



Understanding the Affordable Private School Market in India

PROGRAM TO IMPROVE PRIVATE EARLY EDUCATION (PIPE)



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

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5 key objectives of the research



- 2 Understand **APS owners' buying process for 'non-traditional' purchases** i.e., purchases not uniformly made across schools, especially those linked to improvements in quality¹
- 3 Assess how APS owners view the Early Childhood Education (ECE) business



- Understand how the ECE section of an APS functions
- 5 Identify the **top challenges** faced by APSs, and the approach APS owners take to address these challenges

1. Improvement in quality is defined as the owner's perception of a positive change in any aspect related to the school

Findings are based on interviews with a cross-section of stakeholders, observations at APSs, and secondary research

Primary • research

- Structured interviews at 28 schools across 3 cities (Bengaluru, Delhi, Hyderabad)
 - 28 APS owners
 - 19 ECE teachers
- Structured interviews with 31 experts and solution providers
- Informal interviews with owners and teachers in 20 schools in Mumbai, Pune, Hyderabad and Delhi (in addition to the structured interviews)

Secondary research

- Review of existing research on key areas, including:
 - Customers (Gray Matters¹, MSDF²)
 - Business economics (Gray Matters³, MSDF²)
 - Education policy (Dr. Archana Mehendale⁴, Accountability Initiative⁵)
 - Quality (CECED⁶, Pratham⁷)
 - Sector wide trends (Ernst & Young⁸)
- Findings from FSG research⁹ aimed at understanding customer behavior and drivers of that behavior

Gray Matters Capital, 2010, "Consumers of Affordable Private Schools: A study of parents in low-income communities in Hyderabad, India";
 MSDF, 2014, "Market Assessment of Affordable Private Schools in Five Cities";
 Gray Matters Capital, 2012, "APS Sector Analysis Report-2012";
 A.Dr. Archana Mehendale, 2011, "ECE in India: Policy and Law";
 Accountability Initiative, 2015, "SSA Budget Brief";
 CECED, 2015, "Indian ECE Impact Study- 1";
 Pratham, 2014, "The 10th Annual Status of Education Report (ASER)";
 Ernst & Young, 2012, "Private Sector's contribution to K-12 education in India: Current impact, challenges and way forward";
 FSG primary customer research of 4,179 households in NCCS (National Consumer Classification System) classes A3-D1 (April-July 2015)

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On the basis of control, schools can be divided into two groups. PIPE focuses on APSs – low-fee, unaided private schools



* This definition is based on a synthesis of the following reports: "Education Technology in India: Designing Ed-Tech for Affordable Private Schools", by Hila Mehr et al. (2013);."Affordable Private Schools (APS) Sector Analysis Report-2012" by Gray Matters Capital (2012);

"Market assessment of Affordable Private Schools in Five Cities", by MSDF (2014)

FSG estimates that there are around 1.5 lakh APSs in urban India

FSG estimate of APS numbers in urban India

- FSG estimates suggest urban India could have anywhere between 1.3 -1.7 lakh APSs
 - The mid-point of this range is around 1.5 lakh APSs
- Please see the next slide for detailed calculations

Other sources of information on APS numbers / enrolments

- Noted APS expert James Tooley has estimated that 70 percent of urban Indian children (~65 million) are in private unaided schools¹
- Educationist Geeta Gandhi Kingdon has calculated that India (rural and urban) has around 2.9 lakh private unaided schools (in 2014-15)²
- As per the 8th All India Educational Survey⁴, urban India had approximately 80,000 private unaided schools (in 2009)

There is no current data on the total number of private schools in India. Data from the official source (District Information Urban India System on Education (DISE)) does not include all private schools^{2,3}

- 1. James Tooley (Professor of Education Policy and Director, E.G. West Centre, Newcastle University) in "Understanding parental choice for Budget Private Schools", Report on Budget Private Schools in India 2016-17, Centre for Civil Society (2017)
- Geeta Gandhi Kingdon (Chair, Education Economics and International Development, Institute of Education, University College London) in "The emptying of public schools and growth of private schools in India", Report on Budget Private Schools in India 2016-17 Centre for Civil Society (2017)
- 3. "The Private School Revolution in Bihar: Findings from a Survey in Urban Patna", by B Rangaraju, J Tooley, P Dixon (2012)
- 4. Eighth All India Educational Survey conducted by the National Council for Educational Research and Training (2009)

Estimating the number of APSs in urban India – detailed calculations

	Scenario 1	Scenario 2
Number of children aged 3-5 (both inclusive) in urban India ¹	19,139,027	19,139,027
% of children in A3-D1 category in urban India ²	69.41%	69.41%
Number of children in A3-D1 category in urban India (3-5 years, both inclusive)	13,284,399	13,284,399
% of these children going to ECE in APS (3-5 years) ³	86%	86%
Number of children in A3-D1 category in urban India going to ECE in APS	11,424,583	11,424,583
# of children from other segments going to APS (from A2 and D2 assuming 12% from each of those categories) ⁴	390,436	390,436
Number of children going to ECE in APS in urban India	11,815,019	11,815,019
Average enrolment in ECE in an urban APS ⁵	90	75
Number of APSs	131,278	157,534

- 1. Single year age returns by residence and sex (Table C-13), Census of India: <u>http://www.censusindia.gov.in/2011census/c-series/c-13.html</u>
- 2. Assuming that the proportion of children by socio-economic classes is the same as the distribution of households. Data from Indian Readership Survey 2014 (see slide 67)
- 3. FSG primary customer research of 4,179 households in NCCS classes A3-D1 (April-July 2015)
- 4. FSG assumption
- 5. FSG assumption based on schools in research sample

The APS market is highly fragmented, and a large number of standalone schools operate within a small geography

Situation in APS market

- Most dense, low-income communities have nearly 30-40
 APSs in a 2-km radius¹
- Only 1/3rd of the APSs are part of a chain¹
- 82% of these chains have less than 5 schools¹



1. "Affordable Private Schools (APS) Sector Analysis Report-2012" by Gray Matters Capital (2012); 2. APS location data: National Independent School Association (NISA)

The proliferation of APSs is being driven by demand from parents and profitability of the business



Low-income parents prefer APSs to government schools

- FSG research shows that 87% of urban low-income parents are sending their ECE-age children to APSs¹
 - Parents associate government schools with **poor quality** education and a **lack of good facilities**
 - Parents also feel government schools are attended by students from poorer families, and do not want their children to associate with them
 - 'English-medium' schools are preferred as parents feel that being in an 'English-speaking environment' would help their child pick up the language – important for success later in life

APSs have low costs and running an APS is a profitable business

- APSs are able to operate at a lower cost per child compared to even government schools
 - A study by Muralidharan and Sundararaman (2015) shows private schools were able to achieve similar level of learning as government schools for around one third of the cost²
- 80%+ APSs are making an operational surplus³
- Successful APSs can make profits of over INR 1.5 million per year (~USD 25,000)⁴
- The APS market in India is estimated to be around USD 5.2 billion⁵

1. FSG primary customer research of 4,179 households in NCCS (National Consumer Classification System) classes A3-D1 (April-July 2015); 2. The Aggregate Effect of School Choice: Evidence from a two-stage experiment in India, The Quarterly Journal of Economics; 3." Affordable Private Schools (APS) Sector Analysis Report-2012" by Gray Matters Capital (2012); 4. FSG estimates, based on schools in research sample. See slides 27 and 31 for detailed estimates; 5."Emerging Markets, Emerging models: Market Based Solutions to the Challenges of Global Poverty" by M Kubzansky, P Frandano & A Karamchandani (2009)

There are multiple levels of regulation that APSs must comply with, but these are often not followed

In principle, APSs are required to comply with provisions of...

Right to Education (RTE) Act

- APSs need to reserve 25% seats for Economically-Weaker Sections (EWS)
- APSs need to fulfill minimum requirements relating to infrastructure, teacher-student ratio, teacher qualifications, etc.
- Schools need to obtain recognition from the State Department of Education, in the form of an NOC which is renewed every 3 years
- The MHRD is supposed to shut schools that do not comply with the above

State-level regulations

- State Departments of Education, and legislatures, often create additional regulations for schools, as education is a concurrent subject
- For instance, Maharashtra introduced an Act in 2011 which mandated approval from a Parent-Teacher committee before a fee hike could be introduced

...However, in practice implementation is often poor, and uneven across states

Implementation

- While States like Odisha have filled only 2% of their EWS seats, Rajasthan has filled ~70%¹
- Only 58% of schools have a playground that meets the RTE's infrastructure requirements¹
- Studies show a large number of schools continue to run without recognition²
- While ~3,000 schools have been shut down, expert interviews showed that these schools often reopen under new names in a few days 3,4

Implementation

 In Maharashtra, very few schools have formed this committee, but school managements have hiked fees⁵

"The government has not followed RTE closely. If you close private schools, there will be people marching on the Minister's office"

- Policy Analyst

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1. "SSA Budget Brief, 2015-16" by Accountability Initiative (2015); 2. "Low cost Private Schools for the Poor in India: Some Reflections", by Geetha B. Nambissan (2012); 3.PIPE interviews with experts and soltuion providers; 4.<u>http://www.thenewsminute.com/article/are-good-low-cost-private-schools-bearing-brunt-faulty-rte-act-23009</u>; 5. "Analysis of School Fee Regulation in India", by Centre for Civil Society (2014)

Profile of a typical APS (1/2)

Ownership

- APSs are usually run either by **individual owners** or by **a family**, who are a part of the local community¹
- The owner does not necessarily have prior experience of working in the education field²



Size and composition

 The typical APS is small in size, with enrollment of around 400 students³

- Few successful APSs grow to 1,000+ students

- 10-20 sq. ft. of area per student
- ~80% of schools have a pre-primary facility⁴ and 69% of schools do not go beyond Grade 8²



1."Education Technology in India: Designing Ed-Tech for Affordable Private Schools", by Hila Mehr et al. (2013); 2. PIPE primary interviews with APS owners in Bangalore, Mumbai, Pune, Delhi; 3. "Affordable Private Schools (APS) Sector Analysis Report-2012" by Gray Matters Capital (2012); 4. DISE Analytical tables 2014-15;

Profile of a typical APS (2/2)



Summary: Profitability and demand drive growth in the poorlyregulated, highly competitive and fragmented APS market

- APSs form a large chunk of schools in India: As per government data, 39% of schools in urban India are APSs. Independent studies indicate that this proportion might be much higher in reality as a substantial chunk of private schools are not listed in government records
- The APS business has low entry barriers and is highly fragmented: APSs are generally run by individual owners or families that do not necessarily have prior experience of working in education. Only one-third of APSs are part of a chain, and more than 80% of these chains have less than 5 schools
- Low-income parents prefer sending their children to an APS over a government school: Close to 90% of urban low-income parents prefer APSs to government schools due to Englishmedium teaching and low teacher absenteeism
- APS teachers generally lack required qualifications and are poorly paid: Most APS teachers lack formal teaching qualifications, and may not even have completed college. The average salary for an APS teacher is around INR 4,000/month
- Adherence to regulation is low: An elaborate regulatory structure exists at multiple levels, but most regulations are not enforced. Enforcement is also uneven across states

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Running a successful APS is potentially a very profitable business...

Illustrative income statement of an APS

(Indicative calculations based on owner interviews and PIPE estimates)

Revenues	Costs		
All numbers in INR unless otherwise stated		All numbers in INR unless otherwise stated	
Average fee per child per month ¹	860	Teacher salary per month	126,000
Number of children in school	390	Number of teachers in school	18
ECE years	3	Average salary per teacher	7,000
Highest grade	10	Staff salary per month	42,500
Average number of children in each grade	30	Number of staff ³	12
Gross monthly fee revenue	335,400	Average salary per staff member ³	3,542
Loss due to fee delinquency per month	(16,770)	Power and utility costs ³	20,000
Delinquency rate	5%	Cost of learning aids ³	10,000
Net monthly fee revenue	318,630	Cost of maintenance ³	10,000
Net annual fee revenue	3,823,560	Expenses on marketing ³	10,000
Total commissions from books and uniforms	307,125	Sundry costs ³	10,000
Average annual cost of books per child	1500	Total monthly costs	228,500
Average annual cost of uniforms per child	750	Total annual costs	2,742,000
Margin offered to owner ²	35%	Total annual costs (USD) ⁴	42,185
Net annual revenues	4,130,685		
Net annual revenues (USD) ⁵	63,549		

Net annual profit INR 1,388,685 (USD 21,364)⁵

1. Average fee of APSs in research sample (excluding book and uniform costs) from PIPE research on APS owners' buying behavior; 2. Assuming the mid-point of the 30%-40% margin range mentioned by APS owners during research; 3. PIPE estimates; 4. Assuming USD 1 = INR 65



Schools earn revenue through a variety of fees that are collected at different intervals

Illustration of various fees charged by APSs

Start of the academic year



Schools may also charge activity specific fees (e.g., extra fee for a karate class or a school outing)

Successful schools are able to increase fees periodically, but to a limited extent

APS owner's response to the question: *"How often do you raise your fees?"*

Frequency of fee increase



Fee increases

- Most schools in the sample increased fees every year
- The increase is typically limited to below 10%
- The ability to increase fees is constrained by
 - Parents' ability to pay
 - Competition within the micro-market
- Schools **do not always need a new intervention** / improvement to justify the fee increase

Commissions on the sale of products to parents are a substantial source of additional income for APSs



- Commissions on sale of products to parents (e.g., text books and uniforms) can constitute close to 20% of an APS' net earnings
- Commission on sales represent pure profit for the APS, with no associated costs
- APSs can earn **margins of around 30-40%**, and consider the margin offered a key criteria for selecting a supplier

Illustrative case study¹ of importance of commission from text books and school uniforms

Revenues (INR)	Scenario 1 (30% margin)	Scenario 2 (35% margin)	
Average fee per child per month ²	860	860	
Number of children in school	390	390	
Gross annual fee revenue	4,024,800	4,024,800	
Annual fee delinquency (assuming 5% delinquency rate)	(201,240)	(201,240)	
Net annual fee revenues	3,823,560	3,823,560	
Average annual cost of books per child	1,500	1,500	
-Total revenue from books	585, 000-	585, 000 -	
Total earnings from commission on books	175,500	204,750	
Average annual cost of uniforms per child ³	750	750	
Total revenue from uniforms	292,500	292,500	
Total earnings from commission on uniforms	87,750	102,375	
Total earnings from commissions	263,250	307,125	
Net annual profits of school	1,344,810	1,388,685	
Commission earnings as % of net profits	19.58%	22.12%	

1. Rough estimates based on FSG research; 2. Avg. fee of APSs in research sample 3. Assuming two sets cost INR 1500 and are replaced once every two years

Common challenges faced by APSs (1/4)

APS owner's response to the question: *"What are the biggest challenges that you face?"*



Parent engagement

Owners' response

- Some parents 'do not care about the child's education' and therefore do not engage with the school
- Some parents have 'unrealistic expectations' about what the school can achieve for the child
- Some parents are 'uneducated and cannot support the child at home'

PIPE analysis

- While 'disengaged parents' was one of the most frequently reported challenges, it did not appear to be a major challenge in practice
- Owners were often referring to only a minority of parents as being disengaged
- Teachers also described how **parents would often complete the child's homework** themselves, indicating a considerable level of engagement

Common challenges faced by APSs (2/4)

APS owner's response to the question: *"What are the biggest challenges that you face?"*



Fee collection

Owners' response

- 20-25% of parents are behind on fee payments
- 5-10% do not pay at all
- Parents often **demand discounts** on the listed fee

PIPE analysis

- To reduce risk, some schools **collect 50% of the total annual fee upfront** and the rest in 2 (or more) equal instalments
- Owners anticipate the need to provide discounts and quote higher fee amounts
- Owners **price discriminate between parents** depending on their ability pay, offering larger discounts to those who have a lower ability to pay

Common challenges faced by APSs (3/4)

APS owner's response to the question: *"What are the biggest challenges that you face?"*



Space

Owners' response

• Lack of space limits the school's ability to increase student numbers

PIPE analysis

- Classrooms in schools with limited space are cramped and have little or no room for activities
- Most schools have **some free space in the corridors or the central court** of the school, where some activities could be conducted

*Responses to an open-ended question with multiple responses possible

Common challenges faced by APSs (4/4)

APS owner's response to the question: *"What are the biggest challenges that you face?"*



*Responses to an open-ended question with multiple responses possible

Teacher retention / recruitment

Owners' response

- Teacher attrition is **as high as 50%** in some schools
 - Teachers may move to competing schools who pay slightly higher wages, or may discontinue for personal reasons
- There is a scarcity of "good" teachers

PIPE analysis

- Owners often **recruit untrained teachers** for ECE and are able to replace them relatively easily
- Frequent churn of teachers, and the ability to hire untrained teachers, helps owners keep salaries low
- Owners seldom invest in the professional development of teachers, despite hiring untrained teachers

Summary: APSs are run like small businesses, owners have limited education but understand parent expectations

• APSs can be a very profitable business: Successful APSs can make profits of over INR 1.5 million per year (~USD 25,000)

Most APS owners are driven by economics: APSs tend to be run as businesses, and decisions
regarding the school are driven by the impact on revenue and cost

 Successful APSs are able to regularly raise fees, but to a limited extent: Fees are often increased annually and are not necessarily linked to new investments / improvements in the school, but the ability to increase fees is constrained by the parents' ability to pay and the level of competition in the micro-market

 'Commission' on goods is an important source of income: Commissions on text books and uniforms can account for ~20% of income for an APS, and are an important factor when owners select suppliers

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A typical APS owner is a small businessman looking to differentiate and grow his business



Name: Kamal Kumar Sharma Age: 34 Education: Graduate Years in-charge of school: 6 Prior experience: Owned a real estate brokerage firm

- Has inherited the school which was started by his father
- Divides his time between the school and a real estate business
- Has hired a Principal to take care of most of the day-to-day affairs of the school
- Believes that parents are not interested in quality and only run after big brands and gimmicks
- Feels increasing fees is not easy as the newer schools are happy to undercut fees in attempt to lure parents
- Wants to add a new building to increase his school's capacity
- Faces challenges with fee collection, and bureaucratic issues due to RTE

APS owners often view the school as a business, and tend to be primarily motivated by economics

What drives the typical APS owner's decisions about the school?

Financial motives are the primary drivers for running APSs

- APSs are often run as **businesses** (family businesses in many cases).
- Decisions about the school are therefore analyzed on the basis of their **impact on costs and revenues**.
- Some owners may believe that improving **quality could** lead to better financials in the long-term.

"I cannot introduce anything for which the parents are not willing to pay"

Social

- APS owners enjoy a certain standing within the local community.
- Being seen as providing 'quality' or 'caring about students' can enhance this standing, and may drive some decisions made by the owner

"My school is wellrespected in this community and everyone greets me with respect"

Some owners are also driven by social and altruistic motives

Altruistic

- Some owners may be committed to **improving the quality** of education for its own sake.
- Decisions to invest in certain aspects may therefore be driven by an 'altruistic' motivation to improve quality

"I noticed that my students were bored in class and wanted to do something to engage them"

APS owners operate in a highly competitive environment and under multiple pressures

APS owners are running a difficult business

- APSs operate in a highly fragmented and competitive environment
- Increased competition has limited the ability of APSs to increase fees
- A small proportion of schools is struggling with falling enrolment numbers due to increased competition
- Parents often delay paying fees and also negotiate discounts, leading to challenges in managing cash flows
- Teacher attrition is high
- Owners have to contend with multiple regulations and rent-seeking behavior by the official machinery
- Parents are often reluctant to pay higher fees and this makes it difficult for owners to invest in intangibles or in product that show impact over a longer period
 - Low-income parents are skeptical of additional spending
 - APS owners generally pass on costs of any new purchases (products/services) to parents (often with a markup)
 - Any product or service that is not visible to parents (e.g., teacher training), or one that is likely to show significant results only over a longer-term, is a difficult acquisition for the APS

Affordable private school owners know that parents generally judge quality of a school on the basis of easily visible factors

Key factors on which APS owners believe parents judge schools

- English language
 - Conducting classes in English medium
 - o Considered a minimum requirement
 - Also emerged during the PIPE customer research as a key requirement by parents¹
 - Speaking more English words, either in conversation or as rhymes
 - Writing English alphabets and words, particularly in cursive style
- 10th standard results
 - Percentage of students that pass the exam
 - Results of the best performing students
 - Results of entrance exam for other schools, in cases where the school itself does not offer 10th standard (e.g., many APSs in Delhi offer classes only till 8th standard)
- Physical infrastructure of the school (e.g., well maintained building)
- **Technology-related interventions** (e.g., smart class system, computer lab, SMS alerts)
- 'Discipline' and 'confidence' exhibited by children, often judged in relation to other children in the locality or building

(Govt. Recognised) Smart Class Available Smashing Ball Pool Fully A.C. Large Playway Area CCTV Cameras Computer Lab Convence Facilities (Van, Rickshaw)



Summary: APSs are generally run by financially-driven owners who have a keen sense of parent expectations

- APS owners often view the school as a business, and tend to be primarily motivated by economics: APSs are often family-owned businesses and most decisions are analyzed on the basis of their financial impact. Some owners are also driven by social and altruistic motives
- APS owners operate in a highly competitive environment and face several challenges: APSs operate in a highly fragmented and competitive environment. They face challenges in timely collection of fees, retaining teachers, and in complying with multiple regulations
- Affordable private school owners know that parents generally judge quality of a school on the basis of easily visible factors: Parents tend to assess 'quality' of the school on factors such as 10th standard results, English language skills of the child, or the use of technology in the school

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The buying behavior of APS owners can be analyzed using a five-stage framework



Need recognition for interventions is primarily driven by external solution providers

A Need recognition	Information gathering Evaluation	Decision making Post-purchase behavior
Manner of need recognition	Description	Example
Driven by external provider	 The most common manner of need recognition Owner may be aware of the problem but would not have considered finding a solution External provider informs owner of the intervention, and the problems it addresses 	Teach for India (TFI) representatives contacted the owner to place TFI Fellows at an APS. He was not aware of problems with pedagogy at his school till TFI Fellows joined and students showed greater interest in their classes
Driven by observing other schools	 The second most common manner Owners look up to 'elite' schools and try to emulate them Owners tend to follow other APSs only once a product becomes a 'hygiene' factor i.e., something that all schools are implementing 	The school attended by the owner's daughter used text messages to communicate with parents about homework. The owner thought this would help him differentiate his school in the micro-market and contacted the solution provider
Driven internally by school	 The least common manner Owner proactively tries to address a problem that she is already aware of, by seeking potential solutions and providers 	The APS lacked space for play. The APS owner reached out to hardware stores to identify potential flooring solutions that could turn her indoor assembly hall into a safe play area
External solution providers are the main source of information for APS owners



APSs evaluate and select interventions based on some key criteria (1/2)

Need recognition

aathering

С

Evaluation

Decision making

Post-purchase behavior

Affordability:

- Ability of the APS to pay for the intervention, given its financial resources
- Ability of parents to bear the cost, if it were to be passed on to them

2 A

Alignment with the owner's motivations:

- Financial motivations (often a primary criterion)
 - Increase enrolment and/or retention of students
 - Increase fees or introduce new charges
 - Improve the school's brand
 - Ensure value for money (i.e., ensure price being offered by the provider is competitive)
- Non-financial motivations (often a secondary criterion)
 - Improve student outcomes (ensure adequate quality of the intervention)
 - Improve the owner's standing in the community

"I sometimes have vendors who come to me with very nice and colorful textbooks, but I know my parents can't afford that"

"Ultimately the parents need to be willing to pay for anything I bring into the school"

"I changed the pre-primary classes into Montessori because it made me sad to see the children so bored in class"

© FSG

For the majority of APS owners, there has to be a strong business case for selecting an intervention

APSs evaluate and select interventions based on some key criteria (2/2)

Need recognition

aathering

Evaluation

С

Decision making

Post-purchase behavior

- Ease of integration into the APS' operations:
 - Additional training required for teachers
 - Behavior changes required in either teachers or parents
 - Infrastructure changes required in the school, such as changes in classroom layout
 - Monitoring required to ensure implementation
- Clarity of details related to design and implementation of the intervention:
 - Content of the intervention (e.g., will the product cover all aspects of the syllabus?; what do the TLMs look like?)
 - Role of the owner and staff in implementation
 - Role of the provider
 - Process and schedule for rolling-out the intervention
 - After-sales service commitment by the provider

"A company approached me with a new math pedagogy. I liked their approach but they wanted 3 months to train the teachers. I asked them, 'who will take classes and who will pay for those teachers?' They had no answer!""

"I had another teacher training provider come to me as well, but they were not clear about what exactly they were going to do or teach"

The APS owner is often a unilateral decision maker on adopting interventions

	Consulted	Decision maker	Informed
Owner		Unilaterally decides on taking up an intervention	
rincipal	May shortlist vendors, or provide advice on quality, particularly for interventions directly related to academics		Expected to ensure implementation
eacher	May provide some advice if she is among the small group of 'trusted' teachers		Expected to implement
Parent			May raise concerns in some cases, but owners feel they can manage the concerns if required

APS owners do not systematically assess impact on students or teachers, but track parent perceptions



Quality of after-sales service is a key factor when deciding whether to continue with an intervention

Need recognition Information Evalua	tion Decision making E Post-purchase behavior
Illustration: Discontinued smart board service	Illustration: Praise for strong after-sales service
A smart board vendor approached me some 3 years ago and impressed me with the product. I paid INR 4,00,000 (~USD 6,000) for it	I purchased the spoken English program for my Sr. KG, 1st , and 2nd grades some 6 years ago. It was the ideal program
He promised regular content updates and troubleshooting support	The company provided handholding and support in implementing the program, including lesson planning and training teachers
After the first year, their after-sales service became very poor. They took days to answer our calls	The trainer continued to come regularly to observe the teachers and provide feedback
It was not worth the hassle anymore and I stopped using their service last year	The company shut down, but I would have loved to continue with them

Timing of decisions to purchase interventions

Intervention type	Description	Timing of decision	Rationale
Curriculum changes	 An intervention which replaces the text books, on which weekly and daily lessons are based (e.g., an English program 	 5-6 months prior to start of the academic year 	 Schools decide on a publisher and give out orders 5-6 months prior to start of the academic year
	that requires existing classes to be replaced)		 School gets sufficient time to plan for the coming year
			 Publisher gets sufficient time to fulfil the order
Non-curriculum changes	• Smaller interventions which supplement the existing curriculum, rather than replacing it	 Ideally 2-3 months prior to start of the academic year 	 Any required teacher training can happen in the 10 days prior to the start of the
	(e.g., a math program that is run twice a week	 Much greater flexibility to make 	academic yearLimited training is
	in addition to the existing math classes)	decisions throughout the	also possible throughout the year

year

Examples of items that schools have invested in (1/2)

ltem	Description	Expenditure ¹	Rationale
Smart board	 Classroom(s) fitted with an interactive board and computer Used to deliver educational content that maps to the curriculum 	 Quarterly instalments of INR 100,000 (~USD 1,500)² for 5 years (for 13 boards) 	 Smart boards are a hygiene factor in most micro-markets, as almost all schools within the fee range tend to have one
Abacus math class	 Extra math classes, taught using the Abacus method Intended to improve the students' ability to perform calculations and do mental math 	 Annual cost of INR 400,000 (~USD 6,000)² for 1st-10th grade 	 Math skills are valued by parents Program could help the school differentiate itself in the micro-market
Building renovation	 New coat of paint New flooring Plumbing repairs Electrical works 	 One-time expense of INR 1.8 million (~USD 28,000)² 	 Building quality and level of maintenance is considered by parents as a proxy for quality

2. Assuming USD 1 = INR 65

Examples of items that schools have invested in (2/2)

ltem	Description	Expenditure ¹	Rationale
SMS alert	 Text messaging system to inform parents about daily 	 Annual cost of INR 24,000 (~USD 370)² 	 High-end schools provide similar services
service	homework assignments	per year for the entire school	 Parents like the use of technology
			 Parents are keen to know about the child's school work
			 Teachers do not have to write in each student's diary individually
Refurbish ment of ECE class- rooms	 Bright paint and wall pictures for ECE classes Rubber mats to replace benches 	 One time expense of INR 25,000 (~USD 400)² 	 High-end chains setup their ECE classes in this manner
Teacher training course	 2-year course on classroom management and lesson planning for primary school teachers 	 One-time expense of 2,00,000 (~USD 3,000)² for 5 teachers 	 Parents value trained teachers Cheaper to train teachers, relative to hiring trained teachers

1. As mentioned by school owner; 2. Assuming USD 1 = INR 65

Summary: Need recognition in an APS is generally driven externally; the owners make purchase decisions unilaterally

- Need recognition for an intervention is most commonly driven externally: Interventions are usually brought to an APS owner by an external party, rather than the owner actively seeking out interventions
- Solution providers are the primary source of information about interventions: APS owners rely heavily on the solution provider, and do not seek out alternative providers or sources of information
- APS owners adopt interventions that are affordable, align with their motivations and can be easily integrated into the school
- APS owners unilaterally decide on whether to adopt an intervention
- For APS owners, changes in parent perception are the most important measure of impact
- Interventions that require changes to the curriculum need to be purchased upto 5-6 months prior to the academic year, but there is much greater flexibility with other interventions: Textbooks on which the curriculum is based are finalized well in advance. However, interventions that do not require a change in textbooks can potentially be introduced anytime during the academic year, although the preference is naturally to avoid changes in the middle of the year

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_	

ECE classes are setup in a manner very similar to other classes...

- Fixed benches and desks in all KG classes
- More flexible seating arrangements in the Nursery section in roughly a third of schools (but not the KG sections)
 - Some owners believe Nursery aged children require more space
- Lack of teaching-learning-materials
- Drab walls
- Hard concrete floors



...and are cramped for space



Layout of a typical ECE classroom in an APS







The approach to teaching in ECE classes is similar to other classes, and is often not developmentally appropriate...

- Teacher-directed rote learning
 - Students intone words, sentences, rhymes and numerals – mimicking the teacher
 - Students write letters or words by copying from the board, or tracing on work books
- Lessons are **repetitive**, with the same material covered several times in the same manner
- Little time for play or activities
- Open ended conversation or **questioning is** often discouraged



...but the flexibility in curriculum and pedagogy provides an opportunity for developmentally appropriate ECE

Curriculum

- There is no regulation stipulating the ECE curriculum to be followed
- Topics to be covered in the year are determined by the textbook that is selected
- Schools have complete autonomy in selecting textbooks, and can change the selection every year

"State board prescribes syllabus for Grade 1 and above. For preprimary we teach what is in the textbook"

Pedagogy

- Teachers decide how a particular topic should be taught in class, and often have complete autonomy
- Teachers rely on previous experience or suggestions from other teachers on how to teach a lesson
- Classes have no formal lesson plans

Monitoring

- There are no in-class observations
- Many schools require teachers to maintain a daily diary of topics covered in class
- Teachers are not required to report how they taught the topic

"The Principal gives me termwise targets and I break them down into number of pages to cover daily. I am free to teach in the manner I think is right" "After classes every day, I record the topics taught for each subject in a daily diary and submit it to the Principal every Monday"

ECE teachers are often unable or unwilling to spend time on lesson planning



experienced teachers

Summary: ECE and primary classes are setup and conducted in a similar manner, although the ECE curriculum is more flexible

- ECE classes are setup and conducted in a manner very similar to other classes : There are fixed benches for seating; and a teacher-directed, rote learning approach to teaching
- The curriculum and pedagogy for the ECE section are very flexible: The topics to be covered for the year depend on the textbook chosen by the school; and teachers are given autonomy in how they teach the topic
- **Teachers spend very little time planning lessons:** Most of the teacher's time is spent on teaching the class, followed by tasks such as assigning and checking homework, marking attendance and following up on due fees. Teachers typically spend 5-30 minutes planning for the next day's lessons, and almost no time is devoted to training

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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	
	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 	
Approach	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 rote¹ with activity based learning² in affordable private schools³ 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 schools⁴
- 86% of families with lowincomes 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 education⁶

Current learning outcomes are poor due to rote teaching

- 35% of Grade 10 students can read at Grade 4 level⁷
- 84% of Grade 1 students can't read at grade level⁸
- Most private preschools follow mainly rote teaching with no age appropriate activities⁹

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 later¹⁰
- 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 investments¹²

- 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 providers¹ 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





1. Stakeholders are APS administrators, teachers and parents

2. Skills include numeracy, early language skills, executive function, motor skills and socio-emotional skills

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



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



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

Goal

3 ABL solution providers >500 APSs each

© FSG | 60

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

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 date¹ 33% improvement Since 2018



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?.

Goal

50% better learning outcomes across each skill

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



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



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

Goal

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

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



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

Goal

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

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NCCS (New Consumer Classification System)

Definition

- NCCS is used to classify households into socio-economic classes
- The classification is based on two variables:
 - Education level of the chief wage earner
 - Number of consumer goods owned by the household from a predefined list of 11 durables¹
- There are 12 classes in the NCCS ranging from A1 to E3
 - A1 being the most educated class with the most household goods

Background

- NCCS was launched in 2009 as an update to the previously used SEC (Socio-Economic Classification) system
- It was developed by Market Research Society of India (MRSI) and Media Research Users Council (MRUC)

Macro data on percentage of Urban households in the country- by NCCS

PIPE target NCCSs



Source: IRS Data 2014



REIMAGINING SOCIAL CHANGE

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