committees of children to administer various activities in the school – prayer, water, cleanliness, physical training, picnics, mid-day meals, and so on.

One interesting committee is the communication (*sandesha vahak*) committee, which takes care of absentee students. Everyday, members of this committee contact the absent students and ensure their presence on the following day.

Support from the Village

The village community has seen his efforts and has supported him with resources. The two Vadgam schools now have 16 rooms in the same premises, two rooms for the mid-day meal scheme and a huge compound, protected by a compound wall. Four donors gave Rs.80,000 for building rooms. Another donor sponsored the water tank and yet another gave a water cooler worth Rs.30,000. Apart from such major facilities, many other facilities like a stage for programmes, fans, tube lights, a decorative school entrance, wall paintings, cupboards, furniture, and a science lab, have been created with community donations received over the years. Celebrations of national festivals on August 15 and January 26 are also occasions for raising funds for the school. These are occasions to exhibit the children's skills. On seeing their children perform various acts, the parents feel proud and come to believe that their decision to educate their children was the correct decision. People give prizes to children on this day. Cash prizes of about Rs.3000-5000 are thus given.

Discussion Questions

1. Jotani mobilized small sums from the students for the school. Comment on the pros and cons of this practice, keeping in mind the socio-cultural context.
2. Comment on the need for a separate school for girls in Vadgam. Identify the key features of Jotani's efforts to set up this school and ensure education of girls.
3. Study the various learning activities initiated by Jotani. Comment on the usefulness of an association of children for science and math.
4. How can the communication committee be helped in performing its tasks better? Are you aware of similar innovations for ensuring regular attendance?

PRERNA A. MEHTA

Prerna Mehta became a teacher in 1983. After working in a few schools in a routine manner, she began work in Baladiya village of Bhuj *taluka* in Kachchh district. She found it was dominated by members of the Patel community. But most of the residents were the older generation, children or women; the youth and the earning population of the village had migrated to countries like Kenya and the United Kingdom. For a village with a population of 2500, there were six bank branches. The village youth living abroad used to come to the village during December-January. They used to give the girls studying in the school snacks and fruits everyday. The school building had two floors, the upper one for the girls and the ground floor for the boys. But educational activities were not satisfactory.

Keeping the girls from the *Vadi* (farm areas and outskirts of the village) in the schooling cycle was a problem. The girls were very irregular in their attendance. Drop out of girls of Classes 5-7 was also high. The academic performance of these girls was also not up to the mark. The problem of absenteeism was the root of all these problems. She realised that though initial enrolment was good, most girls did not complete the primary education cycle. And so she planned a project of three years and implemented it in four phases. The idea was to start extra activities in a planned manner.

During the first one and a half months she started co-curricular activities in Classes 5 to 7 in the evening from 4 pm to 5 pm. The girls used to collect waste material, and make many things with these. Exhibitions of these handicraft articles were held. These articles were distributed in the neighbouring schools. Then painting was taken up. The girls used to paint handkerchiefs with fabric colours. Clay pots decorated with colours, *aabhla* (small decorative pieces of mirror), painted clay pans, baskets from plastic wires, wall-pieces, embroidered cloth, and decorative articles from paper, were the outputs. Exhibitions of these articles were held and from the profits, the expenses of manufacturing such goods were managed. These activities attracted many girls to the school.

In the next one and a half months, the emphasis was on 'reading'. Prerna used to identify the girls who were weak in reading; the responsibility of helping them learn was assigned to the better girls of the same class. This made the weak girls take an interest in reading. They used to read the textbooks of their class, storybooks, books of the lower classes, and reading cards. She assessed that 98% of the identified girls developed their reading competence to satisfactory levels because of this activity. Importantly, the activity was built into the timetable, so that the seriousness was there.

In the third phase, the girls undertook activities like cultural events, celebration of national festivals, songs, stories, prayers, *bhajan* and *dhun*, welcome songs, elocution, cleaning activities, decoration activities etc. This also helped in increasing their interest in the school. This directly helped reduce absenteeism. In the fourth phase, they were given some understanding of agriculture, irrigation, tree plantation; they were also taken on farm visits for observation studies, and picnics. During such activities or visits,

the girls used to sing the songs they had learned. Simultaneous progress was observed in their academic performance also.

As a result of this four-phased planning (locally relevant activity followed by academics, then activities once again followed by academic activity), the interest in studies increased as the girls could see the relevance of what was being done to their own culture, lives and societal expectations. Because of all these activities, the village also took notice of the school. The participation of the community increased. Enrolment increased and wastage was controlled. The school now started to receive physical facilities from the community. Over a period of three years, all these activities came to be seen as necessary components of schooling itself.

Prerna joined the Bhuj Darbargadh Girl's School in 1996. This was an urban school. Most of the teachers were about to retire, but she found their dedication commendable. Here, she saw teachers who worked sincerely till the end. But she also saw what damage a poor headmaster could do. Meanwhile, the DIET started to give her various jobs, and this gave her an opportunity to discuss her problems with teachers of other schools. During such conversations, the problem of slow learners and bright students came up. She also read an advertisement put out by the NCERT in a local newspaper. When she went to ask for the details, she was told that it was meant for researchers and not for people like her. She collected the information booklet from the DIET for a day, and was inspired to work on the problems of weak and bright students. She was recognized by NCERT for this work.

Prerna early on realized that "when we talk about equal opportunity for all, we have to come to terms with the fact that in rural situations it is difficult to come across children who are equally good at Math, language and environment." She started with some research on the thinking of the parents and the teachers working in different schools in Classes 1-5. The result was an analysis of the problems the children of different categories faced and the possible solutions. She highlighted the pressures that the weaker children were subjected to and suggested remedial measures. This research-based approach also helped when she became a CRC Coordinator. During CRC meetings teachers would often complain that it was impossible to teach students who couldn't even read. She prepared an action plan to improve the situation. First of all with the help of teachers of Class 3 she surveyed children to assess their reading skills. The results were not encouraging, but with the help of the survey results, and the suggestions from the teachers who participated in the survey, a series of activities like letter reading, group reading, extra/additional reading, individual reading, reading cards/word/sentences, reading pictorial stories, reading sentences painted on walls charts etc. were implemented. A repeat assessment after three months found that about 50% of the targeted children showed good improvement in their reading skills. Such projects are now carried out every year.

The Earthquake Experience

The earthquake that struck the district in January 2001 proved to be a nightmare for many teachers like Prerna. She was injured, but was able to resume work in a few

months. She found that children were still affected by the trauma of the experience. Some of them were still in shock and panicked easily. Prerna was inspired to start teaching the children with the help of a few other teachers and a small sum of Rs.2000. The makeshift schools were run in either tents or prefabricated rooms. Some academic institutions helped her when they realised the value of this work for children. A doctor regularly examined the children. Prerna then started a variety of activities in the various schools; these included elocution, essay writing, good writing and drawing. Children's songs and stories were used abundantly in the process. About 15 well known people helped bring children out of their trauma. When the situation was so chaotic, these activities proved to be very helpful and soothing. They helped to recreate the environment for an educational purpose.

Bal Killol and Bal Kalrav

During a training programme at the DIET, an anthology of children songs written by a teacher poet, Bhagvanji Pithad, was released. This incident inspired her to write children's songs. The extensive experience of dealing with children came in handy. The motivation was so strong that she wrote 31 songs in three days. The next question was about the relevant pictures. Her son helped her. They prepared pictures relevant to the songs. Thus, the book "*Bal Killol*" was prepared. She presented the manuscript to the *Gujarati Sahitya Akadami*, which sanctioned a support of Rs.5000. She added Rs.2500, and published the book. The songs have become popular among children. Inspired by the success of the first anthology of children's songs, she wrote another book *Bal Kalrav*. The book has patriotic songs for children. The income of the first book was utilised to meet the expenses of the second book.

These two books gave her the confidence to prepare an anthology of the stories of national heroes. She prepared speeches of about five minutes each on the life of national heroes like Subhash Chandra Bose, Rabindranath Tagore, Indira Gandhi and so on; she also added sections on well-known women like Kalpana Chawla and P.T. Usha.

Eco-club

At Darbargadh Prerna decided to introduce an eco-club. Children used to gift her something on her birthday. She asked them to stop the gifting practice and instead collect money for a pipeline. She added her own contribution to what the children collected and established a watering system for the trees in the school. Prerna's next activity was feeding birds. She bought a vessel and asked the girls to tie a friendship band to that vessel on friendship day, instead of tying it on her. She asked them, "Do you want birds to be your friends?" The reply was yes. "Tie a friendship band to this vessel and put something in it once a week." To her surprise, within a few days, the children had collected enough grain for six months. The result was dramatic – birds began to visit the school regularly in the evenings.

Initiatives at School No. 14 Bhuj

In September 2008, Prerna was transferred to School No. 14, Bhuj, the only state-run Hindi-medium school in the taluka. Here, she has accelerated her efforts since she was the head teacher and it was easier to access resources. She was able to mobilize funds for a reverse osmosis water machine from an NGO, the 'Sahjanand Rural Development Trust'; the school's own contribution was mobilized from a US-based donor. The parents then bought pots, pot stands and drinking glasses for each class. She has also bought an overhead project with the Trust's help, and this is now used regularly by the teachers. Teachers like preparing their own transparencies. Using the same approach, a DVD player and educational CDs have been bought for the school. Other infrastructure has also been created. For instance, the Parle Group donated eight fans.

Discussion Questions

1. Identify the logic behind the four phases Prerna designed in Baladiya village. What were the objectives of this activity? How would you evaluate the activity?
2. What are the features that enable one to label Prerna's initiatives in Darbargadh with the weak learners and with rural children 'research-based'?
3. A teacher is also a researcher. Analyze this statement. When does a teacher become a researcher? What qualities and skills are needed to develop as a researcher?
4. What do you think would have been the impact of Bal Killol and Bal Kalrav on the teacher who wrote them? How would you encourage teachers to produce their own material?
5. Study the eco-club initiative. What are the educational benefits of such an activity? What other activities can you suggest for the eco-club?

BHADABHAI D. BORKHATRIA

Bhadabhai Borkhatria started teaching in 1973 when he became an assistant to his own guru, Shri Shantilal Rawal. All his co-teachers were enthusiastic, and Bhadabhai worked peacefully for eight years. He conducted extra classes from 3 to 5 in the afternoon, and used to form small study groups three months before the final exam. These groups used to meet at one place in the late evening and study under his supervision. Things were fairly placid. During his tenure in this school, in 1978, the school was given six hectares of land and asked to develop a farm. The school did this and to celebrate the event organized a meeting of the Sarpanches of 52 villages of the taluka. The school children performed several activities, one of which was a set of three physical exercises performed simultaneously. The sarpanch of Khakhijaliya village was so impressed that he wanted to develop his own school. After a year he came to Bhadabhai and said, "I want to transfer you to my village school." Accordingly, Bhadabhai, in spite of the reservations of his family and village people, went there in June 1981.

Very soon he realized that the villagers did not care for education. "Teaching was a duty, and teachers had to behave in accordance with the people's wishes." Children may come to school or may not, and they could leave the class before time (granting permission was compulsory for the teacher). At the time of examinations some of the villagers would come to the school with a list of children who had been "recommended" by the village people for 'pass' marks; teachers had to obey. Passing was considered very important because it was not considered good for an old boy to sit in primary grades. Girls used to sit in the last row with their eyes downcast; in fact they were not allowed to continue in school beyond three or four grades.

Alcoholism and gambling were severe problems. The people did not spare the school verandah. As soon as school was over they would occupy it and would use it till late evening, lighting up the place with candles. The school compound was also used as a toilet. Moving out of the village for work was strongly discouraged, and so all the youth were engaged in animal husbandry. Though the closing time for the school was 5.30 in the evening, often gamblers would enter the school at 4.30 and ring the bell declaring that school was over. They would also tell the teachers, "Master, let them go now, we are getting late for our play." Some of them slept on the school's compound wall. Often Bhadabhai used to pour used machine oil on it so that their clothes would become dirty; his only intention was to discourage them. But it provoked the mischief makers further.

The sarpanch, however, supported him. They met the people regularly. Once his colleagues, in desperation, asked him to come up with some solution and promised their support. In a meeting Bhadabhai proposed to form a Jalaram mandal for singing bhajans. He knew how to play several indigenous musical instruments, and used this talent in such gatherings. This made the youth of the Lohana community, who are followers of Saint Jalaram, his close friends. Together they started various activities like navratri celebration, bhajan singing, youth groups, and prayer groups. This created a more spiritual environment in the village. Bhadabhai also helped out on the people's farms with his skills in sowing seeds of carrot, onion and cumin. "Though the people did not change much," they started respecting him.

One day a few youth asked Bhadabhai to stop teaching early. He quietly opened the door and stood there for some time. One boy apologized and the group went away. He was sure of this response, because he had by then realized the following: “Be helpful to the community, but don’t give advice. Stick to your behaviour and beliefs, and do not show your frustration to the people.”

The parents started to take an interest in their children’s education. Once, a father came to school to get his daughter enrolled. Bhadabhai asked him her name. The father kept quiet for a while, and then said, “Wait, I will go home and ask my wife. Actually I have three daughters of almost the same age and I don’t know which one has to be put into school.” This incident helped Bhadabhai realize the importance of carefully planned parental counselling. He applied this realization to another problem. About 25% of the students used to leave the school much before time, giving some excuse or the other. Bhadabhai told his colleagues to counsel the parents, even if their response turned out to be discouraging. He and his colleagues deliberately paid attention to the girls. They sought out information on who was sick, or which girl was planning to visit her relatives, and then used these occasions as opportunities to visit the family.

In one of his regular gatherings Bhadabhai discussed the prosperity of a neighbouring village. He told the people, “It has been years since our region got irrigation. Our soils are similar. Still they are more prosperous, doing well in jobs and business, whereas we are “zero” on the development scale. Why?” One person said, “We are from a different community.” Bhadabhai rejected this argument by saying, “All human beings are similar and no one stopped you from developing your community; in fact something is lacking in our thinking.” Once he said this, there was a discussion and one parent stressed the need for education. This was the chance he was waiting for. Bhadabhai then talked about the culture of gambling in public places, requesting people to confine their playing to closed spaces. He deliberately used their own biases against women, and told them, “Women folk pass through the streets. You give them a chance to see all of you indulging in bad behaviour.” There was behaviour change, but it took Bhadabhai five years to achieve satisfactory change. He considers this a big achievement, especially since the place was so notorious.

In the meanwhile, Bhadabhai had begun to address the issue of girls’ education. Most were not allowed to study beyond class 4. One reason was all the girls were engaged to be married in their childhood. They also helped with household work. Bhadabhai’s solution was to start a separate school for girls. A girls’ school was started in 1984. He introduced several co-curricular activities to overcome the shyness among the girls. Gradually he introduced story telling, reciting poems, singing songs and bhajans, news-reading – with special sessions on Saturdays. When the parents saw their girls performing at school functions they were happy. For them, “such smartness and poise were for the upper caste people only”; now they were very happy to see their own daughters performing smartly. The girls of the Ahir community used to wear their traditional outfits. Bhadabhai felt that though there was nothing wrong with this, the girls had to feel that were part of a larger community of girls. He convinced the parents to let them use the school uniform of skirt and blouse. This was important in making the

girls feel that they were also like the girls of any other community and hence could perform in school the way the other girls did. A girl of this community from the school played kabaddi for the state team wearing the sports uniform. All these small initiatives went towards enhancing girls' education.

In order to encourage the girls, the teachers always introduced them to visitors by pointing out their strengths. In another initiative, each girl is visited by the teacher every 15 days; the following day, the teacher has to describe to the class what he/she saw. They also try to make the parents academically oriented with simple tricks. It is a common practice to offer a cup of tea to guests, so whenever teachers were offered one on a visit they turn down the tea and instead ask for a book. Bhadabhai has also encouraged the girls to volunteer to help out in group marriages, a practice which the teachers of the school made the people adopt. This has helped to reduce the cost of marriages and has also attacked the dowry system. For Bhadabhai this is important because "it is going to contribute to the welfare of girls/women eventually."

An incident which illustrates how teachers may be called upon to adopt a larger perspective concerning girls' education is narrated below. A girl named Kundanba Khengarji Chudasama had studied in the school. She got married in 1996 and moved to Dhank village of Upleta taluka. Tragically she lost her husband within a year of the marriage. When the school's teachers came to know about this, they decided to do something, since the community was making an effort to get their girls educated. Kundanba belonged to the Darbar community, which was very conservative and traditional in its outlook. The teachers thought that helping her become self-reliant economically would be a good gesture, and were willing to mobilize Rs. 50,000 for the purpose. The teachers met the parents-in-law of the girl, but could not meet the girl herself since she was in a period of veiled isolation. The family appreciated their concern and refused any financial assistance, but promised to let the girl do whatever she decided to take up. Bhadabhai then noticed an advertisement for widows' seats in the state's primary teachers training course, and the teachers got Kundanba admitted. The family decided to send her to Veraval since they had relatives there. She completed her course and was appointed in the same Dhank village.

To sustain his efforts, Bhadabhai started two supplementary institutes: a bal mandir and a high school. He personally ran the bal mandir for the first three months to avoid the risk of children dropping out. Though they started with 35 children, the number went up to 60 in the very first year. With great difficulty, he managed to enrol eight girls in the secondary school in the first year. Initially there was a problem of space, so he accommodated the secondary section in the boys' section, and the primary teachers taught them for two months till new teachers were appointed. He also took charge of the administration till the school got a full-time principal. (This finally happened after seven years, in 1991.) Bhadabhai and his colleagues also made arrangements for residential facilities for children from other villages, since they had to meet a specified school strength. Over time, the bal mandir expanded, and anganwadis were set up; today there are five anganwadis to support the schools.

A village which had a bad reputation is now known for its school. Doordarshan made a documentary of 35 minutes on the school. The drop out rate among girls is zero and this has been maintained for many years. Over eight years, the number of matriculate girls reached 500; a creditable achievement since at the beginning there were only 35 girls who had completed primary education. In recent years Bhadabhai has been working as an education inspector, and has thus had a chance to visit close to 90 percent of the taluka's schools. He is also active in the Teachers' Federation and is trying to focus on the academic role that a teachers' union can play. He is especially concerned about improving the quality of education in public (panchayat) schools, so that the enrolment shift towards private schools can be avoided. He has prepared a pamphlet, an appeal published on behalf of the head masters of all the schools in the taluka, highlighting the activities of the taluka's public elementary schools and asking parents to refrain from putting their children into private schools. This appeal and meetings at various places with a variety of stakeholders to highlight the workings of public schools appears to have met with some success – investigations by the vernacular press during the middle of 2009 identified 218 children who have reverted to public schools during 2007-09.

Discussion Questions

1. In his second village, the people did not have respect for the school premises. Is there a quicker way of handling this problem than forming a mandal and gaining the confidence of the youth?
2. What do you learn from the examples of the Ahir girls and Kundanba? In the light of the recently introduced right to education, will such social barriers be easier to tackle? What strategies should one use to use the provisions of free and compulsory education of 6 to 14 years old children effectively?
3. Comment on the importance of anganwadis supporting the school.
4. The shift towards private schools seems to be happening in many areas. Comment on Bhadabhai's contact program to convince parents to reverse the shift. What else can be done to address the shift towards private schools?

HARJIBHAI A. PRAJAPATI

Harjibhai Prajapati became a teacher on the last day of 1986. His first posting was at village Bevta, Tharad, Banaskantha District. The village was on the border with Rajasthan. The location was remote, about 12 km from the nearest bus stop. Harjibhai's first introduction to the village was interesting: he kept on walking, asking for directions to the village; finally one person told him, "You are walking through Bevta." Though the village was spread over a considerable area, only a few traders lived in the village proper. The other villagers stayed on their farms. Harjibhai was disappointed; his training had not prepared him for this kind of situation. He wrote to the principal of the teachers' training college where he had studied. He described all the difficulties and complained, "Sir, I passed my exams with a high percentage and still I have been sent to this remote area, why?" Soon, he received a reply. "If meritorious teachers are posted to remote areas at least some work of quality will be done; if you flourish there, the fragrance will spread all around." This reply motivated Harjibhai. Thoughts of running away frequently occurred, but slowly his determination grew.

Republic Day, 26th January, was approaching. Harjibhai expected some kind of celebration. He had been in the school for less than a month, and so asked the head teacher what preparations had to be done. The reply was, "No preparation is required. The teachers, students and four or five persons from the village will gather in the school compound, walk through the village and raise the national flag on a pole prepared by joining together some pieces of wood. Thereafter the national anthem will be sung and *jaggery* will be distributed to everyone." Harjibhai proposed that the school celebrate the day in a grand manner. The head teacher agreed, provided Harjibhai did what was necessary with the very limited resources available.

The school had no national flag of its own. Every year the flag was obtained from the *Talati*. So Harjibhai went to the *Talati*, who lived about 5 km away and asked for the flag. He was told that the peon would hand over the flag on the 26th. At Harjibhai's request, he agreed to let the peon deliver the flag a day early. Harjibhai then started to prepare a cultural programme. The children were made to practise the singing of the national anthem. Harjibhai brought a long bamboo pole from the goat-herders of the village and fixed a small pulley at one end. He got invitation cards prepared in good handwriting, and sent them to the parents a day before the programme. On the evening of the 25th he went to the peon's house and found out that he had gone to collect the flag. Next day he went to collect the flag. He was shocked to see the state the flag was in. The peon had hung it on a nail the previous evening. It had fallen during the night into a corner where some goats were kept. The flag had become dusty and had goat dung sticking to it. Harjibhai was pained. He returned to his school and cleaned the flag with a wet cloth. The ceremony went off well. The people appreciated the programme, and also said they were surprised to get an invitation. It was the first of its kind for them. Harjibhai talked about the need for a national flag and a mast. They contributed Rs. 800 on the spot. This was very significant; in 1987 incomes were very low and the region had been facing drought for three successive years.

Girls' education

Harjibhai then concentrated on increasing the attendance of girls. Out of the 166 children registered in school, only 23 were girls – none of them enrolled beyond Class 4. Even these 23 girls attended only for the first two months of the academic session. Harjibhai decided to use the celebrations during Independence Day to do something for enrolment of girls. He planned a sports festival for the youth, borrowing the idea from village Nenava in a neighbouring taluka where such a festival had developed team spirit and helped the school.

After the celebrations were over, he presented the accounts for the Rs. 800 that they had donated earlier. Some leaders asked if the school needed anything else. He told them, "A lot has to be done – a gate, painting, safe drinking water etc. Those will be taken care of at the proper time. But you have to promise me something." After some time, the Sarpanch Mr. Sardarji Devda asked, "What promise is to be given?" "What action do you think we should take to address the problem of so few girls in the school?" The people gave several reasons for the poor presence of girls. The girls helped with house work; families living on far-off farms were unwilling to send their girls to school; social barriers within the Rajput community; co-education; poor school facilities, and so on. Harjibhai promised to do his best in the school. His colleague, Nirumatiben N. Jadav gave her own example. Examples of other women were also cited, and some impact was made.

However, nothing much happened. Girls from the surrounding area did trickle in, but local girls remained aloof. The academic year ended and the preparation for listing the students for the new academic year began. Harjibhai went from farm to farm noting down the girls' names. How many of these would actually turn up remained to be seen. When the school reopened, only boys turned up. So every evening, Harjibhai would visit four to five farm houses, stay the night there and return the next morning with one or two girl students and their parents. Sometimes, he had to return empty handed. With such efforts, against the new admissions of 28 boys, 16 girls could be forced to join up. But their regular attendance still had to be ensured.

A shepherd's daughter in school

A boy belonging to the shepherd community (*Rabari*) had been admitted to school. His sister regularly accompanied him. During school hours, when her brother was in the class, she would sit under the *babool* tree in the compound and then return home with her brother in the evening. Harjibhai found out that the boy had four older sisters; Lasu was one of them. Harjibhai thought that if Lasu could be educated, she would initiate the breakthrough he was looking for. He talked to Lasu during the recess hours, and one day went to her home. He told her parents that it would be better for her to sit in the classroom rather than near the *babool* tree. Fortunately, a daughter of a woman teacher in the school could give her company. The next day, Lasu was inside the classroom. Lasu was older than all the Class 1 students, but since all children of Classes 1 to 3 sat together there was no problem. She was a quick learner, and as expected became 'an example'. People came to know about Lasu. An educated Rajput mother then sent her

daughter (Hansa Chhogaji Devda) to school. Now there were two bright examples. Other people joined and soon the number of regular girls went up. Hansa and Lasu studied up to Class 4. Thereafter, they dropped out of school. Lasu had entered school at the age of 9, but studied up to Class 4. Four years later, when Harjibhai was attending a fair about 20 km away from the school, a young *Rabari* man came to him and wished him *Ram Ram* in Marwari. He was Lasu's husband; Lasu was standing a little distance away. She thanked Harjibhai for the education and was proud of the fact that she kept all the 'accounts' at her house; her family gladly got her to do the accounts of milk sale and household expenditure. She had also been responsible for sending her husband's younger sisters to school. Both these girls were still in school.

Inspired by Lasu, *Rabaris* began to send their daughters to school. Within a year, there were eight girls attending school regularly. One old man, Rabari Aydan Doagi, who grazed goats during the day, was also inspired by Lasu and visited Harjibhai twice a day to learn reading and writing. He did his homework regularly in a notebook. Meanwhile a teacher who belonged to the *Rabari* community joined the school. This helped matters further. Attendance of girls became regular. Two girls from a Jain family in the village became the first girls in the village to complete Class 7.

Soon, there was a branch of the school in another part of the village. Harjibhai was transferred to that school in September 1988, after more than a year and a half in the old school. The school started with 29 students, of whom six were girls. That the desire to educate their children had taken root in all communities was exemplified by Anaji Harijan, who belonged to a scheduled caste, and over time, educated all his six daughters. (One girl has since completed Class 12 and become a nurse; two of her sisters completed high school.) A variety of activities like drawing, painting, stitching, and embroidery kept the girls attracted to the school.

Harjibhai was due for a transfer, so he prepared a group of five youth of the village to become a school monitoring committee. In early 1996 he was transferred to Jawantri village of Radhanpur taluka. Even after his transfer he visited Bevta quite often to observe its educational progress which had stabilized by the time he left. From 23 girls out of a total enrolment of 166 in 1987, the school had progressed to 33 girls out of 191 children by 1989. But Lasu's case achieved a breakthrough. Over the next few years, the enrolment jumped significantly so that by 1996, there were 148 girls out of a total strength of 393 in 1996. Moreover, these girls now were not just registered on paper, but were actually attending school.

Soon, Harjibhai became a CRC coordinator. This gave him an opportunity to deal with a number of schools. In late 2007 he was once again transferred to a primary school, Vadhsar, in Patan district, and became a teacher once again. In this school, attendance was a problem. Though there were 168 children registered in school, only about 120 attended regularly. He decided to use the educational tour as a tool for regularizing attendance. The children were informed about the places to be seen. Eighty three students, many of whom were absentees in the school, joined the tour. The number of girls was more than that of boys. The tour was enriched by activities like songs, games, jokes. After this activity many of the absentees became regular. This breakthrough was

supplemented by making the prayer assembly more interesting and by giving more responsibilities to children. All the activities listed in the textbooks were carried out faithfully – visit to a farm, visit to various organizations etc. This helped in maintaining the 'educational tour' concept as well.

Discussion Questions

1. Comment on the induction of Harjibhai into the teaching profession. How should a fresh recruit prepare himself or herself for the first few weeks of teaching, especially when posted to a difficult area? What are the support mechanisms that a new teacher should consciously cultivate during the early days of the teaching career?
2. Study Harjibhai's experience of his first Republic Day in Bevt. What is the significance of a well-conducted secular function in building school-community relations? What is your experience of celebrating national functions in school? How can such celebrations be made more effective?
3. Study Harjibhai's handling of Lasu carefully. What lessons do you learn? What would have happened if Lasu had not responded positively?
4. Comment on the significance of model or exemplar cases like Lasu's. How would you plan to look for such opportunities and manage them so that the spread effect (as in Lasu's case) becomes significant?
5. The educational tour has been used as a means to improve attendance. What must have motivated Harjibhai to use this tool? What alternatives can you suggest?

DHANJIBHAI C. VADHER

Dhanjibhai Vadher's first appointment was at the Chanch Bandar Primary School. He was transferred to the Shri Kathivadar Primary School of Rajula taluka in 2002. There were three teachers; each taught two classes, so that all six grades were covered. The school was an old one, in existence since 1954, and so it was a surprise to Dhanjibhai that education of girls hadn't improved all that much over such a long time. His first look at the enrolment register told him that there were 90 boys and 84 girls in the school.

Enrolment, Kathivadar, 2002

Class	Boys	Girls
1	22	37
2	15	21
3	19	16
4	15	7
5	7	3
6	12	-
	90	84

He noted that the number of girls reduced significantly as one went up the schooling ladder. He was also told that the *Ahir* community, the majority community, were highly conservative and that most of the girls were actually only registered, regular attendance was another issue altogether. Promotions were usually decided on the basis of reasonable regularity in attendance. In any case, after Class 4, girls rarely attended school. Dhanjibhai decided to do something for the education of girls. He began with systematic interaction with the parents. He found that the teachers were respected; the teachers also did a good job inside the school – reaching out beyond the school was the problem. The village had a woman Sarpanch, but Dhanjibhai soon realized that it was her husband who was the real power behind the throne. He was not of much help. The only positive feature appeared to be the goodwill that the school had generated among the people.

The first step that Dhanjibhai took was to add Class 7. This, he thought, would be significant, since it signalled that the school was a 'full primary school.' His colleagues agreed with him, and the Education Inspector permitted the addition of the class, but warned that since the numbers were so small, an additional teacher would not be sanctioned. Sure enough, news of the additional class spread; the Sarpanch and other village leaders rushed to the school to congratulate the teachers. They were very happy and were willing to support any activity for girls' education in the village.

Dhanjibhai took up responsibility for Classes 5 and 6, and focused on the three girls studying in Class 5. He met their parents regularly to influence them to let their girls study further. The message was that it was their responsibility to see to it that these girls became the first students of the new Class 7. Then he made a plan for targeting mothers. His goal was that when these three girls finished Class 7, they should be allowed to go on to secondary school. Activities like *ras garba* on Independence Day, celebration of *Janmashtami* and *Navratri*, and other cultural events became public occasions to display

the abilities of the girls studying in the school. *Janmashtami* was a special favourite with the village community. Dhanjibhai proposed to the people that they let a girl perform the festival-ceremony (according to tradition, the birth of God is celebrated at midnight by breaking an earthen pot tied with a rope; usually boys form a pyramid and the one on the top breaks the pot). The village elders were already impressed with the performances of the girls and readily agreed. With such small steps, Dhanjibhai tried to promote the cause of girls' education among the village community. He also tried to convert village occasions into opportunities.

Once, he found the village preparing for a mass betrothal ceremony, which was being organized by the *Ahir* community. He rushed to the organizers and proposed that he would like to help on behalf of the school. They welcomed the proposal. Dhanjibhai and his colleagues assumed responsibility of welcoming the guests. The school's girls sang a welcome song for the guests and offered flowers to the guests. Dhanjibhai had prepared a girl of Class 5 to speak on the topic 'I want to study'. This speech surprised the guests and the hosts. Most of them were visibly moved. The parents of the three girls studying in Class 5 got up and publicly promised to let their girls continue to study after primary education. Another guest got up and promised to enrol his sister's daughter in Class 6 the following year.

After this, Dhanjibhai never had to ask the people to send their daughters regularly to school. The following year there were four girls in Class 6. After Class 7, three of them went to a high school in a neighbouring village, with one of the girls opting to stay in a hostel. These girls impart literacy to young adults in the evenings.

This breakthrough with the three girls has led to greater opportunities for the village's girls to move on to secondary school. By 2006, there were 19 girls in Class 5 – drop out had reduced, though it had not been eliminated completely. These 19 formed part of a total strength of 86 girls in Classes 1-5. Four years earlier, there were just three out of 84. Now girls were attending school and moving up the primary education hierarchy. Dhanjibhai followed up this by initiating physical training through equipment bought through a fellowship offered by the Ravi J. Matthai Centre for Educational Innovation, IIM Ahmedabad.

In 2009 Dhanjibhai was transferred to another district. The new school had eight teachers, and Dhanjibhai decided to focus on music. He got many of the non-functioning instruments in the school repaired. With the help of a colleague he trained students to perform various cultural activities. These were presented to the community and served to mobilize funds for the school. An unexpected outcome of the music activity was that boys started taking an interest in performing action songs; earlier they used to consider this to be a girls' activity.

Discussion Questions

1. Why was the addition of Class 7 seen as so important by the people? Can you list similar cases of apparently unimportant steps actually turning out to be significant?
2. Comment on the critical steps that helped Dhanjibhai achieve a breakthrough in the education of girls.
3. In his new school, Dhanjibhai decided to focus on music. How important is music in primary education practice? What are the various roles that it plays? Draw upon your own experiences and suggest a music strategy for a school that does not have music as part of its practice.

LALJIBHAI S. PRAJAPATI

Laljibhai Prajapati teaches in a village that is on the edge of a desert. The school is large, and has Classes 1 to 7, with each class having two sections. There are 16 teachers. The village's land is not fertile, the people are economically backward, and literacy levels are low. The school has 16 teachers. Laljibhai and his co-teachers realized that though physical facilities were reasonable, the quality of education could improve. Around this time Laljibhai received a letter about a 'Model school' competition in the district for which his school had been suggested as a candidate. This letter played an important role in triggering action to improve quality. The first step was to initiate self-monitoring. Though the school was inspected twice a year by the government's administrative department, Laljibhai felt that this responsibility was ultimately the teachers'. Laljibhai decided to implement an idea of one his teachers. After completing some part of the syllabus, that teacher would ask a fellow teacher to visit his class and do an inspection. The frank and honest testing of the students helped everyone. Laljibhai managed to convince his colleagues about the worth of the idea.

A couple of teachers had reservations about the fairness with which such an inspection would be done. Laljibhai felt that the inspection would be fair since his experience of the savings-cum-credit society indicated that teachers trusted each other. This society extended credit of Rs.15000 to any teacher at a very nominal interest. He had also introduced a uniform for teachers, which they had to wear every Thursday. There had been no instance of non-compliance. These examples, when discussed, convinced the doubters.

A plan was prepared with the dates, the class to be inspected, and the name of the inspecting teacher. It was also decided that the inspecting teacher would submit the written report to the Head Master. All the classes in the school were covered in this inspection. When teachers began to visit the classes of other teachers, they could identify certain shortcomings which had nothing to do with teaching, for example, cleanliness.

The inspection was not meant to find fault but was aimed at identifying the deficits in teaching. Some examples follow. "You need to teach the concept of factors properly before teaching HCF & LCM." "The students are able to arrange the numbers to get the ratio, but cannot simplify further, hence they are confused and not able to do the sum quickly. Please get the tables prepared."

With such comments in hand he guided the teachers on the use of TLM to make the teaching natural and easy. To prove the point Laljibhai carried out one simple experiment to explain that 'the earth is spherical in shape'. An earthen pot was brought to the classroom. The pot was broken into very small pieces and these were distributed among the students. The students could understand that though the fragment in the hand appeared to be flat, 'the whole' was spherical. The students could then appreciate that the earth was such a sphere. Many other concepts were discussed. For instance, map reading and houses of parliament. One interesting event took place in class one. While inspecting, a teacher asked the students, "Which is greater, 4 or 7?" Many

students could not answer, though they could easily call out numbers 1 to 10. The inspecting teacher grouped the students according to the numbers and cleared the concept of 'more than' and 'less than' which is part of number learning. The mutual inspections, which were taken up every two months, turned out to be very useful. Once Laljibhai had to play the role of a mediator to resolve the conflict between two teachers; otherwise the activity has been smooth.

The 'next inspection' motivates the teachers to do something on holidays and Sundays as well. The villagers have noticed the increased devotion to teaching among the teachers, even though there was no 'tuition fee' involved. Another outcome is that all the students receive the expertise of all teachers. More importantly, some teachers have accepted that they do not know certain topics thoroughly. Laljibhai has motivated the teachers of his school to solve the problems faced by them through action research. Every teacher has to identify problems for solution. The average student attendance is now consistently above 90% and this has been maintained for years. There is no one from the scheduled castes who has been left out of school. The attendance of the OBC children has increased remarkably.

The teachers also invited a panel inspection under the 'Model school project'. The panel inspectors declared the educational achievement of the school to be about 85%. This was a good achievement and all the staff members of the school were honoured in the presence of the Education Minister and other dignitaries in 2002. Now people from other villages who have relatives in this village leave their children here.

Laljibhai introduced the period system a few years ago. Now the subject teacher holds the examination for his/her subject every month. The students pay for the answer books from their savings or pocket money. The students collect the money and keep the accounts themselves.

'Let us care for them': Retaining children in Class 1

During 1994 to 1998, Laljibhai taught Class 1. The children gave him lots of problems; many did not come to school for two to five days at a time. Many came after the lunch recess if they wished to do so, otherwise they would stay home. Sometimes their parents would forcibly drag them to school. The children would cry or weep and the mothers in desperation would slap them. The inspiration for solving this problem came from Laljibhai's exposure to some of the principles of the Swadhyay Pariwar, a movement started by Shri Pandurang Athavale. One principle is that people can stay connected only on humanitarian considerations. He thought if the students of class 1 could be connected by bridging their feelings, the problem would be solved. The easy and practical solution was to build an emotional bridge between the students of class 1 and class 7. Each student of class 1 was put under the guidance of a student of class 7 (preferably a relative). Some guidelines were given to the older children.

1. Bring the students of class 1 under your guidance regularly.
2. Instruct the mothers or others concerned to send the child to school in a neat and clean condition.

3. If the child remained absent visit the parents the same evening and find out the reason for the absence.
4. Visit the child at her home on a holiday. Play with the child, take him/ her with you whenever you go to a nearby place.
5. If the child needs help in studying, do what you can or bring the problem to the teacher's notice.
6. You must meet the child on festival days.
7. Ensure that the child is not being teased, or harassed in school or during recess hours.
8. Tell us about any noteworthy event taking place at the child's place so that the teacher can visit the family.

This experiment proved to be very successful and provided Laljibhai with a great learning opportunity. One child was reluctant to come to school even after the best efforts of the older child. Finally the young child told the older student that the teacher had scolded him and put a 'wrong' against a spelling exercise that had been written out correctly. Laljibhai himself was the teacher concerned. The word was "Dhaja". The child had written "Ghaja" and hence he had given him a 'wrong'. Through this incident he realized the confusions and misunderstandings that can arise among children. Students of Class 1 became regular and parents' responsibility towards schooling increased. The older children particularly ensured that the young children were not pushed around near the water tap. Later, he allotted older children to the young ones at random, since he wanted to convey that 'any one can do something for their own people, but humanity is that which is done for others.'

Mid-Day Meals for relationship building

The large number of students using the mid-day meal scheme made the management of this activity especially difficult. Laljibhai had seen big marriage parties where things were highly organized and successful when the distribution system was designed well. He made teams of two to three teachers. One table was reserved for classes 1 and 2, the other was for classes 3 and 4 and the third one was for classes 5-7. A couple of teachers took the responsibility of supplying food from the back. This experiment not only helped in organizing the mid-day meal effectively, but also helped in building good relationships with the students. Serving food was not such a big deal for the teachers, but students found it amazing. This in fact helped in getting many things done in the school.

Tackling addiction

When he found that many children were addicted to different types of tobacco, he realized that the children had to learn to disobey their parents in certain areas. The children were usually sent by their parents to buy tobacco and this was the starting point. He had to teach them how to refuse to bring such things when their parents asked them to buy tobacco. He also advised the children that they should follow the instructions given by their parents regarding other household tasks as and when required. Some of the parents were angry when their children refused to bring tobacco for them, and they argued with Laljibhai. But ultimately when their own children's well

being was placed at the centre of the argument, they realized that what the teacher was doing was right. He then extended this activity to alcohol addiction. One particular community was involved in brewing alcohol and many members suffered from alcoholism. He convinced this community to stop making liquor in the village.

Community activities

Laljibhai wanted to promote the construction of toilets at the homes of people on grounds of hygiene. A government scheme which funded toilet construction came in handy. After a lot of spade work, he was able to convince people about the need for toilets. Children played a key role in the effort. Laljibhai has been appreciated by the government for this initiative of his. He also found that plastic waste had become dangerous – it got mixed up with compost and sometimes animals ate plastic since it was mixed up with grass. Once a month, he started collecting the waste and burning it. Burning may not be the best mode of disposal, but there does not seem to be an alternative.

Discussion Questions

1. Study the peer inspection system that Laljibhai tried out. List the benefits of this system. In your own situation, can you implement this? How would you take care of resistance to the idea?
2. How will you ensure that the peer inspection system does not become a routinized ritual?
3. Connecting a Class 1 child with a Class 7 child seems to have worked in Laljibhai's case. What are the principles of educational development that are evident in this innovative activity – from the point of view of the younger child and that of the older child?
4. How do you think the community development activities of Laljibhai helped him in his educational activity? Is it necessary for a teacher to involve himself in de-addiction or plastic removal?

RAMANBHAI G. PATEL

Ramanbhai Patel started teaching in January 1976 at the Pipalwada Primary School. The village was dominated by the Kshatriya community; the people were mired in superstition; social evils and inhuman customs prevailed. Ramanbhai and his colleagues decided to tackle what appeared to be the most important problem with children of this community – 50 percent attendance in school.

Drive for Improving Presence

The population of the village was about 5500. First they compiled a list of all the pockets and streets of the village and prepared lists of children according to the streets. They also included other details like the names of parents, occupation, time of availability etc. Since the school was large, there were 14 teachers. They divided themselves into four teams and took up responsibility for different streets.

Every team used to go to its street, spread a rug on the ground and hold a gathering. The teachers always carried a list of absentee and irregular students. To entertain people, they performed skits on superstition and girls' education, and also sang *Bhajans*. The teachers used to prepare students to give such performances and students also performed at the gatherings. During the day, the parents were contacted, to motivate them to attend the gatherings in the evening. Every Thursday, the four teams performed actively in their streets. Such continued activity not only increased attendance in school, but also the enrolment for the following year. This programme was called "*Khatla Parishad*".

This experience, and his own experiences as a student who used to string up a light to enable his friends to study, helped Ramanbhai design a program that he introduced wherever he went, especially after he became a Block Resource Centre Coordinator: Team leader for quality improvement. The idea was simple: ensure that poor children get a proper place to do their homework and identify one child who could act as mentor and monitor. The program starts with an orientation of the members of the MTA and PTA and identifying a volunteer who would be able to offer some space and a lighting facility to the students. Finding a child who was performing well in school to act as a guide is the next step. This child reports to the class teacher everyday. The teacher visits the place once in a while and keeps in touch with the community members who are providing facilities for the program. Often, the children get snacks from some of the community members. Ramanbhai has observed that his simple initiative has made a difference to the poorer children, who do not have lighting in their homes. More importantly, in a large number of cases, this initiative has reduced the deleterious impact of the nuisance of liquor, when fathers came home drunk and disturbed the home environment. Tests indicate that on an average, performance of the poorer children has gone up by about 10 to 15 percent. Now the CRC Coordinators who work under Ramanbhai monitor the activity in their own clusters and report the progress to him regularly.

Teaching Learning Material

When Ramanbhai was transferred out from Pipalwada, the first thing that struck him about his new school was the absence of any orientation to mathematics and science among the children. He started with a Numeral Display Tool, which he designed. This tool is such that children themselves can read, write and develop an understanding of numerals. The children enjoyed learning numbers with this tool and its reflection was seen in their performance. This tool is still in use, for many years now.

For science improvement, he planned a project, "Nature and Society". One lesson in the science textbook of Class 7 covered various locations of social activity and occupations. The best way to teach such lessons was to expose the students to these real life situations. Therefore, he took his students to visit hospitals, patients in their homes, agricultural institutions, nurseries, shops to show vessels of different metals. He also took them to a secondary school to demonstrate some science experiments. All this was supplemented by lessons on topics like erosion of land, different kinds of erosion, erosion of rocks due to rain, rivers, farms, lakes, and different kinds of stone.

Geometry Teaching

When he found that children of Classes 5-7 had difficulties with geometry, Ramanbhai prepared a 'Geometrical Aquarium.' His hobby of drawing came in handy here. First he prepared a large sized protractor. This protractor was fixed onto the shape of a fish made from cardboard. It was photocopied to prepare multiple copies. He made two fish and fixed them in such a manner that they could slide on two strings. Thus he prepared a tool to show two angles and a line crossing them, showing *chhedika* (intersecting lines). Later on, he prepared an improved version of this aquarium with multiple fish, showing all kinds of angles and lines.

Ramanbhai's other TLMs include a Numeral display tool; a Numeral Ship with snakes and ladders; a tool for understanding "area" using graph paper and tools for demonstrating experiments with light.

As a BRC Coordinator, he has helped all the CRC Coordinators of his region to prepare such TLMs. These TLMs are now available with all the CRC Coordinators and they are being used in many schools. Many subject teachers have made and used these TLMs.

Learning from his interest in TLMs, his students also learned to think about new tools and actually made them. With empty biscuit boxes and convex lenses they have made magnifiers for viewing rolls of pictures prepared from old magazines and old books. The students have also shown a lot of interest in collecting math puzzles, and have also learned to prepare models dealing with sound and light.

Ramanbhai observed that the children who benefited during the process of making and teaching through these tools, later on joined the science stream. They remember their learning experiences even today. Many of these children had also participated in science fairs at district and state level.

Details of TLMs and Experiments

Geometrical Aquarium

Ramanbhai first tried this tool on an experimental basis. The students were divided into two groups, an experimental group and a control group, with 35 students in each. A knowledge pre-test was taken. This tool basically was meant to teach quadrilateral-related aspects. The action research kind of planning was divided into 22 periods. When the same groups were given post-experiment tests, the results were highly encouraging.

The following is a list of the raw material required to prepare this tool and the cost per item.

A sheet of plywood
A piece of plastic paper
A protractor
Xerox paper, about 20 pieces
Colour, gum and rubber bands
Nails, screws, strings and a measure tape
Small round pieces of rollup board

The expenditure on the tool is as follows.

Plywood piece	Rs. 150
Stationery cost	Rs. 100
Xerox cost	Rs. 80
Colours	Rs. 50
Evaluation cost	Rs. 70
Thick paper	Rs. 50
Total	Rs. 500

Procedure to prepare the tool

1. Prepare a scene of fish swimming in water on a plywood sheet.
2. Prepare sample fish about 20 cm in length, from a plastic sheet.
3. Stick the protractor dial on the shape of the fish.
4. Stick a piece of rollup board in the middle of the dial.
5. Fix the fish prepared thus on the board at the proper distance.

When a number of such fish are fixed on the board, they make multiple parallel rows of fish. Secondly, as they are fixed on the board with a screw in the centre, they can revolve. As a result, while teaching, a teacher can move the fish on the horizontal lines and rotate the fish from the centre. Thus, they make various triangles and quadrilaterals. When rubber rings are used to connect different fish from their centres, various angles can be created. The protractor fixed on the fish indicates the exact angle. Thus, endless angles can be made and demonstrated. Children can themselves perform the activity and see what angles they can make.

In addition to this, Ramanbhai made some very simple tools for the same purpose of teaching geometry and different shapes. For example, he used the spokes of a bicycle wheel and rubber valve tubes as connectors between two iron spokes, to make squares, rectangles and many other shapes. Also, he made a model of a human body using thin sticks collected from old kites. The model is made in such a manner that all the body organs are represented as different geometrical shapes and angles.

Numeral Display Tool

He prepared this tool to improve the quality of mathematics teaching for Class 4 children. He made experimental and control groups to find out whether the tool he had was useful. He planned an intervention over 20 periods; 30 students of the class were divided into five groups of six students each.

Material used to prepare the tool:

Wooden pieces of match-box size, about 50 to 60 pieces

Iron rods

24 x 12 inch hardboard box

Number box for numerals

Cards prepared from card paper or hardboard

Colour

Rubber rings

Two wooden pieces

Thus, the cards of numbers from unit to thousand are prepared.

To use this display tool, a figure is written on the blackboard, say 7538. Starting with the unit, there is 8. Eight pieces with 1 written on them are brought forward from the rear. Now cards with 8 written in figures and words are placed in the place made below the display. The next digit is 3. Three pieces of 10 are placed in the row of ten. Again cards with 30 written as figures and words are placed below. In the third place, the hundreds, the figure is 5. So five pieces with hundred written are brought forward and cards are placed. The same procedure is followed to prepare figures with thousand, ten thousand and so on. This repeated exercise helps children understand the concept and remember it. The final testing proved that the tool is indeed helpful in teaching the targeted concepts. The following are the details of expenditure incurred on this tool.

Numeral box and model	Rs. 350
Stationery	Rs. 200
Computerization expenses	Rs. 300
Miscellaneous expenses	Rs. 150
Total expenditure	Rs. 1000

Teaching Mathematics using Graph Paper

The syllabus of Class 7 consists of lessons on the concept of areas of different shapes. After teaching these lessons he undertook informal testing. From this he found that the children found it difficult to understand the concepts of square, rectangle, and cylinder.

To explain the concepts, he used graph paper. First he explained what 1 square centimetre was. Then with the help of the same graph paper, more than one square was shown to explain multiple squares. Every group prepared such samples using graph paper. Using a measuring tape, they were given the idea of 1 metre = 100 centimetres. Then the children were taken to the grounds and the length and width of the ground were measured. Then they were given ideas of square metre, hectare and square kilometre. Using chart paper, the area of a rectangle, a circle, a cylinder were examined. Tests were taken after each unit. Finally the post experiment test was taken, which established that the use of chart paper increased the achievement level.

Science Improvement Project: Nature and Society

Ramanbhai believes that society and nature are living laboratories. The idea came to his mind when he was teaching students a unit called on Soil. He took the students to a soil testing laboratory in a nearby town. Next, to explain how soil is formed, he used a globe and charts—the portion of land, ice and rocks on the earth, the composition of soil and the layers of soil. Also, he had special sessions on the formation of rocks. This was followed by a visit to a temple on a river bank to show the children as many live examples as possible of what they had understood from the charts. During this visit, they had to keep notes. These notes were brought back to the classroom and discussed. Then, with a magnifying glass, the students had to go through the components of soil. Charts that had been prepared gave them detailed information about the components. Some simple experiments were also made, to understand related concepts—a piece of clay mixed with water and observed the next day; comparing the weights of dry soil and wet soil, and so on. The students finally had to classify soils; they had to collect samples and prepare a table indicating details of the various types.

Discussion Questions

1. Why is the Khatla Parishad so named? Devise a check list of questions if you were asked to monitor the effectiveness of this program.
2. The Team Leader for Quality Improvement project was designed for the poorer children. It is run in various clusters of the block. Your task is to examine the effectiveness of this initiative. What questions will you ask the children, parents, facility providers and teachers?
3. What is the feature common to Ramanbhai's Team Leader project and Preparation of TLMs?
4. Read the TLM account carefully, and prepare a list of questions on items which you do not understand or on which you want more clarity.
5. What is the principle (that you may have learned in your teacher training college) behind the Science Improvement Project? Think of one more example where this principle can be applied.

SHANTILAL N. PATEL

Shantilal Patel was born in a remote village, and for his higher secondary education had to walk five km everyday to reach school. During this time he developed an interest in gardening and plants. In his very first school, Tenduka Prathmik Shala, taluka Songadh, which he joined in 1972, he created a garden, drawing water from a nearby canal. After about four years, he was transferred to a tribal area school where he worked for another four years. Here he sharpened his approach to teaching through plants and gardens. Then he joined the Ambheta School, which was not very far from his home village. The school was in a very bad condition. Its most common purpose seemed to be to serve as a rest house for visiting bridegrooms and their relatives. Otherwise, it served as a shelter for all the wandering animals of the village and for people who did not have any place to stay.

Shantilal made a thorn fence around the school; then he started levelling the school compound. The villagers saw him toiling alone, and after some time asked him what he was doing. He told them that he wanted to make the school "alive". They then agreed to support him. Shantilal prepared a plan for the school gardens and brought saplings from the government nursery. He planned an attractive entrance and a "green corner" called *Gandhi Kutir*. He painted the school with pictures taken from the textbooks as models. As the school and school premises became more and more attractive, children started coming. The villagers got involved. They created a "Kitchen Garden", a "*Prarthna Chowk*" and a beautiful "Nature Education Garden". The community then built an approach road for the school. With the passage of time, the school continued to progress and received the Best School Award at the block level. This motivated the children. The gardens were classrooms, since many of the plants and activities could be related to what was taught through the textbooks. The children's presence and attendance increased dramatically. Making irregular children regular has been the major role of the Nature Education garden. All girls of school going age were enrolled, and the school environment has been primarily responsible for keeping them in school. The breakthrough took a few years, but over the years the school grew into an institution that was able to tackle the problems of enrolment and retention successfully.

In 1999 he was transferred to another school, the Navitariya Primary School, in another block. Here the school building was fairly good, but the school compound was often used as an open air toilet by the villagers. Fortunately, there was a canal passing near the village. Shantilal started to create another garden in this school. With the help of the school children and some villagers he gathered pillars for fencing and built a fence. The school compound was thus protected. But some people who used the school as a toilet used to damage the fence everyday. He brought the matter up at the village panchayat and this resolved the problem to some extent.

He then thought of a *Bagayat Sinchai Yojana* (irrigation system in the school garden). The community got interested. With community help, he made a tank, laid a pipeline after levelling work and started irrigation. The requirement of water was satisfied. A Garden Complex with *Gandhi Kutir* and a *Vanaushadhi Udyan* (herbal garden) was created. Along

with this activity, he also got a flag stand, dining hall and other facilities created. All the classrooms were decorated with pictures and new study material was prepared.

He then implemented the idea of a science room. His experience with Class 7 taught him that there must be one such room in every primary school. "A 'Science Box' which is the usual practice or tradition in primary schools is not enough. There should be something that exposes children to different concepts of science, gives them the freedom to tinker around and the opportunity to learn about science in a holistic manner." He surveyed the block, and found that on an average there were about 400 children in each school, but not one school had an exclusive facility for science teaching. This study inspired him to create something for science learning.

The first requirement was some basic infrastructure. When he started to look around for options, he saw a 20-foot eucalyptus tree trunk lying in the school compound. He decided to use it to prepare a table and other furniture for science experiments. One day, as he was taking measurements for the table, a villager Shri Maheshbhai B. Patel came to see him, and asked what he was doing. Shantilal told him about his plan to make a science room. Shri Patel then took him to the Chairman of the Nagarik Bank at the district headquarters, and they explained the plan for a science room to him. He immediately approved the amount that Shantilal asked for, Rs.26,480.

With this help, Shantilal and his fellow teachers started making the iron frame for an experiment table and prepared waterproof surfaces themselves. They did all the carpentry and painting. Next they made fibreglass models of human organs, and bought five sets of instruments to facilitate science experiments. They also bought some photographs. Using their own resources and the available welding and other facilities, the teachers prepared models of planets, the solar system, eclipses, and fixed them to the ceiling. The drawing teacher Shri Rajeshbhai Gamit took great pains to paint the room and give it the finished look of a science room.

With the passage of time they made the following changes:

- A new arrangement was made for the children of Classes 5 to 7 to sit separately in groups and conduct experiments.
- The tables for experiments were arranged in such a manner that the children could sit or stand and conduct or observe the experiments.
- Separate baskets were made to store the science instruments and tools for Classes 3 to 7.
- The room was equipped with such pictures and charts that the children of lower classes could also use and enjoy them.

Though Shantilal has not made any formal assessment of the effectiveness of the science room, he has the following observations to make:

Since all children get first hand experience of the experiments, their observation and learning become deeper and long lasting.

- Many teachers of the *taluka* and district have visited the Science Room and they are also copying this idea.

- The curiosity of the children has increased. They prefer to spend time in the Science Room.
- Achievement levels in science have increased, as indicated by marks in exams.
- Children of surrounding schools are also allowed to use the room.
- Visiting teachers have been inspired to prepare many TLMs and use them.

The science room has been tied up with a “Prakruti Udyan” (nature garden), *Vanaushadhi Udyan* (herbal garden), *Gandhi Kutir*, *Prerna Kutir*, Orchard Irrigation System and many other features. The people have not only appreciated the efforts but have also participated actively by providing financial and manual labour support. Shantilal has been invited by many schools to guide their own efforts. Two schools have been especially successful in replicating the experiment – Boika and Nava Dhangeriya.

After five years in this school, Shantilal volunteered to move to another school. He was transferred to Kanwa primary school in 2004. All the children in this school belonged to a scheduled tribe. The problems of attendance and enrolment were grave here. Again he resorted to his strategy of creating a beautiful garden and science room in the school as a starting point to overcome all problems. He also established a fountain and a wind mill here. His prior experience had shortened the gestation period needed, and within one year, he was able to equip the school with roads inside the school premises, a garden, an entrance, necessary furniture, and an irrigation system. From these economically not well-off communities he managed to mobilize Rs.60,000 for the school. He also attracted a private donation of Rs.10,000 for a science corner, and when the children and community started working on school improvement, the Adivasi Vikas Mandal donated Rs.13,000 for science instruments. Community donors provided all the required furniture. Attendance has stabilized at nearly 100%.

There were only three teachers for Classes 1-6, and so Shantilal wanted to do something that would motivate the children to read and learn on their own. So he developed an open library. The idea was first proposed in a VEC meeting; one of its members, Shri Jayeshbhai Desai, assumed responsibility for the financial aspects. The VEC immediately saw this initiative as an answer to the problem of teacher shortage. It finalized a location in the school for the library. A hexagonal library was prepared; the roof was designed to be a green roof. It was built with a metal frame and creepers were allowed to cover the frame. The library was decorated with the works of Gijubhai Badheka, Dayanand Saraswati and Narmad. Book racks were prepared using old cycle baskets. The entrance was decorated with a fountain, around which a herbal garden was developed. The seats were donated by the community. The library was inaugurated in December 2006 by a leading political leader. Since that time, the management of the library has been with the children. They have to maintain the various sections – magazines and newspapers, songs, stories, literature etc. The library has been very popular with the children. The newspapers are favourites. Teachers have also started using the children-managed open library.

Discussion Questions

1. Shantilal has used the idea of a garden very effectively to improve the environment and make the school an attractive place. What are the factors which helped him succeed in this activity? Are there similar activities that you can think of which can provide a focus for a teacher's school improvement efforts?
2. Discuss the science room experiment. How will you assess the effectiveness of such a room? Are similar rooms possible for other subjects? Which ones?
3. What strikes you as significant about the open library? How will you develop this further? What indicators would you suggest to the children to help them monitor their library's functioning?

PRAKASHCHANDRA N. SUTHAR

Prakashchandra Suthar worked as a primary school teacher in Amreli district from 1992 to 2001, and then he was transferred to Kesarganj Primary School of Sabarkantha district. Along with the transfer, he was made responsible for the CRG (Cluster Resource Group) for science. He was trained by the district's DIET. The training was not satisfactory and Prakashchandra noted that for most of the trainees, the difficult points remained difficult even after the training. He was aware of the problem of the non-availability of equipment and instruments, but he also knew that teachers did not get the needed help from the nearby high schools, did not have information about where the equipment would be available, and that head teachers did not allow free use of whatever equipment there was for fear of a 'Dead Stock problem.' As he was thinking about these problems, he was nominated as a paper setter for science by the DIET. The other paper-setters suggested choosing the easiest experiments for questions relating to experiments. Most of the questions he suggested were considered difficult. Prakashchandra found this difficult to accept, since in his previous district, the same questions had been handled well.

He made a list of the experiments which were considered difficult in Sabarkantha. He began to construct equipment for these and piloted them in his school. The DIET noticed this and asked him to be a trainer, teaching science experiments in schools in a few talukas with his science kit. Gradually the teachers' views about science experiments changed since he demonstrated that equipment could be made with low-cost material by oneself. In order to extend this activity, he came up with an activity, "*Vignan mate Tirthyatra*" – a science pilgrimage.

Vignan mate Tirthyatra

Prakashchandra noticed a curious phenomenon – the teachers who were of the opinion that experiments could not be conducted for want of equipment were the ones who devoted a lot of their time to religious or spiritual activities. Their holidays were spent on such activities. He considered *Tirthyatra* (pilgrimage) an appropriate label, since the time would be used to solve problems related to science, and a pilgrim was supposed to carry all that he needed with him.

Under the *Vignan mate Tirthyatra*, Prakashchandra first targeted his own taluka, Vadali. He asked for permission to begin with Classes 5-7 in 60 schools. He wrote to all the schools explaining the activity and mentioning that would be no financial burden on the schools, since he himself would be bearing the costs. Though the DIET had permitted him to leave the school on working days to go to the project schools, Prakashchandra decided to visit the schools only on holidays and Sundays, so that his class work could go on. Various schools started inviting him. During these visits he demonstrated many experiments, and trained the students to carry out the experiments and to prepare equipment/ instruments.

After some difficulties in the beginning, he standardized the experiments by preparing a list of science activities, their serial number in the text book and the equipment required.

About 16 experiments or activities were listed for Class 5, 59 for Class 6 and 50 for Class 7. These include a variety of activities – making a simple magnetic compass, conduction of heat in solids, the image in a pinhole camera, distillation, electrolysis of water and use of a voltmeter, models exhibiting details about density, the periscope, preparation of zinc oxide, images formed by a concave mirror, the kaleidoscope, and so on. The ‘science box’ that Prakashchandra prepared tried to keep purchased material to a minimum, and so its cost could be limited to Rs. 300.

Developing science in the form of a pilgrimage has inspired teachers to devote time to school even during holidays. Teachers of all those schools where the *Vignan Tirthyatra* was conducted have prepared the science box and have taken the *Tirthyatra* further; 24 of these teachers have exhibited the experiments at science fairs in the district. The students are also familiar with the experiments and themselves conduct them. According to Prakashchandra, “The values of logic, observation and accuracy have been developed in both teachers and students as a result of the construction of equipment.”

The project continues. Prakashchandra has been encouraging the teachers through letters and messages, and also monitors the activities of the schools where he has performed the “*Vignan mate Tirthyatra*”. The response of the schools has been encouraging.

After a few years at Kesarganj, he was transferred to Chulla village. Here he made 40 working models and with these developed a science lab. At Chulla he organizes various math and science related activities for students every alternate Saturday.

So far Prakashchandra has demonstrated his experiments in about 160 educational institutes, including private schools and colleges. He has also developed science labs in seven primary schools, and has made science equipment for a voluntary organization. He was invited to write science textbooks for Classes 5-7, and has used this opportunity to promote low-cost equipment to understand science. In addition, Prakashchandra is involved in the government’s in-service training of primary teachers through the distance education mode.

Discussion Questions

1. The problems of science education that Prakashchandra initially identified (see first paragraph) are fairly common. What should be done at the administrative level to solve these problems?
2. Comment on Prakashchandra’s use of the word ‘pilgrimage’. Can you think of similar terms which blend culture with educational purposes?
3. Identify the key principles that Prakashchandra followed, and the key steps he took to plan and refine his *Vignan mate Tirthyatra* initiative.
4. Write a short essay of one page on the key initiatives that are needed to improve the quality of science education at the primary level.