

The Case for Early Childhood Intervention in Education

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Summary

Cross-country research in recent years has confirmed what many parents believed for years that teaching children early in life through exposure to stimuli through play and observation cultivates instincts to explore and learn. Research indicates that early childhood education yields the highest returns on investment in any segment of education. It can help mitigate socioeconomic inequalities and enrich prospects for economic advancement.

Introduction

Over the past few days, Estonia has been in the news for achieving remarkable improvements in the *Programme for International Student Assessment (PISA)*¹ scores. The high ranking was attributed to the emphasis placed on pre-school education for all children starting at the age of three. Children's performance in pre-school programmes is deemed important enough for the state to subsidise programmes for three to six-year-olds, often, even younger children. The children spend most of the time playing under the supervision of trained kindergarten teachers, with some instruction in later years. The intent is to prepare children to enjoy learning, reinforced by making sure that they are physically and emotionally ready to learn. Early childhood education² (ECE) can help narrow learning and capability gaps between rich and poor children and children coming from different socioeconomic strata. Singapore has always placed considerable emphasis on education in the belief that the citizens are the most valuable asset of the city-state, and education is the single most important avenue for creating a meritocracy with productive citizens. Singapore consistently ranks at the top of the PISA table. The 2019 budget allocation for education focussed on two demographic groups – tertiary education and early childhood education. Despite students from Singapore ranking among the top three nations in the PISA scores, yet, ECE receives a great deal of attention, with efforts aimed at continuous improvement. Over the past decade, the emphasis has shifted from academic excellence to a focus on creativity and enterprise; in other words, seeking to give the youth a head start in life in the knowledge economy. In Finland, which also figures at the top of the rankings, and in a recent survey, was deemed to be the 'happiest' country in the world, children do not start formal schooling till the age of seven. Yet, every Finnish child from the age of four spends several hours daily on weekdays, playing or socialising with other children, under the watchful eyes of teaching aides and teachers. Carefully structured play that seeks to

¹ The PISA is a globally measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges.

² The ECE entails developing children psychologically and physically (through free meals and information for parents on age-appropriate nutrition) for school. While ECE programmes differ across countries, and within states, the broad intent is to provide a safe, secure, and pleasant environment where through play and other activities a curiosity to learn is instilled in the child. School and learning should be an enjoyable experience; the intent is also to mitigate the effects of socioeconomic hierarchies through play and group activities.

engender a measure of camaraderie, respect for others, diligence and creativity inspires confidence and a curiosity to learn.

What is common among these high achievers? Firstly, despite being at the top of the global rankings, there isn't a sense of complacency. Despite differences in approach, training of teachers, and resources, each of these countries lays great emphasis on early childhood education as an intervention to provide a foundation of emotional and physical development. The intervention is carried out through play and group activities that seek to inculcate qualities such as concentration, developing attention spans, continually endeavouring to improve outcomes by trying new methods and carefully documenting findings in ongoing projects. These qualities in children at the age of four are strong predictors of academic success in later years of schooling. Secondly, they mitigate the effects of differences in class, ethnicity, socioeconomic status and the often hostile environment to which children from disenfranchised background are subject. Early childhood education offers the ideal setting to mitigate the effects of social and economic inequities by creating a situation in which children see others as peers.

India

Insights from the experiences of Estonia, Finland and Singapore carry profound lessons for India as it endeavours to educate its children. In the decade since the enactment of the Right to Education Act in 2009, India has achieved near-universal enrolment in primary schools. However, getting children to attend school has not ensured they are learning. The Annual Status of Education Reports (ASER) reveals poor learning outcomes that become sharper when compared with countries at similar levels of development. ASER 2018 indicates 73 per cent of all children in Class III³ cannot read at Class II level, though the number has fallen marginally over the past few years. Almost half of the children in Class 5 cannot read a Class 2 textbook, while barely a quarter can do simple division. Slightly over a quarter of children in Class 3 can read Class 2 textbooks and half the children in Class 5 can read texts they should have been able to read three years earlier in Class 2. Students at Class 8 struggle to read books prescribed for students in Class 5.

The results for arithmetic are similar. The results in private schools are marginally better than for government schools. In absolute terms and when compared to the abilities of children in comparable countries, primary school children in India fare poorly. Children are not only lagging in learning from the first year of primary school, but the gap between what they learn, and age-appropriate learning is steadily widening. The consequences are poor learning outcomes and exceptionally high dropout rates. More alarmingly, ASER findings over the years show that learning standards have been falling steadily, and plateauing over the past few years. India and, indeed, many other developing economies, are cases of schooling without learning.

³ 'Class' refers to the year in Primary School. Class III is the third year of Primary School.

Early Childhood

The challenge is daunting. Children enrol in schools, but learning levels are far below the standards expected at their age and class level. The early years are the most active period of brain development that lays the foundations for subsequent learning and skill formation. Since the brain is malleable during the formative years and brain development is sequential and cumulative, sound nurturing foundations pave the path for continuous skill acquisition. Investments in early childhood education and securing a safe environment that fosters learning at the very early stages, enables policymakers to adapt to changing circumstances and increase the impact of investments during a later stage.

A strong foundation includes balanced nutrition, good health, a nurturing and supportive environment that helps ease the transition school, access to education, and eventually a path out of poverty. On the other hand, weak foundations result in cumulative learning gaps through the years of schooling. Poor nutrition also weakens physiological and cognitive development. The high dropout rates among these cohorts is a reflection of the frustrations in dealing with the Weak foundations, by contrast, result in the accumulation of learning gaps, as well as higher risks of poor biological development that hamper skill formation – with repercussions that carry over the life of the individual.

A nurturing environment, one that facilitates learning through exploration, through play and through interactions with nurturing adults and peers enhances the child's ability to absorb and react to new information. Much of what is encompassed by nurture, in the 'nature versus nurture' debate, on what shapes a child's personality and character, rests on these foundations.

ECE in India

Interventions designed with play and interaction among groups helps enhance socialisation skills and the ability to address challenges, the transition to school, eventually translating into better learning outcomes. The vast disparities and social distances in India make it particularly important to create a conducive environment in pre-school learning locations. Children from disenfranchised groups or those coming from settings of strife or violence are particularly vulnerable. They need a secure, reassuring atmosphere that offers not just an escape, but a stimulating environment to grow and learn. The challenge of providing this in a setting with limited resources and poorly trained staff is immense. Table 1 delineates the dimensions of an ECE programme deployed by Pratham.

In 1975, the Indian government launched the Integrated Child Development Services (ICDS), the world's most extensive integrated early childhood programme, with over 40,000 centres across the country. Since its inception nearly forty years ago, despite difficulties in adapting to the vastly different local circumstances found on the subcontinent, the programme has matured and expanded. The results are mixed. While it has benefited generations since, the impact on school achievements, especially of those the vulnerable groups, has been marginal.

Nearly 50 per cent of the children in the age group of three to six years enrolled in the ICDS scheme. A significant percentage attends private childcare and learning centres. ICDS institutions face two serious challenges: i) A large proportion of children do not attend and pre-school programme; and ii) In most *anganwadis* (rural child care centre), started in 1975 as part of ICDS, the curriculum is a watered-down version of what is taught in the first year of primary school. These interventions, at best, have a marginal impact on overall development and preparedness for schooling. The gaps between first-generation learners and those with educated parents become even starker in the early years, and more challenging to bridge over time.

Table 1: Early Childhood Education: Development Domains

Physical Development	Develop fine and gross motor skills, along with pre-writing abilities
Socio-Emotional Development	Learn to adapt to a new settings & people, work in groups, individual, interaction & interpersonal skills
Cognitive Development	Develop basic problem-solving and pre-math abilities such as matching and counting, along with knowledge of colours, shape, symbols etc,
Language Development	Develop basic vocabulary and improve the ability to express ideas confidently, both individually and in groups
Creative Development	Develop creative abilities, imagination and aesthetic appreciation

Source: Pratham: Early Childhood Education⁴

As mentioned earlier, a growing body of research demonstrates the powerful benefits of intervention in the earliest years. The advent of the digital economy, with the need for continuous learning and strong cognitive and social skills, further reinforces the importance of ECE as a means for providing a level playing field. It is not just the individual, but the family, the community, society and the economy that benefit.

The United Nations Children’s Fund’s State of the World’s Children report⁵ highlights evidence that investing in the most vulnerable children can yield immediate and long-term benefits. “On average, each additional year of education a child receives increases his or her adult earnings by about 10 per cent. And for each additional year of schooling completed, on average, by young adults in a country, that country’s poverty rates fall by nine per cent.”⁶

Quality ECE also helps reduce repetition and dropout rates. In 2014, more than one of four children in the three to six age group in India were not receiving any pre-school education, these were concentrated among the poor a⁷and other marginalised communities, thought the positive outcomes are more pronounced among children from vulnerable groups. Research indicates that every dollar spent on ECE yields returns between six and seventeen

⁴ Pratham, <https://www.pratham.org/programmes/education/early-childhood-education/>

⁵ UNICEF State of the World’s Children Report 2016.

⁶ Ibid.

⁷ World Bank (2018), Ibid.

dollars and every year of schooling results in a 10 per cent increase in earnings over the working life-span.

Concluding Observations

As the World Bank's World Development Report⁸ points out, there is a global "early learning crisis" in the early most of the developing world in the early primary grades, with children not being able to learn the basics of reading, writing and numeracy. The consequences of this crisis persist and accumulate over the years.

The significant and persistent learning gaps reported over the years in ASER reports and other studies highlight the urgency of intervention. The case for substantially ramping up efforts and investments in ECE are compelling on the grounds of equity, efficiency and long-term social stability, and as evidence has shown for reinforcing civic and democratic norms. Societies that can create conditions allowing for socioeconomic mobility are stable and progressive with a keener sense of the social compact that lends cohesion.

Several government and non-government agencies have formulated ECE programmes. Pratham has designed intervention programmes in several Indian states that seek to develop strong fundamental skills to enable children to cope up with their curriculum and advance through the years while enjoying learning. Education is the responsibility of the states, and many of them have proactively embarked upon programmes to address the severe deficiencies in primary education through multiple programmes, including an increasing emphasis on ECE.

As an illustration, the '*Parho Punjab, Parhao Punjab*'⁹ programme focuses on building foundational skills such as essential reading, comprehension, expression and arithmetic for children from the pre-primary school cohort till the end of primary school. The ECE programme entails setting up and activating pre-schools across the state to achieve all-round development (which includes physical, motor, language, cognitive, socio-emotional, and creative and aesthetic appreciation) of children in the age group 3 to 6 years. Good pre-school programmes and activities enable children to adjust to school, to become better and happier learners; thus building the foundations of learning from an early stage.

The challenge in India is to design programmes responsive to the circumstances and needs of all children. In an immensely heterogeneous population, characterised by vastly different socioeconomic conditions, often within the same local areas, a programme that can adapt and cater to individual needs requires careful thought, planning and implementation, in a spirit where continuous improvement is possible. Such programmes have to be monitored continuously.

It vastly improves the prospects for children to complete primary education, to access pathways out of poverty and enduring disadvantages, and go on to contribute to a rapidly growing economy with a vast youth population.

⁸ World Bank. "World Development Report, 2018. Learning to Realise Education's Promise".

⁹ From Pratham's presentation on "*Parho Punjab, Parhao Punjab*" (Learn Punjab, Teach Punjab).

Teachers and teaching aides are critically important; they need sensitivity training and a keen sense of the local ethos in settings where there may be vast differences among local communities, and across regions. India is desperately short of kindergarten teachers trained to nurture children in pre-school years. Digital technologies can play a crucial role in training teachers for ECE programmes, especially with pedagogic techniques and foundational material required to handle children in pre-school years, and with specialised programmes.

The benefits of ECE are vast. Developing strong foundations, including good health and nutrition amongst children in the pre-school years, supported by a nurturing environment that makes it fun to learn, can help ensure a smooth transition to the early years of schooling, and the transition to senior years in school. It vastly improves the prospects for children to complete primary education, to access pathways out of poverty and enduring disadvantages, and go on to contribute to a rapidly growing economy with a vast youth population.

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