Program to Improve Private Early Education (PIPE)

IMPACT ASSESSMENT 2018 (DIPSTICK)
Glossary of terms (1 of 2)

1 year PIPE APSs: APSs with partner solutions for 1 year

2 year PIPE APSs: APSs with partner solutions for 2 years

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

Administrator: Individual business-persons who leverage an existing asset or infrastructure to set up APSs. Administrators predominantly run these schools.

Affordable Private School (APS): Educational institutions that are accessed by low-income households. APSs operate from Kindergarten to grade 8 or above, are not government-aided, trust-aided or trust-funded and charge all-inclusive fees between INR 500 – INR 1650 per child per month (i.e., including books, tuition fee, admission/ readmission fee, uniforms, and excluding transportation)

Control APSs: APSs using no external interventions

Early Childhood Education (ECE): The formal education a child receives between the ages two through five. Although early childhood is typically 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 with English rather than the local vernacular as the primary language of instruction

Full curriculum PIPE APSs: PIPE APSs using full school curriculum

Learning Manager: Member of ABL solution provider’s implementation team assigned to facilitate implementation in a particular school. A Learning Manager assigned to a school will deliver all touchpoints to that school (including school visits, teacher training, parent engagement visits etc.)

Markers: Indicators or signs that parents use to assess whether their child is learning

“Right” markers: Parents assess their children are learning by asking if they can actually understand the content

“Wrong” markers: Parents assess if their children are learning by asking if they can recite rote memorized content
Glossary of terms (2 of 2)

**Partner:** 8 private companies providing high-quality ABL solutions to the APS market

**Partner solutions:** Play/activity based programs including curriculum materials and continuous support for proper implementation of the program, provided by PIPE partners

**PAT:** Pre-school assessment tool to assess the impact and sustainability of ABL in APSs

**PIPE APSs:** APSs using PIPE partner solutions

**Preschooling/Preprimary classes:** All formal educational classes prior to first grade

**Program to Improve Private Early Education (PIPE):** Program to replace rote memorization technique with activity based learning in the ~300,000 APSs in India

**Single subject PIPE APSs:** PIPE APSs using single subject curriculum

**Socioeconomic class/NCCS:** The New Consumer Classification System (NCCS) is used to classify households into socioeconomic classes based on two variables: Education level of the chief wage-earner, and the number of consumer durable goods owned by the household from a predefined list of 11 durables. For a full list of variables and the exact classification system, see [http://www.mruc.net/?q=new-consumer-classification-systemnccs](http://www.mruc.net/?q=new-consumer-classification-systemnccs)

**Standalone preschool:** Preschool providers that do not offer classes beyond preprimary

**Tuition class:** After-school coaching/tutorial classes that provide extra academic support to children

**“Working poor” households/ Low-income households:** Households belonging to socioeconomic classes D1 to A3 under the New Consumer Classification System (NCCS). These households constitute the middle 70 percent of urban India and have an average monthly household income of between INR 9,000 and INR 20,000. The term “low-income household” has been used interchangeably with the term “working poor”
PIPE conducted assessments in APSs to assess the impact and sustainability of ABL

Objectives of the assessment

- **Assess impact of partner solutions** by comparing APSs with PIPE partner solutions, to APSs that have no external interventions
- **Assess sustainability of ABL** in APSs delivered by a PIPE partner
Agenda

1 Objectives of the assessment

2 Research design and methodology

3 Key assessment findings

4 Introduction to PIPE and FSG

5 Appendix
PIPE developed a pre-school assessment tool and hired an external organization to conduct dipstick assessments in 58 APSs

- **PIPE developed the pre-school assessment tool (PAT)**\(^1\) to assess the impact and sustainability of ABL in APSs
  - The **tool assesses schools across 5 key sections** namely classroom environment, student learning outcomes, parent interviews, teacher interviews and owner interviews

- **PIPE hired an external agency (Reniscience Education) and trained assessors** to conduct the assessments

- **PIPE developed a sampling plan** that included
  - 38 APSs with partner solutions and 20 APSs with no interventions
  - 26 APSs with partner solutions for 1 year and 12 APSs with partner solutions for 2 years

- **Reniscience Education conducted the assessments at 58 APSs**

- **PIPE ensured data consistency and accuracy** by independently conducting assessments in 2 APSs in each of the cities and comparing the data collected by external assessors and PIPE team

- **PIPE analyzed the data** to identify key findings which have been listed in this document

\(^1\)To refer to the pre-school assessment tool and the approach to developing the tool click [here](#)
PAT contains 5 distinct steps to track impact and sustainability

<table>
<thead>
<tr>
<th>Sections</th>
<th>Parent interviews</th>
<th>Teacher interviews</th>
<th>Owner interviews</th>
<th>Classroom environment</th>
<th>Student learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Evaluating level of parent engagement</td>
<td>Checking if TLMs are available</td>
<td>Checking if owners value ABL</td>
<td>Assessing physical setup of classroom</td>
<td>Measuring students’ learning outcomes in English, Math and motor skills</td>
</tr>
<tr>
<td></td>
<td>Checking if parents assess learning</td>
<td>– teachers are trained</td>
<td>– share benefits with parents</td>
<td>Assessing culture through peer interactions and teacher-student engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>– teachers are capable</td>
<td>– plan to continue using ABL</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td>Conducive home environment is essential to reinforce learning</td>
<td>Logistical readiness and teacher training are essential to implementation of ABL</td>
<td>Owner buy-in and understanding is essential for continued use of ABL</td>
<td>Interactions &amp; risk taking involved in ABL can happen only in safe learning environments</td>
<td>ABL will improve students’ understanding of concepts and learning outcomes</td>
</tr>
<tr>
<td></td>
<td>What would you ask your child to check if they are learning Math?</td>
<td>How many training sessions have you attended?</td>
<td>Are you planning to start /continue using ABL?</td>
<td>Teachers asks open ended questions and responds positively to students</td>
<td>Can you read “PIN”?</td>
</tr>
</tbody>
</table>

1To refer to the pre-school assessment tool and the approach to developing the tool click here
The findings in this document are based on assessment of 58 APSs across 5 cities.

Assessed 58 APSs across 5 cities
- 38 APSs with partner solutions
- 20 APSs with no interventions
- Delhi, Mumbai, Hyderabad, Chennai and Bangalore

Assessed 290 children
- 190 students from APSs with partner solutions
- 100 students from APSs with no interventions

Interviewed 232 parents
- 152 parents from APSs with partner solutions
- 80 parents from APSs with no interventions

Interviewed 116 teachers and owners
- 58 owners (1 per APS)
- 58 teachers (1 per APS)
Agenda

1. Objectives of the assessment
2. Research design and methodology
3. Key assessment findings
4. Introduction to PIPE and FSG
5. Appendix
PIPE APSs have scored better than control APSs on dipstick assessment of 38 PIPE and 20 control APSs

1. PIPE APSs scored 54% higher than control APSs, as ABL helps improve quality of education
2. PIPE APSs scored higher than control APSs across all sections, showcasing a marked improvement in classroom quality and stakeholder awareness of learning
3. PIPE APSs scored 80% higher than control APSs on classrooms being more interactive and conducive to student learning
4. Thrice as many teachers in PIPE APSs use materials (e.g., flashcards) correctly to teach concepts, as compared to control APSs
5. APSs with PIPE partner solutions for 2 years as compared to 1 year, scored 40% higher on teachers’ engaging individually with children resulting in improved staff child interactions
6. APSs with PIPE partner solutions for 2 years as compared to 1 year, scored 105% higher on teachers’ setting classroom norms or using routines resulting in increased student engagement during classes
7. In PIPE APSs, ~2.3x students can read new English words and ~1.3x students can name more than 6 animals as compared to control APSs
8. Children in PIPE APSs did not perform better than children in control APSs on Math learning outcomes
9. Twice as many parents in PIPE APSs identified one question to check for learning in English, as solution providers have made parents more aware about it
PIPE APSs scored 54% higher than control APSs, as ABL helps improve quality of education.
PIPE APSs have scored higher than control APSs across all sections, showcasing a marked improvement in classroom quality and stakeholder awareness of learning.

Section-wise scores

<table>
<thead>
<tr>
<th>Section</th>
<th>Control APSs</th>
<th>PIPE APSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom environment</td>
<td>29.2</td>
<td>44.9</td>
</tr>
<tr>
<td>Student learning outcomes</td>
<td>4.6</td>
<td>8.3</td>
</tr>
<tr>
<td>Parent interviews</td>
<td>9.0</td>
<td>10.9</td>
</tr>
<tr>
<td>Teacher interviews</td>
<td>5.9</td>
<td>8.6</td>
</tr>
<tr>
<td>Owner interviews</td>
<td>5.7</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Overall total score for PAT is 100. Total score for classroom environment is 30. Total score for student learning environment is 25. Total score for parent interviews is 20. Total score for teacher interviews is 13. Total score for owner interviews is 12.
PIPE APSs scored 80% higher than control APSs on classrooms being more interactive and conducive to student learning.

**Classroom environment scores**

- **PIPE APSs** scored better than control APSs on:
  - Staff-child interaction
  - Appropriate use of materials (e.g., flashcards)
  - Student engagement in class
  - Room arrangement to conduct activities

- **PIPE and control APSs** have scored poorly on:
  - Peer interaction (amongst children)
  - Opportunity for students to express themselves in class

1Total score for classroom environment is 30. 10 parameters (e.g., room arrangement, displays etc.) have been rated on a scale of 0-3, each.
Thrice as many teachers in PIPE APSs use materials (e.g., flashcards) correctly to teach concepts, as compared to control APSs.

- Compared to control APSs, most teachers in PIPE APSs conduct activities using materials with the entire class.
- Across APSs, observed very few instances of students using material in small groups or individually.
APS with PIPE partner solutions for 2 years as compared to 1 year, scored 40% higher on teachers’ engaging individually with children resulting in improved staff child interactions.

**Staff-child interaction scores**

<table>
<thead>
<tr>
<th>Scores</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Staff are unresponsive or respond negatively to children</td>
</tr>
<tr>
<td>1</td>
<td>Staff interacts positively with the whole group and no negative physical contact</td>
</tr>
<tr>
<td><strong>Items in 1 +</strong></td>
<td>Staff interacts positively with some individual children</td>
</tr>
<tr>
<td>2</td>
<td><strong>Items in 2 +</strong> Staff are respectful to children and guide them positively</td>
</tr>
</tbody>
</table>

![Graph showing staff-child interaction scores](image)
APSs with PIPE partner solutions for 2 years as compared to 1 year, scored 105% higher on teachers’ setting classroom norms or using routines resulting in increased student engagement during classes.

**Classroom norms and routines scores**

<table>
<thead>
<tr>
<th>Scores</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Class is poorly managed with no norms, routines or expectations made visible or used and severe forms of discipline is used</td>
</tr>
<tr>
<td>1</td>
<td>Teachers use appropriate rules to manage class, and, staff do not hurt or intimidate children</td>
</tr>
<tr>
<td>2</td>
<td><strong>Items in 1 +</strong> Children appear to be aware of class rules and expectations and teachers reinforce expectations gently</td>
</tr>
<tr>
<td>3</td>
<td><strong>Items in 2 +</strong> Staff tries to involve children in solving their conflicts and problems</td>
</tr>
</tbody>
</table>
In PIPE APSs, ~2.3x students can read new English words and ~1.3x students can name more than 6 animals as compared to control APSs.

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### Students able to read ‘PIN’¹

<table>
<thead>
<tr>
<th></th>
<th>Control APSs</th>
<th>PIPE APSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>1.00</td>
<td>2.26</td>
</tr>
</tbody>
</table>

### Students able to name >6 animals

<table>
<thead>
<tr>
<th></th>
<th>Control APSs</th>
<th>PIPE APSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>1.90</td>
<td>2.45</td>
</tr>
</tbody>
</table>

¹PIN is generally not taught as part of the regular curriculum and hence checks for ability to read new words.
Children in PIPE APSs did not perform better than children in control APSs on Math learning outcomes.

**Students able to count 12 sticks out of 20**

- Control APSs: 1.40
- PIPE APSs: 1.32

**Students able to identify largest number from a group of 6 single digit numbers**

- Control APSs: 1.10
- PIPE APSs: 1.13
Twice as many parents in PIPE APSs identified one question to check for learning in English, as solution providers have made parents more aware about it.

Parents identified question to check children’s English skills

Typical correct responses

- "My child has started speaking to the neighbors in English"
- "My child is learning the sound of English alphabets and not just memorizing the letters"
- "My child has started using phonics to read new English words"
## Agenda

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<thead>
<tr>
<th></th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Objectives of the assessment</td>
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<td>4</td>
<td>Introduction to PIPE and FSG</td>
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<td>5</td>
<td>Appendix</td>
</tr>
</tbody>
</table>
The Problem: Children in school in India are not learning

<table>
<thead>
<tr>
<th>Weak foundation in early years(^1)</th>
<th>Leads to poor learning outcomes in secondary school(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In grade 1</strong></td>
<td><strong>In grade 10</strong></td>
</tr>
<tr>
<td>• 78% can’t read simple three-letter words</td>
<td>• Only 35% students can read at grade 4 level</td>
</tr>
<tr>
<td>• 54% can’t pick 12 pencils from a stack of 20</td>
<td>• Only 32% students can place decimal numbers in increasing order</td>
</tr>
<tr>
<td>• 82% can’t complete a simple 4-piece puzzle</td>
<td>• Only 24% can calculate area of a circle</td>
</tr>
</tbody>
</table>

Children are exposed to rote memorization techniques in early years and hence struggle to cope with primary education

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\(^1\) Findings from assessment of 207 children commencing grade 1 in Affordable Private Schools (APSs), conducted by FSG in 2016-17

\(^2\) Findings from assessment of 50,000 students in grades 9 and 10, conducted by Education Initiatives in the states of Gujarat, Maharashtra and Rajasthan in 2013-14
86% of children from urban, low-income families are exposed to pedagogically inappropriate “rote” techniques

1. IRS 2014. The research selected households belonging to socioeconomic classes A3-D1 according to the New Consumer Classification I 2- FSG research. Percentage of parents of 4 and 5 year olds enrolled in a private educational institution. Assumes that those in non-APS private preprimary classes will transition on to grade one at an APS I 3-1- e.g., the teacher would stand in front of the class and ask children to memorize “A for Apple, B for Bat, C for Cat …”
The Solution: Adopting activity based learning in early years can provide the right educational foundation to succeed in life.

Why focus on the early years?

Nobel laureate James Heckman highlighted that return on investments in early years are highest compared to remedial programs later\(^1\).

Why focus on activity based learning?

Activity based learning is the right pedagogy\(^2\) in teaching children in the early years and giving them a solid foundation.

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PIPE aims to replace rote memorization technique with activity based learning in 300,000 APSs in India

Leading to children from low-income families getting a solid foundation and an equal opportunity to succeed in life
PIPEs impact: More schools and better outcomes

FSGs Pre-School Assessment Tool was used to assess 38 PIPE schools and 20 non PIPE control schools i.e. APSs where no ABL solutions have been introduced across classroom environment, student learning outcomes and engagement of teachers, owners and parents.
Our efforts are supported by

To learn more about our work please visit [www.fsg.org/pipe](http://www.fsg.org/pipe)
**Our team** brings together strategic, educational, and operational experience and expertise

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| Vikram Jain           | Program Lead           |  - Leads the PIPE program  
  - 15 years of strategy, operations and consulting experience  
  - Worked with Monitor Inclusive Markets, McKinsey and Deloitte  
  - MBA, London Business School |
| Sriramprasad Rangarajan| Partner Team           |  - 6 years of operations and consulting experience in India and Africa  
  - Launched an employability assessment tool that has been commissioned on 30,000+ candidates  
  - Worked with HCL, PwC and Athena  
  - MSc Operations Research, LSE |
| Gauri Kirtane         | Quality Team           |  - Over 10 years of experience in education leadership, with a focus on teaching, learning and curriculum design  
  - Most recently, Education Manager for more than 35 centers and 1200 students at the Akanksha Foundation  
  - EdD, University of Pennsylvania |
| Sana Kazi             | Program Team           |  - 6 years of consulting experience in the education sector  
  - Worked with PwC, Center for Civil Society and Goldman Sachs  
  - MPA, LSE |
| Lakshmi Narayanan G   | Field Team, Bangalore  |  - 7 years of work experience, with extensive experience in the education space in Bangalore  
  - MA-Development, Azim Premji University |

*Total team size: 14*

**Roles and responsibilities:**

- **Partner team:** Capacity building of partners, Best practice development
- **Quality team:** Monitoring in schools, Best practice development
- **Program team:** Dissemination and program management
- **Field team:** Monitoring in schools

*The team shown here is representative of the PIPE team for 2018-19*
FSG is a mission driven non-profit (501 c3) focused on Scale Social Impact

We are well known for having pioneered **innovative approaches**

- **Catalytic Philanthropy**  
  *Philanthropy that considers the big picture*
- **Inclusive Markets**  
  *Creating markets that work for everyone*
- **Shared Value**  
  *Creating business value and social value*
- **Collective Impact**  
  *Organizing around common goals*

We use these approaches to help global leaders create impact and promote their effective use

We leverage these approaches to run initiatives that create scale sustainable impact

- Early Childhood Education
- Low-income housing
- 100,000 Opportunities Initiative
FSG Inclusive Markets (FSG IM) believes that markets can and should benefit the poor

**We believe** that markets should be part of the portfolio of solutions for social change.

**Our strength** is in understanding how to make inclusive business models work, and how to get them to scale.

We create impact in various program areas by:
- **driving new thinking** for the field, and
- **making change happen** on the ground.

We are a “**mission driven**” and **non-profit** unit whose work is entirely public domain.
## Agenda

<table>
<thead>
<tr>
<th></th>
<th>Objectives of the assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Research design and methodology</td>
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<tr>
<td>4</td>
<td>Introduction to PIPE and FSG</td>
</tr>
<tr>
<td>5</td>
<td><strong>Appendix</strong></td>
</tr>
</tbody>
</table>
Classroom environment: PIPE vs Control APSs (1/2)

Note: Scores on a scale of 0-3
Classroom environment: PIPE vs Control APSs (2/2)

Note: Scores on a scale of 0-3
Student learning outcomes: PIPE vs Control APSs

<table>
<thead>
<tr>
<th>Activity</th>
<th>Control</th>
<th>PIPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of Students read PIN</td>
<td>1.00</td>
<td>2.26</td>
</tr>
<tr>
<td>Average of Students identified largest number from a group of 6 numbers</td>
<td>1.10</td>
<td>1.13</td>
</tr>
<tr>
<td>Average of Students counted 12 sticks</td>
<td>1.40</td>
<td>1.32</td>
</tr>
<tr>
<td>Average of Students wrote their names</td>
<td>3.60</td>
<td>3.79</td>
</tr>
<tr>
<td>Average of Students named 6+ animals</td>
<td>3.20</td>
<td>2.45</td>
</tr>
</tbody>
</table>

Note: Scores on a scale of 0-5
Student learning outcomes: PIPE vs Control APSs

- % of Students read PIN: 20% (Control) vs 45% (PIPE)
- % of Students identified largest number from a group of 6 numbers: 22% (Control) vs 23% (PIPE) vs 28% (Control) vs 26% (PIPE)
- % of Students counted 12 sticks: 72% (Control) vs 76% (PIPE)
- % of Students wrote their names: 38% (Control) vs 49% (PIPE)
- % of Students named 6+ animals: 45% (Control) vs 49% (PIPE)
Parent interviews: PIPE vs Control APSs

Note: Scores on a scale of 0-4
Parent interviews: PIPE vs Control APSs

- % of Parents valued Math conceptual learning: PIPE 34%, Control 39%
- % of Parents valued English conceptual learning: PIPE 54%, Control 45%
- % of Parents identified Math marker: PIPE 30%, Control 42%
- % of Parents identified English marker: PIPE 26%, Control 53%
- % of Parents value partner: PIPE 37%, Control 4%
Teacher interviews: PIPE vs Control APSs

Note: Scores on a scale of 0-2, unless specified otherwise

- Average of Teacher to identify Math marker: PIPE 1.24, Control 1.15
- Average of Teacher to identify English marker: PIPE 0.97, Control 0.60
- Average of Teacher to describe an activity for senior kindergarten: PIPE 1.34, Control 0.45
- Average of No. of training sessions attended by teacher: PIPE 0.20, Control 0.20
- Average of No. of demo/monitoring sessions completed by partner: PIPE 1.79, Control 0.40
- Average of Teacher to share a weekly plan (Scale 0-1): PIPE 0.74, Control 1.00
- Average of Teacher to observe benefits of ABL: PIPE 1.68

© FSG | 38
Owner interviews: PIPE vs Control APSs

Note: Scores on a scale of 0-2, unless specified otherwise
Average score: Full curriculum vs Single subject PIPE APSs

<table>
<thead>
<tr>
<th>Category</th>
<th>Full curriculum</th>
<th>Single subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom environment</td>
<td>9.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Student learning outcomes</td>
<td>9.8</td>
<td>12.1</td>
</tr>
<tr>
<td>Parent interviews</td>
<td>9.7</td>
<td>7.5</td>
</tr>
<tr>
<td>Teacher interviews</td>
<td>10.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Owner interviews</td>
<td>7.8</td>
<td>7.7</td>
</tr>
</tbody>
</table>

Total score

- Classroom environment: 30
- Student learning outcomes: 25
- Parent interviews: 20
- Teacher interviews: 13
- Owner interviews: 12

Overall total score for PAT is 100. Total score for classroom environment is 30. Total score for student learning environment is 25. Total score for parent interviews is 20. Total score for teacher interviews is 13. Total score for owner interviews is 12.
Classroom environment: Full curriculum vs Single subject PIPE APSs (1/2)

Note: Scores on a scale of 0-3
Classroom environment: Full curriculum vs Single subject PIPE APSs (2/2)

Note: Scores on a scale of 0-3
Student learning outcomes: Full curriculum vs Single subject PIPE APSs

Average of Students answered correctly (Out of 5)

- Average of Students read PIN: Full 1.68, Single 2.84
- Average of Students identified largest number from a group of 6 numbers: Full 0.84, Single 1.42
- Average of Students counted 12 sticks: Full 1.26, Single 1.37
- Average of Students wrote their names: Full 4.11, Single 3.47
- Average of Students named 6+ animals: Full 2.53, Single 2.37

Note: Scores on a scale of 0-5
Parent interviews: Full curriculum vs Single subject PIPE APSs

Note: Scores on a scale of 0-4
Teacher interviews: Full curriculum vs Single subject PIPE APSs

<table>
<thead>
<tr>
<th>Metric</th>
<th>Full</th>
<th>Single</th>
<th>Average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of Teacher to identify Math marker</td>
<td>1.37</td>
<td>1.11</td>
<td>1.23</td>
</tr>
<tr>
<td>Average of Teacher to identify English marker</td>
<td>1.11</td>
<td>0.84</td>
<td>1.00</td>
</tr>
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<td>1.68</td>
<td>1.00</td>
<td>1.39</td>
</tr>
<tr>
<td>Average of No. of training sessions attended by teacher</td>
<td>1.84</td>
<td>1.26</td>
<td>1.55</td>
</tr>
<tr>
<td>Average of No. of demo/monitoring sessions completed by partner</td>
<td>2.00</td>
<td>1.58</td>
<td>1.79</td>
</tr>
<tr>
<td>Average of Teacher to share a weekly plan (Scale 0-1)</td>
<td>0.84</td>
<td>0.63</td>
<td>0.73</td>
</tr>
<tr>
<td>Average of Teacher to observe benefits of ABL</td>
<td>1.84</td>
<td>1.53</td>
<td>1.68</td>
</tr>
</tbody>
</table>

Note: Scores on a scale of 0-2, unless specified otherwise
Owner interviews: Full curriculum vs Single subject PIPE APSs

Average of Owner to describe benefits of ABL: 1.63 Full 1.58 Single
Average of Owner to identify Math marker: 0.95 Full 1.05 Single
Average of Owner to identify English marker: 1.11 Full 1.05 Single
Average of Owner shared benefits of ABL with parents: 1.37 Full 1.00 Single
Average of Owner ensuring teachers implementing ABL: 1.16 Full 1.21 Single
Average of Owner planning to continue using ABL (Scale 0-1): 0.95 Full 0.95 Single
Average of Owner to introduce ABL to other grades (Scale 0-1): 0.68 Full 0.89 Single

Note: Scores on a scale of 0-2, unless specified otherwise
Average score: 1 year vs 2 year PIPE APSs

1 Overall total score for PAT is 100. Total score for classroom environment is 30. Total score for student learning environment is 25. Total score for parent interviews is 20. Total score for teacher interviews is 13. Total score for owner interviews is 12.
Classroom environment: 1 year vs 2 year PIPE APSs (1/2)

Note: Scores on a scale of 0-3
Classroom environment: 1 year vs 2 year PIPE APSs (2/2)

<table>
<thead>
<tr>
<th>Metric</th>
<th>1 year</th>
<th>2 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of Staff-child interactions</td>
<td>1.31</td>
<td>1.83</td>
</tr>
<tr>
<td>Average of Peer interactions</td>
<td>0.04</td>
<td>0.00</td>
</tr>
<tr>
<td>Average of Discipline</td>
<td>0.69</td>
<td>1.42</td>
</tr>
<tr>
<td>Average of Student engagement</td>
<td>0.38</td>
<td>0.75</td>
</tr>
<tr>
<td>Average of Transition</td>
<td>0.88</td>
<td>1.17</td>
</tr>
</tbody>
</table>

Note: Scores on a scale of 0-3
Student learning outcomes: 1 year vs 2 year PIPE APSs

Average of Students answered correctly (Out of 5)

- Average of Students read PIN: 2.08 (1 year), 2.67 (2 year)
- Average of Students identified largest number from a group of 6 numbers: 1.08 (1 year), 1.25 (2 year)
- Average of Students counted 12 sticks: 1.19 (1 year), 1.58 (2 year)
- Average of Students wrote their names: 3.69 (1 year), 4.00 (2 year)
- Average of Students named 6+ animals: 2.38 (1 year), 2.58 (2 year)

Note: Scores on a scale of 0-5
Parent interviews: 1 year vs 2 year PIPE APSs

Note: Scores on a scale of 0-4
Teacher interviews: 1 year vs 2 year PIPE APSs

<table>
<thead>
<tr>
<th>Category</th>
<th>1 year</th>
<th>2 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of Teacher to identify Math marker</td>
<td>1.15</td>
<td>1.42</td>
</tr>
<tr>
<td>Average of Teacher to identify English marker</td>
<td>1.04</td>
<td>0.83</td>
</tr>
<tr>
<td>Average of Teacher to describe an activity for senior kindergarten</td>
<td>1.31</td>
<td>1.42</td>
</tr>
<tr>
<td>Average of No. of training sessions attended by teacher</td>
<td>1.50</td>
<td>1.67</td>
</tr>
<tr>
<td>Average of No. of demo/monitoring sessions completed by partner</td>
<td>1.88</td>
<td>1.58</td>
</tr>
<tr>
<td>Average of Teacher to share a weekly plan (Scale 0-1)</td>
<td>0.73</td>
<td>0.75</td>
</tr>
<tr>
<td>Average of Teacher to observe benefits of ABL</td>
<td>1.77</td>
<td>1.50</td>
</tr>
</tbody>
</table>

Notes: Scores on a scale of 0-2, unless specified otherwise.
Owner interviews: 1 year vs 2 year PIPE APSs

<table>
<thead>
<tr>
<th>Activity</th>
<th>1 year</th>
<th>2 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of Owner to describe benefits of ABL</td>
<td>1.58</td>
<td>1.67</td>
</tr>
<tr>
<td>Average of Owner to identify Math marker</td>
<td>0.92</td>
<td>1.17</td>
</tr>
<tr>
<td>Average of Owner to identify English marker</td>
<td>1.04</td>
<td>1.17</td>
</tr>
<tr>
<td>Average of Owner shared benefits of ABL with parents</td>
<td>1.15</td>
<td>1.25</td>
</tr>
<tr>
<td>Average of Owner ensuring teachers implementing ABL</td>
<td>1.15</td>
<td>1.25</td>
</tr>
<tr>
<td>Average of Owner planning to continue using ABL (Scale 0-1)</td>
<td>0.92</td>
<td>1.00</td>
</tr>
<tr>
<td>Average of Owner to introduce ABL to other grades (Scale 0-1)</td>
<td>0.73</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Note: Scores on a scale of 0-2, unless specified otherwise
Average score: By city

<table>
<thead>
<tr>
<th>City</th>
<th>PIPE APSs</th>
<th>Control APSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bengaluru</td>
<td>6 8 8 12 8 43</td>
<td>7 3 6 10 5 30</td>
</tr>
<tr>
<td>Chennai</td>
<td>9 12 15 7 10 53</td>
<td>4 4 6 7 6 26</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>9 9 8 9 7 41</td>
<td>6 4 8 10 6 34</td>
</tr>
<tr>
<td>Mumbai</td>
<td>9 11 9 12 9 49</td>
<td>6 5 4 8 2 25</td>
</tr>
<tr>
<td>Delhi</td>
<td>9 8 5 18 11 51</td>
<td></td>
</tr>
</tbody>
</table>

- Owner interviews
- Parent interviews
- Teacher interviews
- Student learning outcomes
- Classroom environment

1Overall total score for PAT is 100. Total score for classroom environment is 30. Total score for student learning environment is 25. Total score for parent interviews is 20. Total score for teacher interviews is 13. Total score for owner interviews is 12.