Learning Curve

A newsletter from Azim Premji Foundation

Issue III, July 2004

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Azim Premji Foundation

From the Foundation

In this issue of "Learning Curve" we are pleased to present to our readers some of the findings of the key research completed by the Foundation.

As is probably known, each one of the programmes of the Foundation has a base line, a monitoring system and an end line. In addition, multiple researches have been commissioned to understand the inter-linkages in a comprehensive manner.

Since most of the programmes are very young at this stage, no concrete conclusions have been drawn. All the same, there are interesting revelations that we are keen to share with our readers.

We would urge our readers to interpret the current research findings in a certain perspective.

For instance, under the Learning Guarantee Programme, the findings of comparison between the winning schools and those that participated but did not make it in this round of evaluation provided very interesting insights into the possible factors. However, they are primarily the differentiators between these schools and are not intended to constitute the conclusion on what facilitates learning and what does not.

Similarly, the findings related to the Computer Aided Learning interventions in Andhra Pradesh and Karnataka have to be understood with a perspective that the execution models in these states are significantly different. Further, the current research is restricted to find out learning based on the usage of identified curricular content of the Foundation and not about the progress on overall subjects. There are other factors such as differences that could exist within the schools in terms of duration of exposure and other contributing factors towards learning.

We welcome critique and inputs from readers to help us enrich our evaluations and investigations. Please also feel free to seek clarifications on any of the contents of this issue of "Learning Curve" since it is not possible to cover all the details in a newsletter.

Dileep Ranjekar

Government of Karnataka to expand Learning Guarantee Programme

The Learning Guarantee Programme, launched on pilot basis in North East Karnataka, appears to have generated great enthusiasm and voluntary spirit for accountability among schools and educationists in the region. The State Government plans to expand the programme to cover all the 202 Education Blocks in the State. There are over 48,000 primary and higher primary government schools in Karnataka. The plan is to evaluate around 10,000 schools in the academic year 2004-05.

Azim Premji Foundation has already imparted training to 100 master trainers from the District Institute of Education Training (DIET) on the process of evaluation. These in turn will train 3,200 evaluators chosen from among the education functionaries and led by BEO, BRC, and DIET lecturers.

Research For Development of Elementary Education in India

Prof. R.Govinda
National Institute of Educational Planning and Administration, New Delhi

Of what use is research that does not help improve the education system in India? This is the common refrain of many observers on research studies in elementary education conducted in the country. In the prevailing situation when the country is still struggling to provide basic education of acceptable quality to all children, it is quite legitimate to expect that investment made in research add value to ongoing efforts for improving the system. But for this to happen, researches in elementary education have to be so designed to capture change and improvement in the field reality and to be able to link such changes to ongoing development actions in the education system. This article is, by no means, a comprehensive review or evaluation on the current state of research studies on elementary education; it only alludes to the broad contours and directions of ongoing research in education.

Has developmental action succeeded in bringing all children to school?

Various surveys on schooling show that enrolment has gone up significantly in recent years, particularly among girls. Increase in enrolment has been attributed, particularly by the sponsoring agencies, to such innovative efforts as Education Guarantee Scheme in Madhya Pradesh, Girls Camps promoted by Lok Jumbish in Rajasthan, Bridge Courses popularised by MVF in Andhra Pradesh or urban initiatives such as Pratham in Mumbai. Though these efforts which mainly target vulnerable sections of the population appear to have achieved good results in the short term, we are short of scientific empirical evidence on the way these have interacted with various factors in the field; their sustainability; undesirable side-effects they might have in the long run; local factors that may have facilitated their implementation; and the potential they hold for long term and large scale adoption. These require specially designed empirical studies, including qualitative and longitudinal ones. Quick paced evaluation studies, which have become a regular part of education development work in the country, do not answer such critical questions.

## Do children who get enrolled stay in and complete elementary schooling?

Many children drop out without completing the cycle of elementary schooling. There is very little systematic effort to track children and study the flow pattern of students from class to class. Large-scale data bases created under DPEP and SSA do not deal with the issue squarely. In fact, macro figures arrived at are often conflicting. Understanding the dynamics involved in this demands more localised in-depth studies of child tracking and exploring the effectiveness of contextually relevant solutions. It is obvious that what applies to migratory population cannot be applied to sedentary population dependant on local agricultural labour, though children in both categories may not stay to complete schooling. This is compounded by the fact that children are enrolled in a variety of school settings EGS (single teacher centres), 2-3 grade schools (mabaadi) and so on; mushrooming of recognised and unrecognised schools in the private sector has further complicated the issue. Some attempts have been made to tackle the issue through maintenance of Village Education Register which would help follow up on all children in a specified locality.

To what extent has teacher quality and performance improved?

Recent years have witnessed massive investment for improving teacher performance in elementary schools. Two types of inputs have been provided (a) teacher training, mainly, in techniques of pedagogy, and (b) material support for teaching. Small scale studies on impact of teacher training indicate positive change in teachers. Similarly, studies on material support, including direct financial grants to teachers, show that it has made a difference. But generally they are inconclusive on how to create developmental action based on these findings. The limitation essentially lies in the design and approach of the studies. But they do not address the central proposition that resource centres have to play only an instrumental role in order to achieve change elsewhere, namely, classroom behaviour of teachers. Merely recounting the activities of the centres, however good they may appear to be, is of no consequence. Wherever even small scale empirical studies are done it is essential to link the observations with contextual factors that have facilitated or hindered cumulative improvement in teachers' behaviour and performance. For this, the traditional rigid positivistic framework has to be replaced by a more open exploratory one while designing such studies.

To what extent have the developmental inputs transformed the nature of classroom transaction processes?

Classroom is the heart of all formally organised educational efforts. Factors that influence classroom processes are firmly embedded in (a) teacher quality and (b) local learning context and conditions. Some small scale studies addressing this issue are available. But, part of the problem seems to be that the State authorities managing developmental action often chose to showcase isolated small-scale experiments. It is important to note
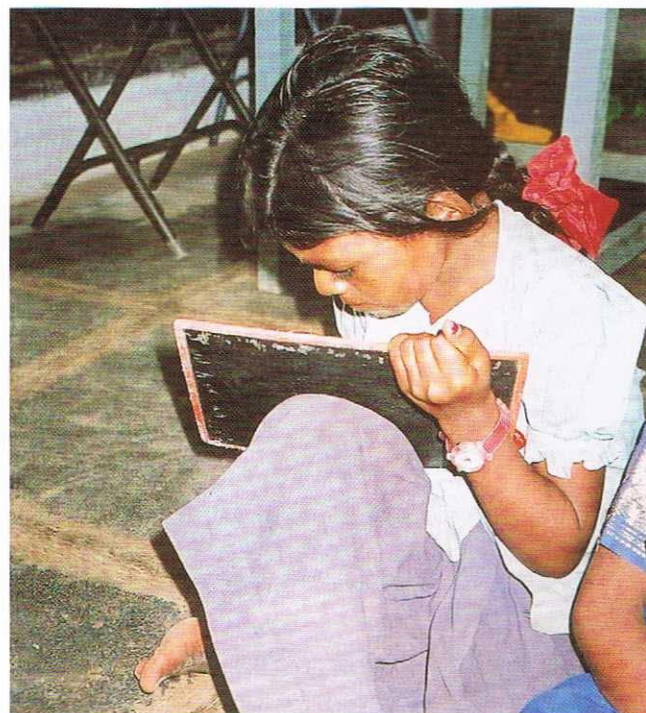
that one cannot discover or perfect a formula to transform classroom processes across the board. Teacher being the central figure in orchestrating classroom processes, poor subject competence can severely affect efforts to improve classroom transaction. Studies are needed to make a realistic assessment of this problem.

Do children learn better now than earlier?

Conducting large scale testing of children has become quite pervasive in recent years. Using achievement tests and measuring learning levels of children to benchmark quality of schooling in a country cannot be rejected as irrelevant or inappropriate. But, to what extent does it help influence learning levels of children attending schools in widely varying contexts which characterise elementary education in India? National level assessments co-ordinated by NCERT tell an average story describing the current status of schooling in different states. But it should be noted that while running a school system is a national level endeavour, teaching-learning is essentially a localised phenomenon almost completely defined by the teacher-learners and the local conditions in which the interaction processes take place. The need for empirical research in this area is enormous if it has to help local authorities to devise developmental inputs that are relevant to the context in which learning takes place. Even the paradigm of research has to undergo change. Teachers and learners cannot be seen only as objects of study; they have to become active participants in such empirical explorations.

Are schools qualitatively superior to what they were earlier?

Can the quality of education improve if the schools, what is provided in them, how they function, what happens in them, do not change? It is perfectly normal to assert that for quality improvement in education, 'school is the heart of the matter'. No claim on improved facilities and training of teachers can be automatically interpreted to mean improvement in school functioning. For this, research studies have to treat schools as holistic organisational entities. Interestingly, establishment of alternate delivery mechanisms has led to sponsoring comparative evaluation studies that tend to highlight the superiority of one-teacher schools, non-formal centres, schools with para-teachers and so on. Such studies may help authorities to legitimise and expand their policy and programme initiatives but would hardly throw light on the quality of schooling per se. The goal has to be that all schools change for the better. In reality, there are schools that are improving and those that are not.

To conclude, it should be stated that research studies would not solve or even find solutions to the multitude of problems that the elementary education system faces in India. But if these are properly designed and carefully aligned to developmental action, they can definitely make a difference to the system both in quantitative and qualitative aspects. This demands an understanding among the administrators of the value of research that goes beyond the conduct of large scale surveys and evaluation studies. It also demands of researchers high levels of creativity, independent thinking and professional knowledge and skills. Most of all, it requires mutual trust and closer collaboration between professional researchers and educational planners on a sustained basis.

(Prof. R. Govinda is Senior Fellow and Head, School and Non-Formal Education Unit, National Institute of Educational Planning and Administration.)

Milestone: 50 Titles
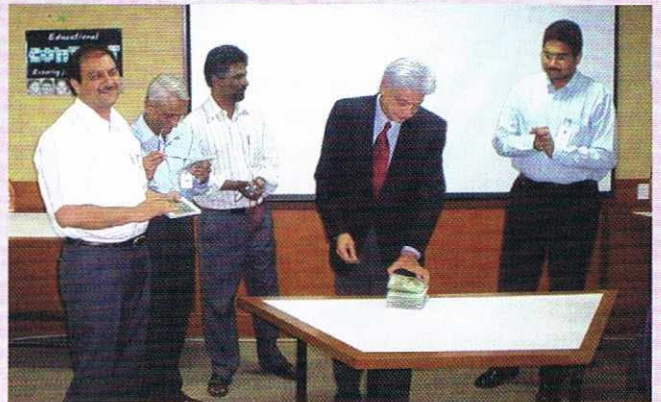
July 1, 2004 was a momentous day for the Foundation as it reached a milestone with its 50th Title, under the Computer Aided Learning Programme. All these Titles are available in Hindi, English and Kannada. Some are in Tamil and Telugu also. Mr. Azim Premji, Chairman, Azim Premji Foundation released the 50th Title, at a function which was attended by Mr. V R Patel, Commissioner for Public Instruction, Karnataka, Dr. Rajkumar Khatri, State Project Director SSA, Karnataka, Mr. Jagannath Rao, Director DSERT, Karnataka, Mr. Sanjay Jaju, Collector, West Godavari District, Andhra Pradesh, Ms. Seshukumari, State Academic Monitoring Officer, DPEP, Andhra Pradesh and Mr. Ramadas, State Project Director, SSA, Pondicherry. On this occasion, all our collaborators in content creation, i.e. subject matter experts, child psychologists, creative analysts and educational software companies working on the Titles were honoured.

Excerpts from the speech by Mr. Azim Premji on the occasion.

"…Delivering universal quality education to our children is a complex issue. Each child learns in a different way and each teacher has her own approach and understanding of how the children in her class learn. In a way, it is like each mother believing that her way of bringing up the children is the best way. A lot of experiments and initiatives have been tried in enhancing the learning of children across the world.…

…We decided to launch a pilot Computer Aided Learning Programme in 35 rural Government schools in Karnataka in consultation with the Government of Karnataka. The pilot involved placing computers in identified schools, providing curricular content and liaisoning with the communities to take responsibility for the operational costs of the programme……

…..We were testing the following hypotheses:

1. Even six year old children can use a computer without elaborate training;

2. Computers can attract and retain children in schools;

3. Computers can bring the community to school and their involvement will spread to other areas of learning;

4. Good quality content can enhance the quality of learning in a joyful manner.

….Today, almost three years later, we are confident that the hypotheses have some validity….."

For the full text of the speech, please visit www.azimpremjifoundation.org

Factors differentiating the successful schools from others in the Learning Guarantee Programme

What enables a school to succeed in the Learning Guarantee Programme? To what extent is the quality of teaching and school management system responsible for this? Can the children and their families also contribute to the success?

A study carried out in a sample of the schools that participated in Learning Guarantee Programme (LGP) provides indicators to some of these questions. And what is abundantly evident is that any typical school could potentially be a Learning Guarantee School.

LGP IN A NUTSHELL

Azim Premji Foundation initiated the Learning Guarantee Programme in association with the Government of Karnataka in 9,280 government schools in North East Karnataka. To qualify for a Learning Guarantee School Award, the schools volunteering for assessment had to achieve pre-determined levels in **Enrolment** (100% enrolment of children in the 6-11 years age group in the habitation), **Attendance** (90% children showing regular attendance) and **Achievement** (90% competencies demonstrated by the children). In the first year of the programme, 896 schools offered themselves for evaluation. Of these, 40 schools emerged successful.

OBJECTIVES OF THE RESEARCH

The broad aim of the study was to identify attributes that differentiate schools that have succeeded in the LGP assessment (the Winning Schools) from the other schools which were also evaluated in the programme (the Other Schools).

The overall performance of schools was analysed on two parameters:

A. Socio-demographic, infrastructure and environmental indicators - These encompass quantitative measures like school infrastructure, school management, socio-economic background of the enrolled children and environmental factors.

B. In-school processes - These are essentially qualitative aspects like commitment of teachers, quality of teaching methods, and classroom practices.

The study was intended as a preliminary exercise to help get a broad understanding of the aspects involved and to provide inputs and direction for further detailed research on specific issues thrown up by the findings.

METHODOLOGY

The sample for the study comprised the 40 Learning Guarantee Programme Winning schools and 40 Other participant schools which 'matched' the successful schools on basic parameters like block, type of school (LPS/HPS, Girls/Co-ed, approximate school strength) etc. to ensure similarity of environment to the extent possible.

A structured questionnaire based approach was used to collect the data for the study. The information was obtained by observations, by interviewing the Head Teacher as well as data from the school registers and records. The sample for the study comprised the 40 Winning schools and 40 Other schools. The data collection for the study was carried out by a team of area co-ordinators of the Foundation. The team was thoroughly briefed and trained for the purpose before the start of the field work. The data was collected in February 2004.

FINDINGS

The findings of the study are presented in two sections - Quantitative indicators and Qualitative feedback. Data from Winning schools and the Other schools is compared and results are presented.

Quantitative Indicators

The quantitative indicators are segregated into four categories Infrastructure, Teacher Profile, School Practices and Socio-economic parameters.

Infrastructure

Surprisingly, facilities like pucca building and availability of bus service within half a kilometre of the school hardly seem to make a difference. Facilities like drinking water, usable toilets and separate toilets for girls seemed to be slightly better in Winning schools than in the Other schools. An overall assessment of these indicators suggests that the Winning schools are similar to any Other participating school on most of the parameters.

Teacher Profile

Data shows that a typical teacher in a Winning school is very much like his/her counterpart in Other schools in terms of age, education, caste background, number of years of teaching experience, experience in the present school and marital status. **In other words, the demographic profile of the teacher does not seem to be influencing in any way the success of the school.**
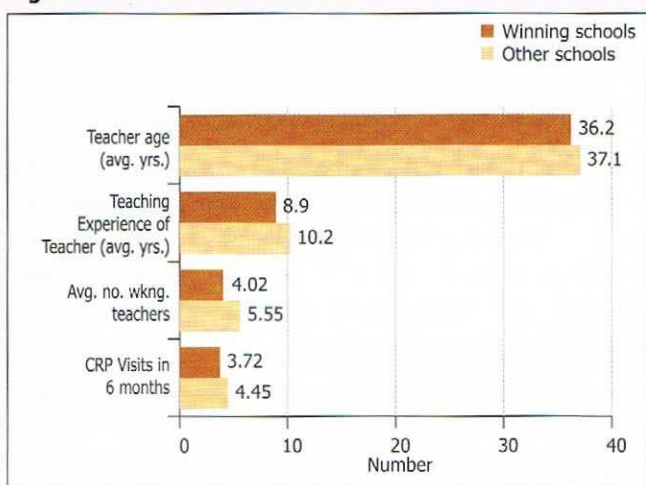
The graphs below present some of the indicators which do not differentiate between the two segments of schools.

Figure 1: The Non Differentiators
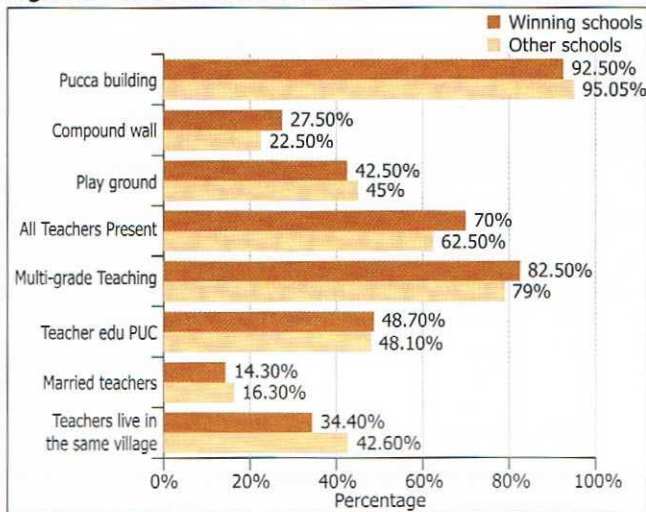
Figure 2: The Non Differentiators

School Practices

The most significant differentiators emerged in school practices. The Winning schools clearly present a better appearance with neat surroundings. While this in itself may not appear to be a significant parameter, it is perhaps indicative of a certain discipline and pride in the school and concern for environment. The extensive presence of Teaching Learning Material is another differentiator and one which is closely connected with the 'learning' process. The findings also show that management practices are a major area of differentiation between the Winning and the Other schools. Teachers are more punctual and records are kept better in the Winning schools.

Qualitative Findings

Data was collected through open-ended questions to understand what the various stakeholders did to meet the LGP criteria. The findings revealed the following important differentiating aspects about Winning schools.

i.   The schools have tried sincerely to reduce absenteeism, increase attendance, increase interaction and involvement of the parents.

ii. They have also put in extra efforts to get the children to practice more and to provide additional teaching or remedial lessons.

iii. There was more co-operation from the SDMC members and president in the Winning schools segment.

iv. Parents in Winning schools have contributed in many ways. On the other hand, the parents in the Other segment do not seem to have done anything significant.

The Block Education Officers and the Cluster Resource Persons on the other hand seem to have been a lot more even handed in their efforts towards both kinds of schools.

Figure 3: Differentiators
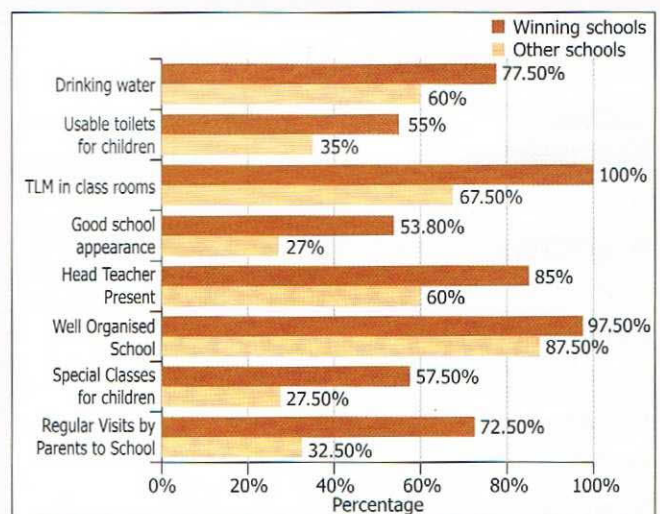
Socio Economic Indicators

Data on socio economic indicators of the children and their families was collected from the school records. This could, however, be collected for only about 75-80% of the children. Hence, this data has to be seen as being broadly indicative of the overall socio- economic profile of the families in the habitations around the schools rather than definitive indicators for each school. This data represents information pertaining to 9,141 households of the children across the 80 schools.

An extremely revealing picture does come out of this section of the study. While the profile of the households of children in Winning schools does not read particularly well, that of the households in the Other schools is even less so. About 38% of the fathers and about 23% of the mothers of children in both segments of schools work as labour. Further, the overall situation is highlighted by the absence of 'education' among parents. Between 45% and 58% of the fathers and between 66% and 77% of mothers have had no formal education. On this aspect, the differences in the two segments of schools are significant. The educational background thus does seem to have a correlation with the success or otherwise of the schools on the Learning Guarantee parameters. The heartening aspect however is that in this scenario, children in 40 schools have been able to demonstrate learning achievement.

CONCLUSIONS

The findings presented clearly bring out the significant differentiators between the Winning schools and the Other schools. The findings also seem to disprove some of the commonly held perceptions while reinforcing some others.

The following table summarises the key indicators. (The number of + signs in the last column indicates strength of differentiation.)

Indicator	Winning schools	Other schools	Strength of differentiation
Drinking water	77.5%	60.0%	+
Usable toilets for children	55.0%	35.0%	+
Separate girls toilets	51.3%	30.8%	+
TLM in class rooms	100.0%	67.5%	+++
Good school appearance	53.8%	27.0%	+++
HT Absent	2.5%	17.5%	+
All registers are maintained up to date	97.5%	87.5%	+
Teachers took special classes for weak students	57.5%	27.5%	+++
Practised model question papers	50.0%	27.5%	+++
Parents made regular visits to monitor and discuss with teachers	72.5%	32.5%	+++
SDMC helped in Increasing attendance	52.5%	25.0%	+++
Father has no formal education	45.0%	57.9%	+++
Mother has no formal education	65.7%	76.9%	+++

To summarise thus, the key learning from the study is

1. The infrastructure facilities at the school are not important differentiators between the Winning and the Other schools.

2. The profile of teachers in terms of age, educational qualifications, experience or place of residence also does not contribute to schools achieving learning guarantee.

3. The key differentiators relate to teacher involvement, school management and teaching practices in terms of high degree of discipline

   - Extra efforts were put in by teachers to teach the children and provide remedial teaching to those who need it.
   - Commitment on the part of teachers to ensure that children learn.
   - Extensive teaching learning material in the class.
   - Interacting with the parents regularly on the progress of the children.

4. The educational background of the parents also seems to play a role in the success of the school. However, irrespective of the background, the parents as also the SDMC members have contributed their bit to make the schools successful.

The most heartening finding of the study on the participating schools is that any average school can achieve Learning Guarantee with greater involvement and effort from the teachers and the community. This suggests that many more schools can achieve the distinction in the coming years.

These findings need to be viewed as the first step in the process of unravelling the factors and issues that motivate schools, communities and the children to strive and succeed in achieving Learning Guarantee. A more detailed understanding, particularly of the classroom transactions, teacher motivation and aspects like how the families overcome their economic limitations to achieve success is required.

For the complete research document, please visit www.azimpremjifoundation.org

Learning Guarantee Programme school feedback

Each of the schools that were evaluated in the Learning Guarantee Programme has been provided individual feedback. The feedback sessions generated a lot of confidence in the fairness and transparency of the evaluation process. The key to the feedback process was the complete involvement of the Cluster Resource Persons in the education department. The 896 schools were provided competency-wise performance data for each child. An analytical school performance summary was also provided, to enable the school to identify the competencies which the children have mastered and those which they have not.

In 2004, 1,451 schools have offered themselves for evaluation and there is an air of excitement and determination among the schools to become Learning Guarantee schools.

National Conference on Enhancing Learning in Elementary Schools

Organised by Ministry of Human Resource Development, Government of India and Azim Premji Foundation

**July 23-25, 2004
National Institute of Advanced Studies,
IISc. Campus, Bangalore**

Impact of Computer Aided Learning on Learning Achievements

Azim Premji Foundation is implementing Computer Aided Learning Programme in some government elementary schools in Karnataka and Andhra Pradesh. Under the programme, the computers are made available by the government while the Foundation provides training and curricular content. The features of the programme in the two states are slightly different.

The key features of the Computer Aided Learning Programme in Karnataka are as follows:

- The government provides 5-8 computers and related hardware to each identified school.

- The programme is designed to ensure involvement of the community and make the centres self-sustaining over a period of time.

- The computers are managed by local youth -Young India Fellows (YIFs) who are trained by Azim Premji Foundation.

- The curricular content developed by the Foundation to assist in learning subjects like mathematics, language and EVS are provided to schools.

- Children have freedom to decide which curricular content to use.

- The YIF provides services which generate revenue for the sustenance of the centres and pay for the honorarium of the YIF.

In the West Godavari district of Andhra Pradesh however, the programme has been implemented differently. The key features are:

- The district administration in West Godavari district provides e-services through e-seva kendrams and Rural Service Delivery Points (RSDP). One computer is used in each centre to provide services to the community like collection of electricity and water bills.

- The computers are made available to the children of nearby schools.

- The curricular content is provided by Azim Premji Foundation. The teachers in the school are trained in the use of the curricular content and their integration in classroom learning.

- The teachers accompany the children to the computer centre in batches of 10 and assist the children in their use. A group of five children gets to use the computers and the curricular content for about 30 minutes each week.

OBJECTIVES

The objective of the research was to understand the impact of the programme in Karnataka and Andhra Pradesh on the learning levels of children exposed to the intervention.

METHODOLOGY

A 'control group' and 'experimental group' design was followed. The schools where the students had exposure to the computer aided curricular content formed the experimental group while the schools which did not have access to the computers and curricular content comprised the control group. For the sake of uniformity, all the experimental group schools were those where the computer installation and use for learning started in September 2003. Six schools each from the two groups in Karnataka and ten schools each in Andhra Pradesh were randomly selected as the sample for the study. 1,161 students from class III, IV and V in 12 schools were given the written test in Karnataka. In Andhra Pradesh, 1,772 students in class III, IV and V were tested across the 20 schools.

The impact of the above intervention was sought to be measured separately through appropriately designed 'learning achievement tests'. The tests were based on the learning in school curriculum which overlapped with the curricular content. A simple Analysis of Variance (ANOVA) test was carried out to determine the statistical significance of the data.

FINDINGS IN KARNATAKA

The average percentage of marks obtained by the students' class wise is presented below:

Figure 1: Average Percentage of Marks of Students in sample schools in Karnataka
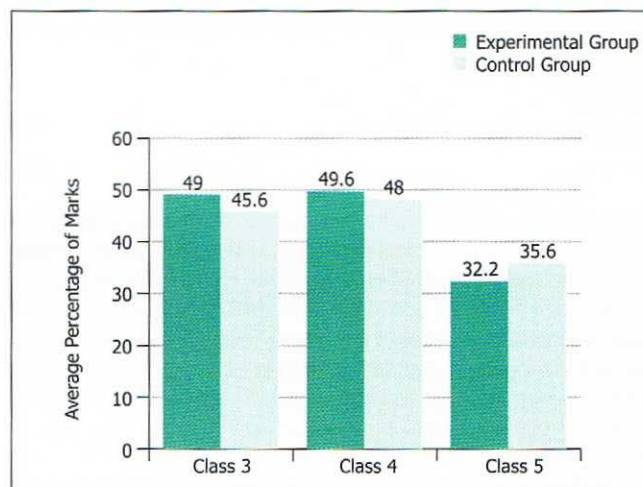
The results clearly show that the average marks obtained by the children in the two groups of schools are similar. The ANOVA test indicates that there is no significant difference in the marks of two groups. In other words, exposure to computers and the curricular content to the students in the experimental group schools does not seem to have increased their level of learning (as measured by the achievement test) in any way.

However, a separate analysis carried out on all the 225 centres in the state on their sustainability indicates that over 11% of the schools have become fully self-sufficient by generating regular revenue to cover all the expenses. Further, in an additional 16% of the schools the parents and the community have come forward to pay for the salary of the YIF volunteers.

FINDINGS IN ANDHRA PRADESH

The average percentage of marks obtained by the children class wise is presented below:

Figure 2: Average Percentage of Marks of Students in sample Schools in Andhra Pradesh
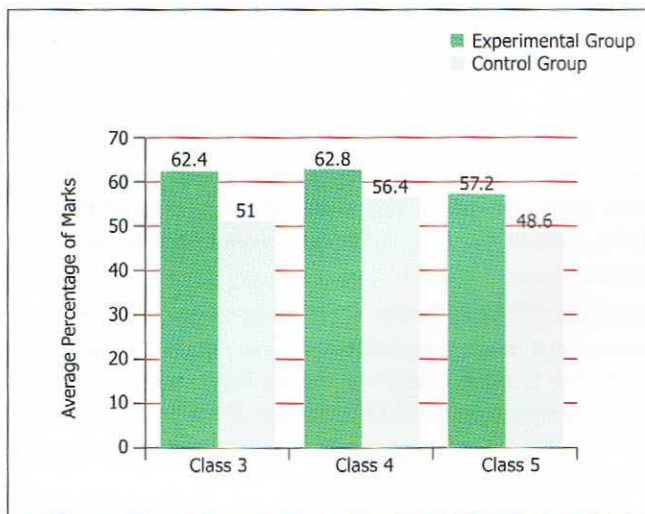
As can be seen, in all the three classes, the marks obtained are significantly different between the experimental group schools and the control group schools. The average marks in experimental group schools are consistently higher than the average marks in control group schools in all three classes. This is a clear indication that the computer aided learning has significantly impacted the students in the experimental group schools in a positive way.

CONCLUSIONS

In Karnataka the impact on learning achievements is not seen. But the progress towards economic sustainability is noteworthy. This aspect needs to be monitored for more time to determine success.

The findings in Andhra Pradesh clearly point to the experiment being successful in the context of the environment there. The involvement of the teachers in the computer aided learning has had a beneficial impact. To be able to replicate this in other parts of the country, it would be necessary to understand how precisely the involvement of the teachers has been helpful. A clearer assessment of this in terms of parameters like the time spent by teachers on the curricular content, the type of linkages that they drew between the classroom teaching and the computer exposure, the type of follow-up exercises, if any, that they exposed the students to, the sequencing of the classroom teaching and the computer exposure that was practised and the quality of the classroom processes in general would be helpful in further improving the curricular content based learning process. A separate study to understand this is suggested.

Note: The models in Karnataka and Andhra Pradesh are different in conception and context and should be viewed independently and not in a comparative frame. Whereas, the focus in Karnataka has been self sustenance with the participation of community, the same effort is not involved in Andhra Pradesh where the existing e-seva Kendrams are leveraged for the school children to learn.

Impact of Computer Aided Learning on children with specific learning disabilities

Spastic Society of Karnataka conducted a research study on analysing the impact of using computer aided learning on children with specific learning problems in rural elementary schools of Karnataka. The following is an abstract of their report.

One of the major objectives of learning is to acquire knowledge and retain it for applying in real life situations. Learning can become a nightmare when there are memory problems, difficulties in following directions, trouble with visual or auditory perception of information and an inability to perform paper-and-pencil tasks. Persons with learning disabilities have **specific problems** related to language (dyslexia), writing (dysgraphia) and mathematics (dyscalculia) **in spite of having near normal or above normal IQ** and not having any serious sensory disability, emotional disturbance, brain pathology etc. Millions of children have been labelled as learning disabled. These children are years behind their classmates in developing academic skills which can lead to their dropping out of school.

OBJECTIVES

The objectives of the study were

1. Study the effectiveness of computers in enhancing learning for the children with special reference to the children who have problems in learning.
2. Study the impact of the technology on the Meta cognition of inefficient learners.

METHODOLOGY

1,010 Children from classes III-VI from four schools of Anekal District of Karnataka were screened using psychological and psycho-educational assessment to identify those children with reading, mathematics or written expression substantially below that expected for their age, schooling and level of intelligence. The children identified were tested to ensure they had normal sight, hearing,

motor abilities and mental growth. The study thus involved observation of 70 children identified with specific learning problems. These children were studied for one year from December 2002 to January 2004.

FINDINGS

Positive impact was observed on some parameters:

- Most of the children showed improvement in visual motor co-ordination, social intelligence, language and non-verbal reasoning. There was tremendous improvement in social behaviour, attention, language (oral), communication and motivation.
- The computer aided learning had a positive impact in promoting the reading skills of the children, especially automaticity in reading. Improvements were also seen in aspects of speed, expression, accuracy and clarity.
- Computer aided learning enhanced language processing and memory of the children, with improvements in visual and auditory processing ability.
- A few children accessing the Computer Aided Learning Centre were seen to demonstrate improvement in motivation to write, ideation: (content and vocabulary), and use variety of words in written expression.

However, on a few aspects, beneficial affect could not be observed:

- There was no clear impact on higher order comprehension of factual information. i.e. analytical thinking and reasoning skills. The children required guidance in using the curriculum software that is meant to improve comprehension and concept understanding skills.
- Numerical reasoning and thinking skills did not show adequate improvement. Intensive application and coaching would be required as number work involves analytic thinking and reasoning.

Wipro Applying Thought in Schools: Partners' Forum

Wipro's education initiative, **Wipro Applying Thought in Schools,** contributes towards improving quality of education in India. Active in 14 cities, the initiative has imparted close to 200,000 hours of training to over 2,800 teachers, principals and parents from 120 schools nationally.

The initiative was triggered when Wipro realized that even the best people leaving our education system do not bring basic life-skills to the workplace. Education, with its focus on memorization and "doing well in exams" is strongly disconnected from the needs of the student and society. Over the past three years, the initiative has engaged with various stakeholders such as teachers, principals, parents, educationists to enable change. Wipro has partnered with experts in education to incorporate contemporary international research and the best teaching practices. .

Often, dialogue on education tends to polarize around issues of access and basic literacy. Wipro believes that national discourse needs to dramatically shift axis to the issue of quality. By quality, we mean a system of education that draws from a philosophy of an ideal society, a system which creates friendly and inclusive learning experiences so children construct knowledge, a system that feels responsible for the holistic development of every child to make them creative and critical learners.

Wipro has taken the first steps in initiating such dialogue. The **fourth Wipro Partners' Forum** was held in March 2004 in Bangalore. Eminent educationists from across the country from diverse organisations such as Azim Premji Foundation (Karnataka), CEMD (Delhi), CISCE (Delhi), Digantar (Rajasthan), Educational Initiatives (Gujarat), Educomp (Delhi), Eklavya (Madhya Pradesh), iDiscoveri (Delhi), NEEV (Delhi), Schoolscape (Orissa), Sparsh (Maharashtra), Teacher Foundation (Karnataka), Vidya Bhawan (Rajasthan) and Vikramshila (West Bengal) came together to share best practices and debate actions we need to take to facilitate quality education in India. The Forum discussed a wide range of issues from philosophy of education and psychology of child development to curriculum, pedagogy and assessment.

There were three tasks: networking, continuous expansion and creating a forum where agencies can come together and talk. Interestingly, each Forum itself has shown how to move forward. The next Partners' Forum will be held in September 2004.

For more information: www.WiproApplyingThoughtInSchools.com
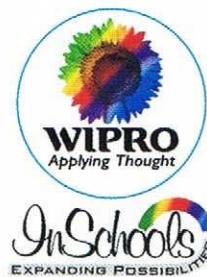
Pratham Innovation - Learning to Read

Pratham recently innovated, scaled up, and mainstreamed a "learning to read" technique. It combines 'reading aloud' stories, use of the phonetic 'barakhadi' chart for coding and decoding sounds, use of rhyming words, and an activity to 'say what you want and write what you want'. Children seven years and older who cannot recognize alphabets learnt to read simple sentences in eight weeks. Others who can recognize alphabets or read words haltingly progress much faster.

Between January 2003 and March 2004, nearly 250,000 children have learnt to read using this method in Pratham classes. Moreover, the "reading programme" has been mainstreamed in government schools in Maharashtra in 16 out of 33 districts. It is estimated that nearly 2.5 million children learnt to read between August 2003 and 2004 in a stepwise process that consisted of piloting the method in one block in each district followed by a district-wide scaling up. The success on scale is probably due to a combination of elements of the technique and the focus on reading.

A Pratham random sampling evaluation of children was carried out in all districts of Maharashtra. The chart below shows results from five districts in Vidarbha region. The enrolment of Std. II-VII children in treated areas was 868,000 while it was 393,500 in untreated areas. The treated areas now have nearly 85% readers, about 26% more than in the untreated areas. A state-wide external assessment to validate these results is now underway.

	Programme areas Std. II-IV	Programme areas Std. V-VII	NO Programme areas Std. II-IV	NO Programme areas Std. V-VII
Readers	76%	96%	49%	61%
Word readers	12%	4%	16%	14%
Non readers	12%	1%	35%	25%

District government officials, elected representatives, and teachers have taken ownership of this programme which will address writing, comprehension, and arithmetic in 2004-05.

For more information: www.pratham.org

Accelerated Learning Programme Concludes

The Accelerated Learning Programme (ALP) launched in August 2002 in Raichur, Bellary, Koppal, Yadgir, Gulbarga and Bijapur districts of North East Karnataka has successfully concluded at the end of two years.

The programme aimed at:

1) bridging the competency gap of 'out of school' children enrolled through short- term Bridge courses and enrolment drives, and

2) improving the learning levels of underachieving children in regular class.

The programme provides relevant innovative academic / pedagogic inputs to achieve this. It also stresses that every child in the formal system has the ability to learn, despite being 'out of school' for a year or more. It also facilitates retention and learning.

Scale and Coverage

During 2002- 03, the programme covered 55,000 children in 1,029 schools in the six districts. Gaining from previous year's experience the programme was redesigned and implemented in 2003-04, covering 68,200 children in 956 centres.

How it works

a) The ALP at each centre is carried out by a volunteer. He/she belongs to the local community and has been selected after a written test /interview. The volunteer is trained by the Foundation to use the pedagogical package that has also been developed for multilevel learning.

b) The programme is run within the school, during school hours and with the active support of the Head teacher.

c) Area coordinators monitor these centres on a daily basis by checking the quality of teaching and learning.

d) The volunteer maps the base competencies of each child on a chart throughout the programme. From the chart, at any point of time, it is possible for a person who visits the centre to know where a particular child stands vis-à-vis the current competency and the progress achieved.

Results:

i   There are two criteria on which the quantitative results will be cross-checked (a) consolidation of the progress charts maintained at various centres (b) independent end line test administered in a random sample of over 100 centres. Findings of the above are expected by end of July 2004.

ii   Schools have widely acknowledged that the Accelerated Learning Programme helped them significantly in improving the learning levels.

iii Availability of a field team of over 1,500 trained volunteers available across the 16 blocks at grass-root level.

iv   A process manual for ALP as a reference guide has been adopted by the Government of Karnataka.

Accelerated Learning Programme methodology expansion by Karnataka government

The Government of Karnataka has printed over 150,000 copies of these work books for distribution in schools that have a fair proportion of recently mainstreamed "out of school' children. It also plans to use the pedagogical method and the workbooks in about 6,000 schools, where a large number of out of school children have been enrolled.

These work books and the teacher's hand book are available for any organization or institution to utilize.

Computer Labs Outside School

Azim Premji Foundation and the district administration in West Godavari district of Andhra Pradesh evolved "computer labs outside school" for elementary school children. The model uses the available infrastructure in the e-seva kendrams and Rural Service Delivery Points. School children in the vicinity use these centres for computer-aided learning. Teachers in the schools are trained to integrate the curricular into classroom transactions for effective learning.

Making Assessment Fun

Children learning joyfully through computers using child-centric curricular content for about six months were tested for learning impact. Children were assessed through an online test from March 29, 2004 to April 5, 2004. 29,100 students took the online test designed to assess the competencies learnt through the computer-aided lessons.
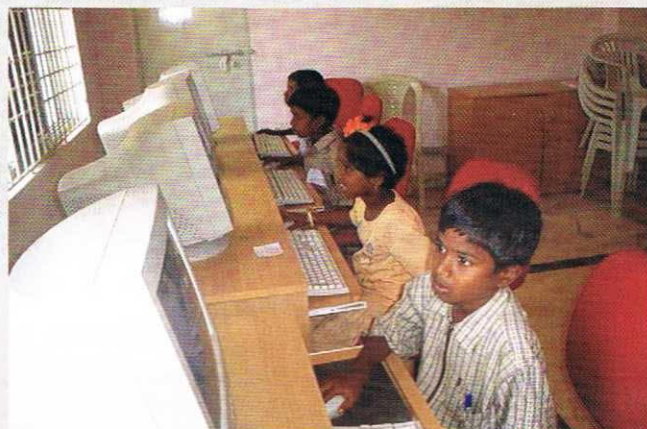
Children taking the online test in Eluru

The test was conducted class-wise, where students from class I to class V had different sets of randomised questions to answer. Students in class III, IV and V could, on an average, answer over 30 questions while students in class I and II answered around 20 questions. The atmosphere where the test was conducted had to be seen to be believed. The toppers in each class won a cash prize of Rs.2,000, Rs.1,000 and Rs.500 respectively provided by the District administration. The Foundation provided the children with a wrist watch. In addition, the winning schools and centres were given a certificate of appreciation by the Foundation.

Model extended in East Godavari and Kurnool

Joyful learning now finds its place in East Godavari and Kurnool districts of Andhra Pradesh. Children in 150 schools in both these districts will now use technology initiatives as part of their curriculum.

In addition to leveraging the presence of e-seva kendrams and Rural Service Delivery Points, the schools also get computer funding by the contributions of SSA (50%), Community (25%) and Byraju foundation (25%). As a first step, training programme was conducted at Bhimavaram covering 480 teachers.

Child Friendly School

OBJECTIVE

Experiment and demonstrate a process of providing quality education to all children in identified schools in partnership with all stakeholders, while building capacity and accountability to deliver the same on a sustained basis.

Definition of education in a Child Friendly School

A facilitated process of all-round development - encompassing physical, intellectual, psychomotor, creative, ethical, cultural and social development and includes acquisition of knowledge and skills; and development of attitudes and values as defined from time to time.

COVERAGE

- 1,100 schools during 2004 - 2008 in Andhra Pradesh and Karnataka.
- Pilot in about 535 schools during 2004 - 2005 in Shorapur Block of North East Karnataka and Chittoor district of Andhra Pradesh.

KEY INTERVENTIONS

School Environment

- Physical infrastructure - classrooms, toilets, compound wall, playground, drinking water etc.
- Enrolment of all children in habitation.

Community ownership and participation

- Developing a school improvement plan in consultation with the school and community.
- Evolve school management principles and practices locally.
- Resource utilization plan - physical and financial.

Capacity building

- Head Teachers - Administrative and academic leadership of school, equity issues, prioritization of resources etc.
- Teachers - subject matter expertise, understanding learning process, creating classroom culture that is most conducive for child centric, individual learning.

- Parents - interest in child learning process, support at home for learning.

EXPECTED RESULTS

Result 1: Learner friendly school environment. Indicators: teacher pupil ratio of 1:40, functional blackboard, adequate ventilation, toilets for boys and girls with water facility, compound wall, school garden, library books etc.

Result 2: Multigrade, gender sensitive culturally relevant curriculum - competence in reading, mathematics, knowledge attitudes and skills for life.

Result 3: Available teaching learning material that supports activity centered programme, conducive to individual-paced learning and acquiring life skills.

Result 4: All teachers competent to implement the quality curriculum and non-threatening learning by children.

Result 5: School as centre of change in the community by increasing awareness, obtaining required participation and support on environmental and social issues.

Result 6: A system of results based monitoring in schools and communities gathering evidence and documenting the efficiency of project components in place thereby sustaining the change.

PARTNERSHIP

While the Karnataka Government provides infrastructure like classroom, compound wall, teachers, and toilets with water facilities, UNICEF provides financial and training resources for toilets, health, hygiene, pedagogical packages where readily available, printing of material etc.

Azim Premji Foundation assumes overall project leadership. It includes developing of Head Teacher training package and multigrade training package for teachers, improving schools with community help, providing master resource persons for training packages and programmes.

Computer labs for kids in Pondicherry

In partnership with M.S. Swaminathan Research Foundation (MSSRF) and Government of Pondicherry, Village Knowledge Centres of MSSRF have been converted into computer labs for kids, during specified hours of the day.

10 Village Knowledge Centres are now being used by around 5,900 children from 16 schools.

153 teachers, 18 Sarva Shiksha Abhiyan officials and 30 Nirvahaks were trained by Azim Premji Foundation.

Mr. Ramadas, State Project Director, (SSA) who actively participated in this programme and saw its impact on the teachers has extended this programme to cover more schools in Pondicherry.

Curricular content being released by Dr. M S Swaminathan in Pondicherry

Learning - Play in Uttaranchal elementary schools

120 Elementary schools in all 13 districts of Uttaranchal will have children 'Learning Play' from July 1, when the schools reopen for the new academic year. The animated multimedia content developed by Azim Premji Foundation will be used in the pilot project across 120 schools. A three-day workshop from May 14-16 was held at the Dehradun DIET for 20 District co-ordinators and officials from SERT to validate the content for the state specific requirements. Prior to the workshop, a five member team from the State Primary Education department visited Azim Premji Foundation in Bangalore between April 21, 2004 to April 24, 2004 and familiarised themselves with the content development process and visited schools in Karnataka where similar content is being used.

Now in Urdu too

In Karnataka, there are 3,868 Urdu Language Primary Schools. Similarly in Andhra Pradesh there are 3,000 Urdu medium schools. The first Title in the Foundation's curricular content in mathematics was translated and made available in Urdu. This is the initial step in making all the curricular content available in Urdu.

New Titles released

The number of Titles brought out by the Foundation has increased to 50. Among the recent Titles, three are for EVS (The Mystery of Shadows, The Story of a Seed and Shambu's Green Friends) and six are for Mathematics (Angle Tangle, Mixing Fixing, Trip to Kolkata, Eco Day, Nature Adventure and A Day with Kadooji).
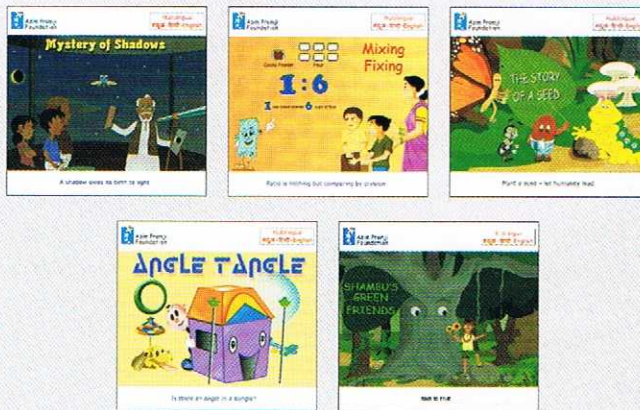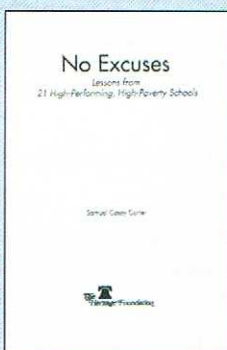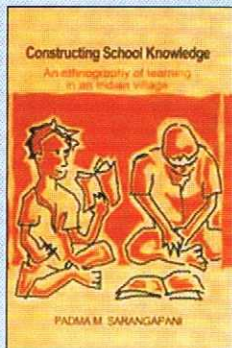
Book Case
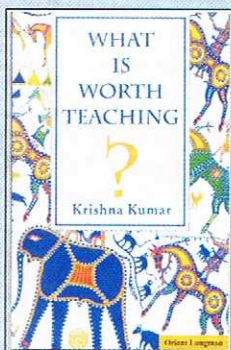
1. What is Worth Teaching?

By Prof. Krishna Kumar, Orient Longman Publication

This collection of lectures deals with the character of school knowledge and curriculum and relates the school curriculum to the structure of the educational system and political and economic conditions under which the system functions.

2. No Excuses Lessons From 21 High-Performing, High-Poverty Schools

Compiled by Samuel Casey Carter, The Heritage Foundation

...through anecdotes of high-performing, high-poverty schools shows, that there is no excuse for the failure of schools to deliver learning. Their achievements are an intended result of hard work, common sense teaching philosophies and successful leadership strategies that can be replicated.

3. Constructing School Knowledge

By Padma M. Sarangapani, Sage Publications

Based on a detailed study of a village school the author explores the process and meaning of rural schooling as constituted by teachers and children themselves.

4. Why Children Can't Read - And What We Can do About It

By Diane McGuinness

...examines the construction of writing systems and how they can be taught, along with exciting recent studies on reading programmes. The book is designed for teachers, educationalists and parents.

Azim Premji Foundation