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FSG REIMAGINING SOCIAL CHANGE

Approach to developing Scoring Tool to Assess Readiness of Schools (STARS)

PROGRAM TO IMPROVE PRIVATE EARLY EDUCATION

Glossary of terms (1/2)

- **Affordable Private Schools (APSs):** Schools that charge fees up to INR 28,500 per annum, and typically provide education up to grade 10
- **Early Childhood Education (ECE):** The formal education a child receives between the ages two through five. Typically early childhood is considered to range from birth to age six, this narrower definition has been chosen to reflect the research's interest in the years when formal pre-primary education is typically provided in India
- **English-medium education:** Education where the language of instruction is English
- **Markers:** Indicators or signs that parents use to assess whether their child is learning
  - **Markers to test recall:** Questions used by parents to assess their children for content memorized using rote methods (e.g., asking the child to recite numbers)
  - **Markers to test concepts:** Questions used by parents to assess their children's conceptual understanding of any topic (e.g., asking the child to count items)
- **Preschooling/ Pre-primary classes:** All formal educational classes prior to first grade
- **Program to Improve Private Early Education (PIPE):** Program that aims to replace rote with activity based learning in all 300,000 APSs in India
- **Activity based learning (ABL):** Learning through structured play-based activities, games, and experiences that provide developmental benefits across the cognitive, physical, and socio-emotional domains
- **ABL solution provider:** Private companies providing ABL solutions including curriculum materials, teacher training and continuous support for proper implementation of the program
- **Partner:** Private companies that have partnered with PIPE and provide high-quality ABL solutions to APSs
- **Partner solutions:** Play/ activity based programs including curriculum materials and continuous support for proper implementation of the program, provided by PIPE partners

Glossary of terms (2/2)

- **PIPE teachers:** Teachers teaching in APSs served by PIPE partners
- **STARS:** Scoring Tool for Assessing Readiness at School to assess the impact of ABL in APSs
- **PIPE APSs:** APSs using PIPE partner solutions
- **Control APSs:** APSs using no external interventions
- **Full curriculum PIPE APSs:** PIPE APSs using full school curriculum
- **Single subject PIPE APSs:** PIPE APSs using single subject curriculum
- **1 year PIPE APSs:** APSs with partner solutions for 1 year
- **2 year PIPE APSs:** APSs with partner solutions for 2 years
- **3 year PIPE APSs:** APSs with partner solutions for 3 year
- **4 year PIPE APSs:** APSs with partner solutions for 4 years

Agenda

1	**Overview of the Scoring Tool to Assess Readiness of Schools**
2	Approach to developing the tool
	2.1 Classroom observation
	2.2 Child learning outcomes
	2.3 Stakeholder interview
3	Key relevant resources
4	Backup
5	About PIPE

PIPE developed the Scoring Tool to Assess Readiness of Schools with two objectives

1. **Track impact** of good pedagogy (e.g. Activity-Based Learning) in preschool by measuring change in the classroom environment and child learning outcomes

2. **Track sustainability** of good pedagogy by measuring administrator, teacher and parent engagement

Why the Scoring Tool to Assess Readiness of Schools ?

Rigorous

- Adapted to Indian context based on existing tools (ECERS 3, IDELA)
- Assesses stakeholder buy-in on good pedagogy in addition to change in classroom environment and learning outcomes

Efficient

- Less than 4 hours required to complete assessment in a school

Scalable

- 3-4 days training required
- Doesn't require expert probing skills

Comparable

- Produces a simple score on 100
- Each score has a clear description

STARS contains 5 sections to track sustainability and impact of good pedagogy

	Impact		Sustainability		
Sections	**Classroom environment**	**Child learning outcomes**	**Administrator interviews**	**Teacher interviews**	**Parent interviews**
Description	• Assesses physical setup of classroom • Assesses culture through peer interactions and teacher-student engagement	• Measures child learning outcomes in numeracy, literacy and cognitive task • Assessments for end of Sr. KG and Grade 2	• Checks if administrator – Knows that good pedagogy helps learning – Shares benefits with parents	• Checks if teacher – Has received training to teach in early years – Manages parent concerns – Recommends pedagogy	• Evaluates level of parent engagement • Checks parents awareness of and satisfaction with the school
Rationale	• In a safe classroom environment students take risks, ask questions promoting better interaction among children and staff	• Good pedagogy improves child's understanding of concepts and learning outcomes	• Administrator understanding and buy-in is essential for continued use of good pedagogy	• Teacher capability and buy-in is essential for good implementation	• Parent understanding and buy-in is essential for continued use of good pedagogy
Example	• Teachers asks open-ended questions and responds positively	• Read "pin" (UKG) • Solve two subtraction problems (Gr 2)	• According to you, how does a good teacher teach counting?	• Has it been easy to address parent complaints about the pedagogy?	• At the end of Sr. KG/ this grade what should your child know in English?

Note- Please refer here for the detailed tool

The entire tool is scored on 100

Section	Number of questions (A)	Maximum score per question (B)	Number of interviewees assessed (C)	Actual Score (=A*B*C)	Normalised scores (on 100[1])
Classroom environment	11	3	1	**33**	**20**
Child learning outcomes: End of UKG	14	1	6	84	30
Child learning outcomes: End of Grade 2	17	1	5	85	30
Administrator interview	4	3	1	**13**	**10**
	1	1			
Parent interview	2	3	5	**50**	**10**
	4	1			
Total	53			**265**	**100**

1. For each section, the total score will be proportionally adjusted to maximum scores identified in this column.. For e.g., if a classroom scores 27 out of 33, the normalized scores will be calculated as (27/33)*20 or 16.36

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PIPE followed a 3-step process to develop a robust classroom environment tool

1 Developed criteria

- Developed criteria to assess tools under consideration
  - Contextually relevant
  - Granular
  - Easy-to-use

2 Selected tool

- Reviewed 4 classroom assessment tools
  - Early Childhood Environment Rating Scale 3 (ECERS 3)
  - Classroom Assessment Scoring System Tool (CLASS)
  - Early Childhood Education Quality Assessment Scale (ECEQAS)
  - Measuring Early Learning Environments (MELE)
- Selected ECERS-3 as it most closely fit criteria laid out in step 1

3 Adapted tool

- The ECERS 3 tool was modified and adapted to ensure:
  - Relevance
  - Ease of use
  - Comprehensiveness

PIPE looked for tools that were relevant to the APS context, granular and easy to use

1 **Developed criteria** → 2 Selected tool → 3 Adapted tool

Criterion	Description
Contextually relevant	• Assesses factors that determine a good learning environment • Assesses factors that are relevant to Indian APSs
Granular	• Provides an objective assessment about the classroom environment through observation-based criteria • Differentiates effectively between bad, good and better environments • Captures improvements or changes to the classroom environment
Easy to use	• Can be used with 3-4 days of training • Can be used by individuals not trained in education • Allows for objective scoring

PIPE leveraged the ECERS 3 tool to develop the classroom environment assessment section

1 Developed criteria → 2 Selected tool → 3 Adapted tool

Tool name	Description	Selected?	Rationale for selecting / not selecting
Early Childhood Environment Rating Scale 3 (ECERS 3) *3rd edition of ECERS-R scale*	**Captures:** Classroom environment data for 35 items organized in 6 sub-scales **Training required:** 3-4 days	Yes	• Covers relevant criteria • Granular • Easy-to-use
Classroom Assessment Scoring System Tool (CLASS)	**Captures:** Teacher behaviors linked to student learning **Training required:** 2 days	No	• Focused on interactions between staff and children and among children • Does not evaluate materials, physical environment, planning and curriculum
Early Childhood Education Quality Assessment Scale (ECEQAS)	**Captures:** Classroom environment data for 63 questions across 3 sections **Training required:** 1 day	No	• Scoring is insufficiently simplified • Some aspects not relevant to urban APSs (e.g. hazardous conditions, noise pollution)
Measuring Early Learning Environments (MELE)	**Captures:** Classroom data across 7 sections **Training required:** Unavailable to PIPE	No	• Version of tool assessed not simplified enough

PIPE shortlisted 11 sub-scales from ECERS-3 that were the most relevant to the Indian APS context (1/7)

1 Developed criteria → 2 Selected tool → 3 Adapted tool

Sub-scale	Item	Rationale for including / not including in STARS
Space and furnishings	• Indoor space	• Children require space to interact and engage in learning experiences • The teacher needs to access students to facilitate learning
	• Furnishings for care, play and learning	• Space and resources are constrained at APSs • Given space and resource constrains in APSs it is rare to see furnishings other than desks
	• Room arrangement for play and learning	• Space and arrangement are critical to effectively implement good pedagogies like activity-based learning • While availability of space is important, it needs to be used in order to have impact
	• Space for privacy	• Given space constraints in an APS, solution providers have little control over this aspect • Privacy does not have the same cultural value as in a Western/ American context
	• Child-related display	• Display of children's artwork helps with self esteem and reflects classroom work and learning
	• Space for gross motor play	• Most APSs do not have a garden/ compound or play space
	• Gross motor equipment	• Given the absence of open play spaces, it is unlikely that an APS will have space for gross motor equipment

Assessment area included in STARS Assessment area dropped from STARS

PIPE shortlisted 11 sub-scales from ECERS-3 that were the most relevant to the Indian APS context (2/7)

1 Developed criteria → 2 Selected tool → 3 **Adapted tool**

Sub-scale	Item	Rationale for including / not including in STARS
Personal care routines	• Meals/snacks	• Solution providers have little control over this aspect – E.g. Most children are toilet trained by the time they start preschool in India – E.g. Most children at APSs also carry their own snacks from home
	• Toileting/ Diapering	
	• Health practices	
	• Safety practices	

Assessment area included in STARS Assessment area dropped from STARS

PIPE shortlisted 11 sub-scales from ECERS-3 that were the most relevant to the Indian APS context (3/7)

1 Developed criteria → 2 Selected tool → 3 Adapted tool

Sub-scale	Item	Rationale for including / not including in STARS
Language and literacy	• Helping children expand vocabulary	• Expanding vocabulary is important for children to begin using language in speaking and writing
	• Encouraging children to use language	• Encourages more conversation and language use • Opportunities for conversation lead to better exposure to language and more chances of practicing it
	• Staff use books with children	• Use of books/ print is solution provider–specific • The tool was designed to be solution provider-agnostic
	• Encouraging children's use of books	
	• Becoming familiar with print	

Assessment area included in STARS Assessment area dropped from STARS

PIPE shortlisted 11 sub-scales from ECERS-3 that were the most relevant to the Indian APS context (4/7)

1 Developed criteria → 2 Selected tool → 3 **Adapted tool**

Sub-scale	Item	Rationale for including / not including in STARS
Learning Activities	• Fine motor	• Tool is designed to be solution-provider agnostic • Fine motor activities, art, etc. are not always part of solution providers' curricula, particularly for single-subject providers
	• Art	
	• Music and movement	
	• Blocks	
	• Dramatic play	
	• Nature/science	
	• Math materials and activities	• Separate item on 'Materials and activities' included in the tool, which includes Math materials and activities
	• Math in daily events	• Pilots resulted in low-interrater reliability (e.g., teacher saying "Be quiet for 1 minute" had differing interpretations)

Assessment area included in STARS Assessment area dropped from STARS

PIPE shortlisted 11 sub-scales from ECERS-3 that were the most relevant to the Indian APS context (5/7)

1 Developed criteria → 2 Selected tool → 3 **Adapted tool**

Sub-scale	Item	Rationale for including / not including in STARS
Learning Activities	• Understanding written numbers	• "Math in daily events" included to assess Math learning in the class • Including two Math criteria is superfluous for a one-hour classroom observation
	• Promoting acceptance of diversity	• Solution providers have little control over this aspect • Schools are usually responsible for promoting acceptance of diversity
	• Appropriate use of technology	• Not all solution providers have products that use technology • Not all APSs have access to technology

Assessment area included in STARS Assessment area dropped from STARS

PIPE shortlisted 11 sub-scales from ECERS-3 that were the most relevant to the Indian APS context (6/7)

1 Developed criteria → 2 Selected tool → 3 **Adapted tool**

Sub-scale	Item	Rationale for including / not including in STARS
Interaction	• Supervision of gross motor	• There is limited gross motor activities in most APSs due to space constraints. Also, this may be very intervention specific
	• Individualized teaching and learning	• Given the class size, teacher-student ratio and teacher capability, this becomes difficult for a partner to impact and control
	• Staff-child interaction	• Positive interactions help create a safe learning environment
	• Peer interaction	• Peer interaction leads to increased conversation and better learning through collaboration
	• Discipline	• Classroom management is essential for a smooth implementation of good pedagogy

Assessment area included in STARS Assessment area dropped from STARS

PIPE shortlisted 11 sub-scales from ECERS-3 that were the most relevant to the Indian APS context (7/7)

1 Developed criteria → 2 Selected tool → 3 Adapted tool

Sub-scale	Item	Rationale for including / not including in STARS
Program structure	• Transitions and waiting times	• Lead to minimal wasted time • Provide a natural way for children to move from one session to the next
	• Free play	• Single subject solution providers typically don't have control over the time table beyond the intervention they provide
	• Whole-group activities for play and learning	• Collaboration leads to better learning • Captured in items such as materials and activities and student engagement

Assessment area included in STARS Assessment area dropped from STARS

PIPE modified the scoring criteria

1 Developed criteria → 2 Selected tool → 3 **Adapted tool**

Category	Original approach	Challenges	Proposed approach	Rationale
Scale	• 0-7	• Wide • Require expert skills to differentiate	• 0-3	• Narrow, mutually exclusive set
Scoring indicators	• Greater than 5 indicators • Not mutually exclusive	• Overlap between criteria creates confusion in scoring for non-experts • Large set of scoring options	• Less than 3 indicators per criteria • Mutually exclusive	• Operationally easy to execute while retaining key indicators
Approach	• Full day assessment requiring 3 hours in class	• Most users of the tool would not be able to spend 3 hours in a single classroom	• 1 hour in class	• Feasible to observe a class for 1 hour • Time frame gives access to a range of activities and sessions including transitions and interactions

Agenda

1 Overview of the Scoring Tool to Assess Readiness of Schools

2 Approach to developing the tool

- 2.1 Classroom observation
- **2.2 Child learning outcomes**
- 2.3 Stakeholder interview

3 Key relevant resources

4 Backup

5 About PIPE

PIPE wanted to assess children by using developmentally appropriate questions that …

- Are ***activity based***
- ***Test conceptual understanding of constructs***
- Are ***easy to administer objectively***
- ***Highlight gaps in ECE*** to help schools and parents realize the need for good ECE
- Are ***easy to communicate*** to all stakeholders
- Are ***age appropriate*** and customized for target children

PIPE followed a 4-step process to finalize questions to assess learning among Sr.KG children

1 — *Identified potential questions[1]*

- Identified ~35 potential questions based on IDELA, MELQO and SRI[2] assessments and interviews with experts, parents, teachers, and APS administrators

2 — *Narrowed to ~15 questions[1]*

- Selected and developed questions to conduct a dipstick check on student learning outcomes
- The questions were not meant to replace existing summative assessments

3 — *Piloted and revised questions[1]*

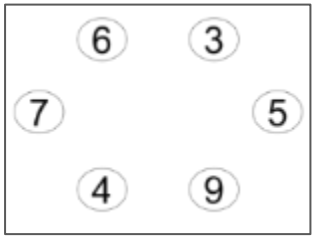
- Rolled out the questions on 360 Sr.KG children in AY[3] 2017-18 and on 972 children in AY[3] 2018-19
- Observed the use of questions with children and discussed and documented the learnings

4 — *Finalized 10 questions[1]*

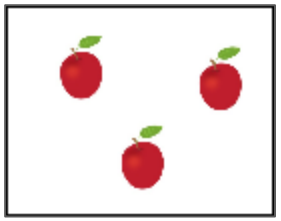
- Based on observations and feedback from rollouts, finalized 10 questions to include on Sr.KG STARS tool
- Refined questions (e.g., tweaked language and collateral based on feedback)

1: For details on the approach, please refer to 'Customizing a Comprehensive Tool To Measure Early Learning Outcomes for Children in India'; 2. For links to the assessment tools, please refer to Section 3; 3. AY – Academic Year

4 Finalized 10 questions to include in STARS based on pilots (1/3)

Sl no.	Construct	Questions	Expected response
1	**English reading**	"Can you read 'pin'?" *[Show word 'pin']*	Child should be able to read new and unfamiliar 3 letter phonic words correctly
2	**English speaking**	"Can you tell me in English what is happening in this picture?" *[Show a picture of park with 2-3 children playing different games]*	Child should be able to say at least one sentence using English words about a familiar topic/ theme
3	**One-to-one correspondence**	"Can you give me 12 sticks?" *[Ask while pointing to a bowl with 20 ice cream sticks]*	Child should be able to count up to 12 sticks correctly
4	**Comparing numbers**	"Can you identify the greatest number here?" *[Show numbers 6, 3, 5, 9, 4, and 7 arranged randomly]* 	Child should be able to identify the greatest single digit number from a random group of numbers

4 Finalized 10 questions to include in STARS based on pilots (2/3)

Sl no.	Construct	Questions	Expected response
5	**Abstract addition**	"There are 3 apples in this box. If I were to add 2 more, how many would be there in total?" *[Point towards a photo of 3 apples. Do not indicate the numbers with fingers or otherwise]* 	Child should be able to do abstract addition with single digit numbers
6	**Executive function**	"Can you complete this puzzle?" *[Give the child a 4-piece puzzle]*	Child should be able to complete a 4-piece puzzle
7	**Expressive vocabulary**	"Name as many animals as you can."	Child should be able to recall and name at least 6 animals in any language

4 Finalized 10 questions to include in STARS based on pilots (3/3)

Sl no.	Construct	Questions	Expected response
8	**Conflict resolution**	"This girl is crying. What would you do to make her feel better?“ *(Show the girl crying picture)* 	Child should be able to give 1 or more relevant solutions to make the girl feel better
9	**Empathy**	“Imagine that you are playing with a toy that you like. Now another child wants to play with that same toy, but there is only one toy. What would you do in this situation?”	Child should be able to give 1 or more relevant responses on how to resolve the conflict
10	**Digit span**	“Whatever I say, you should say it backwards So now I say 4-1, you say?” “Whatever I say, you should say it backwards. So now I say 3-5-6, you say?” “Whatever I say, you should say it backwards. So now I say 4-9-2-7, you say?”	Child should be able to do complete backward digit span

PIPE followed a 4-step process to finalize questions to assess learning among Grade 2 children

1 *Identified potential questions*

- Selected ASER[1] for Grade 2 as it is an established assessment for child learning outcomes in India

2 *Adapted questions for Grade 2*

- Selected and contextually adapted questions from ASER to conduct a dipstick check on student learning outcomes in Grade 2 classrooms in APSs
- The questions were not meant to replace existing summative assessments

3 *Added additional questions*

- Rolled out the questions on 760 Grade 2 children in AY[2] 2018-19
- Observed the use of questions with children and discussed and documented learnings

4 *Finalized 10 questions[1]*

- Based on observations and feedback from roll-outs, finalized 10 questions each to include on Grade 2 Maths and English STARS tool
- Refined questions (e.g., tweaked language and collateral based on feedback)

1. For links to the assessment tools, please refer to Section 3; 2. AY – Academic Year

Grade 2 English: STARS assesses Grade 2 children on reading skills…

Ask the child to read this tool. Mark the child at the highest level he/she can reach.[1]

Q1. Ask child to read out all the words given in the box.

both		step
	cup	
out		rope
	dog	
hat		key

Q2. Ask the child to read the paragraph given in the box. If child reads para correctly, then move Q3

There is a big monkey.
He lives on a tree.
He likes to jump.
He also likes bananas.

Q3. If child reads para in Q2 correctly, ask the child: **What does the monkey like?**

Q4. Ask the child to read the story in the given box. Child must read this story fluently and without mistakes.

A big tree stood in a garden. It was alone and lonely. One day a bird came and sat on it. The bird held a seed in its beak. It dropped the seed near the tree. A small plant grew there. Soon there were many more trees. The big tree was happy.

Q8. Ask child to read the following words

leb		ral
	gax	
nom		tob
	diz	
fut		hig

Questions No.	1	2	3	4	8
Expected response	Children must read 5 or more words correctly	Children must make 3 or less errors	Child says either jumping or banana	Children must read full story fluently with three or less errors	Children must read 5 or more words

1: All questions have been sourced from ASER Centre Test Samples and EGRA; Question 3 added by PIPE to test comprehension

…listening and oral dictation

Sl no.	Construct	Questions[1]	Expected response
5,6,7	**Listening comprehension[2]**	"Now I will read you a small story. Then I will ask you some questions. Listen carefully. Rani is feeling very sad. She dropped her new toy and it broke. Her mother comes home and sees the broken toy. She picks up the pieces and helps Rani fix the toy with glue. The toy looks fine now and Rani is happy once again." Ask the child: - Why is Rani sad? - Who helps Rani? - Why is Rani happy now?	Child should give correct answers to the question based on the read-aloud passage
9	**Dictation**	Ask child to write legibly jot mud ship tram goat best spray fight	Children must write 5 or more spellings correctly to get a tick

1: Questions have been sourced from ASER Centre Test Samples and EGRA; 2: Question 5,6,7: Added by PIPE

Grade 2 Math: STARS assess Grade 2 children on numeracy (1/3)

Ask the child to read this tool. Mark the child at the highest level he/she can reach.[1]

	Q1. Ask the child to do both 2 problems from any one set below. Both problems must be correct for a tick.		Q2. Ask the child to do both 2 problems from any one set below. Both problems must be correct for a tick.		Q3. Ask the child to do both 2 problems from any one set below. Both problems must be correct for a tick.	
SET A	9 – 5	7 – 2	51 – 35	67 – 48	13 + 35	37 + 40
SET B	4 – 3	7 – 6	84 – 49	73 – 36	44 + 21	43 + 36
SET C	5 – 2	4 – 1	56 – 37	31 – 13	41 + 37	13 + 12
SET D	3 – 1	8 – 4	45 – 18	43 – 24	45 + 12	43 + 24
SET E	5 – 3	4 – 2	25 – 19	56 – 39	13 + 12	56 + 31

1: Questions are based on ASER Centre Test Samples and EGMA

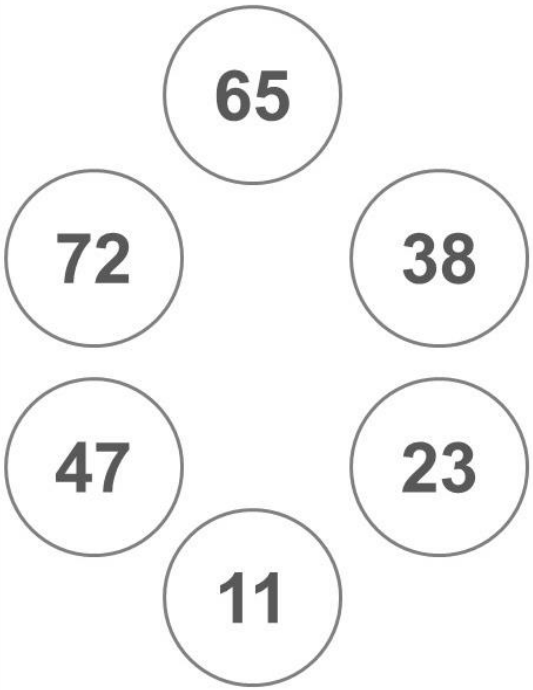
Grade 2 Math: STARS assess Grade 2 children on numeracy (2/3)

Ask the child to read this tool. Mark the child at the highest level he/she can reach.[1]

Q4. Ask the child to do both 2 problems from any one set below. Both problems must be correct for a tick.

SET A	18 + 35 = ____	37 + 44 = ____
SET B	24 + 29 = ____	43 + 39 = ____
SET C	28 + 37 = ____	49 + 12 = ____
SET D	18 + 27 = ____	43 + 19 = ____
SET E	13 + 19 = ____	59 + 31 = ____

Q9. Ask to child to identify the biggest number below



Q10. DO THIS QUESTION ORALLY

[Say to the child]
"Can you say the missing number below:"

10 15 ____ 25

[If correct, start with patterns below. If incorrect, give the correct answer and start with patterns below]
"Can you say the missing number below:"

300 400 500 ____

28 ____ 24 22

1: Questions are based on ASER Centre Test Samples and EGMA

Grade 2 Math: STARS assess Grade 2 children on numeracy (3/3)

Sl no.	Construct	Questions[1]	Expected response
5	**Word problem (Simple)**	How much is 9 and 4 altogether?	Child must say 13
6	**Word problem (Simple)**	If I take away 5 from 9, what is left?	Child must say 4
7	**Word problem (Complex)**	Samara had 4 chocolates. Her father gave her 7 more chocolates. How many chocolates does Samara have altogether?	Child must say 11
8	**Word problem (Complex)**	Raju had 12 chocolates. He gave 5 chocolates to Pooja. How many chocolates does he have left?	Child must say 7

1: Questions are based on ASER Centre Test Samples and EGMA

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	2.3	Stakeholder interview
		2.3.1 Administrator interview
		2.3.2 Teacher interview
		2.3.3 Parent interview
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PIPE used a five-step approach to design a tool to assess administrator's ability to support good pedagogy

Steps	A Identified **key skills** of an administrator	B Identified **areas of inquiry** to measure this skill	C Developed **questions** for areas of inquiry	D Edited tool to **flow like a conversation**	E Developed **scoring options** for questions
Description	• Key skills that an administrator should have to ensure good classroom implementation and child learning	• Key areas of inquiry to measure administrator's performance on key skills (through in-person interview or evidence gathered)	• Simple open-ended questions • Simple objective questions • Limited probing skills required	• Restructured questions to make the interview conversational	• 0-3 scale for 4 questions – A score of '0' implies no awareness of the area of inquiry – A score of '3' implies practice of good pedagogy • 0-1 scale for 1 question
Example	• Know that children should understand concepts and not just recall content	• Examples of concepts in English and Math that children should know	• How does a good teacher check if children are learning Math? • Are you going to renew that book publisher / programme for the upcoming year?		• 0: Unaware • 3: Conceptual assessments like counting objects

A PIPE identified what an administrator should be able to do B and areas of inquiry to measure this skill in STARS (1/4)

An administrator should…	Areas of inquiry to measure this skill	Rationale for including/ not including in STARS
1 **Know that children should learn and not just recall content**	• Check how an administrator assesses whether a UKG child knows – English – Math	• Solicits vague response, e.g., "It is not under my scope", "Teachers check", "We have an examination system" as opposed to questions that indicate learning on key concepts
	• Check how administrator assesses if UKG child is ready for Grade 1 Math / English	• Including grade 1 readiness leads respondents to answer "checking for annual assessments"
	• Check what administrator believes teachers must do to assess if children are learning English / Math	• Captured within response set for skill #2 "Know that good pedagogy helps learning"
2 **Know that good pedagogy helps learning**	• Check what administrator believes is the best way to teach – counting – reading	• Administrators are likely to facilitate good pedagogy if they know that good pedagogy helps learning • Narrow and targeted response set due to standardized curriculum for Math and English
	• Check if administrator continues with good pedagogy	• Engaged and aware administrators are likely to continue ABL pedagogy to facilitate learning at school
	• Check what administrator has done in the past 2 years to improve Math/English learning in pre-primary	• Broad response set • Not relevant to assess buy-in on good pedagogy
	• Check how administrator has differentiated school from other schools	• Broad response set • Not relevant to assess buy-in on good pedagogy

Area of inquiry included in STARS Area of inquiry dropped from STARS

A PIPE identified what an administrator should be able to do B and areas of inquiry to measure this skill in STARS (2/4)

An administrator should…	Areas of inquiry to measure this skill	Rationale for including / not including in STARS
3 Ensure teachers implement good pedagogy	• Check how administrator supports teachers to teach English and Math well	• Difficult to verify • Lots of probing required to determine the quality of support offered
	• Ask administrator to describe activities they have seen/heard in a pre-primary class that they thought were good	• Question is too theoretical • Difficult to verify • Description of one or two activities does not imply consistent follow-up
	• Ask administrator what they do to make sure implementation is good	• Large response set • Difficult to verify
	• Ask administrator how often they visit the classroom	• Difficult to verify • Frequent visits do not necessarily mean monitoring is of good quality
	• Ask administrator how they make sure English and Math are taught well	• Large response set • No direct implication on buy-in on good pedagogy
	• Ask administrator what his/her typical day in school is like	• Large response set • Vague question to determine whether administrator visits classroom to monitor quality
	• After you ask administrator what the best way to teach students counting/reading, check how administrator makes sure this happens in classrooms	• Too nuanced/technical for a typical APS administrator • Unclear how to differentiate “good” administrator from a “bad” administrator

Area of inquiry included in STARS Area of inquiry dropped from STARS

A PIPE identified what an administrator should be able to do B and areas of inquiry to measure this skill in STARS (3/4)

An administrator should…	Areas of inquiry to measure this skill	Rationale for including / not including in STARS
4 Know how parents can support effective teaching	• Check what the administrator tells UKG parents about how they can help their children learn at home	• Parents currently check rote memorization and are unaware of activity-based learning) • Parent buy-in on good pedagogy and awareness of correct markers key to ensuring sustainability of good pedagogy in the school
	• Check what the administrator tells UKG parents about how they can check learning in English and Math	• Same as above
	• Check how many times the administrator has engaged parents to inform them of good learning in the school	• Engagement with parents does not necessarily involve communication on quality of education or pedagogical approaches used in school
	• Check what the administrator tells parents about how the school teaches children well	• Hard to verify responses • Large response set
	• Check how the administrator tells parents these messages	
	• Ask administrator to give examples of feedback that parents have provided about their child's learning at school	• Even schools using bad pedagogies could receive favorable feedback from parents
	• Ask administrator what parents should check at the end of UKG to know that their child has learnt English/Math	• Including "At the end of UKG" leads respondents to respond with "check end of year assessment", which may be rote or conceptual

Area of inquiry included in STARS Area of inquiry dropped from STARS

A PIPE identified what an administrator should be able to do B and areas of inquiry to measure this skill in STARS (4/4)

An administrator should…	Areas of inquiry to measure this skill	Rationale for including / not including in STARS
5 **Advocate learning versus recall**	• Check for whether and how administrator advertises good learning • Check for whether and how administrator communicates learning approaches to prospective parents	• Excluded as this gets captured under 'educates parents' • Administrators may choose not to advertise learning approaches but still facilitate good pedagogy within their school

Area of inquiry included in STARS Area of inquiry dropped from STARS

C A set of questions were developed for each area of inquiry (1/4)

An administrator should ….	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
1 **Know that children should understand concepts and not just recall content**	• Check how an administrator assesses whether a UKG child knows – English – Math	1. According to you, how does a good teacher teach counting?	• Solicits vague responses e.g., "We have experienced teachers", "We have been in this business for long and know how to dot", "You can go and see for yourself"
		2. According to you, how does a good teacher teach reading?	
		3. How would you check if a UKG child is ready for Grade 1 Math/English?	• Including 'ready for grade 1…' leads respondents to provide 'checking for annual assessments' as the response
		4. In class, what do teachers do to check if children are learning Math/English?	• Overlaps with knowledge area of "How to teach this effectively to students"
		5. How would you check if your UKG child knows Math?	• Most responses were 'delegation' as their time is generally spent on higher grades
		6. How would you check if your UKG child knows English?	

Question included in STARS Question dropped from STARS

C A set of questions were developed for each area of inquiry (2/4)

An administrator should ….	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
2 **Know that good pedagogy helps learning**	• Check what administrator believes is the best way to teach – Counting – Reading	7. How does a good teacher know if a child is learning Math?	• While administrators may have never taught a class, they are expected to know how an effective teacher teaches • Tests specific understanding of activity-based pedagogy • Narrow response set and doesn't require expert probing skills
		8. How does a good teacher know if a child is learning English?	
		9. According to you, what is the best way to teach children counting?	• Question feels uncomfortable to ask an owner/administrator who may have never taught a class
		10. According to you, what is the best way to teach children to read?	
		11. What have you done in the past 2 years to improve Math and English learning in pre-primary?	• Not relevant to assess buy-in on good pedagogy • Large response set
		12. How have you differentiated your school from other schools?	• Not relevant to assess buy-in on good pedagogy • Large response set
		[Which book publisher or programme is used in your Sr. KG classroom?] Once owner names publisher, ask 13. Are you going to renew that book publisher / programme for the upcoming year?	• Owners convinced of value of ABL typically renew the book publisher or programme

Question included in STARS Question dropped from STARS

C A set of questions were developed for each area of inquiry (3/4)

An administrator should ….	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
3 **Ensure teachers implement good pedagogy**	• Check how the administrator supports teachers to teach English and Math well	14. How do you support your teachers to teach English and Math well?	• Difficult to verify • Lots of probing required to determine the quality of support offered
		15. Can you describe activities you have seen/heard in a pre-primary class that you would say were good?	• Theoretical • No implication on buy-in on good pedagogy
		16. What do you do to make sure implementation is good?	• Large response set • No direct implication on buy-in on good pedagogy • Difficult to verify
		17. How often do you visit?	• Difficult to verify • Frequent visits do not necessarily mean monitoring is of good quality
		18. What is your typical day in school like?	• Large response set • Vague question to determine whether administrator visits classroom to monitor quality
		19. After “According to you, what is the best way to teach counting/reading” ask “And how do you make sure this happens in your classrooms?”	• Too nuanced/ technical for a typical APS administrator • No direct implication on buy-in on good pedagogy • Not sure how to differentiate good owner and bad owner

Question included in STARS Question dropped from STARS

C A set of questions were developed for each area of inquiry (4/4)

An administrator should ….	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
4 **Know how parents can support effective teaching**	• Check what the administrator tells UKG parents about how they can check learning in English and Math • Check what the administrator tells UKG parents about how they can help their children learn at home	20. What do you tell UKG parents about how they can help their child learn English/Math at home?	• Checks if administrator knows how to direct parents to help their child learn at home
		21. What do you tell UKG parents about how they can check learning in English /Math?	• Difficult to verify • Lots of probing required to determine the quality of support offered • Theoretical
		22. What do you tell UKG parents about how they can help their child learn at home?	• Hard to verify • Large response set
		23. How do you tell them these messages?	• Hard to verify • Large response set
		24. Can you give examples of feedback that parents have provided about their child's learning at your school?	• Doesn't have implication on buy-in on good pedagogy
		25. At the end UKG, what should parents check to know that their child has learnt English/Math?	• Including 'at the end of UKG' leads administrators to respond with 'check end of year assessment'…

Question included in STARS Question dropped from STARS

D PIPE restructured these questions to ensure the interview is conversational

[Warm up] How have you been doing?

[Warm up] How is the school doing?

[Warm up] We are interested in talking about Sr KG

- Question 1: How does a good teacher know if a child is learning Math?
- Question 2: How does a good teacher know if a child is learning English?

[Transition] Moving to parents, what kinds of jobs do the parents who send their children to your school do?

- Question 3: What do you tell parents about how they can help their child learn Math at home?
- Question 4: What do you tell parents about how they can help their child learn English at home?

[Transition] Moving to books used in the Sr. KG class, which book publisher or programme is used in your Sr. KG classroom?

- Question 5: Are you going to renew that book publisher / programme for the upcoming year?
- Question 6: What is the annual fees for Sr.KG? Including uniform, books and readmission fees?

E Question 1 – 4 are scored on a scale of 0 to 3 (1/4)

<table>
<tr><th>Question</th><th>0</th><th>1</th><th>2</th><th>3</th></tr>
<tr><td rowspan="2">Question 1:
How does a good teacher know if a child is learning Math?

(Prompt “Can you suggest more ways to check” once)</td><td rowspan="2">Mentions one or more of the following:
Ask the child to:
• Recite 1-100
• Write numbers
• Write number names
• Recite tables
Check test scores/report card
Unaware
Other</td><td>Mentions one of the following:</td><td>Mentions two of the following OR one in column 3:</td><td rowspan="2">Mentions two or more of the following:
Ask child to:
• Fill missing numbers
• Identify 'before-after' numbers
• Compare quantities/ numbers (e.g. bigger/ smaller, less/ more than, largest/ smallest)</td></tr>
<tr><td colspan="2">Ask child to:
• Identify numbers at random
• Identify shapes
• Count using objects (e.g. beads, fruits, vegetables)
• Add or subtract</td></tr>
</table>

E Question 1 – 4 are scored on a scale of 0 to 3 (2/4)

Question	0	1	2	3
Question 2: How does a good teacher know if a child is learning English? ***(Prompt "Can you suggest more ways to check" once)***	***Mentions one or more of the following:*** Ask child to: • Recite A-Z • Recite rhymes • Repeat after teacher • Write alphabets • Check test scores/report card • Read familiar words taught in class (cat, bat, apple) • Unsure/ unaware	***Mentions one of the following:*** Ask child to: • Identify letters at random • Match sounds with letters • Write dictated alphabets/ words/ spellings • Respond to simple questions (e.g. "What is your name?") • Use every day phrases like "good morning," "please," "thank you" • Follow instructions in English	***Mentions one of the following:*** Ask child to: • Describe a picture in English/ Narrate a story/ event • Read new words (e.g. in newspaper, story book, billboard) • Match the word to the picture • Name objects starting with a letter • Speak in English (Have simple conversations in English) • Phonics • Blending of sounds	***Mentions two or more of the following:***

E Question 1 – 4 are scored on a scale of 0 to 3 (3/4)

<table>
<tr><th>Question</th><th>0</th><th>1</th><th>2</th><th>3</th></tr>
<tr><td rowspan="2">Question 3:
What do you tell parents about how they can help their child learn Math at home?

(Prompt “any more” once)

(Prompt “Give examples of homework” if the response is “Ensure homework is completed”)</td><td rowspan="2">Mentions one or more of the following
Ask child to:
Recite numbers
Copy numbers
Check report cards
Send to tuitions
Ensure homework is completed
Revise lesson taught at school
Do nothing
Other</td><td>Mentions one of the following</td><td>Mentions two or more of the following OR one in column 3</td><td rowspan="2">Mentions two or more of the following
Ask child to:
Arrange currency in order of value
Word problems for addition/ subtraction
Play simple games (e.g. snakes and ladders)
Teach kids to sort (e.g. shapes, size, colour)
Transact using real money
Read numbers at random (e.g. mobile and bus numbers)</td></tr>
<tr><td colspan="2">Ask child to:
Count objects
Identify shapes, etc.
Add or subtract</td></tr>
</table>

E Question 1 – 4 are scored on a scale of 0 to 3 (4/4)

<table>
<tr><th>Question</th><th>0</th><th>1</th><th>2</th><th>3</th></tr>
<tr><td rowspan="2">Question 4:
What do you tell parents about how they can help their child learn English at home?

(Prompt “any more” once)

(Prompt “Give examples of homework” if the response is “Ensure homework is completed”)</td><td rowspan="2">Mentions one or more of the following
Ask child to:
• Recite poems
• Recite A-Z
• Send to tuitions
• Check exam results
• Attend PTM
• Ensure homework is completed
• Do nothing
• Other</td><td>Mentions one or more of the following</td><td>Mentions one or more of the following OR one in column 3</td><td rowspan="2">Mentions two or more of the following
Ask child to:
• Read “new” words
• Describe their routine/ picture/ event/ TV show etc.
• Identify sounds/ phonics
• Tell/ Read stories together in English
• Show English stories/ cartoons on YouTube, TV (or similar media)
• Speak with parent in English (Make simple conversation)
• Follow simple instructions (e.g. “Go carefully”)</td></tr>
<tr><td colspan="2">Ask child to:
• Read words taught in school
• Identify letters at random
• Identify colours / animals / vehicles, etc.
• Practice writing alphabets
• Name objects starting with a letter
• Encourage conversations in English</td></tr>
</table>

E Question 5 is scored on a scale of 0 to 1

Question	0	1
[Transition question] Which book publisher or programme is used in your Sr. KG classroom?	Enter name of programme below _____	
Question 5: Are you going to renew that book publisher / programme for the upcoming year?	• No / Unsure	• Yes

Agenda

1	Overview of the Scoring Tool to Assess Readiness of Schools
2	Approach to developing the tool
2.1	Classroom observation
2.2	Child learning outcomes
2.3	Stakeholder interview
2.3.1	Administrator interview
2.3.2	**Teacher interview**
2.3.3	Parent interview
3	Key relevant resources
4	Backup
5	About PIPE

PIPE used a five-step approach to design a tool to assess teachers' ability to support and implement good pedagogy

Steps	A	B	C	D	E
	Identified **key skills** of a teacher	Identified **areas of inquiry** to measure this skill	Developed **questions** for areas of inquiry	Edited tool to **flow like a conversation**	Developed **scoring options** for questions
Description	• Key skills that a teacher should have to ensure good classroom implementation and child learning	• Key areas of inquiry to measure teachers' performance on key skills (through in-person interview or evidence gathered)	• Simple open-ended questions • Limited probing skills required	• Restructured questions to make the interview conversational	• 0-1 scale for 5 questions • 4 point visual satisfaction scale
Example	• Know that children should understand concepts and not just recall content	• Examples of concepts in English and Math that children should know	• In the past 1-2 months, has the principal / owner given you feedback on your teaching?		• 0: Unaware/ Unsure / No • 1: Yes

A PIPE identified what a teacher should be able to do and B areas of inquiry to measure this skill in STARS (1/2)

A teacher should…	Areas of inquiry to measure this skill	Rationale for including / not including in STARS
1 Know that children should learn and not just recall content	• Check how a teacher assesses what a new child who has joined his/her class knows: – in English – in Math	• Better assessed through classroom observations (refer to Section 2.1 of this presentation) as it demonstrates if the teacher asks questions to check for learning
	• Check if the teacher assesses whether children have developed socio-emotional awareness	• Evaluating socio-emotional understanding is a very high expectation to have of an APS teacher
2 Know that good pedagogy helps learning	• Check if the teacher uses activity-based methods to teach – counting – reading 3-letter words – concepts in non-Math or non-English subjects (e.g. EVS)	• Better assessed through classroom observations (refer to Section 2.1 of this presentation) as it demonstrates if the teacher indeed practices ABL to teach concepts
	• Check if teacher knows ways to address learning gaps in Math/English	• Even teachers who do not use good pedagogy might be able to address learning gaps • Good pedagogy may not be the only solution to address these gaps
	• Check if teacher understands that creating a student-centric culture in the classroom helps activity-based learning	• Most accurately assessed through observation in the classroom environment section
	• Check if teacher would recommend pedagogy to new school	• Recommendation of pedagogy indicates teacher's buy-in / value of the programme

Area of inquiry included in STARS Area of inquiry dropped from STARS

A PIPE identified what a teacher should be able to do and B areas of inquiry to measure this skill in STARS (2/2)

A teacher should…	Areas of inquiry to measure this skill	Rationale for including / not including in STARS
Prepare for lessons and follow a detailed session/lesson plan	• Check for – a day's lesson plan – resources / material planned to be used for the lesson	• Lesson planning in an activity-based classroom is best assessed through classroom observation
Use materials correctly to teach concepts	• Check for correct usage of materials provided	• Better observed through classroom observation (section 2.1)
	• Procures materials to implement an activity	• Indicates teacher's commitment to implement ABL pedagogy
3 Know how parents can support effective teaching	• Check for suggestions given to parents to help children learn Math/ English at home • Check for suggestions given to parents to assess child's learning in Math/ English	• Teachers predominantly engage with parents on report cards or homework as opposed to sharing questions / home activities that assess / reinforce key concepts
4 Keep parents updated on child progress and manage concerns	• Check if updates are given to parents about child's learning progress • Check parents' expectations are managed and their concerns addressed	• Managing parent expectations is key part of ensuring smooth rollout of ABL pedagogy
5 Have received formal training and ongoing support in the academic year	• Check if teacher has attended formal trainings in the past academic year • Check if teacher receives periodic feedback	• Training is necessary for good implementation • Regular feedback from owner/principal/learning managers enables engaging teaching environment

Area of inquiry included in STARS Area of inquiry dropped from STARS

C A set of questions have been developed for various areas of inquiry (1/3)

A teacher should…	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
1 **Know that children should learn and not just recall content**	• Check how a teacher assesses what a new child who has joined his/her class knows: – in English – in Math	1. Let's say you have a niece or nephew who is in UKG. How will you check what he/she knows in Math?	• Solicits theoretical responses that do not indicate buy-in or implementation of ABL. For e.g., "I will ask for their report card or exam results", "I will ask them to count" etc.
		2. Let's say you have a niece or nephew who is in UKG. How will you check what he/she knows in English?	
		3. If a new child joins your class, how will you check for his/her learning in Math?	• Responses include process and logistics that are not relevant to this question (e.g. "first I will make sure they are comfortable…")
		4. If a new child joins your class, how will you check for his/her learning in English?	
		5. In class, tell us all the ways you check if a child is learning math?	• Using 'in class' forces generic 'whole-class' related response (e.g. asking children to chorus numbers at the end of a number activity)
		6. In class, tell us all the ways you check if a child is learning English?	

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (2/3)

A teacher should …	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
2 **Know that good pedagogy helps learning**	• Check if the teacher uses activity-based methods to teach – counting – reading 3-letter words	7. How would you teach numbers 11-20 to your class?	• Solicits theoretical responses that do not indicate buy-in or implementation of ABL For e.g., “I will ask them to count”, “I will ask them to practice worksheets”, “I will revise key concepts everyday”
		8. How would you teach ‘addition’ to your class?	
		9. How do you teach your class to read 3 letter words?	
		10. How do you teach your class the concept “heavy or light”	• Non math/ non English concepts aren’t standardized • Buy-in on good pedagogy better represented through Math and English concepts
		11. What would you do if a child is struggling with counting?	• Checks for teacher’s ability to recognize and address learning gaps • Does not explicitly check for teachers buy-in on good pedagogy (e.g. ABL)
		12. What would you do if a child is unable to read new 3-letter words?	
		13. In class, describe activities that you have done to teach children Math/ English?	• Large response set • Requires skilled probing skills to distinguish rote and activity-based delivery (e.g. use of flashcards) • May require multiple verbose prompts

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (2/3)

A teacher should …	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
2 **Know that good pedagogy helps learning**	• Check if teacher would recommend pedagogy to new school	14. If you join a new school, will you ask the principal / owner to buy the current books/ curriculum?	• Indicates teacher's buy-in of ABL pedagogy
	• Check if materials were provided or procured by the teacher for conducting activities in class	15. Have you spent money to buy teaching learning material this Academic Year? If yes, how much?	• Solicits a specific response (i.e., amount of money spent) • Indicates teacher's commitment to implement ABL pedagogy

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (3/3)

A teacher should…	Areas of inquiry to measure this skill	Questions	Rationale for keeping or dropping question
3 **Know how parents can support effective teaching**	• Check for suggestions given to parents to help children learn Math/ English at home • Check for suggestions given to parents to check for the child's learning in Math / English	16. What do you tell parents to do at home to help their child learn math?	• Teachers do not tell APS parents how to help children learn at home • Require extensive probing
		17. What do you tell parents to do at home to help their child learn English?	
		18. What do you tell UKG parents about how they can check learning in English?	• Nuance of the question could not be communicated in interviews
		19. What do you tell UKG parents about how they can check learning in Math?	
		20. What can parents who are not educated do at home to help their children with Math?	• Not all APS parents are uneducated • Including '…who are not educated' distracts interviewees
		21. What can the parents who are not educated do at home to help their children with English?	

Question included in STARS Question dropped from STARS

D PIPE restructured these questions to ensure the interview is conversational

[Warm up] How are you?

[Warm up] What classes do you teach?

[Warm up] We are interested in talking about Sr. KG.

[Warm up] Which books or curriculum do you use in your classroom?

- Question 1: How satisfied are you with the current books/ curriculum?
- Question 2: Have parents shared any complaints about the curriculum / books being followed?
- Question 3: Has it been easy for you to address their complaints?
- Question 4: Have you spent money to buy teaching learning material this Academic Year? How much?
- Question 5: In the past 1-2 months, has the principal / owner given you feedback on your teaching?
- Question 6: If you join a new school, will you ask the principal / owner to buy the current books/ curriculum?
- Question 7: How many days of teacher training have you attended this Academic Year from someone from within the school?
- Question 8: How many days of teacher training have you attended this Academic Year from someone outside the school?
- Question 9: How many total days of teacher training have you attended this Academic Year?

Agenda

1 Overview of the Scoring Tool to Assess Readiness of Schools

2 Approach to developing the tool

2.1 Classroom observation

2.2 Child learning outcomes

2.3 Stakeholder interview

2.3.1 Administrator interview

2.3.2 Teacher interview

2.3.3 Parent interview

3 Key relevant resources

4 Backup

5 About PIPE

PIPE used a five-step approach to design a tool to assess parents' ability to support child learning

Steps	A Identified **key skills** of a parent	B Identified **areas of inquiry** to measure this skill	C Developed **questions** for areas of inquiry	D Edited tool to **flow like a conversation**	E Developed **scoring options** for questions
Description	• Key skills that a parent should have to ensure child learning	• Key areas of inquiry to measure parents' performance on key skills (through in-person interviews)	• Simple open-ended questions • Limited probing skills required	• Restructured questions to make the interview conversational	• 0-3 for 2 questions – A score of '0' implies no awareness of the area of inquiry – A score of '3' implies practice of good pedagogy • Restructured questions
Example	• Support learning at home	• Examples of engagement with child or support provided to child at home to learn English and Math	• At the end of Sr. KG/ this grade what should your child know in Math?		• 0: Unaware • 3: Conceptual activities like counting objects

A PIPE identified what a parent should be able to do and areas B of inquiry to measure this skill in STARS

	A parent should ….	Areas of inquiry to measure this skill	Rationale for including/ not including in STARS
1	**Support learning at home**	• Describes simple activities like – Counting items – Reading new words to reinforce concepts being taught in school	• Engaging with children at home helps reinforce key concepts
2	**Check for learning**	• Asks questions to test understanding rather than recall of key Math/ English concepts	• Checking for learning will help parents assess if their child has understood key concepts or rote memorized content
3	**Be aware of learning**	• Values understanding of concepts • Expects children to learn rather than just recall content • Pedagogy used in school	• Parents who are aware of learning are likely to expect children to learn concepts • Parents aware of pedagogy in school
4	**Recognize techniques that lead to good learning**	• Recognizes that teachers/ schools should use good pedagogy to teach concepts	• Difficult for APS parents to specify what a good technique to teach concepts is

Area of inquiry included in STARS Area of inquiry dropped from STARS

C A set of questions have been developed for each area of inquiry (1/7)

A parent should ….	Areas of inquiry	Questions	Rationale for keeping / dropping questions
1 Support learning at home	• Examples of engagement with child or support provided to child at home to learn English and Math	1. What do you do at home to help your child learn Math?	• Large response set • Hard to codify desired responses • Requires expert probing skills, e.g., does counting mean recall of numbers or counting objects
		2. What do you do at home to help your child learn English?	
		3. Generally at home who spends time with the child after he/ she is back from school?	• Not an indicator of supportive home environment, as it only checks for the individual who spends time
		4. Who helps the child study at home?	• Not an indicator of supportive home environment, as it only checks for the individual who helps the child study
		5. If your child struggles with English/ Math, what do you do?	• Already included in (1) and (2) in a direct manner • Question fails if the parent doesn't believe their child is struggling

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (2/7)

A parent should ….	Areas of inquiry	Questions	Rationale for keeping / dropping questions
1 **Support learning at home**	• Examples of engagement with child or support provided to child at home to learn English and Math	6. What all activities have you done with your child in the last week?	• Hard to accurately assess the answers due to the large response set
2 **Check for learning**	• Examples of questions asked or activities described to assess understanding of concepts/ content recall in English and Math • Awareness of rote • Awareness of conceptual understanding	7. How do you check if your child is learning counting?	• Narrows response set • Received either rote answers such as “check homework”/ “send to tuitions” or “count objects”
		8. How do you check if your child is learning to read?	• Narrows response set • Only received rote answers such as “check homework”/ “send to tuitions”
		9. What do you do to check if your child is learning Math?	• Only received rote answers such as “check homework”/ “send to tuitions”
		10. What do you do to check if your child is learning to read English?	• Only received rote answers such as “check homework”/ “send to tuitions”

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (3/7)

A parent should ….	Areas of inquiry	Questions	Rationale for keeping / dropping questions
2 **Check for learning**	• Examples of questions asked or activities described to assess understanding of concepts/ content recall in English and Math • Awareness of rote • Awareness of conceptual understanding	11. How do you track your child's progress in school?	• Hard to accurately assess the answers due to the large response set (e.g. “check diary” and “ask teachers”)
		12. How do you spend time with your child at home?	• Hard to accurately assess the answers due to the large response set (e.g. “I play with my child” could mean playing games or letting the child play video games which might not be helpful)
3 **Be aware of learning**	• Expect children to learn concepts rather than just rote memorize	13. At the end of Sr. KG, what should your child know in Math?	• Solicits parent view on good learning outcomes • Narrow response set • Effectiveness is currently under pilot
		14. At the end of Sr. KG, what should your child know in English?	
	• Awareness of pedagogy used in school	15. Which company's textbooks are used in your child's school?	• Indicates involvement of the administrator in academic decision making

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (4/7)

A parent should ….	Areas of inquiry	Questions	Rationale for keeping / dropping questions
Recognize techniques that lead to good learning	• Preference between ABL and rote • Awareness of rote • Awareness of conceptual understanding	16. What are the 2 best ways in which teachers should teach your child Math? [Show visual aids with a mix of 3 conceptual and 3 rote techniques]	• Difficult for APS parents to specify what the best way to teach is
		17. What are the 2 best ways in which teachers should teach your child English? [Show visual aids with a mix of 3 conceptual and 3 rote techniques]	• Difficult for APS parents to specify what the best way to teach is
		18. How are English/ Math taught differently in this school?	• Purpose of question is to ascertain whether parent values product • However, valuing product is not relevant to assess whether parents can support child learning
		19. What do you like about the current teaching techniques	• Elicits vague responses like “discipline” and “teacher is friendly” which are hard to verify

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (5/7)

A parent should ….	Areas of inquiry	Questions	Rationale for keeping / dropping questions
Recognize techniques that lead to good learning	• Preference between ABL and rote • Awareness of rote • Awareness of conceptual understanding	20. Are you aware of any new approaches the school is using to teach English and Math?	• Purpose of question is to ascertain whether parent values product • However, valuing product is not relevant to assess whether parents can support child learning
		21. Out of the following 5 options, which of the 2 are most important for your child to learn in Math: • Say #'s from 1-50 in correct order • Count and give 8 objects • Write numbers • Learn spelling of number names • Recite tables	• Already covered in (13) and (14) • Too many options to remember verbally • Only 1 conceptual option is high bar
		22. Out of the following 5 options, which of the 2 are most important for your child to learn in English: • Recite poems • Practice cursive writing • Read new 3 letter words • Learn words by heart • Recite A to Z	• Purpose of question is to ascertain whether parent values product • However, valuing product is not relevant to assess whether parents can support child learning

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (6/7)

A parent should ….	Areas of inquiry	Questions	Rationale for keeping / dropping questions
Recognize techniques that lead to good learning	• Preference between ABL and rote • Awareness of rote • Awareness of conceptual understanding	23. Can you please rank the following 5 cards in ordering of decreasing important for your child's education? (Share the 5 Math cards) • Say #'s from 1-50 in correct order • Count and give 8 objects • Write numbers • Learn spelling of number names • Recite tables	• Complicated to administer and score • Complicated for parents to understand
		24. Out of the following 5 options, which of the 2 are most important for your child to learn in English (Share the 5 English cards) • Recite poems • Practice cursive writing • Read new 3 letter words • Learn words by heart • Recites A to Z	• Complicated to administer and score • Complicated for parents to understand

Question included in STARS Question dropped from STARS

C A set of questions have been developed for each area of inquiry (7/7)

A parent should ….	Areas of inquiry	Questions	Rationale for keeping / dropping questions
Recognize techniques that lead to good learning	• Preference between ABL and rote • Awareness of rote • Awareness of conceptual understanding[2]	25. If you had a money voucher what would you like to spend it on: • English / Math tuition • <Product name> • Textbooks	• Valuing product is not relevant to assess whether parents can support child learning • Options were not defined clearly (e.g. if tuition classes also use the ABL product, parents might opt for 'tuitions' but still value the product)
		26. If the school gave you following options, which one of them would you opt for: • Decrease in annual fees by 200 but no program • Increase in annual fees by 200 with the program • Discount to purchase notebooks • Free extra tuition classes	• Valuing product is not relevant to assess whether parents can support child learning • Options were not defined clearly (e.g. if parents are facing financial difficulties, they might pick cost-saving options even if they value good pedagogy)

Question included in STARS Question dropped from STARS

D PIPE restructured these questions to ensure the interview is conversational

[Warm up] What is your child's name?

[Warm up] What class does your child study in?

[Warm up] We wanted to talk a little about what all you do with your child at home

- Question 1: At the end of Sr. KG/ this grade what should your child know in Math?
- Question 2: At the end of Sr. KG/ this grade what should your child know in English?
- Question 3: Which company's textbooks are used in your child's school?
- Question 4: Are you satisfied with this company's books?
- Question 5: Are you satisfied with this school?
- Question 6: Would you recommend the school to any other parent?

E Question 1-2 are scored on a scale of 0 to 3 (1/2)

Questions	0	1	2	3
	Mentions one or more of the following:	***Mentions one of the following:***	***Mentions two of the following:***	***Mentions three of the following:***
1. At the end of Sr KG/ this grade what should your child know in Math?	• Write number names • Write numbers • Recite rhymes on numbers • Recite numbers • Recite tables • Check homework • Unsure / other	• Count items (fruits/vegetables) • Identify numbers at random • Identify currency value • Transact with money • Add/ subtract/ divide • Identify shapes • Play games involving cards/ dice • Identify missing number before/ after • Identify greater than / less than numbers		
2. At the end of Sr KG/ this grade what should your child know in English?	• Recite nursery rhymes • Ability to complete homework • Practice cursive writing • Recite A-Z • Unsure / other	• Identify letters at random • Read words/ alphabets in school/ tuition book • Read new words • Match sounds and letters • Identify sounds/ phonics • Have simple conversations in English • Follow simple instructions given in English • Read simple stories • Match words and picture of the word		

E Question 2-6 are scored on a scale of 0 to 1 (2/2)

Questions	0	1
3. Which company's textbooks are used in your child's school?	• Doesn't know or no response	• Names the correct publisher
4. Are you satisfied with this company's books?	• No	• Yes
5. Are you satisfied with this school?	• No	• Yes
6. Would you recommend the school to any other parent?	• No	• Yes

Agenda

1	Overview of the Scoring Tool to Assess Readiness of Schools
2	Approach to developing the tool
2.1	Classroom observation
2.2	Child learning outcomes
2.3	Stakeholder interview
3	**Key relevant resources**
4	Backup
5	About PIPE

Accessing relevant sources

Name of source	Link
IDELA	Click here
Early Childhood Environment Rating Scale 3 (ECERS 3)	Click here
Classroom Assessment Scoring System Tool (CLASS)	Click here
Early Childhood Education Quality Assessment Scale (ECEQAS)	Click here
Measuring Early Learning Environments (MELE)	Click here
Early Grade Reading Assessment (EGRA)	Click here
Early Grade Mathematics Assessment (EGMA)	Click here
School Readiness Instrument (SRI)	Click here
MELQO	Click here

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Dropped questions from 2019 STARS

Classroom environment

	0	1	2	3
Math in daily events	No reference to Math in daily events (e.g. “counting down”, “You have 5 minutes to clean up”, “There are 3 days remaining in the week”, “We have 5 more minutes left in this period”) (or) Conducts only formal Math lessons	One reference to Math in daily events during conversations or transitions	Two or more references to Math in daily events during conversations or transitions	Asks children questions to connect Math concepts to daily events (e.g. “How many papers will we need for this art activity?” “How many cups will fill up this bucket?” “How many days till the weekend?”)

Dropped questions from 2019 STARS

Sr. KG

#	Question
1	Can you point to something circle-shaped in this room? (If there is nothing circle-shaped in the environment, ask child “Can you think of something circle-shaped that you know?”)

Dropped questions from 2019 STARS

Administrator interviews

	Q	A	B	C
1	According to you, how does a good teacher teach counting? Can you give examples? ***(Prompt "any more" once)***	Ask child to: ❑ Repeat (e.g. rhymes, numbers, songs) ❑ Write (numbers, names) ❑ Unsure/ unaware ❑ Other	❑ Flashcards ❑ Draw and count on blackboard ❑ Demo by teacher using materials/ students ❑ Use smartboard	❑ Students use materials (e.g. sticks, beans, pencils, beads, abacus) ❑ Play games (e.g. snakes and ladder)
2	According to you, how does a good teacher teach reading? Can you give examples? ***(Prompt "any more" once)***	❑ Write ❑ Memorize word spellings ❑ Unsure/ unaware ❑ Other	❑ TLMs (e.g. flashcards, word-wheel, posters) ❑ Family words (e.g. 'ad', 'og', 'at', 'in') ❑ Sight words	Ask child to: ❑ Read stories in class ❑ Read simple words from newspaper/ story book ❑ Phonics ❑ Blending, segmenting
3	What do you tell them about how they can check learning in Math? ***(Prompt "any more ways to check" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	Check if child can: ❑ Recite 1-100 ❑ Recite tables ❑ Copy numbers ❑ Check report cards ❑ Ensure homework is completed ❑ Do nothing ❑ Other	Check if child can: ❑ Identify numbers at random ❑ Identify shapes ❑ Count using objects (e.g. beads) ❑ Add or subtract ❑	Check if child can: ❑ Fill missing numbers ❑ Identify 'before-after' numbers ❑ Compare quantities/ numbers (e.g. bigger/ smaller, less/ more than, largest/ smallest) ❑

Dropped questions from 2019 STARS

Administrator interviews

	Q	A	B	C
4	What do you tell them about how they can check learning in English? ***(Prompt "any more ways to check" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	Check if child can: ❑ Recite A-Z ❑ Recite poems ❑ Check report cards ❑ Ensure homework is completed ❑ Do nothing ❑ Other ❑	Check if child can: ❑ Read words in the textbook ❑ Identify letters ❑ Identify colours/ animals/ vehicles ❑ Speak in English ❑	Check if child can: ❑ Read "new" words ❑ Describe a picture/ event/ story with some English ❑ Match sounds with letters ❑ Identify sounds/ phonics ❑ Respond in English to new questions (e.g. "What did you learn in school?")
5	How many times have you engaged with parents in the past year to tell them about how you are teaching well? ***(Prompt "any more" once)***	❑ 0 times (or) ❑ Non-academic events (fancy dress) (or) ❑ Just report card distribution ❑ Other	❑ One time ❑ Two times ❑	❑ More than two times

Dropped questions from 2019 STARS

Teacher interviews

	Q	A	B	C
1	How would you teach the numbers 11-20 to your class? ***(Prompt "any more" once)***	❑ Ask child to: ❑ Repeat (e.g. rhymes, numbers, songs) ❑ Write (numbers, names) ❑ Unsure/ unaware ❑ Other	❑ Flashcards ❑ Draw and count on blackboard ❑ Demo by teacher using materials/ students ❑ Use smartboard	❑ Students use materials (e.g. sticks, beans, pencils, beads, abacus) ❑ Play games (e.g. snakes and ladder)
2	How would you teach 'addition' to your class? ***(Prompt "any more" once)***	❑ Write numbers/ addition on board ❑ Make children copy from board ❑ Dictation ❑ Unsure/ unaware ❑ Other	❑ Draw items on the board ❑ Objects for demonstration (e.g. beads, blocks, magnets, sticks, pencils) ❑ Practice worksheets ❑ Use smartboard	❑ Children use materials like beads, beans. sticks, stones., abacus, etc. ❑ Children draw, colour or count pictures to add ❑ Play games (e.g. with dice, cards) ❑ Word problems
3	How do you teach your class to read three-letter words? ***(Prompt "any more" once)***	❑ Write ❑ Memorize word spellings ❑ Unsure/ unaware ❑ Other	❑ TLMs (e.g. flashcards, word-wheel, posters) ❑ Family words (e.g. 'ad', 'og', 'at', 'in') ❑ Sight words	Ask child to: ❑ Read stories in class ❑ Read simple words from newspaper/ story book ❑ Phonics ❑ Blending, segmenting

Dropped questions from 2019 STARS

Teacher interviews

	Q	A	B	C
4	Let's say you have a niece or nephew who is in Sr. KG. How will you check what he/she knows in Math? ***(Prompt "Can you suggest more ways to check" once)***	Ask child to: ❑ Recite1-100 ❑ Write numbers ❑ Write number names ❑ Check test scores/report card ❑ Unaware ❑ Other	Ask child to: ❑ Identify numbers at random ❑ Identify shapes ❑ Count using objects (e.g. beads, fruits, vegetables) ❑ Add or subtract ❑ Recite tables	Ask child to: ❑ Fill missing numbers ❑ Identify 'before-after' numbers ❑ Compare quantities/ numbers (e.g. bigger/ smaller, less/ more than, largest/ smallest)
5	And how will you check what your niece/nephew knows in English? ***(Prompt "Can you suggest more ways to check" once)***	Ask child to: ❑ Recite A-Z ❑ Recite rhymes ❑ Repeat after teacher ❑ Write alphabets ❑ Check test scores/report card ❑ Unsure/ unaware ❑ Other	Ask child to: ❑ Identify letters at random ❑ Match sounds with letters ❑ Write dictated alphabets/ words/ spellings ❑ Respond to simple questions (e.g. "What is your name?") ❑ Use every day phrases like "good morning," "please," "thank you" ❑ Read familiar words taught in class (cat, bat, apple) ❑ Speak in English	Ask child to: ❑ Describe a picture in English/ Narrate a story/ event ❑ Read new words (e.g. in newspaper, story book, billboard) ❑ Match the word to the picture ❑ Follow instructions in English ❑ Name objects starting with a letter ❑ Phonics ❑ Blending of sounds

Dropped questions from 2019 STARS

Teacher interviews

	Q	A	B	C
6	What do you tell them about how they can check learning in Math? ***(Prompt "any more ways to check" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	Check if child can: ❑ Recite 1-100 ❑ Recite tables ❑ Copy numbers ❑ Check report cards ❑ Ensure homework is completed ❑ Do nothing ❑ Other	Check if child can: ❑ Identify numbers at random ❑ Identify shapes ❑ Count using objects (e.g. beads) ❑ Add or subtract ❑	Check if child can: ❑ Fill missing numbers ❑ Identify 'before-after' numbers ❑ Compare quantities/ numbers (e.g. bigger/ smaller, less/ more than, largest/ smallest) ❑
7	What do you tell them about how they can check learning in English? ***(Prompt "any more ways to check" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	Check if child can: ❑ Recite A-Z ❑ Recite poems ❑ Check report cards ❑ Ensure homework is completed ❑ Do nothing ❑ Other	Check if child can: ❑ Read words in the textbook ❑ Identify letters ❑ Identify colours/ animals/ vehicles ❑ Speak in English	Check if child can: ❑ Read "new" words ❑ Describe a picture/ event/ story with some English ❑ Match sounds with letters ❑ Identify sounds/ phonics ❑ Respond in English to new questions (e.g. "What did you learn in school?")

Dropped questions from 2019 STARS

Teacher interviews

	Q	A	B	C
8	What do you tell them about how they can help their child learn Math at home? ***(Prompt "any more" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	Ask child to: ❑ Recite numbers ❑ Copy numbers ❑ Check report cards ❑ Send to tuitions ❑ Ensure homework is completed ❑ Do nothing ❑ Other ❑	Ask child to: ❑ Count objects ❑ Identify shapes ❑ Revise lesson taught at school ❑ Add or subtract	Ask child to: ❑ Arrange currency in order of value ❑ Solve word problems for addition/ subtraction ❑ Play simple games (e.g. snakes and ladders) ❑ Sort (e.g. shapes, size, colour) ❑ Transact using real money ❑ Read numbers at random (e.g. mobile and bus numbers)
9	What do you tell them about how they can help their child learn English at home? ***(Prompt "any more" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	Ask child to: ❑ Recite poems ❑ Recite A-Z ❑ Send to tuitions ❑ Check exam results ❑ Attend PTM ❑ Ensure homework is completed ❑ Do nothing ❑ Other ❑	Ask child to: ❑ Read words taught in school ❑ Identify letters at random ❑ Identify colours/ animals/ vehicles ❑ Practice writing alphabets ❑ Name objects starting with a letter ❑ Encourage conversations in English	Ask child to: ❑ Read "new" words ❑ Describe their routine/ picture/ event/ TV show etc. ❑ Identify sounds/ phonics ❑ Tell/ Read stories together in English ❑ Show English stories/ cartoons on YouTube, TV (or similar media) ❑ Speak in English ❑ Follow simple instructions (e.g. "Go carefully")

Dropped questions from 2019 STARS

Parent interviews

	Q	A	B	C
1	What do you do to check if your child is learning Math? ***(Prompt "any more ways to check" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	❑ Send to tuitions ❑ Send to school ❑ Check exam results/ progress report ❑ Recite numbers ❑ Write numbers/ number names ❑ Don't do anything ❑ Unsure ❑ Other	Ask child to: ❑ Count items (fruits/vegetables) ❑ Identify numbers at random ❑ Identify currency value ❑ Recite tables ❑ Identify shapes ❑ Check homework/ notebook	Ask child to ❑ Transact with money ❑ Play games involving cards/ dice ❑ Identify missing number before/ after ❑ Identify missing number before/ after ❑ Add/ subtract/ divide
2	What do you do at home to help your child learn Math? ***(Prompt "any more" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	❑ Send to tuitions ❑ Send to school ❑ Recite numbers ❑ Write numbers/ number names ❑ Rhymes on numbers ❑ Spouse/ sibling helps ❑ Don't do anything ❑ Unsure ❑ Other	Ask child to: ❑ Count items (fruits/vegetables) ❑ Write number names ❑ Recite tables ❑ Do sums in notebook ❑ Revise what's taught at school ❑ Identify shapes ❑ Help with homework ❑ Ask tuition/ school teacher	Ask child to: ❑ Transact with money ❑ Identify largest numbers ❑ Identify missing number before/ after ❑ Identify shapes in the environment ❑ Do word problems ❑ Play games involving cards/ dice ❑ Sort (e.g. by colour, shape)

Dropped questions from 2019 STARS

Parent interviews

	Q	A	B	C
3	What do you do to check if your child is learning to read English? ***(Prompt "any more ways to check" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	❑ Recite A-Z ❑ Send tuitions ❑ Send to school ❑ Check exam results/ progress report ❑ Recite nursery rhymes ❑ Attend parent teacher meeting ❑ Don't do anything ❑ Unsure ❑ Other	Ask child to: ❑ Identify letters at random ❑ Read words/ alphabets in school/ tuition book ❑ Check spellings ❑ Homework	Ask child to: ❑ Read new words ❑ Match sounds and letters ❑ Identify sounds/ phonics ❑ Match words and picture of the word ❑ Read simple stories
4	What do you do at home to help your child learn English? ***(Prompt "any more" once)*** ***(Prompt "Give examples of homework" if the response is "Ensure homework is completed")***	❑ Send to tuitions ❑ Send to school ❑ Recite nursery rhymes ❑ Spouse/ sibling helps ❑ Recite A-Z ❑ Practice cursive writing ❑ Don't do anything ❑ Unsure ❑ Other	Ask child to: ❑ Identify letters at random ❑ Read words/ alphabets in school/ tuition book ❑ Have simple conversations in English ❑ Follow simple instructions given in English ❑ I speak to my child in English	Ask child to: ❑ Read new words ❑ Show simple English cartoon/ stories on YouTube (or similar media) ❑ Read out English stories

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Overview of FSG Inclusive Markets (IM)

Mission	**To improve opportunities, agency, and choice for families with low-income** by working with companies to serve families as customers (and not with non-profits to serve them as beneficiaries)
Vision	**To demonstrate profitability of offering inclusive products, services, or practices** (e.g., housing, education, employment) that benefit families with low-income
Approach	• **Run multiyear programs to address barriers** that prevent companies from offering inclusive products, services or practices • **Talk to thousands of families to understand their needs**, aspirations, and challenges • **Talk to hundreds of CXOs and managers to understand their business**, ecosystem, regulatory and operational challenges • **Co-create, pilot and rollout solutions with companies** to address barriers and profitably scale inclusive products, services, or practices • **Publish and disseminate public goods** (e.g., primary research, best practices, business model) to get more companies to offer the product, service or practice • **Address ecosystem barriers** (e.g., policy suggestions) to make the market more conducive

Overview of PIPE

Replacing rote[1] with activity based learning[2] in affordable private schools[3] could improve learning outcomes for ~50% of children

~50% of children in India are enrolled in affordable private schools

- 40% of children in rural India are in private schools[4]
- 86% of families with low-incomes in urban India send their children to affordable private schools (APSs)[5]
- 54% of children in South Asia are enrolled in private schools for pre-primary education[6]

Current learning outcomes are poor due to rote teaching

- 35% of Grade 10 students can read at Grade 4 level[7]
- 84% of Grade 1 students can't read at grade level[8]
- Most private preschools follow mainly rote teaching with no age appropriate activities[9]

Adopting activity based learning in early years can provide the right educational foundation

- Poor learning outcomes in the early years leads to poor learning and life outcomes later[10]
- Children learn best using activity based learning (ABL) in the early years (ages 3-8)[11]
- Intervening in the early years gives the highest return on investments[12]

1. See example of rote teaching here
2. Learning through structured play-based activities, games, and experiences
3. Schools that typically charge fees under INR 1,500 (USD 23) per month, and offer classes from nursery to grade 10 or 12
4. ASER 'Early Years' Report (2019)
5. PIPE research based on 4400 interviews with families with low-incomes (2015)
6. UNICEF 'A world ready to learn' (2019)
7. Education Initiatives research based on an assessment of 50,000 students in Gujarat, Maharashtra and Rajasthan (2013-14)
8. ASER 'Early Years' Report (2019)
9. CECED, ASER, and UNICEF 'The India Early Childhood Education Impact Study (2017); PIPE research
10. S Lockhart, Play: An Important Tool for Cognitive Development (2010)
11. M. Hohmann, D.P. Weikart, 'Educating Young Children: Active Learning Practices for Preschool and Child Care Programs' (1999)
12. J Heckman and D. Masterov, The Productivity Argument for Investing in Young Children (2004)

Barriers to adoption of ABL are lack of demand and low willingness to serve APS market

APS administrators, teachers and parents are not demanding ABL

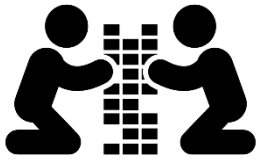
- Limited awareness of poor learning outcomes in children
- Limited awareness on the benefits of ABL
- Current rote memorization technique meets parents' demands

Solution providers[1] don't see a business opportunity to sell in the APS market

- Unclear business model to acquire and sell to APSs
- Fragmented market
- Unclear proposition for APS customers
- Lack of quality standards/ robust tools to assess quality

1. Solution providers are existing private companies currently providing ABL solutions including curriculum materials, teacher training and ongoing support to schools serving students from families with mid or high incomes

PIPE's vision is to replace rote with ABL in all 300,000 APSs in India



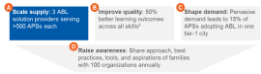
Mission	ABL solution providers **sell profitably and at scale** to APSs in India	ABL solution providers **make learning effective and enjoyable** for children	ABL solution providers **communicate the benefits of ABL** to stakeholders[1]
Goal by 2025	A **Scale supply:** 3 ABL solution providers serving >500 APSs each	B **Improve quality**: 50% better learning outcomes across all skills[2]	C **Shape demand:** Pervasive demand leads to 15% of APSs adopting ABL in one tier-1 city

D **Raise awareness**: Share approach, best practices, tools, and aspirations of families with 100 organizations annually

Detailed next

1. Stakeholders are APS administrators, teachers and parents
2. Skills include numeracy, early language skills, executive function, motor skills and socio-emotional skills

A Scale supply: PIPE partners are providing ABL to >150,000 children across 750+ APSs



Goal

3 ABL solution providers >500 APSs each

Activities

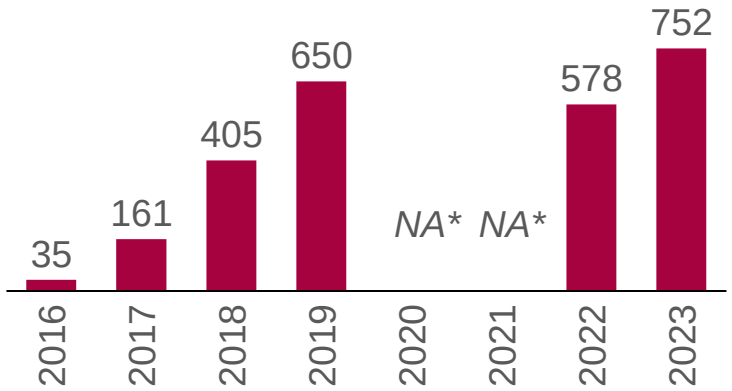
- Identified, convinced and **signed-up 8 partners** to the serve the APS market
- Developed a **profitable business model** for the APS market
- **Identified barriers and developed 23 best practices across 4 business functions** (i.e. product, sales, implementation and management) to support partners to profitably scale in the APS market
- Supported PIPE **partners to co-develop an effective organization structure and team to scale** (e.g., building a strong 2nd line of management)
- Supported PIPE partners to **embed managing by objectives** through a set of annual and monthly dashboards and metrics which determine business health

Impact to date

9 partners signed up

chrysalis, kreedo, HIPPOCAMPUS Learning Centres, 321, Next Education Transforming Education, The Karadi Path Education Company, Chipper Sage, Gyan Shala, vikalp instrument of ideas

# of APSs using PIPE partner solutions[1]



**as schools were closed due to COVID-19[2]*

1 –Based on data collected from partners I 2-Schools were physically shut due to COVID-19, and only remote learning products were offered by the partners to APSs during academic years 2020-21 and 2021-22 The PIPE team has been unable to verify children's extent of engagement with these remote learning products due to school closures and COVID travel restrictions

B Improve quality: Children in PIPE APSs responding correctly to numeracy and literacy questions increased by 33%

Goal

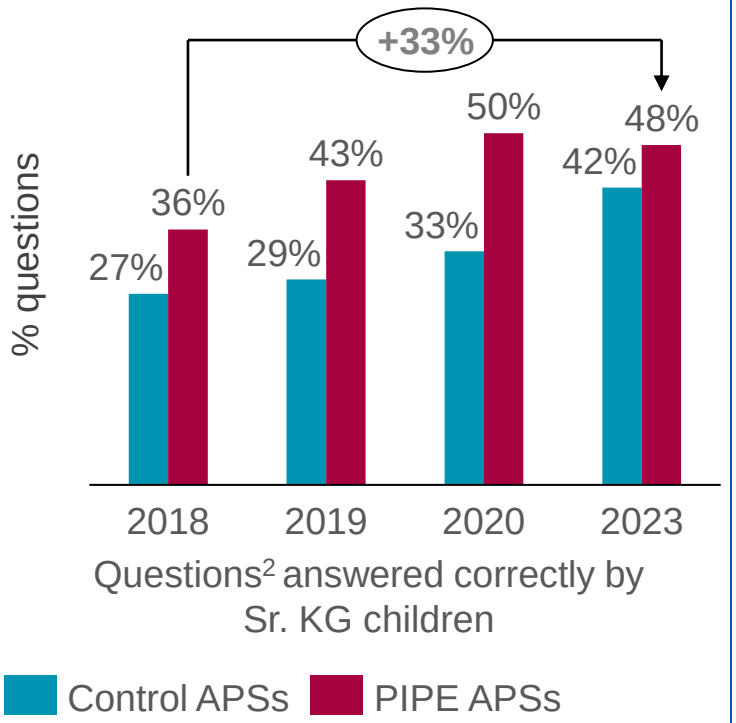
50% better learning outcomes across each skill

Activities

- **Developed public goods** based on research with 4400 parents, 28 APS administrators, 40 teachers, 167 ABL solution providers to:
  - Understand the **reasons for poor learning outcomes**
  - Leverage motivations of stakeholders to improve quality
- **Supported partners in adapting their product** for the APSs market and in improving teacher training
- Developed **'STARS', a tool to assess education quality** (including learning outcomes) in APS
- **Annually assessed and published learning outcomes** in PIPE APSs
- Supporting partners to **develop remote learning strategies to ensure learning continues** during the pandemic

Impact to date[1]

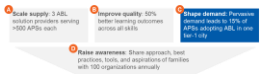
33% improvement Since 2018



PIPE could not conduct assessments in AY 2020-21 and AY 2021-22 as schools were shut due to COVID-19

1-Using the STARS tool. Sample sizes: 2018 (190 children in 38 PIPE APSs and 100 children in 20 control APSs), 2019 (636 children in 106 PIPE APSs and 168 children in 28 control APSs) , 2020 (492 children in 116 PIPE APSs and 210 children in 35 control APSs), 2023 (378 children in 63 PIPE APSs and 204 children in 34 control APSs) I 2- Represent 4 questions that were assessed from 2018-2023 – a. Can you read the word 'PIN'? b. Can you identify the largest number from a group of numbers? c. Can you count and give 12 sticks out of 20? d. Can you name any 6 animals?.

C Shape demand: Created and disseminated collateral to educate parents on the benefits of ABL



Goal

Pervasive demand leads to 15% of APSs adopting ABL in one tier-1 city

Activities

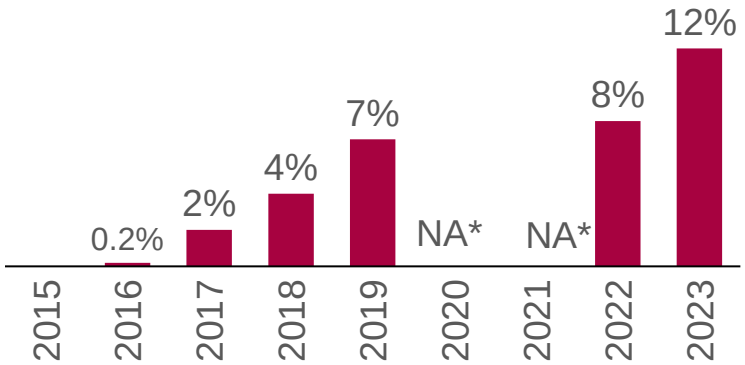
- Developed '**markers to test concepts**' to shape parental demand
- Developed **video and print collaterals** to educate stakeholders on key skills that children should be learning by age
- **Developed 8 videos to educate parents** about their child's current poor learning outcomes, and help them engage in simple activities with their children at home
- Supported partners in organizing '**learning exhibitions**' for parents, to showcase child learning outcomes due to ABL
- Developed '**Toys in a box**', an engaging set of 6-8 developmentally appropriate affordable toys that engage children on key developmental outcomes

Impact to date

Disseminated parent engagement videos to 100K+ parents

www. ratta-ya-samajh.com

% of APSs in Bangalore adopting ABL[1]



**as schools were closed due to COVID-19[2]*

1 – Per PIPE's estimates, Bangalore has ~3,000 APSs Calculated based on the data reported by partners in July every year | 2 – Schools were physically shut due to COVID-19, and only remote learning products were offered by the partners to APSs during academic years 2020-21 and 2021-22

D Raise awareness: Shared the importance of early education and the APS market with ~180 organizations

Goal

Share approach, best practices, tools, and aspirations of families with 100 organizations annually

Activities

- **21 publications** including ANYAS, IDELA Equity
- **~50 presentations** at national and global conferences (e.g., Global Philanthropy Forum)
- **Whitepapers** highlighting program research (e.g. the PreschoolPromise)
- **9 best practices sharing sessions attended by ~20 organizations** (e.g. MSDF investee's)
- **10+ Videos** highlighting sales process, parent engagement etc.
- **~180 annual 1-1 update calls with people** from foundations, NGOs and other organizations working in the education space to share PIPE's approach

Impact to date

- **Companies have used PIPEs best practices and business model** to better target the APS market
- **Godrej** developed a program to support ABL solution providers by providing grants to APSs to "trial" the solution
- **AVPN** set up 'Early Learning Collective' as they realized that ECE can have high impact
- **Central Square Foundation** added a vertical that focuses on ECE based on PIPE research
- **Aga Khan Education Service, India** using videos developed by PIPE to communicate benefits of ABL to teachers and parents

REIMAGINING SOCIAL CHANGE