

ENABLING LEARNING CONTINUUM

EDUCATION STRATEGY (2022-2025)

OUR STORY

Dr. Kallam Anji Reddy¹, a scientist, visionary, and philanthropist, founded Dr. Reddy's Laboratories Ltd. (DRL) in 1984 with a mission to make high-quality and affordable medicines accessible to people worldwide. He firmly believed that businesses had a responsibility towards society, which led him to establish Dr. Reddy's Foundation (DRF) in 1996. His vision was to enable children and disadvantaged youth through 'quality education' and 'employability skills' to help them realise their true potential.

In its early years, DRF began working with marginalised communities to gain a deeper understanding of the prevailing social issues in the undivided state of Andhra Pradesh. This led to the inception of 'Child and Police' (CAP) Project in 1998, in partnership with the state police department. The project's primary goal was to support marginalised children trapped in child labour through bridge schooling support and connecting them with government homes and schools. Over the subsequent seven years, more than 5,000 children were enrolled in government schools, breaking free from the cycle of exploitation and gaining access to education.

In 2001, DRF established the Kallam Anji Reddy Vidyalaya (KARV) in Chandanagar, Hyderabad, with the vision of uplifting and enhancing the education quality and standards for children from low-income families. Catering to first-generation

schoolgoers from economically disadvantaged families, KARV offers English medium education from nursery to grade 10, affiliated with the Telangana state board. The school is a beacon of hope, nurturing young minds and empowering them with a strong foundation.

Many KARV students were opting for employment after their 10th grade due to poor financial conditions but without any formal vocational training. Recognising this need, DRF established the Kallam Anji Reddy Vocational Junior College (KAR-VJC) in 2003 at the same Chandanagar campus in Hyderabad. This institution provides two-year vocational courses² for students who have completed their grade 10. By equipping students with demand-led vocational skills, KAR-VJC opens doors to enhanced employment opportunities. These two institutions – KARV and KAR-VJC have impacted more than 45,000 children and youth since their inception.

Based on its learning from KARV and to ensure that quality education is not confined solely to its own school and vocational college, DRF introduced the School Improvement Program (SIP) in 2011. This program targeted government schools, adopting one school at a time in the then state of Andhra Pradesh and later also in Telangana. It initially aimed to improve education quality by addressing school infrastructure needs, teaching aids, and capacity building of teachers.

 $^{^{1}}$ In recognition of his contributions to the pharmaceutical industry and philanthropic activities, Dr. K Anji Reddy received several awards and honours, including the Padma Shri in 2001 and the Padma Bhushan in 2011

² DRF also runs placement-linked short-duration skill development programs which were launched in 1999. To date DRF has impacted more than 5 lakh youth and persons with disabilities under its flagship placement-linked skill development programs.



Gradually, SIP also started including initiatives such as activity-based pedagogy, smart science labs, spoken English training, computer literacy, promoting WASH (water, sanitation, and hygiene). This was implemented through school health clubs, scholarships, sports and talent development, and need-based infrastructure support. By 2022, the program had expanded to more than 200 government schools in Andhra Pradesh and Telangana. SIP has impacted more than 2,80,000 children in the past one and half decades.

In 2018, to promote the scientific temper among bright young women, especially those who come from low-income families, DRF launched the transformative SASHAKT scholarship program. This initiative aims to support selected young women in pursuing careers in science by not only providing financial support to cover their graduation expenses but also connecting them with senior women scientists who mentor them at every stage of their journey.

In 2022, the SASHAKT scholarship expanded its scope and included scholarship support for secondary education in science under the Junior SASHAKT initiative. To date, the scholarships and mentorship support have touched the lives of more than 150 bright young women.

In DRF's journey of over two and a half decades of working with children, its mission has further expanded in the areas of skill development of youth (including persons with disabilities), agriculture, climate action & environment, and improving primary healthcare services.

Even though Dr. K. Anji Reddy passed away in 2013, his legacy lives on through the robust institutions³ he had built. His unwavering vision and commitment to improving the lives of disadvantaged communities continue to inspire DRF's work in education, livelihoods, health, and the environment.

The Beginning

India's independence marked the beginning of a transformative era in education policy. Article 45 of the Indian Constitution (1950) alluded that the State will strive to provide free and compulsory education for all children up to 14 within ten years of the Constitution's commencement. The government also established various commissions to address and evaluate the challenges in the Indian education system. (Patel et al.)

Radhakrishnan, Mudaliar and Kothari Commissions

The first commission to be appointed was the University Education Commission/ Radhakrishnan Commission (1948-49), which assessed the status of university education and proposed enhancements. Another important commission was the Secondary Education Commission/Mudaliar Commission (1952-53), which recommended suggestions on the objectives of secondary education and its relationship with primary and university education. Third Education Commission/Kothari Commission (1964-66) highlighted the importance of education for national development. It proposed a complete system reconstruction in three essential areas: '(a) Internal transformation (b) Qualitative improvement and (c) Expansion of educational facilities.' (Patel et al.)

National Policy of Education, 1968

The recommendations made by the Education Commission served as the foundation for the first-ever national policy on education. In 1968, the government formulated the first National Policy on Education (NPE). This policy aimed to bring a comprehensive transformation, including programs such as 'free and compulsory education, development and protection of all the Indian languages, equality of educational opportunities.' (*Purohit 2018*)

EVOLUTION OF THE EDUCATION SYSTEM IN POST-INDEPENDENCE INDIA

³ Dr. Reddy's Laboratories, Dr. Reddy's Foundation, Dr. Reddy's Foundation For Health Education



Additionally, it recommended spending 6% of India's national income on education (*Patel et al.*).

Integrated Child Development Services (ICDS), 1975

Launched in 1975, ICDS is one of the world's largest and distinctive Early Childhood Development schemes under the Ministry of Women and Child Development. This scheme essentially operates through an Anganwadi Centre (AWC), focusing on the overall development of the children (aged 0-6) and strengthening the capability of the mother. The important services under ICDS includenutritional and health support, immunisations, early childhood education, referral services, and health education. (MWCD 2015)

42nd Amendment Act, 1976

The 42nd Amendment Act of 1976 brought about a critical change in the Indian constitution during the 21-month Emergency period. It involved the transfer of the subject of 'Education' from the 'State List' to the 'Concurrent List.' The 'Concurrent List' includes subjects of mutual interest to both the Union and the States. This amendment was based on the recommendations of the Sardar Swaran Singh Committee. Consequently, the Parliament gained supremacy over State Assemblies in the enactment of laws related to education.

National Policy of Education, 1986

In 1986, a new NPE was introduced. The policy emphasised providing education to the marginalised sections of society, universalising primary education, focusing on vocational, adult education, and open schools (*Patel et al.*). The NPE was revised again in 1992 after the review of the Ramamurthi Review Committee (1990) and Janardhana Reddy Committee (1992). The committees made recommendations on aspects such as the common school system, early childhood care & education, and Navodaya Vidyalayas (*George*).

Mid-Day Meal Scheme, 1995

The government introduced the National Programme of Nutritional Support to Primary Education (NP-NSPE) to boost children's enrolment, retention, and attendance in 1995. Popularly known as the Mid-Day Meal Scheme, it focused on improving the nutrition levels of children from grades 1-5. In 2007, the scheme was renamed 'National Programme of Mid-Day Meal in Schools' and extended to children in grades 6-8. (PM POSHAN; MOE 2019)

Universalisation of Elementary Education, Sarva Shiksha Abhiyan (SSA), 2001

Another significant scheme was the SSA, launched in 2001-02. The primary goal of the scheme was to achieve universalisation of elementary education for children aged 6-14 by 2010 (Patel et al.). It prioritised addressing social, regional, and gender disparities and improving education quality (MHRD 2004).

Rashtriya Madhyamik Shiksha Abhiyan (RMSA), 2009

RMSA was introduced in 2009 with the goal of increasing the accessibility and enhancing the quality of secondary education. It aimed to raise the enrolment rates from 52.26% in 2005-06 to 75% by establishing accessible secondary schools. Additional objectives of the scheme included elevating the quality of secondary education by ensuring compliance with the required standards, eliminating gender, socioeconomic, and disability-related barriers, achieving universal access to secondary education by 2017, and attaining universal retention by 2020. (MOE 2021)

Right to Education Act (RTE), 2010

An important development came into effect in 2010 with the RTE Act. This Act mandates that all children aged 6-14 have the right to free and compulsory education in a neighbourhood school. Furthermore, the Act states that all private schools must allocate 25% of their seats to children from socially disadvantaged groups. Post the RTE Act, India joined the 135 countries that recognised education as a fundamental right for every child. (Patel et al.)



ASSESSING THE PROGRESS MADE (1950 to 2020)

The education policies, recommendations of various committees, key schemes, and passing of the RTE Act aided in solving the problems of access and equity to a large extent for the Indian education system. This progress enabled India to make excellent progress in enrolment and equity across all levels of education.

In the domain of higher education, the establishment of prestigious institutions such as the first Indian Institute of Technology (IIT) in Kharagpur in 1951 and the first Indian Institute of Management (IIM) in Calcutta in 1961 served as a source of inspiration for a newly independent nation. India was determined to equip its populace with advanced technical skills and knowledge tailored to meet the demands of the era.

Post-independence, India's educational landscape commenced with a meagre count of approximately 2 lakh schools, which had expanded to more than 15 lakh schools by the close of 2020. Similar progress was made in higher education, with college numbers soaring from a mere 600 to over 42,000, effectively catering to the needs of the vast and diverse population.

All the initial educational interventions helped improve India's literacy rate from only 18% in 1950 to 78% by 2020. The female literacy rate, which was in single digits post-independence, improved to 70% by 2020.

India has made substantive progress in the Gross Enrolment Ratio (GER) at primary and upper primary levels, increasing from 43% to 100% and 13% to 90%, respectively, between 1950 and 2020. Similar improvements were made in the Gender Parity Index (GPI), Dropout Rate, and government investment in education, which increased from 0.64% of the then Gross Domestic Product (GDP) in 1950 to 4.3% of the GDP in 2020. **Table 1** captures the progress made in key areas between 1950 and 2020.

Table 1: Progress M				2022
Key Indicators	1950	1980	2000	2020
Literacy Rate (in %)				
Overall	18.3	43.6	64.8	77.7
Male	27.2	56.4	75.3	84.7
Female	8.9	29.8	53.7	70.3
Gross Enrolment Ratio	(GER) (in %	(0)	
Primary	42.6	80.5	95.7	102.7
Upper Primary	12.7	41.9	58.6	89.7
Secondary	NA	NA	NA	77.9
Higher Secondary	NA	NA	NA	51.4
Higher Education	NA	NA	NA	27.1
Dropout Rate (in %)				
Primary	NA	58.7	40.7	1.5
Upper Primary	NA	72.7	53.7	2.6
Secondary	NA	NA	NA	16.1
Gender Parity Index (C		irolled to	male sti	idents)
Primary	0.41	0.67	0.82	1.02
Upper Primary	0.22	0.53	0.75	1.02
Secondary	NA	NA	NA	1
Higher Secondary	NA	NA	NA	1.04
Higher Education	NA	NA	NA	1.01
Pupil Teacher Ratio (P	TR)			
Primary	24	38	43	26.5
Upper Primary	20	33	38	18.5
Secondary	NA	NA	31	18.5
Higher Secondary	21	27	35	26.1
Higher Education	NA	NA	NA	28
Recognised Educationa	l Instit	tutions		
Primary (in hundreds)	2097	4945	6387	7788
Upper Primary (in hundreds)	136	1186	2063	4436
Secondary (in hundreds)	NA	NA	877	1514
Higher Secondary (in hundreds)	74	516	384	1337
College (in absolute numbers)	578	6963	10152	42343
University (in absolute numbers)	27	110	254	1043
Public Expenditure on	Educa	tion		I.
Total Expenditure on Education (in Crore/INR)	64	3884	82486	863118
Expenditure on Education (% of GDP)	0.64	2.98	4.14	4.3

Notes:

- Data Source: Educational Statistics at a Glance (ESAG) 2018, UDISE 2019-20, AISHE 2019-20, ESAG 2014, Nath, LJFMR 2023
- GER greater than 100% might indicate the presence of over or under-age children in a particular level of education.
- For Pupil Teacher Ratio & Recognised Educational Institutes, the figures for Higher Secondary level include Secondary for the years 1950 & 1980.
- For literacy rate, the 1950 figures are for age group 5 and above. From 1980 and beyond, the figures are for age group 7 and above.
- For public expenditure on education, all figures include the expenditure by
 education department as well as other departments. The 2020 figures are based
 on the Revised Estimates of 2019-20.



In 2020, the Indian education system embarked on a new phase with the introduction of the forward-thinking National Education Policy (NEP). However, the unprecedented impact of COVID-19 put the execution plan on pause, as schools remained shut until August-September 2021, bringing forth a fresh set of challenges.

Impact of COVID-19 on Education

The COVID-19 pandemic has impacted the learning of 1.6 billion children and youth worldwide (UNESCO 2022). In India, this number amounted to approximately 286 million students (pre-primary to upper secondary) (UNICEF India 2021). The school closures during the pandemic led to the entire education system operating in a remote learning format. Both central and state governments introduced several initiatives to facilitate homebased learning through mediums such as TV, community radio, podcasts, online platforms, apps, printed materials, and home visits by teachers and community volunteers (Bhushan et al. 2021).

A 2021 study by UNICEF revealed that WhatsApp emerged as the most widely used tool for remote learning. However, the study also highlighted that only 60% of the students utilised remote learning resources. Within this group, 80% of them stated that their learning was notably reduced compared to when they were in school. This decline was primarily attributed to a lack of access to devices and limited awareness of using them for remote learning.

The learning loss due to the pandemic has long-term economic costs both at the individual level (income loss) and the aggregate level (lower-skilled workforce is less productive) (Bhushan et al. 2021). Teachers faced the 'double dilemma' of revising the previous year's coursework or beginning the syllabus for the next year when school started reopening after around 18 months of extended closure (APU 2021). This also led to a delay in the execution of NEP by almost 2 years. For a detailed analysis of the impact of COVID-19 on education in India, please refer to **Table 2**.

Table 2: Impact of Covid-19

- 1.5 million schools closed
 (Central Square Foundation (CSF) 2021)
- 286 million students impacted due to school closures (Preprimary to Upper Secondary Education)
 (UNICEF India 2021)

Across Grades 2-6:

- 92% of the students lost at least one language ability
- 82% of the students lost at least one mathematical ability (Azim Premji University (APU) 2021)
- 33% of elementary students and 50% of secondary students reported poor or very poor mental and socioemotional health (UNICEF 2021)

Learning at home during the pandemic (Class 3,5,8,10):

- No digital device at home 24%
- Learn better in school with peers' help 80%
 Lot of time to learn new things 78%
- Learning was joyful and fun 45%
- Faced difficulty in learning 38%
 No difference in learning, same as in school 50%
- Burdensome, a lot of assignments 78% (NAS 2021)

LAUNCH OF NEP 2020 FOR A FORWARD-LOOKING FUTURE

In July 2020, the government introduced the new NEP. The policy aimed to overhaul India's education system by focusing on holistic development, critical thinking, vocational skills, high-quality education, and transforming India into a 'global knowledge superpower.' It presents a comprehensive plan to reform and revamp the education system, aligning with the ambitious objectives of 21st-century education and Sustainable Development Goal (SDG) 4. (NEP 2020; TOI, Fathima 2022)

The NEP draws inspiration from India's rich traditions and focuses on making the education system interdisciplinary, flexible, equitable, and inclusive. It highlights how education needs to shift its focus from a content-driven approach to one that encourages problem-solving and creativity. (NEP 2020; TOI, Fathima 2022)

The NEP 2020 has proposed multiple reforms for all levels of education across aspects such as pedagogy, teachers, curriculum, assessments, regulation, and investment in education. The new education system will adopt a 5+3+3+4 structure where the students will spend 5 years building



their foundation, followed by 3 years in the preparatory stage, another 3 years in the Middle stage and the remaining 4 years in the Secondary stage. Furthermore, NEP discusses how education must contribute to the character development of learners while simultaneously preparing them for fulfilling employment opportunities. It also stresses the importance of research, technology innovation, and vocational education. (NEP 2020; TOI, Fathima 2022)

Despite the pandemic, notable progress has been made towards achieving key policy milestones, such as efforts to create awareness and garner interest among diverse stakeholders regarding the mission and vision of NEP. The government has rebranded the Ministry of Human Resources Development (MHRD) to the Ministry of Education (MOE) to better reflect the goals of the policy. (ORF, Sahoo 2021) Notwithstanding these initial advancements, the path towards achieving the vision outlined in the NEP is marked by formidable challenges. Some of the key challenges are summarised below.

CHALLENGES IN ACHIEVING NEP'S VISION

Early Childhood Care and Education (ECCE)

Extensive multidisciplinary research indicates that the initial years of a child's life play a fundamental role in shaping their future development (Bhushan et al. 2021). Studies reveal that approximately 85% of cumulative brain development occurs before the age of six (NEP 2020). However, India still faces a prominent challenge, with ICDS struggling to provide quality ECCE at scale (Ahluwalia et al. 2021). Approximately 4 out of every 10 children between the ages of 3-6 are enrolled in an AWC. This substantially strains the AWC network, which is already overburdened with providing multiple services to mothers and young children. (ASER 2022) Furthermore, the existing preschool programs suffer from a dearth of developmentally appropriate curriculum and pedagogical practices, with over 80% of teachers in private preschools and Anganwadi workers lacking prior training (Ahluwalia et al. 2021).

There is also a need for a robust data system for ECCE in India. The available data points are fragmented, inconsistent, incomplete, and sporadically compiled, making it difficult to visualise the long-term trend. (CSF 2022)

Gross Enrolment Ratio and Dropout Rate at Secondary Level and Above

UDISE+ Report 2021-22 published by the MOE highlights that though dropout rates remain low at the primary level (1.45%) and upper primary level (3.02%), there is a significant concern at the secondary level, which has a high dropout rate of 12.61%. This trend is also reflected in the GER data, which registers high numbers at the elementary level (100.13%). However, there is a notable decline of 20.57 percentage points at the secondary level and a further drop of 22 percentage points at the higher secondary level. The GER at the higher education level is also very low at 27.31%, and a lot needs to be done if we want to achieve the NEP target of 50% by 2035 (Table 3). Students from Socio-Economically Disadvantaged Backgrounds are further susceptible to dropouts (NEP 2020).

Table 3: Indicator Data Across Levels					
Indicator	Primary	Upper Primary	Secondary	Higher Secondary	Higher Education
Students enrolled (in crore)	12.18	6.67	3.85	2.85	4.13
GER- All Categories (in %)	103.39	94.67	79.56	57.56	27.30
GER- SC (in %)	113.10	103.79	84.91	61.49	23.10
GER- ST (in %)	106.50	97.95	78.06	52.02	18.90
PTR (in ratio)	26.17	19.45	17.6	27.08	24
GPI (in ratio)	1.03	1	1	1.02	1.05

Notes:

- The data source for all levels of school education is the UDISE+ Report 2021-22, for higher education AISHE Report 2020-21.
- These are the latest reports available on the MOE website.
- GER greater than 100% might represent the presence of over or under-age children in a particular level of education
- Abbreviations: Scheduled Castes (SC), Scheduled Tribes (ST)



Foundational Literacy and Numeracy (FLN)

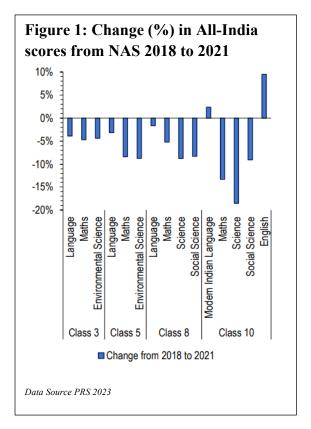
When addressing learning outcomes, a critical point is ensuring the development of solid FLN skills among children. FLN refers to the ability of a child to read with meaning, write, and solve basic math problems by the end of Grade 3. These skills act as a base for meaningful learning in higher grades and foster 21st-century skills such as problem-solving and critical thinking (CBSE Academics).

Table 4 reveals a further decline in the already low reading and arithmetic abilities for grades 3, 5, and 8 from 2018-22, primarily due to the pandemic-enforced school closure. Notably, the decline in reading abilities is steeper than arithmetic abilities. The proportion of children who can read simple English sentences is also low, i.e., 24.5% for Grade 5 and 46.7% for Grade 8 (ASER 2022).

Table 4: FLN Data for Grades 3, 5, 8					
Indicator	2018	2022			
Reading (Regional lar	Reading (Regional language)				
% of Grade 3 children who can read a Grade 2 text	27.30%	20.50%			
% of Grade 5 children who can read a Grade 2 text	50.50%	42.80%			
% of Grade 8 that can read basic text	73%	69.60%			
Arithmetic					
% of Grade 3 children can do subtraction	28.20%	25.90%			
% of Grade 5 children can do division	27.90%	25.60%			
% of Grade 8 children can do division	44.10%	44.70%			
Data Source: ASER 2022					

This lack of a strong educational foundation hinders the student's success in their academic journey and professional endeavours. They fail to develop the competencies required to contribute to the economy and become active participants in society. (The World Bank 2019)

Data from the National Achievement Survey (NAS) (Figure 1) also shows that from 2018 to 2021, students' scores decreased across all subjects for all levels (class 3,5,8,10), except for two subjects in class 10. (PRS 2023)



A 2021 study by Azim Premji University also revealed that across grades 2-6: (a) 92% of public school children have lost at least one specific language ability, and (b) 82% of public school children have lost at least one specific mathematical ability as compared to the previous year.

It is widely recognised that Grade 3 is considered the 'inflection point by which children are expected to learn to read so that they can read to learn after that.' Students who fail to acquire the fundamental FLN skills face difficulties in catching up and might drop out of school. (CBSE Academics) It also impacts their acquisition of advanced skills and influences their grasp of concepts across subjects (APU 2021).

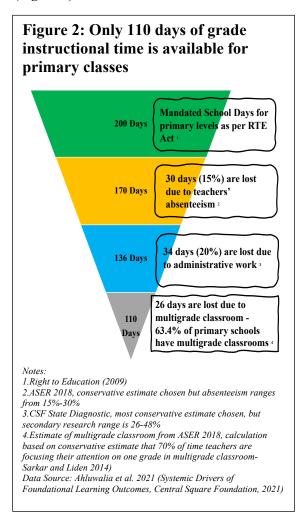
Learning and Assessments

The prevailing education system relies heavily on traditional teaching and passive-learning methods, resulting in a lower emphasis on meaning-making and higher-order thinking skills (Ahluwalia et al. 2021; Bhushan et al. 2020).



A 2014 study by Sankar and Liden across 3 Indian states revealed that 70% of the teaching time was spent on rote learning methods such as 'reading aloud, recitation, copying from board or repeating.' The use of monograde teaching methods in multigrade classrooms is another significant challenge. (Ahluwalia et al. 2021)

According to ASER 2022, approximately 65.5% of Grade 2 classrooms were observed to have students from other grades seated together (ASER 2022). This situation necessitates teachers to put in further effort to accommodate the varying learning levels in these classrooms (Figure 2).



Another pressing issue is that the teachers focus on completing the prescribed syllabus and ensuring exam readiness instead of student mastery. This approach results in learning gaps, with many students falling behind. The lack of a mother tongue-based medium of instruction in schools also leads to a learning disadvantage. The reasons for this could be the strong demand for English medium instruction from parents, lack of teacher training in multilingual instruction, and a dearth of quality instructional material in local languages. (Ahluwalia et al. 2021) Lastly, the current assessment structure is summative and primarily evaluates rote-learning and memorisation capabilities (NEP 2020). These linear assessment methods stifle the students' curiosity and prevent effective tracking of their learning progress.

Teachers' Quality and Motivation

The current quality and motivation of teachers do not meet the desired standards due to numerous factors such as 'quality of teacher education, recruitment, deployment, service conditions, and empowerment'. The Justice Verma Commission Report (2012) highlights that the majority of the stand-alone Teacher Education Institutes are not genuinely engaged in meaningful teacher education but rather appear to be offering degrees for a price. (NEP 2020)

Furthermore, findings from the NAS 2021 Report Card reveal that 65% of the teachers are overloaded with work. The lack of professional development and career progression opportunities also negatively impacts teachers' growth curve, which further impacts the overall learning outcomes at schools.

Additionally, studies show that teacher absenteeism hovers in the range of 15-30%, and teachers spend 20-42% of their time on administrative duties. In 70% of cases, teachers focus on teaching only one grade despite the presence of multigrade classrooms. These factors collectively reduce the instructional time available for teaching-learning activities (**Figure 2**). (Ahluwalia et al. 2021)

Shortage and vacancies of teachers is another major challenge. A study by Datta S. and Kingdon G. (2021) showed that 8 out of the 21 major Indian states faced a shortage of teachers in elementary schools based on RTE norms (Ahluwalia et al. 2021).



School Infrastructure

The data in Table 5 (ASER 2022) shows that a substantial percentage of schools still lack infrastructural facilities such as drinking water, girl's toilets, and library facilities. Digital infrastructure in schools is nascent, with no computers available for students in 77.3% of schools. The added challenge is ensuring the available infrastructure's useability and maintenance. The data from NAS 2021 highlights the issue of space constraints, with 17% of schools facing a lack of space in the classroom and 44% of teachers reporting a lack of adequate workspace. Additionally, the infrastructure for Child With Special Needs (CWSN) requires attention, with only 27% of schools having CWSN-friendly toilets and 48% having ramps with handrail facilities⁴ (UDISE+ Report 2021-22).

Vocational Education

According to the 12th Five-Year Plan findings, less than 5% of the Indian workforce (within the age bracket of 19-24) has received formal vocational education. It presents a stark contrast to countries such as the USA (52%), Germany (75%), and South Korea (96%). The root of this disparity lies in the historical approach to vocational education in India, which primarily concentrated on higher secondary grades and dropouts from Grade 8 and beyond. Furthermore, students who completed Grades 11 and 12 with vocational subjects often encountered difficulties in finding clear pathways to pursue their chosen vocations at the higher education level. The entrance criteria for general higher education did not cater to these students, placing them at a disadvantage compared to their peers from conventional academic backgrounds. (NEP 2020)

UDISE+ Report 2021-22, published by MOE, also highlights that only 4.5% of secondary and higher secondary schools offered vocational courses under the National Skills Qualification Framework (NSQF).

⁴ The regular ASER survey does not include data related to children with disabilities/special needs/ working children. Hence, we have taken data from the UDISE+ Report 2021-22

Table 5: School Infrastructural Facilities (in %) in 2022			
Mid-day meal	Mid-day meal served in school on day of visit	89.5	
	Kitchen/shed for cooking mid-day meal	89.4	
	No facility for drinking water	12.5	
Drinking water	Facility but no drinking water available	11.4	
	Drinking water available	76	
	No toilet facility	2.9	
Toilet	Facility but toilet not useable	21	
	Toilet useable	76.2	
	No separate provision for girls' toilet	10.8	
	Separate provision but locked	8.1	
Girls' Toilet	Separate provision, unlocked but not useable	12.8	
	Separate provision, unlocked and useable	68.4	
	No library	21.7	
Library	Library but no books being used by children on day of visit	34.3	
	Library books being used by children on day of visit	44	
	Electricity connection	93	
Electricity	Of schools with electricity connection, % schools with electricity available on day of visit	85.3	
	No computer is available for children to use	77.3	
Computer	Computer available but not being used by children on day of visit	14.8	
	Computer being used by children on the day of visit	7.9	
Sports	Playground	68.9	
Data Source	: ASER 2022		

Another major challenge stems from the perception that 'vocational education' is inferior to 'mainstream education.' It is frequently viewed as the 'second choice', intended for students who cannot cope with the latter. Data from the National Sample Survey (NSS) 75th Round (2017-18) reveals that the proportion of students enrolled in ITIs/vocational training institutes is only 24% for rural areas and even lower for urban areas at 8.3%. (NEP 2020; SPRF



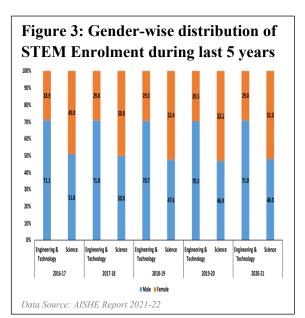
2020) Various other challenges include a demand-supply mismatch in the job market, a lack of qualified vocational teachers, insufficient equipment, and an outdated curriculum that focuses on theoretical concepts (Joshi and Tripathi 2023; Pilz and Regel 2021).

Higher Education

Our higher education system is grappling with several challenges, including: (a) a fragmented educational landscape, (b) neglect of cognitive growth and learning outcomes, (c) rigid and early specialisation barriers, (d) access and language barriers, (e) restricted autonomy to teachers and institutions, (f) stifled career advancement of faculty & leaders, and (g) governance, regulatory & standardisation related issues. (NEP 2020) Another critical challenge is the affordability of higher education. The expenditure includes academic fees and maintenance costs (books, stationery, transport, private tuition). A 2022 report by the Standing Committee on Education, Women, Children, Youth, and Sports highlights that 'student financial aid schemes were not sufficient to cover the cost of higher education' since 'most expenditure from the scholarship is towards course fees.' (PRS 2023) There is also a dearth of a rich research and innovation culture in HEIs. India currently spends only 0.69% of its GDP on research and innovation, which is much lower than countries like the United States (2.8%), Israel (4.3%), and South Korea (4.2%). (NEP 2020) The percentage of women researchers in science is meagre at 16.6% (MST 2022).

Science Technology Engineering Math (STEM) Career for Women

The proportion of students enrolled in STEM at the higher education level is 22.89%, with a gender-wise breakdown of 56.8% males and 43.2% females. The detailed gender-wise distribution of STEM enrolment is shown in **Figure 3**. We see that female enrolment has surpassed male enrolment in the Science stream since 2018. However, in the Engineering and Technology stream, the proportion of female enrolment has remained stagnant at approximately 29%. (AISHE 2020-21)



In the case of women in STEM, the challenge is the low proportion of graduates who actually pursue STEM careers. According to insights shared by Swedish Science Counsellor Fannyvon Heland, India has the highest percentage of women STEM graduates globally, at 43%. However, their representation in STEM jobs stands at only 14%. These women face a range of issues including a scarcity of role models, societal expectations, pressures associated with marriage and childbirth, excessive burden of domestic responsibilities, and safety concerns during commute and in the workplace. (*The Print, Agarwal 2021*)

State-wise Performance

State-wise performance variance in India is another crucial challenge. India has more than 50 approved state education boards, other than the Central Board of Secondary Education (CBSE), the Council for the Indian School Certificate Examinations (CISCE), and the National Institute of Open Schooling (NIOS). Apart from these, different international boards have also been incorporated into the Indian education system, such as Cambridge Assessment International Education (CAIE) and the International Baccalaureate (IB). (COBSE) We can evaluate the performance of states in school education through the Performance Grading Index (PGI) developed by the MOE. PGI offers insights on factors contributing to



performance and areas needing improvement (PGI, MOE 2023).

The latest PGI 2.0 structure consists of 73 indicators, with a total weightage of 1000 points, organised into 2 main categories - Outcomes and Governance management. Each of these categories is further subdivided into six domains, namely: (a) Learning Outcomes, (b) Access, (c) Infrastructure and Facilities, (d) Equity, (e) Governance Processes, and (f) Teacher Education and Training. (PGI 2.0: 2021-22, MOE 2023)

As illustrated in **Figure 4**, none of the states currently fall in the top 5 grades. The highest grade, designated as 'Prachesta - 2' (with a score

Figure 4: Grades Attained by States/ UTs in 2021-22



Grade Colour	Grade Name	Grade Score	Number of States/UTs attaining the Grade
	Daksh	941-1000	NIL
	Utkarsh	881-940	NIL
	Atti-Uttam	821-880	NIL
	Uttam	761-820	NIL
	Prachesta -1	701-760	NIL
	Prachesta -2	641-700	2
	Prachesta -3	581-640	6
	Akanshi-1	521-580	13
	Akanshi-2	461-520	12
	Akanshi-3	401-460	3

Data Source: PGI 2 0 2021-22 MOE 2023

ranging from 641 to 700), has been achieved by Punjab and Chandigarh. For a more detailed view of the top-performing states in each of the six domains, please refer to **Table 6**. (PGI 2.0: 2021-22, MOE 2023)

Table 6: Top Performing States in Education (domain wise)			
Domain	Top Performing States		
Learning Outcomes	Punjab		
Access	Delhi		
Infrastructure & Facility	Chandigarh		
Equity	Delhi		
Governance Processes	Gujarat		
Teacher Education & Training	Delhi		
Data Source: PGI 2.0 2021-22, MOE 2023			

Financing and Investment

Education Commission (1964-66) recommended spending 6% of India's GDP on education. This target has been consistently upheld in various National Policies on Education, including the NEP 2020. (PRS 2023) The latest MOE report (2022) on the analysis of budgeted expenditure on education showed that the total expenditure on education was approximately INR 9.19 lakh crore (Budget Estimate) in 2020-21. This accounts for about 4.64% of the GDP, which is not only low compared to the Education Commission recommendation but also compared to developing countries like Brazil (6.0% in 2019) and South Africa (6.6% in 2021) (The World Bank Data Bank).

In summary, India's education sector is encountering significant hurdles while implementing the NEP 2020, given the policy's immense scale and diversity. Transitioning from a rigid, memorisation-centred system to one that prioritises experiential learning and critical thinking demands a profound shift in attitudes involving educators, students, and parents alike. (ORF, Sahoo 2021) To fully realise the NEP 2020 vision, it is imperative to recognise and address these challenges, as they are pivotal to achieving the NEP's vision.

⁵ Total expenditure on education in absolute and as a % of GDP includes the expenditure by the education department as well as the other departments



ENABLING FACTORS TO ACHIEVE NEP'S VISION

The NEP 2020 is ambitious and progressive, aiming to transform the education system in alignment with the needs and demands of the 21st century. It strives to shift the focus of the Indian education system from 'sorting and selection' to 'human development', empowering all students to unlock their fullest potential (Rise India 2021). This shift is crucial for nurturing well-rounded, skilled, and future-ready children and youth who can contribute meaningfully to India's development. In addition to addressing the earlier-mentioned challenges, the following essential enabling factors will contribute to the successful implementation of the NEP:

India's Demographic Dividend

India boasts a population of over 600 million individuals aged between 18 and 35 years, with approximately 65% of the population falling below the age of 35. This demographic dividend is predicted to last until around 2055-56, reaching its highest point in 2041, when about 59% of the population will be in the working-age bracket of 20 to 59 years. (S&P Global, Malin and Tyagi 2023) The NEP will play a pivotal role in providing the youth with the proper education and training, enabling them to become productive assets to the nation.

Parent's Willingness to Invest

Though adequate funding and investment by the government is necessary for ensuring the Right to Education for all children, a positive sign in India is the willingness of parents to invest in their children's education. This commitment spans across different socio-economic strata, although the amount invested may vary.

A survey conducted by EdTech service provider Schoolnet revealed that, on average, parents in India spend INR 32,000 annually on their child's education. The spending varies across different tiers of cities, with families in Tier 1 cities spending an average of INR 43,000, while those in Tier 4 cities spending an average of INR 29,000 annually.

Additionally, parents spend an average of INR 16,000 annually on after-school education, including personal tutors, tuition, and coaching classes. (*India Today 2022*) The above trends indicate the growing awareness among parents regarding the importance of education and their willingness to invest in it to secure a better future for their children.

Focus on FLN

To achieve universal FLN at the primary level, in line with NEP's vision, the government launched the 'National Initiative for Proficiency in Reading with Understanding and Numeracy -NIPUN Bharat' in July 2021. This mission aims to ensure that every child attains FLN at the end of grade 3 and not later than grade 5 by 2026-2027. It concentrates on five main areas: (a) ensuring access and retention of children in foundational years of schooling, (b) teacher capacity building, (c) creating high-quality learning resources for both children and teachers, (d) tracking children's learning outcomes, and v) addressing children's health and nutrition needs, including mental well-being. (MOE Annual Report 2021-22)

The data from ASER 2022 shows that 81% of schools had received a directive to implement FLN activities from the government, and at least one teacher had been trained on FLN in 83% of the schools. In the Education Working Meetings of G20 2023 India, FLN was identified as a priority sector, and a seminar on ensuring FLN in the context of blended learning was conducted (G20 2023 India Press Release).

Futhermore, NEP proposed SAFAL (Structured Assessment for Analysing Learning) for measuring learning outcomes and providing development feedback to schools (SAFAL, CBSE). It also envisioned the creation of a National Assessment Centre - PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development) as a standard-setting body under MHRD. Other than government, efforts from private sector organisations working in education will also be required to strengthen the NIPUN Bharat Mission and contribute to the vision of NEP on foundational learning.



Technological Advancements

The advancement in digital technologies can play a catalytic role in facilitating the implementation of NEP 2020. Recent technical breakthroughs such as Generative Artificial Intelligence, Machine Learning, and the Internet of Things have the potential to reach the remotest corners of India and bridge the digital divide. Technology at large can not only make learning personalised and interactive but also enhance collaboration and knowledge sharing (TOI, Jain 2023). The government has introduced a multitude of initiatives in the Edtech space, such as (a) National Educational Technology Forum (NETF), (b) National Digital Educational Architecture (NDEAR), (c) National Mission on Education through Information and Communication Technology (NMEICT), (d) Virtual Labs, (e) National Digital Library of India (NDLI), (f) Academic Bank of Credit (ABC) (MOE Annual Report 2021-22). PM e-Vidya is another key initiative comprising all digital, online, and broadcast education endeavours, estimated to impact 25 crore schoolgoing children in India⁶ (PM e-Vidya, MOE).

NGOs and Community Involvement in the Implementation of Education Initiatives

The history of Non-Governmental Organisations (NGOs) and community involvement in education in India is rooted in the collective endeavour to improve educational outcomes and ensure equitable access to education, particularly in the underprivileged areas. The 'innovative' and 'community-oriented' approach of NGOs places them in a distinctive position to effectively tackle the diverse challenges of this sector. Currently, more than 32,000 registered NGOs in India have been actively involved in addressing educational challenges, particularly in states with higher vulnerability. Community involvement has also been recognised as a means to enhance the transparency and efficiency of the education system. This community involvement, which includes the participation of parents, local bodies, and civil society organisations, creates a conducive environment for realising the vision of NEP 2020. The active nurturing of

⁶ PM e-Vidya includes the following sub-initiatives: (a) Digital Infrastructure for Knowledge Sharing (DIKSHA), (b) Study Webs of Active Learning for Young Aspiring Minds (SWAYAM) Portal, (c) SWAYAM Prabha

collaborations between NGOs, the government, local communities, and the private sector paves the way for a comprehensive approach to education reform. (Give 2023)

Setting up of the National Research Foundation (NRF)

A quality research and innovation ecosystem is essential to position India as a leading knowledge society. To accomplish this goal, the NEP recommended setting up the NRF. In June 2023, the Union Cabinet approved a budget of INR 50,000 crore for five years for the establishment of NRF (MST 2023). NRF will aim to catalyse the culture of research in universities through measures such as: (a) funding competitive, peer-reviewed grant proposals, (b) nurturing research at institutions where it is in its infancy, (c) connecting the researchers with the government and industry, and d) recognising exceptional research contributions (NEP 2020).

Global Focus on Ending Learning Poverty

The World Bank introduced the concept of learning poverty in its 2019 report in coordination with the UNESCO Institute of Statistics. Learning poverty is defined as 'being unable to read and understand a simple text by age 10'. This report is significant as it aligned countries to strive towards one standard indicator. The report also discusses how, contrary to the general notion, dynamic changes in technology or society will further increase the importance of strong foundational skills.

In 2022, the World Bank published an update report highlighting the amplified learning crisis post-pandemic. The report recommended 'political commitment at the national level' as the immediate step towards learning recovery and acceleration. It also discussed the importance of introducing structural reforms in countries in order to strengthen the education systems in the long run. The knowledge and measures shared in this report have created an enabling environment for accelerating the work on FLN skills.

TV channels, (d) Special e-content for CWSN, (e) Extensive use of radio, community radio, and podcasts, and (f) Online coaching for competitive exams. (PM e-Vidya, MOE)



Global Focus on Achieving Women Participation in STEM

The 2020 World Bank Report titled 'The Equality Equation: Advancing the Participation of Women and Girls in STEM' explores the global gender gaps in STEM. It reveals that the problem lies not in women's enrolment levels and test scores. It is the stereotypes and biases that exist in the form of perceptions regarding who possesses talent in STEM/capability to work in STEM that undermine their participation. To combat the above, the report recommends various measures such as (a) addressing gender biases in educational materials, (b) engaging parents, (c) promoting STEM-based extracurricular activities, (d) highlighting female role models, and (f) collaborating with the private sector for hiring more women in STEM jobs.India currently has the highest percentage of women STEM graduates (43%) in the world as compared to countries like the US (34%), the UK (38%) and Germany (28%) (The World Bank - Gender Data Portal 2023). We need to focus on harnessing this potential.

Global Focus on Achieving SDGs

The United Nations (UN) SDGs consist of a comprehensive set of 17 goals encompassing 169 targets, which all 193 UN Member states have committed to pursuing by 2030 (UN). India has demonstrated a strong commitment to realising these SDGs, with particular emphasis on SDG4, which revolves around ensuring access to highquality education. This commitment to quality education is not only a standalone objective but also a critical prerequisite for attaining other SDGs. Quality education plays a vital role in shielding individuals from poverty (SDG1), eradicating hunger (SDG2), promoting good health and well-being (SDG3), advancing gender equality (SDG5), facilitating decent employment, thereby driving economic growth (SDG8) and diminishing inequalities (SDG10). India's commitment to the SDGs resonates seamlessly with the vision of the NEP. By prioritising quality education and emphasising its role as an enabler of holistic development, India not only contributes to the global agenda of sustainable development but also lays the foundation for realising NEP's transformative goals within the country.

DRF EDUCATION STRATEGY

In response to the evolving landscape of challenges and enabling factors within the education sector and to contribute to the NEP's vision, DRF has designed its Education Strategy. This strategy will serve as a compass, directing our efforts towards facilitating the learning continuum of students from low-income backgrounds.

DRF acknowledges that several critical interventions anchoring around NEP are equally important. However, based on our past work and understanding of education, we have decided to invest our time and resources focusing on two core areas – (a) building strong foundational skills for children who are left behind, enabling them for future learning, and (b) supporting bright young women to pursue STEM education and careers, thereby bringing about transformational changes in their lives.

This strategy can be summarised as "Enabling learning continuum of students from low-income families by building strong FLN skills in children and supporting bright young women for STEM education & career, using a segmented approach".

The primary purpose of this strategy is twofold: firstly, to enable DRF to make a meaningful contribution towards realising the vision outlined in the new NEP and achieving the sustainable development goals, and secondly, to serve as a framework that guides our future endeavours in the realm of education. The education strategy consists of three core sections: (a) principles, (b) strategic priorities, and (c) strategic components.

1. PRINCIPLES

The following nine key principles will guide all our education work:

- **1.1 Equity Focus:** Our primary focus is on children and young women from low-income families.
- **1.2 Community-Centred Approach:** We will prioritise the active involvement of communities, school staff, and all relevant stakeholders in the development and implementation of our work.
- **1.3 Inclusion and Diversity:** We will embrace diversity and inclusivity in all aspects of our work, fostering an environment where all children, CWSN, and women can thrive and succeed.



- **1.4 Collective Problem Inquiry Approach:** We will follow a collective problem inquiry approach to rigorously test novel ideas, employing a minimum viable product approach to design effective solutions.
- **1.5 Leveraging Technology:** We will harness the power of technology to enhance our solution design, optimise service delivery, and effectively measure the outcomes of our educational initiatives.
- **1.6 Data-Driven Decision Making**: We are committed to rigorously measuring and evaluating program outcomes, basing our decisions on data-driven insights and best practices.

1.7 Continuous Learning and Improvement:

We are committed to a continuous learning and improvement culture, regularly seeking feedback and refining our practices to enhance the effectiveness of our education initiatives.

- **1.8 Partnership and Collaboration:** We will actively cultivate partnerships with organisations, institutions, and stakeholders to leverage collective strengths and resources.
- **1.9 Sustainability and Scalability:** We will design our programs with an eye towards long-term sustainability and scalability, aiming to create lasting impact and extend our reach to more beneficiaries over time.

2. STRATEGIC PRIORITIES

- 2.1 Building Foundational Skills: We will prioritise developing strong FLN skills (in home language/mother tongue) in children (including CWSN), as these skills serve as the building blocks for advanced learning and everyday life tasks. Additionally, we will focus on proficiency in the English Language (EL), which is crucial in our interconnected world and will prepare these children for global communication, education, and employment opportunities. The combination of FLN and EL will empower these children to develop a strong foundation and enable them for future learning.
- **2.2 Promoting Children's Health:** Ensuring the health of school-going children is vital since it directly impacts their learning ability and academic outcomes. Schools can detect and address health issues early on while instilling lifelong healthy habits. Our work will prioritise

these aspects, including linking students with Primary Health Centres (PHCs) for proper health screenings and access to primary health care services.

2.3 Inculcating Environment-Friendly

Practices: We will raise awareness about environmental sustainability among children since they are the future custodians of the planet. Educating them on this topic will influence their immediate family-level knowledge and practices, enabling them to become lifelong advocates for environmental sustainability.

2.4 Supporting Bright Young Women for

STEM Careers: Enhancing women's participation in STEM careers is both a matter of gender equity and a means of unlocking their untapped potential. We will focus on promoting women's participation in STEM education and careers by providing scholarship and mentoring support.

As part of DRF's strategic focus, we have chosen **NOT TO DO** the following:

- (a) Increasing Teachers' Administrative
 Burden: We will refrain from designing
 interventions and systems that further burden
 teachers with administrative tasks, ensuring they
 can focus on effective teaching.
- (b) Technology Integration without Infrastructure and Training: We will not introduce technology without providing the necessary infrastructure and adequate training for both teachers and students to maximise its benefits.
- (c) Non-Aligned Curriculum: Our strategy avoids the introduction of specialised curricula that do not align with the mandates of respective Boards or the priorities of the NEP.
- (d) Promoting Rote Learning: We actively discourage rote learning and, instead, emphasise interactive and critical thinking-based learning approaches to foster holistic development.
- (e) Neglecting Local Context and Culture: We do not neglect the rich diversity of local contexts and cultures and recognise their importance in shaping effective educational practices.



(f) Neglecting Vernacular Languages: We prioritise the inclusion and promotion of vernacular languages and acknowledge their pivotal role in preserving cultural heritage and facilitating learning.

3. STRATEGY COMPONENTS (SC)

SC1: ENABLING CHILDREN FOR FOUNDATIONAL LEARNING

Objective: To develop a scalable model that enables children to acquire foundational learning skills, preventing them from falling behind and ensuring their successful participation in future education

Key Strategic Components

- Identification of government schools which need support on FLN and EL in partnership with District Education Officers
- Discussion with the school Head Master (HM) and school Teachers to align them with the proposed intervention and create a sense of ownership for it
- Conducting a baseline study at the beginning of the academic year to determine the FLN and EL status of the intervention grades
- Training and capacity building of Resource Persons (RPs) to ensure that they are equipped with right skills to deliver FLN and EL to students
- Designing effective pedagogy and related content for quality delivery of FLN and EL
- RPs to provide support for FLN and EL in their assigned schools
- Ensuring the availability of training materials, including assistive technology for CWSN
- Continuous monitoring and regular concurrent assessments to ensure quality execution of the intervention
- An endline assessment towards the end of the academic year to measure the progress made in the area of FLN and EL
- Incorporating the learnings from the assessment insights in the intervention design

SC2: PROMOTING GOOD HEALTH AND ENVIRONMENT-FRIENDLY PRACTICES AMONG SCHOOL CHILDREN

Objective: To inculcate the importance of good health and environment-friendly practices among school students through school health clubs

Key Strategic Components

- Formation of health clubs in the intervention schools with the support of teachers and HM
- Developing quality modules on WASH and Sustainable Practices
- Conducting Training of Trainers (ToT) sessions for RPs to provide training to school health club members
- Developing processes and systems for the long-term sustainability of school health clubs
- Providing regular guidance along with monitoring the planned activities of the school health clubs to ensure they actively promote WASH and Environment-friendly practices
- Connecting schools with the nearest PHCs for proper health screenings and access to comprehensive primary health care services

SC3: DEMONSTRATING AFFORDABLE HIGH-QUALITY PRIVATE EDUCATION MODEL

Objective: Demonstrating a low-cost, highquality private education model for children from low-income families

Key Strategic Components:

- Focus on Kindergarten to Grade 10. In the future, grades will be aligned as per the NEP recommendation of 5+3+3+2
- Focus on quality learning outcomes by incorporating age-appropriate pedagogical interventions across pre-primary, primary, and secondary education levels
- Special emphasis on FLN&EL, which is measured through baseline and endline surveys
- Integrating vocational courses as a core aspect of the schooling system, as per the NEP focus



- Ensuring the availability of quality and inclusive school infrastructure and its regular maintenance
- Promoting sports and life skills for the allround development of students
- Building teachers' competency through well-planned ToTs, as per the NEP focus
- Promoting good health and environmentfriendly practices for the holistic development of students

SC 4: SUPPORTING BRIGHT YOUNG WOMEN FROM LOW-INCOME FAMILIES FOR STEM CAREERS

Objective: To promote the participation of bright young women from low-income families in STEM education and careers through a well-designed scholarship-cum-mentorship program to bring transformative changes in their lives

Key Strategic Components

- Designing a scholarship model which is customised as per the financial requirements of STEM courses and also contains a welldesigned mentorship component
- Onboarding quality mentors from relevant backgrounds who can provide in-depth guidance to the scholarship recipients
- Developing a dedicated website for better outreach and wider dissemination of the scholarship
- Reaching out to top colleges and schools through posters and personal meetings
- Counselling and selection based on students meeting the defined scholarship criteria (low-income families, bright women interested in STEM, preferably firstgeneration learners)
- Scholarship will be provided for higher secondary education in science (quality residential schools) and for undergraduate STEM courses (for top Indian colleges).
- All selected students will get mentorship support during their study phase, enabling them to pursue further studies and careers in STEM

BUILDING PARTNERSHIP

DRF firmly believes that this Education Strategy will pave the way for fostering meaningful partnerships with both the public education system and private Corporate Social Responsibility (CSR)/Foundations that share the common goal of enabling a learning continuum in the areas of (a) building strong FLN skills of children who are left behind, and (b) supporting bright young women through a well-designed scholarship-cum-mentorship program, which will enable them to pursue a career in STEM.

Through these partnerships, DRF's focus is to mobilise and leverage resources and expertise effectively.

CONCLUSION

In alignment with the NEP 2020, our strategy aims to strengthen the education system through evidence-based advocacy, need-based technical support, showcasing scalable models, and sharing knowledge gained from on-ground experiences.

DRF recognises that the path to the educational transformation is through a learning continuum that enables children and aspiring bright young women from underprivileged backgrounds to participate in the education, economy and society meaningfully.

This strategy will enable us to impact approximately 1,00,000 children and aspiring young women by 2025. We plan to conduct a mid-term strategy refresh in December 2025 to review (a) the progress made towards the goals of the strategy, (b) to take stock of ecosystem changes and their impact on our work, and (c) to incorporate new learnings from our work.

We believe that our Education Strategy is deeply rooted in the vision of our founder, Dr. K. Anji Reddy, and represents his commitment to giving back to society by contributing to the education system meaningfully.



REFERENCES

- Ahluwalia, Rahul, et al. "Systemic Drivers of Foundational Learning Outcomes." Central Square Foundation (CSF), 2021, https://cms.foundationallearning.in/wp-content/uploads/2022/07/Full-Report SystemicDriversofFLN.pdf
- Agrawal, Soniya. "Women in STEM: The Growing Numbers, Challenges and Whether It Translates into Jobs." *The Print*, 2021, https://theprint.in/india/education/women-in-stem-the-growing-numbers-challenges-and-whether-it-translates-into-jobs/700564/
- ASER Centre. "Annual Status of Education of Education Report (Rural) 2022." ASER Centre, 2023, https://img.asercentre.org/docs/ASER%202022%20report%20pdfs/All%20India%20documents/aserreport2022.pdf
- Azim Premji University (APU). "Loss of Learning during the Pandemic." Azim Premji University (APU), 2021, https://cdn.azimpremjiuniversity.edu.in/apuc3/media/publications/downloads/Learning-Loss-during-pandemicc.f1660288401.pdf
- Bhushan, Mayank, et al. "School Education in India 2020- Data, Trends and Policies." Central Square
 Foundation (CSF), 2020, https://cms.foundationallearning.in/wp-content/uploads/2022/07/School-Education-in-India-Data-Trends-and-Policies.pdf
- Bhushan, Mayank, et al. "School Education in India 2021." Central Square Foundation (CSF), 2021, https://cms.foundationallearning.in/wp-content/uploads/2022/07/School-Education-In-India-2021.pdf
- CBSE Academics. "Foundational Literacy and Numeracy." CBSE Academics FLN Microsite, https://cbseacademic.nic.in/fln/
- Central Square Foundation (CSF). "Early Childhood Education in India Landscape, Challenges, and The Road Ahead." Central Square Foundation (CSF), 2022, https://www.centralsquarefoundation.org/articles/early-childhood-education-in-india
- Council of Boards of School Education (COBSE). "List of Recognized Boards/Councils India." *Council of Boards of School Education (COBSE)*, 2023, https://www.cobse.net.in/list-of-boards.html
- Fathima, Falak. "Implementation of New Education Policy in India: An Insight." Times of India (TOI) Blog, 2022, https://timesofindia.indiatimes.com/readersblog/educational-blog/implementation-of-new-education-policy-in-india-an-insight-48262/
- G20 2023 India Press Release. "A Seminar on Ensuring Foundational Literacy and Numeracy in the Context of Blended Learning Held at Pune as Part of G20 4th Education Working Group Meeting." *G20 2023 India*, 2023, https://www.g20.org/en/media-resources/press-releases/june-2023/blended-learning/
- George, Jinitha. "National Policy on Education." Jinitha Weebly, https://jinitha.weebly.com/national-policy-on-education.html
- Give. "Education Sector in India." *Give*, 2023 https://give.do/discover/sector/Education/
- Give. "The Role of the Education NGO in India." *Give's Blog*, 2023, https://give.do/blog/the-role-of-the-education-ngo-in-india/
- India Today. "Indian Parents Spend Rs 32000 Annually on Children's Education: Survey." *India Today*, 2022, https://www.indiatoday.in/education-today/latest-studies/story/indian-parents-spend-rs-32000-annually-on-children-s-education-survey-1938750-2022-04-18



- Institute of Management (IIM) Calcutta. "About IIM Calcutta." *Indian Institute of Management (IIM) Calcutta*, https://www.iimcal.ac.in/about
- Indian Institute of Technology (IIT) Kharagpur. "About IITKGP." *Indian Institute of Technology (IIT) Kharagpur*, 2023, https://www.iitkgp.ac.in/about-iitkgp?lang=en
- Jain, Divya. "Reshaping Indian Education with Technology." *Times of India (TOI) Blog*, 2023, https://timesofindia.indiatimes.com/blogs/voices/reshaping-indian-education-with-technology/
- Jesiah, Selvam. "Aligning Higher Education with the United Nations SDGs." The Hindu, 2023, https://www.thehindu.com/opinion/op-ed/aligning-higher-education-with-the-united-nations-sdgs/article67390357.ece
- Joshi, Vidushi, and Dr. S.K. Tripathi. "Issues in Vocational Education in India & Their Possible Solutions."
 International Journal of Creative Research Thoughts (IJCRT), 2023,
 https://ijcrt.org/papers/IJCRT2302041.pdf
- Malin, Sophie, and Ashima Tyagi. "India's Demographic Dividend: The Key to Unlocking Its Global Ambitions." S&P Global, 2023, <a href="https://www.spglobal.com/en/research-insights/featured/special-editorial/look-forward/india-s-demographic-dividend-the-key-to-unlocking-its-global-ambitions#:~:text=India%20is%20home%20to%20more,is%20expected%20to%20hit%2059%25.
- Ministry of Education (MOE), GOI. "About PM POSHAN." Pradhan Mantri Poshan Shakti Nirman (PM POSHAN), https://pmposhan.education.gov.in/
- Ministry of Education (MOE), GOI. "All India Survey on Higher Education (AISHE) 2020-21." Ministry of Education (MOE), GOI, 2021, https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/AISHE Report 2020 21.pdf
- Ministry of Education (MOE), GOI. "Analysis of Budgeted Expenditure on Education (2018-19 to 2020-21)." Ministry of Education (MOE), GOI, 2022, https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/budget_exp.pdf
- Ministry of Education (MOE), GOI. "Mid-Day Meal Scheme." Ministry of Education (MOE), GOI, 2019, https://www.education.gov.in/mid-day-meal
- Ministry of Education (MOE), GOI. "Ministry of Education (MOE): Annual Report 2021-22." Ministry of Education (MOE), GOI, 2022, https://www.education.gov.in/sites/upload_files/mhrd/files/document-reports/annual_report_eng.pdf
- Ministry of Education (MOE), GOI. "National Achievement Survey (NAS) Report Card 2021." *National Achievement Survey (NAS)*, 2021, https://nas.gov.in/report-card/nas-2021
- Ministry of Education (MOE), GOI. "National Education Policy (NEP) 2020." Ministry of Education (MOE), GOI, 2020, https://www.education.gov.in/sites/upload files/mhrd/files/NEP Final English 0.pdf
- Ministry of Education (MOE), GOI. Performance Grading Index(PGI), https://pgi.udiseplus.gov.in/#/
- Ministry of Education (MOE), GOI. "Performance Grading Index (PGI) 2.0: 2021-22 (States & Union Territories)." *Ministry of Education (MOE), GOI*, https://dsel.education.gov.in/sites/default/files/infocus/pgi-s.pdf
- Ministry of Education (MOE), GOI. PM E-Vidya, https://pmevidya.education.gov.in/
- Ministry of Education (MOE), GOI. "Rashtriya Madhyamik Shiksha Abhiyan (RMSA)." *Ministry of Education (MOE), GOI*, 2021, https://www.education.gov.in/rmsa



- Ministry of Education (MOE), GOI. "Unified District Information System for Education Plus (UDISE+) 2021-22." Ministry of Education (MOE), GOI, 2022, https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/udise_21_22.pdf
- Ministry of External Affairs (MEA), GOI. "Seventh Schedule." Ministry of External Affairs (MEA), GOI, https://www.mea.gov.in/Images/pdf1/S7.pdf
- Ministry of Human Resource Development (MHRD), GOI. "Educational Statistics at a Glance (ESAG) 2014." Ministry of Education (MOE), GOI, 2014, https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/EAG2014.pdf
- Ministry of Human Resource Development (MHRD), GOI. "Educational Statistics at a Glance (ESAG) 2018." Ministry of Education (MOE), GOI, 2018, https://www.education.gov.in/sites/upload_files/mhrd/files/statistics-new/ESAG-2018.pdf
- Ministry of Human Resource Development (MHRD), GOI. "Sarva Shiksha Abhiyan (SSA), Manual for Planning and Appraisal." *Ministry of Education (MOE), GOI*, 2004, https://dsel.education.gov.in/sites/default/files/2019-05/Manual_Planning_and_Apprisal.pdf
- Ministry of Science & Technology (MST), GOI. "Cabinet Approves Introduction of National Research
 Foundation Bill, 2023 in Parliament to Strengthen Research Eco-System in the Country." Press Information
 Bureau, GOI, 2023, https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1935895
- Ministry of Science & Technology (MST), GOI. "Government Says, Percentage of Women in R&D Is 16.6% among Total Number of Scientists Working in S&T Organizations." *Press Information Bureau*, GOI, 2022, https://pib.gov.in/PressReleasePage.aspx?PRID=1814462
- Ministry of Women & Child Development (MWCD), GOI. "Integrated Child Development Services ICDS Scheme." Ministry of Women & Child Development (MWCD), GOI, 2015, https://wcd.nic.in/integrated-child-development-services-icds-scheme
- Nath, Dipanjolly. "Literacy Rate in India 2022." *International Journal for Multidisciplinary Research* (*IJFMR*), 2023, https://www.ijfmr.com/papers/2023/1/1409.pdf
- Patel, Sujata, et al. "History of Education Policy in India." E-PG Pathshala, http://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000033SO/P000300/M013097/ET/1452589552
 https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000033SO/P000300/M013097/ET/1452589552
 https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000033SO/P000300/M013097/ET/1452589552
 https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/s000033SO/P000300/M013097/ET/1452589552
 https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/s000033SO/P000300/M013097/ET/1452589552
- Pilz, Matthias, and Julia Regel. "Vocational Education and Training in India: Prospects and Challenges from an Outside Perspective." Sage Journals, 2021, https://journals.sagepub.com/doi/epub/10.1177/0973801020976606
- PRS Legislative Research. "Demand for Grants 2023-24 Analysis Education." PRS Legislative Research (India), 2023, https://prsindia.org/files/budget/budget_parliament/2023/DFG_2023-24 Analysis Education.pdf
- Purohit, Parth. "The History and Evolution of the Indian Education System." *C.R. Naidu & Co.*, 2018, http://www.crnaidu.in/u/white_paper/The%20History%20and%20Evolution%20Of%20The%20Indian%20Education%20System.pdf
- Rise India. "India's New National Education Policy: Evidence and Challenges." *RISE Programme*, 2021, https://riseprogramme.org/publications/indias-new-national-education-policy-evidence-and-challenges
- Sahoo, Niranjan. "Five Challenges That Would Shape the Outcome of NEP 2020." *Observer Research Foundation (ORF)*, 2021, https://www.orfonline.org/expert-speak/five-challenges-that-would-shape-the-outcome-of-nep-2020/



- Social Policy Research Foundation (SPRF). "Vocational Education in the NEP 2020: Opportunities and Challenges." Social Policy Research Foundation, 2020, https://sprf.in/vocational-education-in-the-nep-2020-opportunities-and-challenges/
- Structured Assessment for Analysing Learning (SAFAL), CBSE. "Structured Assessment for Analysing Learning (SAFAL)." Structured Assessment for Analysing Learning (SAFAL), CBSE, https://cbseit.in/cbse/2021/SAFAL/(S(enmvg40mqeqku4dniv0fzmpi))/
- The World Bank. "Ending Learning Poverty: What Will It Take?" The World Bank, 2019, https://openknowledge.worldbank.org/server/api/core/bitstreams/1ef8a794-710b-584e-a540-a3923ad7ea90/content
- The World Bank. "The Equality Equation: Advancing the Participation of Women and Girls in STEM." *The World Bank*, 2020, https://www.worldbank.org/en/topic/gender/publication/the-equality-equation-advancing-the-participation-of-women-and-girls-in-stem
- The World Bank Data Bank. "World Development Indicators." *The World Bank Data Bank*, 2023, https://databank.worldbank.org/source/world-development-indicators/Series/SE.XPD.TOTL.GD.ZS
- The World Bank, et al. "The State of Global Learning Poverty: 2022 Update." The World Bank, 2022, https://thedocs.worldbank.org/en/doc/e52f55322528903b27f1b7e61238e416-0200022022/original/Learning-poverty-report-2022-06-21-final-V7-0-conferenceEdition.pdf
- The World Bank Gender Data Portal. "Share of Graduates by Field, Female (%)." The World Bank Gender Data Portal, 2023, https://genderdata.worldbank.org/indicators/se-ter-grad-fe-zs/?fieldOfStudy=Science%2C%20Technology%2C%20Engineering%20and%20Mathematics%20%28STE M%29&view=bar
- United Nations (UN). "The 17 Goals Sustainable Development Goals." *United Nations (UN)*, https://sdgs.un.org/goals
- United Nations Educational, Scientific and Cultural Organisation (UNESCO). "Transforming Education for the Future." *United Nations Educational, Scientific and Cultural Organisation (UNESCO) Digital Library*, 2022, https://unesdoc.unesco.org/ark:/48223/pf0000382765
- United Nations International Children's Emergency Fund (UNICEF) India. "Rapid Assessment of Learning during School Closures in the Context of Covid." *United Nations International Children's Emergency Fund (UNICEF India)*, 2021, https://www.unicef.org/india/media/6121/file/Report%20on%20rapid%20assessment%20of%20learning%20during%20school%20closures%20in%20context%20of%20COVID-19.pdf



ACKNOWLEDGEMENT

We are thankful to our partners (from government, private sector and not-for-profit organizations), industry practitioners, friends from peer organizations, and our internal team members for their support in developing this Education Strategy Paper.

At Dr. Reddy's Foundation we develop and test innovative solutions to address complex social problems and leverage partnerships to scale up impact. Over the years DRF has directly impacted more than 1.26 million lives through improved education, health, livelihood and climate action outcomes.

TO KNOW MORE

Please visit



www.drreddysfoundation.org



https://twitter.com/DRF_India



https://www.facebook.com/drreddysfoundationindia

in

https://www.linkedin.com/company/drreddysfoundation/