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## Foundational learning skills: Panacea for quality education

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### Abstract

**Purpose:** To understand the role of foundational learning as a means to improve quality in education.

**Design/methodology/approach:** Secondary data sources like research papers and published reports have been used to carry out this qualitative research that is in the form of a landscape analysis.

**Discoveries:** There is increased focus on foundational learning in India. We can learn from the experience of countries such as Kenya, Brazil, and Philippines, which have achieved significant success in the field of education, particularly foundational learning. Government, Private sector and NGOs are playing important role in improving the standards of foundational learning in India.

**Practical implication:** This paper highlights that it is important to impart quality education and for this, all the stakeholders- students, parents, teachers, local community, corporates, NGOs and government should come together.

**Keywords:** Foundational learning, SDG-4, Primary education, pre-primary education

### Introduction

United Nations' Sustainable Development Goals (SDG-4) is to guarantee inclusive and affordable schooling for all and encourage lifelong learning (World Bank, 2018). It is now well established that schooling isn't teaching (Pritchett, 2013); learning is much more than getting children enrolled in schools. According to the World Development Indicators (2019), enrolment in primary schools increased to 90% in 2019 as compared to 83% in 1999. PISA (Programme for International Student Assessment) <sup>[1]</sup> 2018 has pointed out that over the past decade, spending per primary and secondary student has risen by more than 15% across OECD countries, and it is disappointing that most OECD countries have seen practically no change in their student success since the first PISA conducted in 2000.

An Indian NGO, Pratham, recently performed an evaluation of Indian young people between the ages of 14 and 18 to determine their abilities (ASER 2018) <sup>[2]</sup>. Although 86% had either finished grade 8 or were still enrolled in school, a startling percentage lacked even rudimentary skills. In the assessment, an image of a girl going to bed at 10:30 p.m. was shown and then an image of her waking up at 5:30 a.m. was shown, less than 40% of them could tell how long she had slept for. Not even 40% of them could estimate the price of a ₹300 shirt after a 10% discount. Additionally, 27% of those who finished grade 8 or higher education were unable to read a single line.

These poor learning outcomes can be attributed to the minimal focus on foundational learning <sup>[2]</sup>. Bikkrama D. Singh, Managing Director, CSF, and a New Delhi-based non-profit organisation has defined foundational learning as "the ability to read with meaning and do basic math calculations by class 3." Those students who are not able to acquire basic reading and mathematical skills by class 3 or by the age of eight would not be able to handle the pressure of demanding curriculum later on leading to underachievement and high dropout

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<sup>1</sup> The Programme for International Student Assessment, or PISA, is run by the OECD. PISA gauges how well 15-year-olds can apply their reading, arithmetic, and science knowledge to tackle real-world problems.

<sup>2</sup> According to UNICEF's "Guidelines for Design and Implementation of Early Learning Programmes 2019" (p.99), "early learning years from age 3-8-years are a continuum of foundational learning for children."

rates (UNICEF, 2019) <sup>[15]</sup>.

### Significance of foundational learning

Early childhood development has gained significant momentum with regard to global development discourse on 'school readiness'. Target 4.2 of the Sustainable Development Goals emphasises that "by 2030 all girls and boys should have access to quality early childhood development, care and pre-primary education so that they are ready for primary education". Investing in early years of education is not only important for lifelong learning of a child but also for cognitive development of the brain. By the age of 8, almost 80% of brain development is complete (UNICEF, 2019) <sup>[15]</sup>. Pre-primary gross enrolment stands at abysmally low levels of 13% for India, whereas, this figure works out to be 86% for China, 75% for Bolivia and 46% for Sudan (UIS Global Database, 2018).

Numerous official and non-governmental polls have frequently emphasised the fragile nature of India's learning problem. National Education Policy (NEP) 2020 states "A large proportion of students currently in elementary schools, estimated to be over five crores, have not attained foundational literacy and numeracy, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction with numerals" (Pokhriyal, 2020) <sup>[11]</sup>.

The country might lose almost 10 crore kids from the educational system and to illiteracy without foundational learning, according to the draft NEP 2019. India's educational system is the biggest in the world, with more than 260 million students enrolled in about 1.5 million institutions. In order to address this learning gap, the policy has given foundational literacy and numeracy the highest priority and proposed to achieve by 2025.

### International best practices

India can learn from the experience of countries such as Kenya, Vietnam, Peru, Brazil, South Africa and Philippines, which have achieved significant success in the field of education, particularly foundational learning. Some success stories are shared below:

#### 1. Kenya

Free primary education was introduced in Kenya in 2003. Though the enrolment rate improved, the quality of learning was lagging behind. In order to address the schooling-learning gap, a national literacy programme, Tusome (Let's Read), based on the Primary Math and Reading Initiative (PRIMR) was introduced. The programme targeted students of class 1-3 and adopts a holistic approach to the idea of foundational learning. It provides:

- Teaching and learning material in Kiswahili and English (textbooks; homework books covering aspects such as handwriting practice, age-appropriate stories, and fun activities; teacher guides)
- Training for teacher professional development
- Coaching and robust monitoring and evaluation
- Local, county and national data

**Impact:** An independent evaluation (Freudenberger, E. & Davis, 2017) <sup>[3]</sup> undertaken in 2017 by Management Systems International summarises the impact of Tusome for 2015 and 2016 as follows:

a. Non-readers in class 2 English were decreased from

38% to 12%.

- b. Non-readers in class 2 Kiswahili were decreased from 43% to 19%.
- c. Percentage of Students who can read fluently increased from 4% to 12%.
- d. The increase in class 2 learning is comparable to an additional 1.3 years of education when expressed in terms of equivalent school years.

#### 2. Brazil

In 1995, the expenditure on education by the Government as a proportion of GDP was around 5.97 percent. The Brazilian Constitution was amended in 1996 to impose a compulsory allocation of 60% of budgetary resources in order to universalize primary education and improve teacher pay. The Constitution was amended again in December 2006 to expand these targets to basic education (primary and intermediate). Temporary funds were established as a consequence of both these amendments for the conservation and enhancement of education (Ranieri, 2010) <sup>[13]</sup>. The Fund for the Maintenance and Development of Fundamental Education (FUNDEF), originally dedicated solely to primary education, was formerly created, and the Fund for the Maintenance and Development of Basic Education (FUNDBE), expanded to include preschool and basic education, replaced FUNDEF in 2006 (De Mello & Hoppe, 2005) <sup>[2]</sup>. Preschool (for children ages 4-5) was integrated into Brazil's compulsory education system in 2009.

#### Impact

With respect to investments in early childhood education for children under five, Brazil is ahead of Latin American nations. The data comes from the study on Education at a Glance 2018, released by the Organization for International Cooperation and Development. In Brazil, 22% of children under the age of 3 attend school, compared to 5% in Argentina, 20% in Chile, 2% in Costa Rica, and 5% in Mexico (5 percent).

According to the study, access in Brazil is even greater in pre-school, hitting 90% at the age of 4, 97% at the age of 5 and 100% at the age of 6. According to OECD, (2005) <sup>[9]</sup>:

- 60% of FUNDEF allocation was spent on teacher's compensation. On average, teachers' remuneration increased by 38% between December 1997 and June 2001, outstripping inflation. Better remuneration is certainly important to increase the attractiveness of being a teacher, especially in rural areas.
- A composite index that was developed helped to track a student's performance in school.
- FUNDEF illustrates an important and successful case of public spending on education and decentralized budgets.

#### 3. Philippines

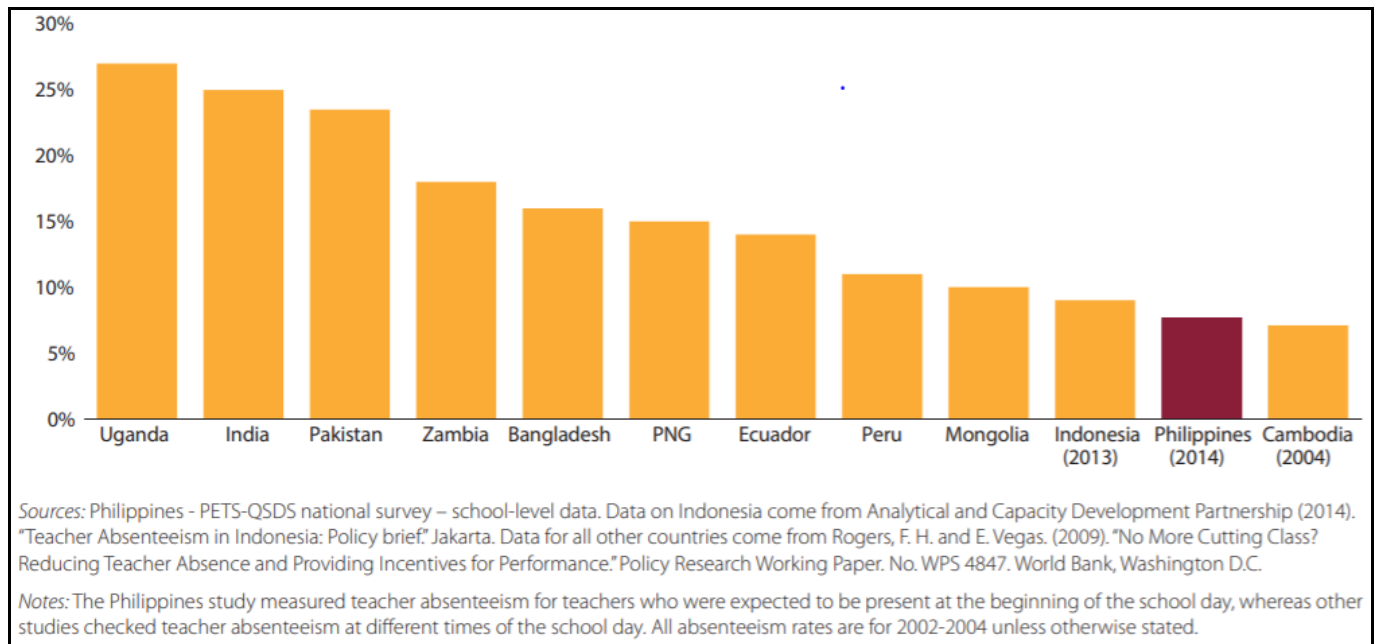
The Kindergarten Education Act, 2011, made kindergarten education a pre-elementary mandate. Between 2010 and 2015, construction of 86,478 classrooms was carried out, and over 128,000 teachers were hired. Monitoring mechanisms were introduced to check teacher absenteeism (refer figure 1).

#### Impact

The net enrolment rate for kindergarten increased as a result of educational changes, rising from 55 percent in 2010 to

74.6 percent in 2015 (World Bank, 2016). In the Philippines, kindergarten enrollment rates now align favourably with rates in other middle-income countries (Macha, Mackie, & Magaziner, 2018) <sup>[6]</sup>. The traditional measures of the quality of learning environments, such as the student-teacher and student-classroom ratios, also

significantly improved as a result of an increase in education spending from 12.4 percent in 2005 to 24 percent in 2018, respectively. All these ratios sharply increased from 2010 to 2013, from 38:1 to 29:1 and from 64:1 to 47:1, respectively. The graduation rates of elementary schools have risen from a level lower than 70% in 2005 to more than 83% in 2015.



**Fig 1:** Primary/elementary teacher absenteeism in selected countries across various years

## Interventions

ASER (2013, p.8) envisioned, "in order to improve learning outcomes and sustain them in the long run, early years may be the best place to invest." Researchers (Josephine, 2003; Rao, 2010) <sup>[4, 14]</sup> have established a link between pre-primary education and better learning outcomes in higher classes.

### 1. Government of India's Initiatives

The Government of India, since 1951, has put emphasis on Early Childhood Care and Education (ECCE) in its holistic form i.e., child welfare, education, health and nutrition through its various policies and schemes. The most significant are Integrated Child Development Services (ICDS), 1975; District Primary Education Programme (DPEP); Sarva Shiksha Abhiyan (SSA); Right of Children to Free and Compulsory Education Act (RTE) 2009, National Education Policy, 2020 and many more. The survey reports of the National Council of Educational Research and Training (NCERT) estimated that "493,700 pre-primary schools existed in the country in 2000 (NCERT, 2006, p.6) and the number swelled to 655,493 in 2009" (NCERT, 2016, p.40). ICDS's Anganwadi programme met with only limited success because the preschool education component "is very weak with repetition high and learning levels low" (Planning Commission, 2008, p.11) and also due to budgetary constraints. About 1.3 million anganwadis cater to over 37 million children. The "Ministry of Women and Child Development" has also taken various initiatives to promote ECCE such as formulation of the National ECCE Policy, 2013; development of ECCE material such as Pictorial Handbook for Practitioners, 2014 and Age-Appropriate Assessment Cards. NEP 2020 also envisages to give a big push to ECCE.

### 2. Private Sector Interventions

Though about 90% of urban families send their wards to private schools that are either standalone pre-primary schools or have attached pre-primary sections, the idea is catching up in rural India also. Limited research is available on the effectiveness of private sector interventions. In an ethnographic study undertaken by Sriprakash, *et al.*, (2020) in a small village of Bihar <sup>[3]</sup> researchers found that preschool children of a certain private school under study were not imparted play-based learning. Pedagogic strategy was similar to that adopted at primary levels. Very interestingly, parents endorsed the same, maybe because they are not aware of the importance of activity-based-learning for preschoolers. The situation must be similar across at most of the preschools.

According to Kaul *et al.* (2014) <sup>[5]</sup>, just 50% of ECCE centres in Andhra Pradesh, Rajasthan, and Assam provide students with reading, writing, and math preparatory tasks, and even private ECCE institutions only do so for a brief period of time. For the rest, they engage students in formal education through rote memorization.

### 3. NGOs' Interventions

In India, there are around 2 million volunteer civic organisations, and many of them work to directly or indirectly educate millions of children. Some of the important ones with their programmes are summarised below:

a. The Read India flagship programme, which aims to

<sup>3</sup> Approximately 23% of rural Bihar's children attend private preschools or schools by the age of 5 according to the Annual Status of Education Report (ASER 2019).

improve children's literacy and numeracy between the ages of 3 and 14 through the development of creative pedagogies, and the publication of the Annual Status of Education Study (ASER), for assessment of children's learning outcomes in rural India who are between the ages of 5 and 16, have been Pratham's major initiatives over the past 20 years.

- b. In order to reduce educational disparity, the non-profit Teach for India (TFI) recruits outstanding, idealistic college graduates and professionals to teach in schools, that do not have access to resources, for two years. The learning results of their students have significantly improved thanks to TFI fellows. According to longitudinal research, done in partnership with the School of Foreign and Public Affairs at Columbia University, students taught by TFI fellows increase in math and English language proficiency four times faster than students in regular classrooms.

There are many more NGOs doing commendable jobs in the area of education.

### Challenges in institutionalizing foundational learning

The path to institutionalize foundational learning is not that easy due to many factors. These are:

#### 1. Lack of alignment and convergence

The key results of the IECEI <sup>[4]</sup> Study, 2017, revealed, "At the age of 4, eight out of ten children were enrolled in either a government or a private preschool or primary school." There was a high percentage of 5-year-olds enrolled in Class 1 in primary schools, however, many 6 and 7-year-olds were actually enrolled in preschool instead of primary school. This points out the need for a synergy between preschool and primary school.

#### 2. Ineffectiveness of the teaching-learning process

This process revolves around the teacher as he/she in a rush to complete the curriculum engages in a monologue while the students remain passive and engage in mechanical tasks, such as choral replies, practice of copying the lesson and rote memorization which makes them feel disassociated with the content being taught to them. Even in the assessments, rather than testing the student's conceptual understanding, the focus is on how well the student reproduces the content. This creates a gap in the teaching-learning process making it futile for some students.

#### 3. Obsolete books and inadequate teaching resources

The books accessible to the students are old, poorly written and in tarnished conditions which have no practical value for them. Even if there is better text available, it may often be unaffordable for many. The material provided to teachers is also of inferior quality with no access to additional resources such as alphabet charts, picture cards, puzzles, 3D shapes, beads, etc. These resources are important for the children as a sense of enjoyment gets integrated with studies, and they stay interested in the classes.

#### 4. High degree of truancy

Repeated school samplings have revealed that on an average

day almost 25-65% of the teachers were not present in the school (Bingman, 2020) <sup>[1]</sup>. According to the United Nations, India has the highest truancy levels. The teachers are also known to pay substitutes to take classes in their place.

#### 5. No uniformity in academic calendars across the country

The children of the same age might be in different classes due to the lack of homogeneity of the academic calendars across India which further adds another degree of complexity. To take an example, Rajasthan, Assam and Telangana begin their school year in different months namely- January, June, and July.

#### 6. Multilingual setup

India is a land of diversity and has people speaking different languages. To develop necessary teaching and reading material in regional languages is a challenge.

#### Way Ahead

It is important to impart sustainable education and for this, all the stakeholders- students, parents, teachers, local community, corporates, NGOs and government should come together. Some suggestions to ensure better learning outcomes and involvement of all the stakeholders are as follows:

#### 1. Development of teaching and reading material in vernacular languages

Research has shown that pre-primary and primary education should be in mother tongue. We can adopt a model similar to Kenya's Tusome wherein a student is exposed to reading in English and his/her mother tongue.

#### 2. Training and monitoring of teachers

In order to address the problem of truancy amongst teachers, particularly in rural areas, technology should be leveraged. Android tablets auto-fitted with applications such as WhatsApp should be given to the teachers and through this, they can share real-time videos of their classrooms with time stamps with monitoring NGOs/government agencies. WhatsApp groups can also be created for teachers teaching in remote areas to enable peer-learning and reduce sense of isolation.

#### 3. Engagement of student volunteers

High school and college students who want to take community development work should be tapped on a part-time basis to teach students.

#### 4. Employee volunteering

Employees of the corporates working in the local area should be tapped and trained to supplement the teaching needs of the students of that area.

#### 5. Awareness programmes for parents

NGOs should make the parents aware about the importance of foundational learning and explain the disadvantages of beginning the formal education at a very early age. This can be done through street plays and songs.

<sup>4</sup> UNICEF's India Early Childhood Education Impact study (IECEI) brings together elements of quantitative and qualitative research to determine the impact of ECE in rural India.

### 6. Tie-up with the government

NGOs can tie-up with the Governments and school authorities to develop online content (in the form of videos and podcasts) and interactive educational games in English, Hindi and other regional languages.

### 7. Reinforcing learning at home

According to ASER 2020 (p.18), “more than half of all mothers (53.1%) and an even higher proportion of fathers (70.8%) have completed more than 5 years of school.” This fact should be leveraged to develop a holistic model of teaching where anyone of the parents knows exactly what is being taught in the class and reinforce the learning at home.

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