

K-12 Education in India: Vision 2047

December 2022



A hand is holding a blue book in a library setting. The book is the central focus, held vertically. The background shows a wooden bookshelf with several other books, some of which are blurred. The lighting is warm and focused on the book and hand.

Agenda

- ▶ K-12 education - overview
- ▶ Vision 2047 for K-12 Education

India had ~254 million students enrolled across ~1.5 million schools in 2020

Indian K-12 Market Overview (2020)



1,382 m
Population



375 m
Age 3-19 population



1.08 m
Government schools



128 m
School-going children in government schools



3.1%
Government expenditure on education as a % of GDP



~0.41 m
Private and other schools



~126 m
School-going children in private and other schools



~9.7 m
Faculty members in Indian K-12 system

Commentary

- ▶ K-12 schools in India are of three types: **government schools, government-aided schools, private schools**
- ▶ K-12 sector in India enrolled ~254 million students in FY20, of which ~46% students were enrolled in **private schools**
- ▶ In FY25, the total enrolment numbers are estimated to be **similar at ~255 million**. This marginal increase is due to the **declining addressable school population** in the age group of 3 to 19, counterbalanced by an **increase in gross enrolment ratio (GER)** by 2025
- ▶ K-12 segment in India has ~9.7 million faculty members in FY20. The **Student Teacher Ratio (STR)** has improved to 26 (FY20) from 30 (FY15)
- ▶ India spends only **3.1%*** of its **GDP** on education, while countries like the US, UK, Sweden, Norway, on an average **spend ~6.5%** of their **GDP** on education
- ▶ Even prominent Asian countries such as **China** and **S. Korea** have a higher percentage of GDP spend on education of **4 - 4.5%**

Note: *Percentage spend on education in FY20

Source: Ministry of RE Vision 2047 document, NSSO, IBEF, ACER, World Bank, Oxford Economics, FICCI Arise Vision Report, EY Parthenon Analysis

Regulatory complexity, inadequacy of quality infrastructure and teachers, digital divide, RTE and non-integrated pedagogy are key areas of challenge currently in K-12 education

Key challenges in the Indian K-12 segment

Key structural challenges

Complex Regulatory Framework



- ▶ **Over regulated** system with **opaque structures** for setting up and operating schools and **overlapping regulations** across levels of the governments (union and state)
- ▶ Slow clearance processes **dissuading potential investors**

Collaboration between the private and government sector



- ▶ **Synergies** and **collaborations** between the private and government K-12 sector are **suboptimal**.
- ▶ **Private** players are **dissuaded** to participate due to **complex** regulatory framework and absence of any clear **financially viable** models

RTE* Implementation



- ▶ RTE norms such as maintaining STR# and infrastructure are causing **financial constraints** for budget schools
- ▶ Compensation provided by government to private schools for reservations is insufficient when compared to actual cost incurred per child

Key implementation challenges

Inadequate quality infrastructure and faculty



- ▶ **200,000+** government schools do not have a **library facility**, **6K** govt schools do not have **buildings**, **5%** lack **clean drinking water**
- ▶ **Shortage** of **500,000+** teachers in elementary schools; **14%** of **secondary schools** do not have **prescribed a minimum of 6 teachers**.

Digital divide and poor last mile connectivity



- ▶ **Low access** to **digital learning** for rural and economically weaker sections & **inadequacy** of **digital infrastructure** for teachers to deliver learning
- ▶ **Fewer than 15%** of rural Indian households had **internet access** as opposed to **42%** urban households

Non-integration of future learning systems in pedagogy



- ▶ Current curriculum has **limited focus** on **analytical** and **cognitive learning** and is delivered in traditional mediums
- ▶ Classroom instruction accounts for a major chunk in student learning

Notes: 1. Challenges specific to public and private K12 in India included in the annexure; *RTE - Right to Education; #STR - Student Teacher Ratio

Source: FICCI Reports, Secondary Research, EY Parthenon Research & Analysis

Apart from the current government efforts, there are additional actions required to address the current challenges more holistically

Measures to overcome key challenges in the Indian K-12 Segment

Solutions to structural challenges

Complex regulatory framework



- ▶ **Regulations must be stream-lined** to ensure that the number of required licenses/approvals reduce; **overlapping regulations** at state vs. national level **must be reduced**
- ▶ Provide self-regulatory framework, higher autonomy to schools

Collaboration between the private and government sector



- ▶ Devise **PPP models** to **unlock** under-utilized national assets and attract **private players** to run government schools. PPP models to be **performance and impact based**; Build **provisions** for private players to make reasonable **returns** in PPP models

RTE* Implementation



- ▶ **Provisions of reimbursement** to private schools for actual costs incurred on reservation seats
- ▶ Promote **public private partnership** to leverage public school assets in return for developing them by the private players

Solutions to implementation challenges

Inadequate quality infrastructure and faculty



- ▶ **Assess and map** the substantial investment required to develop **robust physical and digital** infrastructure of schools; build **teacher competency** to leverage digital tools
- ▶ Implement **national-level teaching training programs** to upskill teachers; Sponsor teachers to avail **courses in India and overseas**

Digital divide and poor last mile connectivity



- ▶ **Provision of loans** to schools for setting-up digital infrastructure; Invest in providing **sufficient bandwidth support** (4G and 5G) across the country
- ▶ **Dedicated fund** for providing e-devices and connectivity in rural areas

Non-integration of future learning systems in pedagogy



- ▶ Inclusion of new-age digital technologies, such as **AI/ML, AR/VR** in **delivery of the course content**, should be promoted
- ▶ AI should be **harnessed to assess student performance and learning capabilities** in schools

Source: FICCI Reports, Secondary Research, EY Parthenon Research & Analysis

Current trends and opportunities in K-12 education, if tapped appropriately, can help provide the right foundation for India in 2047

NEP 2020

- ▶ NEP 2020 aims to disrupt the Indian education system with transformative and generational reforms with a key focus on **early childhood care and education with new curricular and pedagogical structure, standard-setting and accreditation for school education and school complexes**

Shift toward digital education

- ▶ The education sector is undergoing a digital revolution, hastened by the onset of the pandemic. India is seeing a dramatic uptick in the adoption of digital education initiatives, with UNESCO listing it among nine countries likely to shift toward digital education. The government has also launched numerous initiatives to bolster K-12 e-learning - **PM e-VIDYA, DIKSHA, SWAYAM, ePathshala**, among others.

Professional development of teachers

- ▶ India's student-teacher ratio (STR) has been improving over the years, driven by the growth in the overall teacher's cohort in the country. **Continuous professional development initiatives, career management progression initiatives, and initiatives to develop professional standards for teachers** have been launched in the past years and other initiatives have been planned in NEP 2020

Rise in popularity of international boards

- ▶ In the past decade, the two major international boards, i.e., **International Baccalaureate (IB)** and **Cambridge Assessment International Education (also known as IGCSE)** have grown significantly. Parents believe that such international boards imbibe concept-based learning better than local boards as they focus more on research and critical thinking, and provide a better transition to studies abroad

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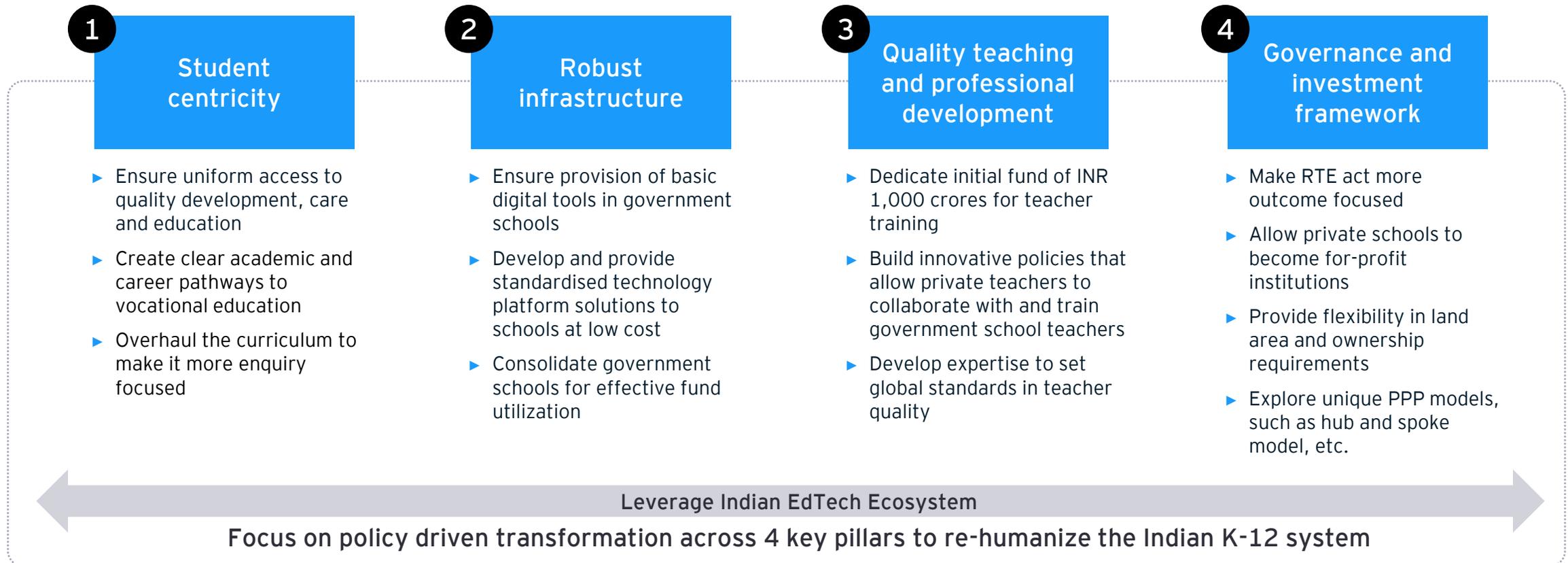
Recommendations for policymakers (Summary of "Now")

Aim to re-humanize and build a student-centric K-12 education system by improving capabilities across four key pillars

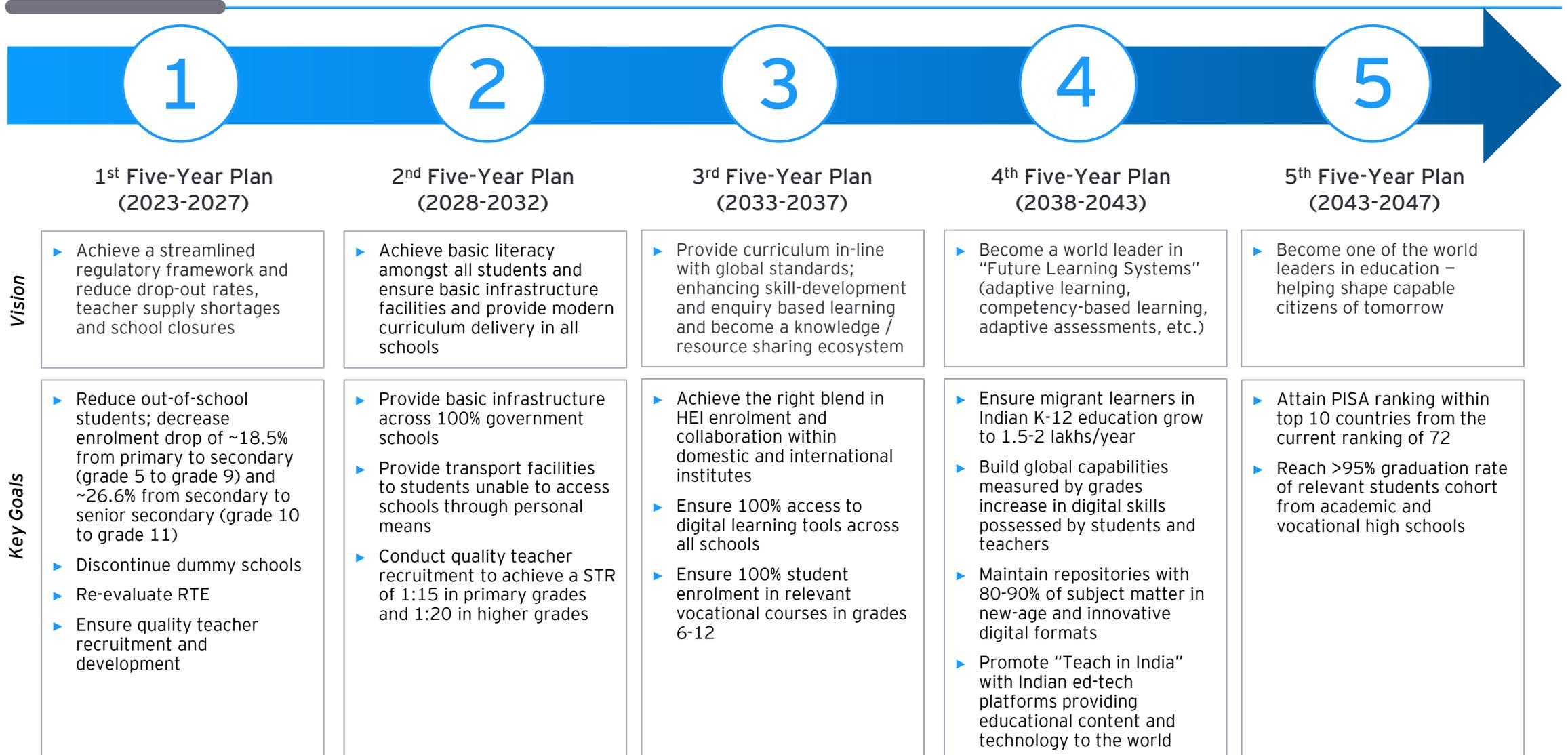
Re-humanization of K-12 Education

“

To build globally capable citizens of tomorrow equipped with cognitive abilities, higher order thinking and a socially responsible mindset with the capacity to innovate, adapt and positively contribute to the world



To achieve India @100 years vision for K-12 schooling, our education system must transform by 2047 with the following strategic Five-Year Plans



Key Unlocks Required - Now (Fix the basics)

Immediate imperatives for K-12 stakeholders include reducing regulation complexity, overhauling the curriculum and focus on upskilling students and teachers

KEY THEMES

UNLOCKS K-12 Level Industry Level Policy-maker Level

1 Student centricity

- ▶ Ensure **quality and inclusive learning** experiences, equality for **disabled and economically disadvantaged students**. Focus on re-humanization of K-12 education; build 4C's - character, capacity, conduct and caliber, amongst students
- ▶ To make schools of 2047 '**future learning systems**', focus on developing actionable blueprints for technological integration in school pedagogies.
- ▶ Re-imagine the **vocational education system in India**, reformulating the programs as demand-driven; develop mechanisms to track out-of-school students and make it easy for them to re-enter schools

2 Robust infrastructure

- ▶ Ensure that a school's infrastructure conforms to 'School Quality Assessment & Assurance' (SQAA) framework guidelines. The infrastructure should be equally accessible by both abled and disabled students. Engage with **ed-tech** players to adopt **digital tools** such as **LMS, ERP, smart classroom hardware**, etc.
- ▶ Ed-tech players should build **low cost, mass implementable and user-friendly technology tools** that can be deployed within the academic and non-academic activities/operations of the schools
- ▶ Focus on building school clusters that **promote greater resource efficiency, effective functioning** and governance

3 Quality teaching and development

- ▶ Build clearly **defined career progression mechanisms** in schools to attract quality teaching talent.
- ▶ Funds for faculty training has declined by **89% from INR 1,158 crore in 2014-15 to INR 127 crore in 2022-23**. This is inconsistent with NEP, which instead recommends **increasing resources for teacher training**. Teacher training should be prioritized, and the funding should be at least increased to past levels.

4 Governance and investment framework

- ▶ Immediate need to **re-imagine** the existing heavily regulated and restrictive policies governing the K-12 landscape in the country
- ▶ **Review RTE act** - make it outcome-focused; **Streamline regulations** to reduce overall licenses/approvals required, as well as reduce **overlapping regulations** at state and national level
- ▶ Develop **regulatory framework** to enable seamless and **secure partnerships between schools and upcoming technology/ed-tech companies**

Source: FICCI Reports, Secondary Research, Primary Research, EY Parthenon Research & Analysis

Key unlocks required - Next (Explore Adjacencies)

To build a world-class K-12 education system, developing digital infrastructure and integrating technology within pedagogy is one of the key next steps for K-12 stakeholders

KEY THEMES

UNLOCKS K-12 Level Industry Level Policy-maker Level

- 1

Student centricity

 - ▶ Aim to **collaborate with global schools, HEIs and international student bodies to co-create curriculum** and allow students to engage in cultural exchange programs to develop students into global citizens
 - ▶ Collaborate with schools to **share knowledge from global thought leaders**, institutions and industry experts to **establish 'Future Ready Forums' in schools**
 - ▶ Introduce **vocational and technical skills in Grade 9 - Grade 12** to familiarize students with the latest technological trends and disruptions.
- 2

Robust infrastructure

 - ▶ Develop **institute wide SOP's for deploying digital tools** and within the institute. Ensure school leadership, faculties and students buy-in on the use of digital interventions within learning spaces.
 - ▶ Conduct competitions in partnership with third-parties and NGOs to **drive adoption of tools for teaching, content creation, collaboration**, etc.
 - ▶ Equip teachers with gadgets (laptops / tablets) to empower teachers to use creative forms of teaching techniques. For instance, in 2019-20, Delhi govt equipped teachers in **1,100+ public schools with 60,000+ tablets**.
- 3

Quality teaching and development

 - ▶ Train teachers to effectively **deliver enquiry-based curriculum** through regular mandatory in-house pedagogy trainings
 - ▶ Develop **peer learning mechanisms through online portals**, where teachers from different schools **share knowledge and train one another** in areas of their subject matter expertise.
 - ▶ Develop policies that **mandate private school faculties** to train and upskill government school teachers on new pedagogies, technologies, etc.
- 4

Governance and investment framework

 - ▶ Aim to **fund students directly** instead of schools. This can be done via education voucher, tuition waivers/subsidies, tax-credit scholarships, etc. This approach may also lead to students **migrating to private schools**, thereby reducing burden from public schools.
 - ▶ In order to further improve private sector participation in the Indian K-12 system, **existing private schools** should be given a chance to transition to **for-profit school structure**
 - ▶ **Limit regulations on school fee** and provide flexibility in land area and school ownership requirements. Provide **greater independence** and autonomy to schools on their admission policies.

Source: FICCI Reports, Secondary Research, Primary Research, EY Parthenon Research & Analysis

Key unlocks required - New (explore frontiers)

The K-12 education landscape must parallelly expand its boundaries and ensure digital amalgamation in the current pedagogy

KEY THEMES	UNLOCKS	K-12 Level	Industry Level	Policy-maker Level
1 Student centricity	<ul style="list-style-type: none">Schools should aim to make their campuses net zero. This will help align students with the 'net zero' mentality and instilling ideas within them to lower carbon footprintAs a part of the corporate social responsibility (CSR) program, the companies can aim to 'adopt' or partner with select low-income focused public/private schools. The schools can use CSR funds to provide scholarships to students, as well as improve their infrastructural facilitiesAim to make the Indian education system a leader in the field by producing well-rounded graduates, measured through top ranks in international assessments and high enrolment and graduation rates at all levels			
2 Develop robust infrastructure	<ul style="list-style-type: none">Focus on building 'anytime, anywhere' flexible model of schooling. Schools can deploy advance learning management and enterprise management digital tools to achieve this.Build institutional and industry partnerships to optimally utilize existing resources, which can result in effective tech-transition for many schools.Focus on consolidating government schools to ensure effective utilization of funds and better overall infrastructure through school complexes			
3 Ensure quality teaching and professional development	<ul style="list-style-type: none">Based on teacher performance statistics, remedial actions can be quickly taken to improve teacher performance and overall academic effectiveness within the schoolDevelop tools for professional training in using ICT for teachers across all regions to support and promote active learningSet-up multiple 'Centres of Excellence' across the country for preparing and training world class teachers. Partner with education industry leaders and global teacher training institutions to train upcoming faculties on global best practices			
4 Reform governance and investment framework	<ul style="list-style-type: none">Liberalize regulations to attract investment from foreign investors and international school chains. Availability payment concession and demand risk concession public private partnership (PPP) models can be explored by the policy makers to partner with private organizations and investorsSchool twinning programs (PPP model) can be explored. Low-performing public schools could be identified, and they could be offered to the private sector as PPP in the form of a Hub and Spoke model. A hub or performing school can mentor the low or non-performing schools to improve their performance efficiency			

Source: FICCI Reports, Secondary Research, Primary Research, EY Parthenon Research & Analysis

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