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PRATHAM'S MODELS FOR IMPLEMENTING
TEACHING AT THE RIGHT LEVEL

I.   INTRODUCTION

Pratham was founded over twenty years ago in Mumbai in India. Right from inception, the mission was "every child in school and learning". The first activity that Pratham undertook was to create pre-school opportunities in the slums of Mumbai. This was based on the idea that universal pre-school would naturally lead to universal enrolment in Grade I. For the first four years of its existence Pratham responded to the educational needs of communities and schools in Mumbai. A variety of strategies were developed for mainstreaming out of school children into school and for helping those in school improve their learning levels. Many of the activities for primary school age children were designed in close collaboration with the city government.

Around 2000, Pratham's work began to spread to other urban areas. By 2002, in many parts of urban and rural India enrolment levels had already reached high levels. Thus, Pratham's primary focus shifted from "every child in school" to "every child in school _and_ learning well". For the next few years, the organization's efforts were all directed at developing effective, durable and cost-effective ways that could be used at scale to enable children to acquire basic foundational skills of reading and arithmetic. It was clear that without these tools for learning, children could not progress further in the school system.

In 2005, Pratham facilitated the first Annual Status of Education Report (ASER).[1] This was the first time in India that a household survey effort on a national scale was undertaken that generated estimates for reading and arithmetic levels of children in elementary school. Data on worryingly low basic learning levels initially shocked policy makers and practitioners. The ASER effort was carried out annually like clockwork for a decade. Over time, it contributed significantly in the shift in government priorities, both at national as well as at state levels - from inputs and access towards learning, outcomes and quality.

In 2007, Pratham launched the nationwide Read India movement with the objective that all children in India should be able to read, write and do basic math. Pratham's CAMaL (Combined Activities for Maximized Learning) methodology, which is also called Teaching-at-the-Right-Level (TaRL), evolved as a result of several years of prior work with children using the "Learning to Read (L2R)" and "Reading to Learn (R2L)" methodologies. Recent experiments with running short-duration high-intensity camps led to Pratham's current approach of Learning Camps that uses this teaching-learning method. The Teaching-at-the-Right-Level approach adopted in these camps and in similar interventions through partnerships with governments, has led to impressive improvements in children's reading and arithmetic levels. Independently done external evaluations also provide evidence of the effectiveness of this approach.

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[1] _Facilitated by Pratham, the Annual Status of Education Report (ASER) is a massive nationally representative household survey of children's basic reading and arithmetic that has been carried out in India every year since 2005. ASER reaches over 560 districts each year, surveying an average of 650,000 children in more than 16,000 villages across India. To access ASER reports from 2005 to 2016, see www.asercentre.org_

II.   WHAT IS THE PROBLEM?

India is close to universal enrolment for children in the age group of 6 to 14. Recent figures for rural India indicate that close to 97% of children (in the 6-14 years age group) are enrolled in a nearby school (ASER 2016). Reaching universal enrolment in a country as big and diverse as India is an impressive achievement. But now that children are in school, the critical question facing the country is – Are children learning?

Over ten years of data from ASER point to three key facts: First, at every grade, basic learning levels are unacceptably low.[2] Second, over time learning levels seem to be "stuck". If anything, there are some indications of a declining trend, implying that later cohorts are doing worse than earlier counterparts.[3] Third, learning trajectories over time are relatively flat. This suggests that if children do not acquire fundamental skills in the primary school years, it is unlikely that they will pick them up later. All of this leads to the simple fact that basic reading and arithmetic skills are essential for moving ahead meaningfully through the school system or indeed through life.

While more and more children are completing more and more years of schooling, learning is stagnant. This crisis in learning can undercut gains that have been made in education on the schooling side. The scale is enormous. Census 2011 figures indicate that for each single year age group, there are roughly 25 million children – at least half of these are several grade levels behind where they are expected to be.

ASER has, year on year, provided evidence of the learning crisis in Indian classrooms. The results as early 2005 called for a need for change in strategy – each of these groups of children at varying levels needed special and specific attention.

III.   WHAT ARE KEY ELEMENTS OF PRATHAM'S TEACHING-LEARNING METHOD

Pratham's objective is to bring about a substantial and significant improvement in basic reading and arithmetic levels of children in primary grades especially those in Grade III, IV and V. At the end of the interventions, it is expected that majority of the targeted children will be able to:

- Read basic text in the local language
- Express their thoughts orally and in writing
- Have thorough number knowledge at least up to two-digit numbers
- Perform basic arithmetic operations with numbers up to 100

Pratham's techniques for enabling children to acquire basic skills in reading and arithmetic has evolved considerably over the last decade.[4] For over ten years, the focus has been on children who

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[2] *ASER 2016 finds that only about half of all children in Grade V can read simple text (Grade II level of difficulty). In arithmetic, about a similar proportion can do a simple subtraction problem (2 digit with borrowing).*

[3] *Other data sources are also finding evidence of a decline in learning levels. For example: Young Lives project in Andhra Pradesh and preliminary results from the latest India Human Development Survey.*

[4] *Earlier the pedagogy was called "Learning to Read (L2R)". It has also been referred to as CAMaL (Combined Activities for Maximized Learning) and more recently the approach has also been called "Teaching at the Right Level" or TaRL. A unique feature of Pratham's development is that over these ten years, there have a series of impact evaluations of different dimensions of Pratham's model. The experiences on the ground along with the evidence generated from these randomized control trials have helped in shaping the intervention's evolution. For a summary of the impact evaluations, see:*

are in Grades III to V (or of that age). These children have been in school for some years but have not acquired the foundational skills that are essential for moving ahead. There are several core elements of the method that Pratham uses. One, learning goals are clearly articulated so that teachers and parents know what is to be achieved. Two, simple assessment is used at the beginning of the program. This is done both to understand the level of individual children and of the group;[5] the data is also used for grouping them for instruction. Later in the program, similar assessments are used to track children's progress and for making course corrections. Third, for instruction, children are grouped by level rather than by grade. Fourth, the method relies on a set of combined daily activities to maximize learning; for example, for building number knowledge and operations in arithmetic – children will do tasks that require them to listen, speak, do, read and write. Children do activities in big groups, in smaller groups and also individually. Fifth, appropriate teaching-learning materials are developed for the program and used in a way that there are materials for each group and their activities.

This methodology has been implemented by Pratham in India in three major ways. First, a volunteer based model that was common in earlier iterations of TaRL. Second, where Pratham team members lead the work (assisted by volunteers) and demonstrate that a significant change in basic learning is possible in a relatively short period of time. This "direct" work takes the form of "Learning Camps" and is widely used currently by Pratham teams in locations across the country. A third model is Pratham partnerships with government school systems where Pratham teams work very closely with government teams to incorporate Pratham's techniques for teaching-learning, assessments as well as Pratham materials into what primary school teachers do in their classrooms. These strategies and approaches are described in more detail below.

IV. WHAT ARE PRATHAM'S MODELS OF IMPLEMENTATION?

MODEL 1: VIA COMMUNITY VOLUNTEERS
(This model was used extensively in the period between 2008 and 2010)

In the 2008-2010 period, Pratham worked closely with local community volunteers, who in turn taught children in their own villages. Each Pratham team member had approximately 20 villages for the year. In each village, s/he initiated a process of assessment. This assessment of reading and arithmetic was done in the community, often with the help of local people and could take up to three or four days depending on the size of the village. The assessment was called a "village report card", especially when it was a census and covered all children in a village who were in Grade III or above. During the assessment, in each neighbourhood, there would be discussions with parents, youth and with village government representatives about the status of basic learning in the village. At times, the Pratham team member conducted "demonstration" activities to show people how to do simple and effective activities with children. Village volunteers either came forward on their own, or people in the village selected volunteers. Pratham trained these volunteers and provided teaching-learning materials, after which each volunteer would teach the children in his/her area

who needed this extra learning support. Usually, the cycle of instruction was about three months. During this time, the Pratham person would visit the volunteers' classes to guide and monitor children's progress.

During 2008–2010, massive volunteer mobilization efforts were undertaken. Following the announcement of the launch of the initiative, Pratham teams identified and trained thousands of village volunteers who taught children. Keeping cost considerations in mind, training programs were short and material kits were minimal. Volunteers were truly volunteers; they were not paid. This volunteer based model was implemented through the year. There were also campaigns during the summer holidays when schools and colleges were closed. For instance, in the summer of 2008, it is estimated that the Read India campaign via volunteers ran at least for a month in more than half of India's villages.

As mentioned earlier, during this phase volunteers were not paid for their efforts. In return for their time, Pratham offered introductory courses in basic computer literacy.[6] This "education for education" exchange was based on the idea that if a young person gives time to educate children in his or her village, she or he becomes eligible for some education in return. Two laptops were provided to a selected person in the catchment area of the twenty villages. All volunteers from this area came to the "education for education" provider (usually within walking or bicycling distance from their own village) in pre-decided slots in the week. Within a period of three to four months, the volunteers were able to complete the computer literacy course for which they received a certificate jointly signed by Pratham and Intel.

The impact of an early version of the volunteer led intervention was studied by JPAL in 2005-06 in Jaunpur district of Uttar Pradesh in India. As part of the study, researchers examined whether and how increasing community participation could help improve education outcomes. Their analysis revealed that mobilizing community members to monitor local schools through Village Education Committees (local bodies comprising of the elected head of the village government, the head teacher of the local school, and three parents nominated by their community) did not increase participation in school governance or improve teacher or student attendance in school, but training local volunteers to teach basic reading and arithmetic outside school had a positive impact on student learning.

At the end of the program, the average child in an intervention village (villages where volunteers ran after-school classes) who could not read anything at baseline was 7.9 percent more likely to be able to read at least letters. Those who could read only letters at baseline were 3.5 percent more likely to read at least paragraphs or words, and 3.3 percent more likely to read stories if they were in an Intervention village. [7]

The main lesson during this period was that it was possible to carry out large scale work through village volunteers and reach millions of children. The drawbacks were that volunteers were often students themselves and hence continuity over a period of several months could be a problem. Yet

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[6] *The basic computer literacy course included Word, Excel, PowerPoint etc.*
[7] *For further details visit https://www.povertyactionlab.org/evaluation/can-informational-campaigns-raise-awareness-and-local-participation-primary-education*

it took an average village volunteer (teaching 2 hours a day), at least three months to bring most of the children in the class up to the desired level.

Although the current model of implementation where Pratham is directly involved is different, even now, volunteers are an integral part of TaRL interventions. Today, they are involved in:

- Supporting learning camps being conducted in the school/village, wherein they assist the Pratham team member in conducting the various teaching-learning activities
- Facilitating and supporting the community based children's groups – here their role is not to teach children, but to act as facilitators and ensure that children spend some time each day learning together in their groups

MODEL 2: DIRECT IMPLEMENTATION VIA LEARNING CAMPS
(This model is currently used widely across India)

Learning Camps are short-duration periods with high-intensity activities that last 6-10 days each time. These camps are generally carried out in local government elementary schools, usually during school hours. Negotiations at the local level with the schools (and if needed with the village government) are done to enable this to happen in the school.[8] Led by a trained Pratham team member and assisted by local volunteers from the community, these camps are conducted with children 3-4 times during one school year - a total of 80-100 hours of instruction.[9] Children from Grade III, IV and V are the target group for this intervention and are grouped by level rather than grade. Each of these groups has an "instructor". While the Pratham person takes charge of organizing the entire camp and is often responsible for one of the groups, the volunteers that s/he have identified and trained work with the other groups under his/her supervision. Since the camp runs for 6 to 10 days at a time, it is relatively easier for volunteers to give this amount of time to the effort. Often, the government school teacher also helps. In addition to all this, Pratham team members go to children's homes to discuss children's progress with parents and to explain what they are doing in school.

Over the past few years, Pratham has been working in about 5,000 schools/villages annually in the "Learning Camp" mode directly reaching about 350,000 children each year. In each learning camp, baseline assessment (in basic reading and arithmetic) is conducted for every child enrolled in Grades III to V in that school. As already mentioned, usually 3 to 4 camps are conducted for 6-10 days each with "gap" days between the camps. School teachers are given materials to give to children to sustain their learning; children are also given worksheets and other materials to take home for the same purpose.

Here it may be worth laying out briefly how measurement is done in the Learning Camps context. Baseline is conducted with all children in Grades III, IV and V in the school in which the Learning Camp is to be initiated. In some states where class sizes are large, only those children are selected for the intervention, who are not able to read sentences. In other states, the camps are conducted

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[8] *In most locations, once schools in the area have seen Learning Camps in action, they ask for similar work in their own schools too. During the camps, progress that children make in reading and basic arithmetic is shared with parents, community members and teachers. Materials like story cards and worksheets are sent home and also shared with teachers so that everyone can see what is being attempted.*

[9] *The number of camps and therefore the number of instructional hours vary by state and are a function of the baseline level of children. In very low baseline states like Uttar Pradesh, at times five camps have also been used.*

with all children. (Children who can read get more time to spend on reading, comprehension and writing activities.) A quick measurement of basic reading and arithmetic is done at the end of each Learning Camp. This measurement allow teams to provide support and inputs as needed for course correction.

At the end of each camp an end line assessment is carried out. The last camp's end line is then compared with the baseline levels. Program and tracking data from the learning camps indicate a substantial and significant impact on basic reading and arithmetic. For example, across India, out of the over 5,000 schools/villages that Pratham worked in over the past year, more than 80% of the Grade III-V children could read in the locations where the intervention was completed. Similar results were achieved in arithmetic as well, with more than 80% of the Grade III-V children being able to solve a simple subtraction problem at the end of the intervention.

Teaching in school and in most other instructional settings tends to be continuous and daily. Learning Camps are different; they are intensive bursts of activity that repeated in a specific period of time. Experiments conducted over time as well as extensive experiences of Pratham teams and systematic evidence collected over time suggested that intensive bursts of focussed activity can generate better learning outcomes than continuous teaching for the same period. External evidence also supported the case of camps as compared to continuous teaching. JPAL's study of Read India (2008-2010) included an investigation of summer camps in Bihar. The evidence showed that the short period of the summer camp improved learning more than the work that was done throughout the year. All of these contributed to the evolution of the Learning Camp model.

Pratham's Learning Camp model has also been evaluated by JPAL using randomized control trial methodology showing very promising results. The evaluation concludes that the Learning Camps have a strong and significant positive impact on basic learning outcomes of students in both reading and arithmetic. Compared to the control group, the intervention groups' children showed improvements of approximately 20 percentage points higher in both subjects (0.71 standard deviations higher that the control group in reading and 0.69 standard deviations in maths). [10]

Questions are often asked about whether the learning that children gained during the camps endures after the camps are over. There are two answers to this question. First, internal Pratham measurements suggest approximately 70% of children who were in Learning Camps two years ago are still "readers" thus indicating that learning gains endure over time. Second, an independent evaluation was carried out by J-PAL, who conducted a follow up to the Learning Camp RCT that had been done in 2013-14. This formal evaluation tracked children 2 years after the camps had been completed and showed that the impact of the learning camps was still evident after 2 years of completion of the camps. [11]

MODEL 3: CATALYZING SCHOOL SYSTEMS – PARTNERSHIPS WITH GOVERNMENT

In addition to creating impact, Pratham's direct work (Learning Camps), serve as demonstration areas to showcase how using the Pratham methodology can improve learning outcomes

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[10] *For a more detailed discussion, see http://pratham.org/templates/pratham/images/Learning_Camps-Preliminary_Results_from_an_RCT_by_J-PAL.pdf*

[11] *The study showed that the Hindi scores for the students part of the 5 x 10 day intervention, were on average 0.34 (0.45) standard deviations higher than the control group. And with regards to math as well, students part of this intervention scored 0.27 (0.38) standard deviations higher than the control group students.*

substantially in a short period of time. These actual demonstrations in varied conditions help in the scale-up of Pratham's teaching-learning approach through government and other partners. (While the previous volunteer-led model had advantages in terms of community participation, it did not work as well as demonstrations for scale up. The current learning camp model is much more effective for demonstrating high impact in a short period of time using low-cost resources.)

In the last ten years, there have been a variety of partnerships between Pratham and governments at different levels. Until 2012 or so, Pratham would negotiate collaborations at the state level. But since 2012-13, discussions with interested district administrations have also led to fruitful partnerships. It is hard to provide a brief summary of these partnerships over time as each had its own distinctive character and was based on the realities and possibilities of the context at the time. Some partnership programs that started at the district level have later moved to becoming state-wide programs. In other cases, such partnerships have spread to other districts and sometimes to other states as well. Still others lost steam and the collaboration disintegrated. But as an organization, Pratham has ploughed the lessons from each episode of working together with the government back into the design process as critical inputs into the next set of partnerships.

One of the reasons that Pratham's partnerships with government are primarily for Grades III to V is because children who have been "left behind" in early years do not seem to be an area in which there is much concerted action – either within the government or among others working in education. (In recent years, governments have been focussed on early grade reading and math in Grades I and II and on science and math in upper primary school.) Building foundational skills is still possible in Grades III to V particularly if appropriate techniques are used. Building durable basic skills in these grades still allows children a good chance to be able to move into higher grades and be able to deal with the content and curriculum that has been prescribed. [12]

Since 2011, Pratham has had partnerships at various levels with governments in 19 states and union territories across the country. In several states, these partnerships have carried on for multiple years, either staggered over the period or continuously or both. In 2016-17 alone, partnership programs with governments in 13 states and union territories reached over 4.4 million children.

Typically, during such a partnership, Pratham team members work closely with their government counterparts on <u>all</u> aspects of the program from design, to preparation, training, implementation, monitoring, measurement, evaluation and review. In the last few years, Pratham's partnership programs with governments, have usually had the following characteristics:

- **Learning goals:** Clear articulation of learning goals to be achieved in a specific time duration.
- **Simple Assessment:** Use of simple assessment to understand the "baseline" situation. Often the assessment feeds into the instructional design and leads to the organization of groups for learning. In some states, the Pratham/ASER assessment tools were used directly. In other cases, the tools are modified with inputs from the state governments. In all cases, one-on-one assessment of children's reading ability is part of the assessment.

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[12] *Pratham is also working on early grades (Grade I and II) both in the direct intervention mode as well as in partnership with governments but the impact of these models on children's learning has not as yet been evaluated independently. We expect that in the next few years, Pratham will be ready to scale up the early grade work on a substantial scale. In several states, Pratham's programs are implemented as "early years" interventions in which the last year of pre-school and first two years in primary school are taken as a continuum.*

- **Cluster resource teams from the government:** Usually, the "cluster" level cadre within the government system is trained first.[13] They often do 10-20 days of actual practice teaching using the methods they have learned in Pratham training. Once this phase is completed, the cluster resource people will train the teachers in their charge (Pratham team members assist). Creating this academic leadership team within the government is crucial for the successful roll out of the program.

- **Appropriate teaching-learning materials:** The materials that Pratham has developed for use in the direct programs is shared with the government. These are then printed by the government school system and distributed in their schools. This cost is borne by government.

- **Teacher training:** Teachers are trained in the Pratham methods. Government officials (especially the cluster-level government teams who have themselves been trained and have conducted "practice" classes) conduct the training of teachers. Pratham team members assist in these trainings, wherever possible. The government pays for the entire cost of teacher training. The first round of training at the start of the program is usually 4 days. Refresher trainings and review meetings are done periodically through the course of the program.

- **Time for basic learning:** As part of the learning improvement program, time is set aside during the school day to carry out the activities to improve basic learning. This feature of the program is jointly discussed and decided at the initial stages of designing the program. Usually it is one hour for reading and one hour for arithmetic. For that period, "normal" curriculum/teaching-learning activities are not done. Focus is on building foundational skills.

- **Grouping by level not grade:** For instructional purposes, children of Grades III, IV and V are grouped by level not grade. The grouping is done on the basis of the initial baseline assessment. As children progress, they move into higher groups. During the "special period", teachers who usually teach these grades are assigned to groups instead of to grades. Depending on the availability of government teachers in the school, two or more groups for instruction are formed.

- **Monitoring and mentoring:** The cluster resource people (government people at the cluster level) and Pratham team members move from school to school to support the teachers in conducting specific activities. Since cluster coordinators are government employees, all the additional costs borne by the government.[14]

- **Tracking of progress:** Periodic assessment is done by teachers at different points in the joint program. In many cases, Pratham helps out by analyzing data and providing feedback to the different levels of decision-makers in the government school system.

- **Memorandum of understanding**: In most cases, a formal document like memorandum of understanding is signed by the government department and Pratham to begin the intervention.

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[13] In India, in most states, there are government people from the education system at the "cluster" level. A cluster comprises of 12 to 15 or more schools.

[14] In a Pratham-government partnership program, cluster coordinators from the government side and other officials at a sub-district level, have to move around from school to school a lot. This transformation of tasks from administration and "supervision" to academic support implies that cluster coordinators must spend time in the schools in their charge.

Cost sharing by government in Pratham-government partnership programs has varied considerably over time. As stated earlier, in all cases, governments pay for the costs of teacher training and for the cost of additional teaching-learning materials that go to schools in their district or state. They also pay of any additional costs at their end. Usually, Pratham covers its own costs – primarily the cost of Pratham teams who are working with government teams at state, district or sub-district levels. However, there are some cases where the government supports the full or partial cost of Pratham teams as well.

Like with Pratham's direct work (Learning Camps), Pratham-government partnership work (including the impact of the cluster level cadre) has also been evaluated by JPAL. In 2013-14, Pratham partnered with the government in Haryana (a state in north India) to implement a joint program for learning enhancement in two districts. The government cluster level people were trained by Pratham. They conducted their own "practice" classes and then assisted by Pratham, trained the teachers in their charge. Government school teachers taught children in Grades III, IV and V using Pratham's methods for 1-2 hours a day. The aim was to reach a satisfactory level of basic skills. Using randomized control trial methodology, JPAL evaluated the impact of this intervention and concluded that the intervention group's oral reading score improved by over 0.15 standard deviation over control groups.[15] This program was very similar to what was being implemented in Bihar and in other states from 2014 onwards.

Questions about the durability of learning gains can be asked in the context of Pratham- government partnerships as well. For instance, what is the evidence to show that learning gains from the intervention period (partnership program) endure over time?

Unlike in the case of learning camps, in the government partnership sector we can only turn to two existing pieces of data. The first is from an early evaluation of Read India conducted in Bihar by JPAL where a joint program of Bihar government and Pratham. Early in that project, in the summer of 2008, there was a summer camp in which government school teachers taught children of Grades III, IV and V for one month using Pratham's "teaching-at-the-right-level" methodology. JPAL found that the learning gains from the summer one month were larger than the gains that were made during the school year. Also, the learning advantage from the summer camps was visible even two years later for the children who had attended the summer camps.

More recent data comes from comparisons of ASER data from year to year. Let us look at the comparison of ASER 2014 and 2015 for the state of Maharashtra.[16] Pratham worked with Maharashtra government in a partnership program in 2014-15. The intervention lasted from December 2014 to March 2015. The ASER survey is done each year in September-October. Data from ASER 2015 as compared to ASER 2014 shows a definite increase that is visible even six months after the intervention was completed. Similar comparative analysis can be done with ASER 2013 and ASER 2014 in the case of Bihar. (More details can be shared).

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[15] See note on impact evaluations:
http://pratham.org/templates/pratham/images/Evaluations_of_Pratham_Teaching_at_the_Right_Level_TaRL_programs_by_J-PAL.pdf
[16] In 2015, the ASER survey was only conducted in two states – Punjab and Maharashtra. Data for both states is available on www.asercentre.org

V. WAY FORWARD

Pratham continues to conduct Learning Camps across India. The demonstration sites are extremely useful for continuously refining methods, for training new team members and for showcasing nuts and bolts of how learning improvements happen. Some states are also experimenting with the "next stage" camps in which higher level comprehension, vocabulary and problem solving is being targeted. In the 2017-18 school year, digital devices and content will also be integrated into Learning Camps. We anticipate that there will be many lessons to be learned in this process.

Ensuring longer term durability or sustainability of learning gains acquired in the Learning Camps is an important dimension of Pratham's work. Last year, community based children's activity groups, also called "libraries" were introduced in all villages where Learning Camps had been carried out. These are groups of children who meet in their neighbourhood daily or at different intervals to learn and have fun together. There is no instruction, but usually an adult, often a mother, supports the group. Pratham provides tasks, worksheets, project and other materials to the groups periodically. Based on the experiences of the past year, in 2017-18, Pratham will continue to work to strengthen childrens' groups and peer learning opportunities through these "libraries".

In terms of government partnerships, Pratham anticipates continuing and deepening the current partnerships for learning improvement. In addition, it is likely that partnerships will be negotiated with some new partners as well.

There is interest and curiosity in other countries as well about Pratham's teaching-at-the-right-level approach. 2017-18 may prove to be an exciting year as these models are adapted and transplanted in other countries and contexts.

For more information, please write to info@pratham.org