



Summary: Impact of “Creative Learning and Teaching” techniques on academic performance in grades 3rd, 4th and 5th.

Pali district, Rajasthan, India

“The learning gains in Hindi and Math are so great, it’s reasonable to conclude that introducing CLT in Educate Girls’ program schools makes a striking difference.”

*Barbara Herz, Author “What works in Girls Education”,
Former Head of the World Bank’s Women in Development Division*

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INTRODUCTION

Educate Girls is holistically tackling issues at the root cause of gender inequality in India's education system. Our comprehensive model reforms government schools through community ownership and reaches 100% girls' enrollment, higher attendance and improved learning outcomes for all children. Founded in 2007, the non-governmental organization has its management and outreach office in Mumbai and operations in Pali and Jalore districts, Rajasthan.

An important part of our program to improve the quality of education is the introduction of child-centric learning and teaching techniques. The emphasis lies on activity-based and playful learning: children learn more efficiently, if they enjoy the process.

In September 2010, we trained 910 government schools teachers in "Creative Learning and Teaching" (CLT) techniques to improve learning levels and academic performance and supported the implementation of the CLT methodology in a 12-weeks module.

Our pre tests in government schools have found that only 15% primary school children can read a simple story in Hindi, their native language!

We conducted a pre and post test to assess the improvements children made in Hindi, English and Math. The results demonstrate that all 20,632 children have made dramatic improvements in learning outcomes.

In sum, we see big gains for both boys and girls in reading Hindi and in doing two-digit math (multiplication and division) -- core goals for primary school.

WHAT IS CLT?

Classroom transactions play an important role in retaining children in school. Thus learning and teaching methodologies are crucial in the process of ensuring girls do not drop out from school. Educate Girls' Creative Learning and Teaching (CLT) techniques comprise of two methodologies:

An accelerated “**Catch Up**” methodology ensures that children who are lagging behind other children in the classrooms can be taught effectively to catch up with the rest of the class.

The “**Peer Group Learning**” methodology emphasizes peer group work and involvement in the teaching and learning process. The objective is to take the burden off the teachers and to ensure that children find learning fun and thereby take interest and initiative in the process. The peer group methodology is suitable for children in classes 3rd, 4th and 5th as they are older and have achieved a certain level of reading, writing and numerical computation abilities.

Implementation of the CLT module

In September 2010, we trained 35 DIET¹ members and 6 KGBV²s teachers in the use of CLT techniques. As per our MOU with the Sarva Shiksha Abhiyan (SSA), Educate Girls planned the teachers' trainings to be conducted in all 923 Primary Schools across ten blocks of Pali district in co-operation with the DIET members. Of the 923 primary schools 13 were left as they reported 0 enrollments. Out of the remaining 910 schools, 854 teachers attended the CLT trainings conducted during October and November 2010.

We provided all 910 primary schools in the program a CLT kit with games and creative learning material developed by Educate Girls and Pratham Rajasthan. The CLT kit helps teachers to implement the CLT activities in the classroom.

¹ District Institute of Education and Training

² Kasturba Gandhi Balika Vidyalaya - Girls residential schools

“CLT is very easy to implement in the classroom as children learn by playing. This saves time and helps me complete my other school related work.”

*Mr. Dalaram Goswami, Teacher,
Primary School Badla Piyaon Kishan Nagar, Jaitaran, Pali*

Pre Testing

After the teacher trainings, Educate Girls conducted a pre test, which serves as baseline data for our impact study.



The pre tests were conducted in co-operation with CLT trained teachers and School Management Committee (SMC) members. The testing tools used in 3rd, 4th and 5th classes for Hindi, English and Math are based on standard ASER tools.

ASER Hindi and Math Testing Sheets:



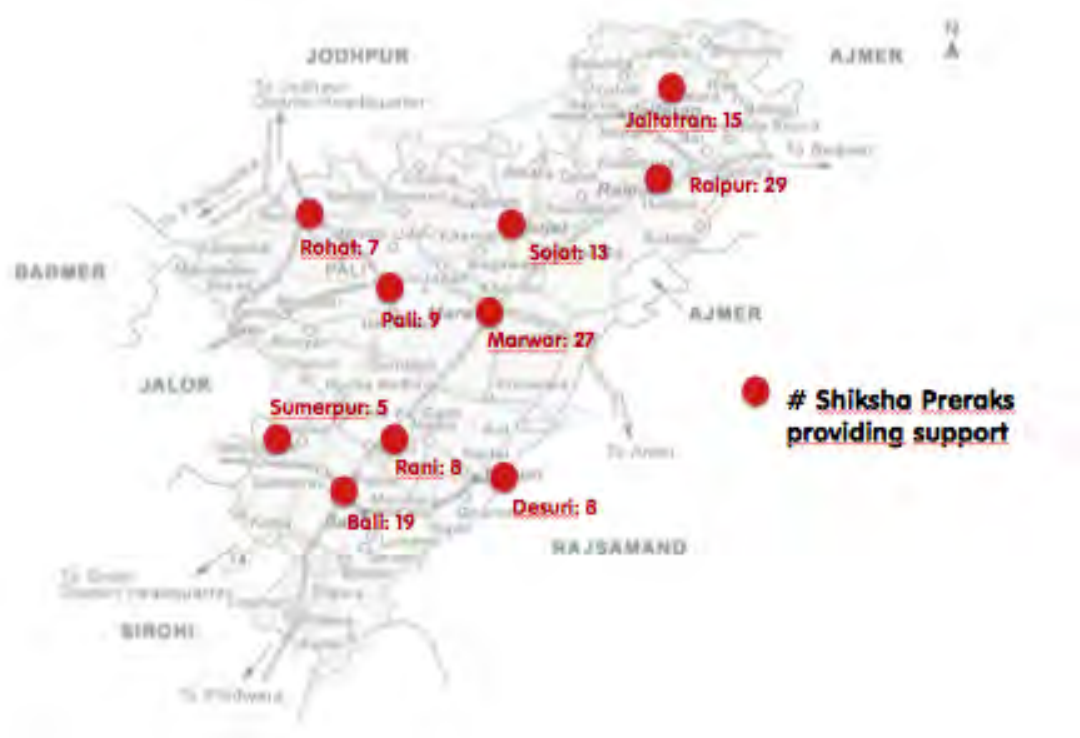
The pre test covered a total of 20,632 children in 910 Primary Schools. Educate Girls also conducted pre tests in 10 KGBV schools, 34 Bridge Courses³ and 8 Non Residential Bridge School Course (NRBC) centers across the district.

³ Shiksha Mitra Kendra (SMK)

To keep the processes transparent, the pre test results were shared with all teachers and the Sarva Shiksha Abhiyan (SSA) officials.

CLT Handholding Support

After the pre tests Educate Girls started a 12-weeks CLT support program in December 2010. All 910 primary schools were categorized based on the pre test performance, teacher motivation and accessibility of the school. Low scoring schools, where the number of weak children was higher than 60, received handholding support from a Shiksha Prerak (Village Education Volunteer) trained by Educate Girls. In total, 140 Shiksha Preraks operated block wise to assist teachers:



"I really enjoyed teaching children through CLT. It helped me build relationships like a family member with the teachers, children and their parents. Now everyone gives me a lot of respect in the village!"

Ravindra, Shiksha Prerak, Primary School Tewali, Bali

In addition, our Field Coordinators provided handholding support to another set of 300 schools; motivating teachers and demonstrating CLT activities with teachers and children.

For the first time, Educate Girls set up a telephone helpline in January to support 450+ schools with further mentoring. 763 support calls were made to teachers and Shiksha Preraks. In February we started an SMS campaign to involve and update teachers, Head Masters, Shiksha Preraks and our staff on the progress of CLT. Over 40,000 individual SMS were sent out during these 12 weeks.

RESULTS

This section features the subject wise aggregate results in grades 3rd, 4th, and 5th in 910 primary schools in Pali.

Enrollment and Attendance

In November 2010, total enrollment in the 3rd, 4th and 5th grades in the 910 primary schools was reported at 28, 895. On the day of the pre test 71% were present and were tested. In March/April 2011, 79% were present on the day of the post test.

Attendance (3,4,5th grades)			Test Attendance in %			
	Boys	Girls	Total	Boys	Girls	Total
Pre test Total	11,535	9,109	20,632	73%	70%	71%
Post test Total	11,917	9,445	21,362	80%	76%	79%

"I personally learnt addition, subtraction and multiplication through CLT! Now I feel that it really is a better teaching technique to rote memorization practices."

*Mr. Rajaram, Parent and President School Management Committee,
Primary School Bhatu Ki Dhani, Bali*

Subject based aggregate results for 20,632 children in grades 3rd, 4th, and 5th, conducted in 910 program primary schools.

The results of the pre and post test show dramatic improvements in learning levels in Hindi, English and Math. All children have moved 1-2 levels higher in their reading and math abilities. At the end of the 3 months activity there were almost 0% left at the lowest level of “no response”. All children had improved and were able to at least recognize alphabets or higher.

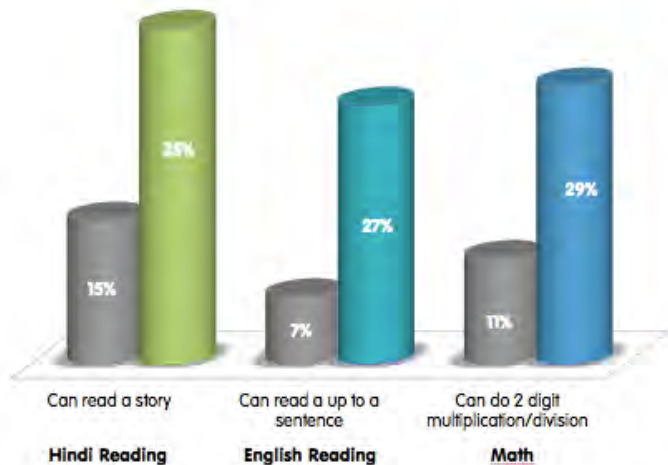
Learning Levels Hindi and English	Hindi		English		Math		Learning Levels Math
	Pre test	Post test	Pre test	Post test	Pre test	Post test	
Read up to story level	15%	35%	1%	2%	11%	29%	2 digit multiplication/division
Read a paragraph	18%	29%	2%	6%	24%	33%	2 digit addition/subtraction
Read a sentence	16%	20%	5%	21%	13%	21%	3 digit recognition
Read words	20%	12%	24%	42%	21%	13%	2 digit recognition
Alphabet recognition	25%	4%	48%	28%	27%	4%	1 digit recognition
No response	6%	0%	20%	1%	4%	0%	No response

The table below illustrates, where the greatest improvements in learning outcomes have been achieved.

Children who can read a story in Hindi increased by 20%

Children who can read up to a sentence in English increased by 20%

Children who can do 2 digit multiplication / division increased by 18%



IMPACT STUDY

To get a deeper understanding of the impact of Creative Learning and Teaching techniques on the learning outcomes in 910 program schools, we compared the results with a sample of schools outside the program area. 56 schools were chosen in two blocks outside of Pali district and tested as “control group” against the 60 schools sample in the Program area. This control group process also ensures the validity and reliability of our data. The outcomes are illustrated in the table below.

Learning Levels	Pre tests		Post test		Overall % Change	
	Program Schools	Non Program Schools	Program Schools	Non Program Schools	Program Schools	Non Program Schools
Can read a story in Hindi	17%	14%	31%	16%	14%	2%
Can read a sentence in English or above	3%	14%	15%	19%	12%	5%
Can do up to 2 digit multiplication/ division	12%	6%	23%	6%	11%	0%

Sample: 60 program and 56 non program schools

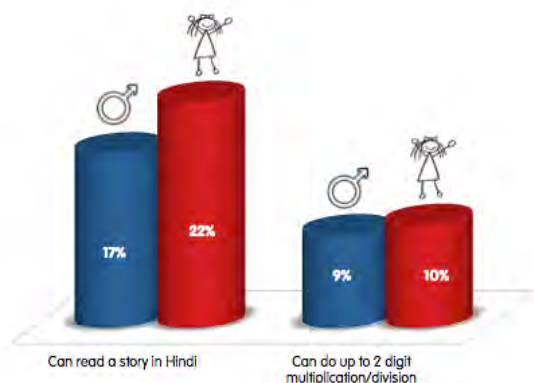
Whereas learning outcomes in the 56 non program schools have slightly improved in Hindi and English reading, our 60 program schools show immense progress in all three subjects.

Gender Specific Results

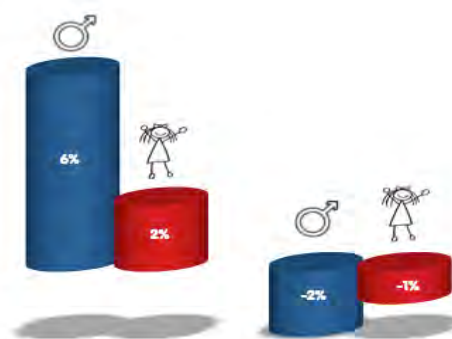
Introducing CLT in EG’s program schools boosts learning scores for both boys and girls in Hindi and Math -- and helps girls catch up. For the gender specific impact we looked at the 5th grade results of boys and girls. 5th grade is crucial to completing primary school and moving to upper primary sections. Our pre and post test comparison revealed following progress in Hindi and Math.

Gender specific learning gains in 5th grade Hindi and Math

Program Schools



Non Program Schools



In sum, we see dramatic gains for both boys and girls in reading Hindi and in doing two-digit math (multiplication and division) -- core goals for primary school. CLT was the only major change occurring during this short interval of 3 months and the gains in Hindi and Math are very significant. Introducing CLT in EG's program schools makes a striking difference for children's learning levels and helps girls catch up. CLT transforms teaching from rote to inter-active problem solving and even games, more challenging and more fun for teachers and children.

Vote of Thanks!

Educate Girls would like to thank all the people involved for their support and great feedback: Commissioner RCEE Ms. Veenu Gupta, REI Office Jaipur, District Collector Mr. Neeraj K Pawan, Additional District Magistrate, Zilla Pramukh Mr. Khushveer Singh Jojaware, CEO (Zila Parishad), DEEO, BEEO, SSA Officials, Teachers, Head Masters, SMC members, Shiksha Preraks, Panchayat representatives Pali District, our NGO partner Pratham Rajasthan and all our staff. A special thanks goes to Barbara Herz for her expert analysis and to Manish Sinha, Letzdream Foundation for the technical and funding support.

Next Steps in 2011

In the coming months, Educate Girls will train one teacher from the remaining 1488+ schools in Pali that have a primary school section. We will also transfer the CLT techniques to DIET members in Jalore and conduct the same CLT program in the new district.