2022

Industry Research Report on the Indian Online Education and Training Sector

January 13, 2022

IRR Advisory

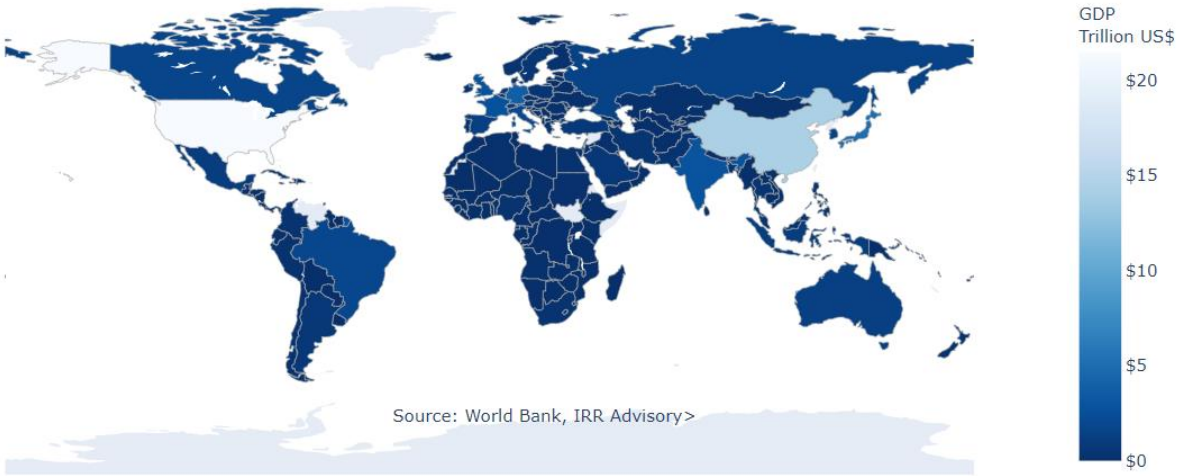
-

Table of Contents

1. MACROECONOMIC OVERVIEW

Gross domestic product (GDP) is the standard measure of the value added created through the production of goods and services in a country during a certain period. The economic health of a country is determined by her GDP which refers to the total market value of all the goods and services a nation produced each year. The exhibit below shows the global standing of each country in terms of their GDP where the colour codes represent the GDP in trillions of US$.

World GDP (in US$ tn) by Countries (2019)



World GDP stood at US$84.5tn in CY19, with the USA (GDP US$21.43tn) accounting for almost 24.5% of the global economy and China (GDP US$14.34tn) accounting for 15.4% of the world GDP. India (US$2.87tn) stood 5th in global GDP ranking, behind USA, China, Japan and Germany, accounting for 3.3% of the global GDP. Asia accounted for 38.8% of the global GDP, followed by North America at 28.0% and Europe at 25.2%. The remaining continents South America, Africa and Oceania contributed to 8.0% of the global GDP.

The global GDP in CY20 was down 3.3% from the previous year, as global economic activity was brought to a standstill by the Covid-19 pandemic. The impact on economic activity, health and livelihood across the world was unparalleled due to the pandemic. The advent of the pandemic saw global financial markets turn increasingly volatile with panic selloffs, flight to safety and wealth erosion in equity markets across both advanced and emerging economies. Sovereign bond yields fell to record lows and as the outbreak spread quickly around the globe, lockdowns and social distancing stalled economic activity across the world.

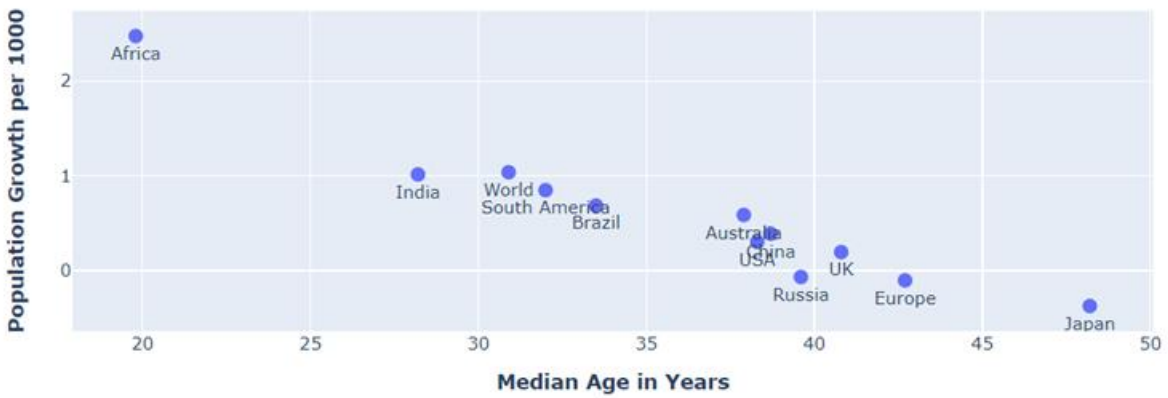
A country's GDP depends on a factor of two things, namely its population and its per capita GDP. A larger population is expected to stimulate demand, but it also depends on the purchasing ability of the people which is reflected in the per capita GDP of the country. The total world population stood at 7.7 billion in 2019, with China and India accounting for 18.0% and 17.5% of the global population.

In terms of world population, Asia accounted for 59.5%, Africa 17.2%, Europe 9.6%, South America 8.4%, North America 4.7%, and Oceania 0.6% of the global population. The exhibit below shows the country-wise population where the colour codes represent the population in millions.

World Population (in millions) by Countries

General population trends mask considerable differences between countries. On the one side stand the world's least developed countries, which continue to have high fertility levels. The population of the world's least developed countries is projected to double by 2053, and in some countries it will even triple. On the other side are high-income and rising-income countries, which are experiencing slow population growth or no population growth at all. Whereas the former countries continue to have large, growing, populations of young people, the latter have large, growing populations of older persons. These changes in demographics will influence demand patterns across regions. The exhibit below shows population growth and age demographics across regions, with a younger age demographics and higher population growth reflecting robust GDP growth for those regions over the next three decades.

Age Demographics and Population Growth

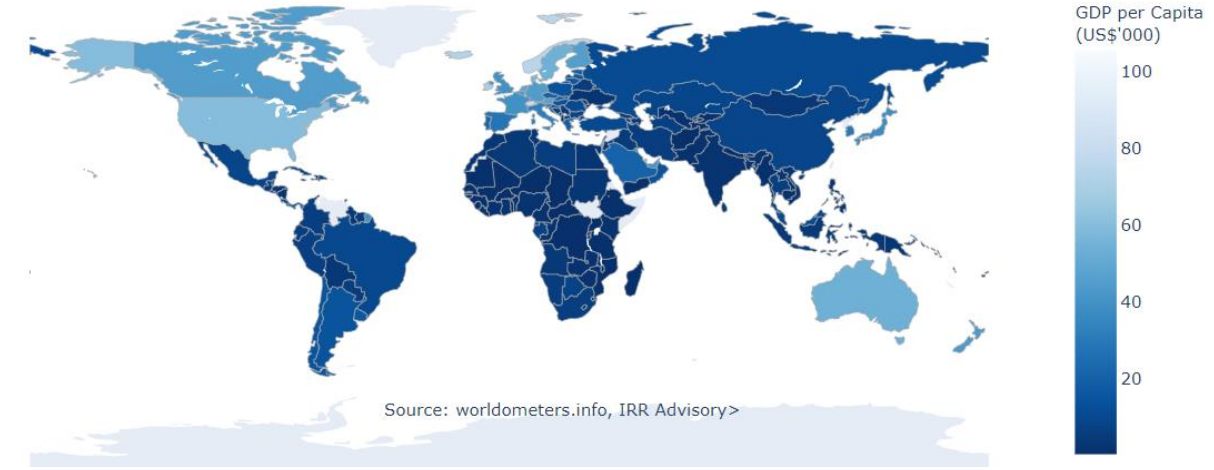


Source: worldometers.info, IRR Advisory

Africa today exhibits the highest population growth and the most favourable age demographics, followed by India, while countries like Japan, Europe and Russia have an ageing and declining population. Regions like Africa, South America and India can drive global GDP. This will depend on how quickly the various countries recover from the pandemic.

To measure current prosperity of countries, per capita GDP is universally used to measure a country's wealth and prosperity. Per capita GDP illustrates the economic production value attributable to each citizen and translates to a measure of national wealth. Per capita GDP is typically combined with GDP to analyse the prosperity of a country based on its economic growth. Small, rich countries and more developed industrial countries tend to have the highest per capita GDP. As per IMF's World Economic Outlook Report April 2021, the top ten countries in terms of their GDP per capita are Luxembourg, Switzerland, Ireland, Norway, United States, Denmark, Iceland, Singapore, Australia and Qatar. Luxembourg, with a current per capita GDP of US$131,782 would remain at the top spot of nominal ranking for the next few years as it is ahead of 2nd ranked occupier Switzerland by a huge margin of US$37,086. However, the World Bank reports that the per capita GDP of Monaco and Liechtenstein are significantly higher, though these are tiny economies. India, with a per capita GDP of US$2,091 is ranked 162 in the world.

World per capita GDP by Countries



Source: worldometers.info, IRR Advisory

Meanwhile, the initial phase of economic recovery from coronavirus-related lockdowns has been faster than expected and global growth momentum has picked up. While CY20 GDP releases have - in general - surprised to the upside across developed markets, the emergence of second and third waves of COVID-19 coupled with onset of flu season are raising concerns and could weaken future growth expectations.

Global prospects remain highly uncertain one year into the pandemic. New virus mutations and the accumulating human toll raise concerns, even as growing vaccine coverage lifts sentiment. Economic recoveries are diverging across countries and sectors, reflecting variation in pandemic-induced disruptions and the extent of policy support. The outlook depends not just on the outcome of the battle between the virus and vaccines—it also hinges on how effectively economic policies deployed

under high uncertainty can limit lasting damage from this unprecedented crisis. Global growth is projected at 5.9% in 2021, moderating to 4.9% in 2022. The growth reflects additional fiscal support in a few large economies, the anticipated vaccine-powered recovery in the second half of 2021, and continued adaptation of economic activity to subdued mobility. High uncertainty surrounds this outlook, related to the path of the pandemic, the effectiveness of policy support to provide a bridge to vaccine-powered normalization, and the evolution of financial conditions.

Overview of the World Economic Outlook Projections of Real GDP annual percent change

World Economic Outlook	Estimate (%)	Projections (%)	
Name of the Country/ Economy	2020	2021	2022
World Output	**-3.1**	**5.9**	**4.9**
Advanced Economies	**-4.5**	**5.2**	**4.5**
United States	-3.4	6.0	5.2
Euro Area	-6.3	5.0	4.3
Germany	-4.6	3.1	4.6
France	-8.0	6.3	3.9
Italy	-8.9	5.8	4.2
Spain	-10.8	5.7	6.4
Japan	-4.6	2.4	3.2
United Kingdom	-9.8	6.8	5.0
Canada	-5.3	5.7	4.9
Other Advanced Economies	-1.9	4.6	3.7
Emerging Market & Developing Economies	**-2.1**	**6.4**	**5.1**
Emerging and Developing Asia	-0.8	7.2	6.3
China	2.3	8.0	5.6
India	-7.3	9.5	8.5
ASEAN*	-3.4	2.9	5.8
Emerging and Developing Europe	-2.0	6.0	3.6
Russia	-3	4.7	2.9
Latin America and the Caribbean	-7.0	6.3	3.0
Brazil	-4.1	5.2	1.5
Mexico	-8.3	6.2	4.0
Middle East and Central Asia	-2.8	4.1	4.1
Saudi Arabia	-4.1	2.8	4.8
Sub-Saharan Africa	-1.7	3.7	3.8
Nigeria	-1.8	2.6	2.7
South Africa	-6.4	5.0	2.2
Low-Income Developing Countries	**0.1**	**3.0**	**5.3**

**includes Indonesia, Malaysia, Philippines, Thailand, Vietnam.*

Source - IMF's World Economic Outlook, October 2021

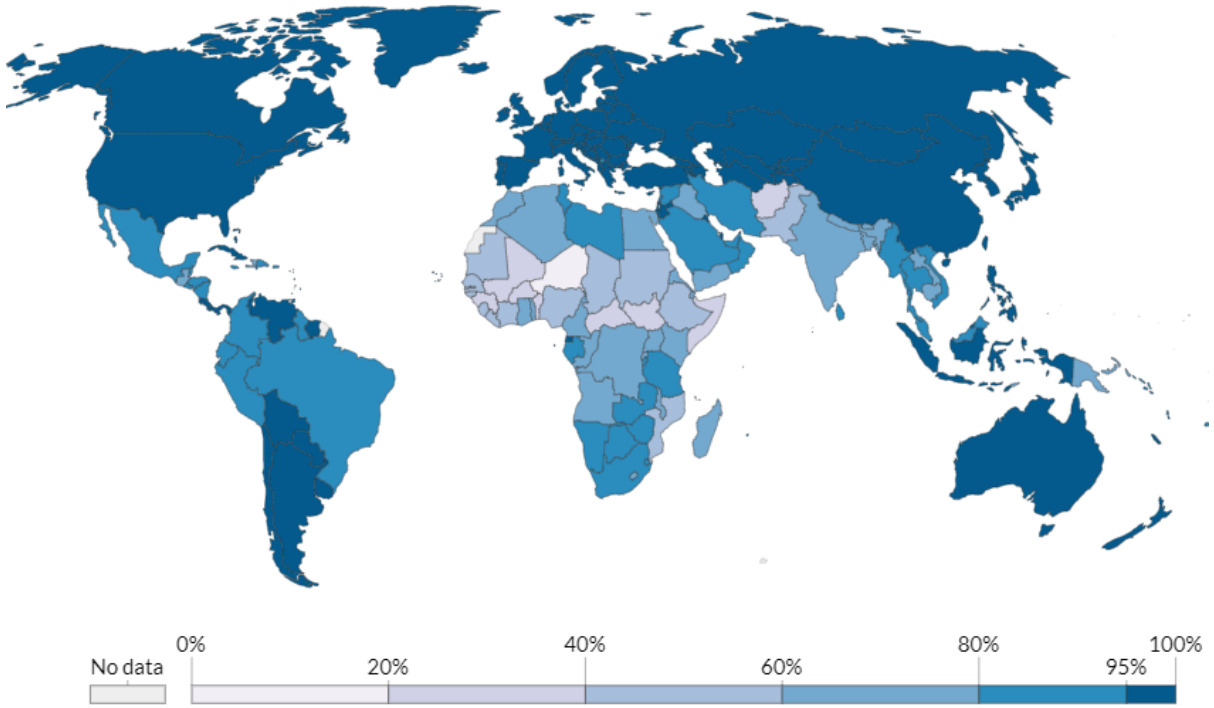
The global economic recovery continues amid a resurging pandemic that poses unique policy challenges. Vaccinations have proven effective at mitigating the adverse health impacts of COVID-19. However, unequal access to vaccines, vaccine hesitancy, and higher infectiousness have left many people still susceptible, providing fuel to the pandemic. The marked spread of the Delta variant and the threat of new variants that could undermine vaccine effectiveness make the future path of the

pandemic highly uncertain. This has implications for the resilience of a recovery already in uncharted territory—characterized by pandemic-induced supply-demand mismatches that could worsen with a more protracted health crisis. Gaps in expected recoveries across economy groups have widened since the July forecast, for instance between advanced economies and low-income developing countries. As recoveries proceed, the risks of derailments and persistent scarring in heavily impacted economies remain so long as the pandemic continues. Meanwhile, inflation has increased markedly in the United States and some emerging market economies. As restrictions are relaxed, demand has accelerated, but supply has been slower to respond. Commodity prices have also risen significantly from their low levels of last year. Although price pressures are expected to subside in most countries in 2022, inflation prospects are highly uncertain. These increases in inflation are occurring even as employment is below pre-pandemic levels in many economies, forcing difficult choices on policymakers—particularly in some emerging market and developing economies.

Vaccine access remains the principal driver of fault lines in the global recovery, reinforced by the resurgence of the pandemic. Many advanced economies have seen remarkable progress in vaccinations since the April 2021 World Economic Outlook. By contrast, most emerging market and developing economies have had a much slower rollout, hampered by lack of supply and export restrictions. Advanced economies have achieved broad availability of vaccines, with hesitancy (rather than inadequate supply) being the main constraint on further gains. As per IMF estimates around 58% of the population in advanced economies has been fully vaccinated. By contrast, the rest of the world has starkly lower shares of population that are fully vaccinated against COVID-19, at about 36% in emerging market economies and less than 5% in low-income developing countries. In these economies, vaccine supply and distribution remain the primary constraints.

Finally, global literacy has drastically risen over the last two centuries – from 12% in 1820 to 86% in 2015. Literacy measures a person's skill to read and write and is a key measure of a population's education. As per an OECD study, global literacy has increased by 4% every five years - from 42% in 1960 to 86% in 2015. In many countries more than 95% have basic literacy skills, although large inequalities remain between sub-Saharan Africa and the rest of the world. In Burkina Faso, Niger and South Sudan, literacy rates are still below 30%.

World Literacy Rates (2015) by Countries



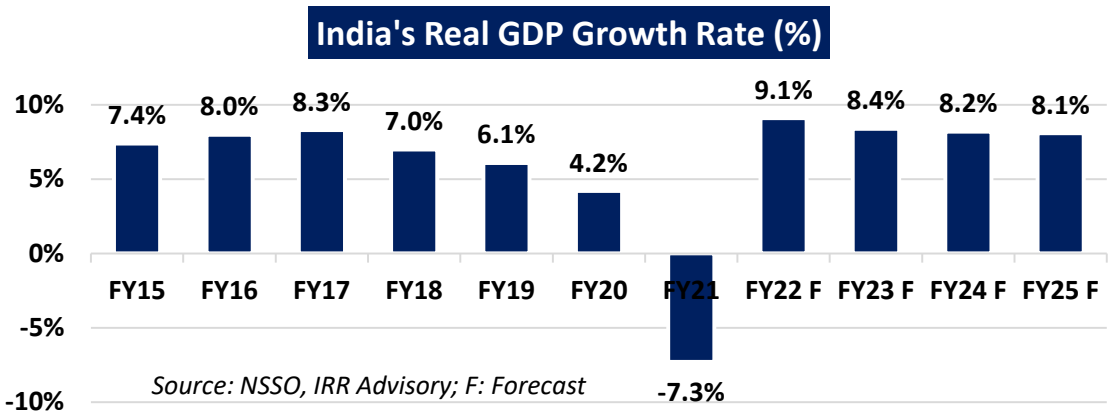
Source: www.ourworldindata.org

2. OVERVIEW OF INDIAN ECONOMY

India, the world's third largest economy in terms of its PPP (purchasing power parity) with population of over 1.3billion (bn) has witnessed significant economic growth since the country was liberalized in early 1990s. Industrial deregulation, divestment of state-owned enterprises, reduced governmental controls on foreign trade and investment, served to accelerate the country's growth and India has been one of the leading growing economies, posting an average of 7.0% Gross Domestic Product (GDP) growth since beginning of this millennium. However, India's GDP growth rate has seen a downward trend over the past few quarters since FY19, which has been further exacerbated by the coronavirus pandemic. The COVID-19 pandemic and the resultant lockdown has seen significant impact on the economy and in people's livelihood. The economic loss for India due to COVID-19 in FY21 is estimated to be INR18.4tn.

Sharpest contraction post-independence

The disruption caused by the COVID-19 pandemic unfolded with such a speed and scale that the disruption of production, breakdown of supply chains/ trade channels and total wash out of economic activities in certain sectors during that period – e.g. aviation, tourism, hotels and hospitality – significantly impacted the Indian economy. According to NSSO data, the size of the Indian economy in FY21 was INR134.4tn at 2011-12 prices. IRR Advisory projects the size in FY22 will be INR147tn. This suggest that FY22 would be a year in which India will be able to just recover the lost ground and will be able go past the FY20 GDP level in a meaningful way only in FY23. Economic activities, despite unlocking beginning June 2020, have not returned to normal due to the continued imposition of partial/ local/ regional lockdowns post the second wave of infections.



India's GDP contracted by 7.3% in FY21, the lowest GDP growth in the Indian history since independence and the sixth instance of economic contraction in India. While the Indian GDP is expected to rebound and grow at 9.1% y-o-y in FY22, mainly due to the weak base of FY21, the GDP in value terms in FY22 is expected to be slightly higher as compared to FY20. Though the scar of COVID-19 pandemic and lockdown on the economy is subsiding, it will continue to impact the normalisation of economic activities in the contact-intensive sectors till the mass vaccination/herd immunity becomes a reality.

Economic Outlook FY22

The progress of COVID-19 infections, like elsewhere in the world, had impacted the life, livelihoods and the Indian economy in a way that there are no parallels in the recent history. To contain the spread of infection, India imposed one of the severest lockdowns in the world starting 25th March 2020, which lasted till end-May 2020. Indian economy was witnessing a slow down even before the imposition of COVID-19 induced lockdown. On an annualised basis, private final consumption expenditure (PFCE) growth had declined to 5.5% in FY20 from 8.1% in FY17. The decline was sharper on a quarterly basis whereby PFCE growth declined to negative 26.7% in Q1FY21 from 11.2% in Q3FY17. The economic disruption caused by COVID-19 had a telling impact not only on the economy but also on jobs and livelihoods. The effect was more pronounced in the unorganised sector, leading to huge reverse migration. The reverse migration of labour coupled with job losses cast a shadow over quick demand recovery.

When it appeared that India had brought the COVID-19 cases under control, a fresh surge of COVID-19 cases started in March 2021, leading to state governments taking steps to control the spread including imposing curfews and lockdowns, resulting in loss of economic output. During the second wave of COVID-19 cases, the total number of daily active cases crossed four lakhs for the first time in the first week of May. Though the second wave had come under control India has been hit by the third wave. The growth outlook for FY22 will see a downward pressure if India faces a severe third wave of COVID-19 cases. In case the spread of COVID-19 increases dramatically in the third wave like witnessed during the second wave and authorities put more stringent measures in place, it can have a debilitating impact on economic activity and growth going forward. Availability of vaccines and the pace of vaccinations will be key monitorable; issues and any unavailability of vaccines is likely to hinder and delay economic recovery.

The economic recovery in our country would entirely depend on the progress of the vaccination drive. If India were able to vaccinate its entire adult (18+) population by 31 December 2021, then the GDP growth was expected to come in at 9.6% y-o-y in FY22, otherwise it will be 9.1%. It was certain right from the beginning that India will not be able to vaccinate its entire adult population by 31 December 2021. Accordingly, IRR Advisory has forecasted its GDP growth for FY22 to 9.1% y-o-y despite the fact, several high frequency indicators are showing a faster rebound than expected, healthy kharif harvest and exports volume and growth continue to show a turnaround in FY22. Yet, FY22 GDP will be 10.9% lower than the trend value. A glance at the National Accounts Data shows that of the four demand-side growth drivers namely private final consumption expenditure (PFCE), government final consumption expenditure (GFCE), gross fixed capital formation (GFCF) and exports, only GFCE has shown somewhat decent growth, averaging 5.7% during FY19-FY21. PFCE, GFCF and exports during this period grew 1.3%, 1.5% and 1.5%, respectively. PFCE growth after a gap of three consecutive quarters turned positive in 4QFY21 and clocked a growth 19.3% and 8.6% in 1Q and 2Q of FY22 respectively. IRR Advisory thus expects PFCE growth to come in at 10.4% y-o-y in FY22 compared with 10.8% projected earlier.

India - Economic Outlook FY22 (% change)	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22F
Gross value added at FY12 prices	7.2	8.0	8.0	6.2	5.9	4.1	-6.2	9.1
- Agriculture	-0.2	0.6	6.8	6.6	2.6	4.3	3.6	3.0
- Industry	7.0	9.6	7.7	5.9	5.3	-1.2	-7.0	10.7
- Services	9.8	9.4	8.5	6.3	7.2	7.2	-8.4	10.2
Real GDP at FY12 Prices	7.4	8.0	8.3	6.8	6.5	4.0	-7.3	9.4
- Private final consumption expenditure (PFCE)	6.4	7.9	8.1	6.2	7.6	5.5	-9.1	10.4
- Government final consumption expenditure (GFCE	7.6	7.5	6.1	11.9	6.3	7.9	2.9	7.5
- Gross fixed capital formation (GFCF)	2.6	6.5	8.5	7.8	9.9	5.4	-10.8	9.1
Nominal GDP	11.0	10.5	11.8	11.1	10.5	7.8	-3.0	15.6
Average wholesale inflation	1.3	-3.7	1.7	2.9	4.3	1.7	1.3	8.0
Average retail inflation	6	4.9	4.5	3.6	3.4	4.8	6.2	5.6
Average exchange rate (INR/USD)	61.1	65.5	67.1	64.5	69.9	70.9	74.2	77.1
Fiscal deficit (central government, % of GDP)	4.0	3.9	3.5	3.5	3.4	4.6	9.3	6.6
Current account deficit (% of GDP)	1.3	1.1	0.6	1.8	2.1	0.9	-1.1	1.5

Note: Negative CAD in FY21 represents current account surplus

Source: Union Budget, NSSO, IRR Advisory

Among the other demand-side growth drivers, only exports appear to be a bright spot. As 1HFY22 exports volume and growth indicates a revival backed by a favourable global trade outlook, IRR Advisory expects the exports of goods and services to grow at 16.0% y-o-y in FY22. GFCE growth averaged 7.1% during FY16-FY21 and is projected to grow at 7.5% in FY22. IRR Advisory estimates investments as measured by GFCF to grow 9.1% y-o-y in FY22.

Support to Demand

In response to the COVID-19 pandemic, countries across the globe provided both fiscal and monetary packages to ease the sufferings of households and businesses. The government of India (GoI) also announced an economic package aggregating INR29.8tn, of which INR17.2tn was by the government and INR12.7tn was by the RBI. The actual fiscal impact of the economic package was low as most of the policy support was in the form of credit guarantees/enhancement and/or credit lines and was focused on the supply side. Minimisation of the direct fiscal impact in the economic package was reflective of both fiscal constraints and GoI's fiscal conservatism. The fiscal conservatism appears to have been abandoned in GoI's FY22 budget, to provide the necessary support to the aggregate demand. This, however, has been done largely through capex and not direct support to the lives and livelihoods.

The union government's capex grew by 33.3% y-o-y in FY21, according to the revised estimate, and 25.0% y-o-y in FY22, according to the budget estimate. IRR Advisory expects this to enhance the productive capacity of the economy and accelerate the growth and employment opportunities but in the medium to long term. The only downside of this strategy is that the people who are at the bottom of the pyramid and whose lives and livelihoods were severely battered by the COVID-19 pandemic and countrywide lockdown will take much longer to return to the pre-COVID -19 level and many may not return for ever. The government final consumption expenditure (GFCE) is the only demand side component, which is expected to grow in FY21 – albeit by 2.9% - due to the stepped-up government expenditure.

Gradual Revival in Consumption Demand

Consumption demand as measured by the PFCE, accounting for about 59% of GDP, is the largest component from the demand side. PFCE was witnessing a slowdown even before the imposition of COVID-19 induced lockdown. On an annualised basis, PFCE growth had declined to 5.5% in FY20 from 7.6% growth in FY19. As the economic disruption caused by COVID-19 has had a telling impact on jobs/livelihoods and consumer became risk averse, PFCE contracted by 9.1% y-o-y in FY21. However, it is expected to grow by 10.4% in FY22, led by essentials (pharma, healthcare and telecom), followed by non-discretionary consumer goods and infrastructure sector (chemicals, oil & gas, IT, sugar and agri-commodities) and industrial goods and cyclical sectors (power, iron & steel, logistics, cement, construction, automobiles and automobile ancillaries). Although discretionary consumption and sectors such as airlines, hotels, leisure/travel/tourism, retail trade through shopping malls, cinema, sports and entertainment events are also expected to recover in FY22, their recovery will be contingent upon the progress in mass vaccination/achieving herd immunity because of the contact-intensive nature of these sectors.

Investment Demand Gets Government Support

Investments as measured by gross fixed capital formation (GFCF) is expected to grow at 9.1% y-o-y in FY22, after recording negative 10.8% y-o-y growth in FY21. Investment demand, particularly the incremental private corporate investment, has been languishing for a number of years now primarily due to a combination of factors such as i) excess capacity (capacity utilisation stagnating 70%-75% since FY14), ii) weak domestic/global demand, and iii) stretched/ leveraged balance sheet of Indian corporates. Most of the capex growth in the economy has been driven by the government capex which averaged 1.7% of GDP during FY11-FY20. Government capex in FY21 (RE) for the first time since FY08 came in higher than 2.0% of GDP. The predominant narrative says that increased government spending which is carried out via borrowing tends to reduce private spending known as 'crowding out'. However, there are studies which have also shown that during the periods of uncertainty/risk aversion, higher public investment on the contrary 'crowds in' private investment. With the renewed focus of government on capex in the FY22 Union Budget to support growth recovery, the government capex at INR5.5tn works out to be 2.5% of GDP. Due to the positive spill-over effects of public investment, capex spending by the private corporate sector may also see some traction but will be limited to the areas of new sectors/opportunities in the near term and the full multiplier effect will be visible in the medium/long term.

Agriculture remains a bright spot

The agricultural GVA is projected to grow 3.0% y-o-y in FY22 (average during FY14-FY21: 3.6%). This is based on the expectation of a normal and spatially well distributed rainfall in 2021. Although the second advanced estimate of production of food grains for FY21 is still not out, it is expected that the Rabi harvest of 2021 to be good. Target of total food grains production for 2021-22 is set at 307.3mnT, comprising 151.4mnT in kharif season and 155.9mnT during rabi. In 2020-21, production was 303.3mnT, against the target of 301.0mnT. For 2021-22, the target for rice production has been fixed at 121.1mnT, wheat at 110 mnT, pulses at 25mnT, coarse cereals at 51.21 mnT and oilseeds at 37.5mnT. Continuing thrust on higher cereals output over the last six years has proved the government's reluctance to take any chance, even though it has been running schemes for Punjab and Haryana farmers to shift from water-guzzling paddy crop. Though the NDA government declared a

shift in the country's agriculture policy from production centric to income centric by announcing a target to double farmers' income by 2022, the continuing thrust on higher (than requirement) procurement of paddy and wheat under MSP operation has been a burden on the exchequer with continuous rise in food subsidy. The IMD has predicted 2021 monsoon rainfall to be 98% of the long period average (LPA) of 88 cm. The monsoon season of June-September has over 70% share in India's annual rainfall and is considered key to the success of agriculture sector, as almost 52% of the agricultural land is rain-fed.

Industrial and Services Sector Poised to Recover

Although the industrial output as captured by IIP continues to be volatile, and select segments of services sector such as hotels, leisure/travel/tourism, sports, entertainment are still at some distance away from seeing any visible traction, growth can be witnesses in FY22 mainly due to the base effect. IRR Advisory expects industrial and services sector to grow at 10.7% and 10.2%, respectively, in FY22. However, the surge in COVID-19 cases could dampen demand further when firms' financials are already susceptible to the hurdle of rising global prices.

IRR Advisory feels the delay in economic recovery would be limited to just about a quarter in FY22, provided the COVID's second wave is not allowed to last much beyond June 2021. Economic recovery would depend on the pace of vaccination and government policy interventions in the coming weeks and months. Despite the surge in COVID cases and deaths, state governments have allowed some factories to stay open, even amid lockdowns, which has blunted any downturn in industrial activity. Despite several segments being contact intensive, the services sector is recovering. In fact, some of the services sector segments such as financial services, IT and IT enabled services have greater flexibility in their operations whereby they can offer their services remotely. Support to the services sector recovery also came from the continued functioning and increased expenditure by the central and state governments.

Focus on Infrastructure

Over the past year, several factors have influenced the need for changes to infrastructure planning and delivery: socio-political developments, trade tensions, a global pandemic and fast-evolving tech innovations. These create both opportunity and risk while yielding new possibilities for innovation in capital flows and investment models. Many of these factors are not new, and similar trends have been talked about for years. What has changed, however, is that the pandemic has accelerated the need for governments and investors to adopt policies that reflect these priorities.

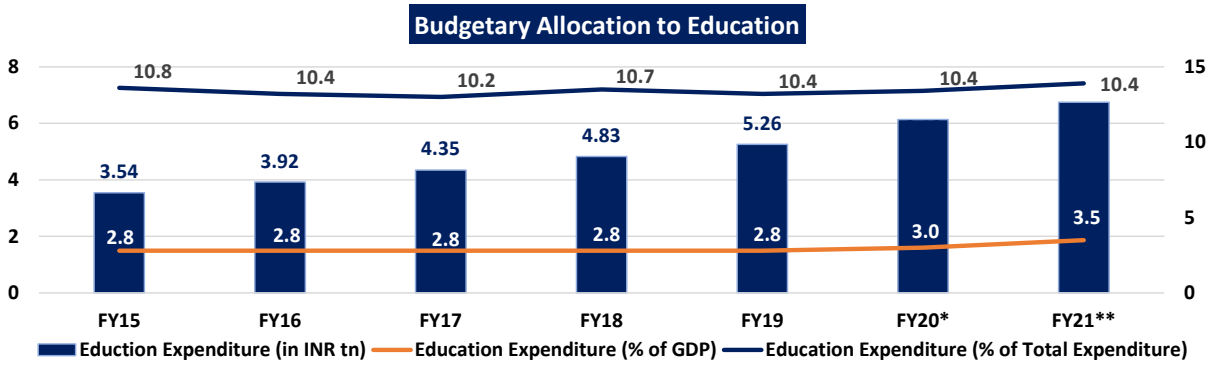
India's construction industry will continue to grow at strong pace over the next few years, driven by stable government support for infrastructure development and expanded private involvement in key sectors and PPPs. Sustained investment in construction will help India gradually bridge its sizeable infrastructure deficit, which range from rural road and power access to strained urban transport systems. Government support for infrastructure development was illustrated in the FY22 Union Budget - allocations across various infrastructure sectors have been adjusted upwards, compared with FY21, including the budgeted expenditure for the Ministry of Railways, the Ministry of Road Transport and Highway, and the Ministry of Power. Ongoing regulatory reforms made as part of Prime Minister

Narendra Modi's Make in India initiative are also opening infrastructure sectors to greater foreign and private involvement, which will unlock greater pools of financing and improve operational efficiencies in the industry.

The National Infrastructure Pipeline (NIP) will support growth of India's infrastructure sector over the short-to-medium term, providing much-needed clarity and structure to the country's spending plans. First unveiled in December 2019 by a special task force, the NIP is a five-year infrastructure investment plan that aims to facilitate the design, delivery and maintenance of public infrastructure benchmarked against global standards. A final report of the NIP was submitted at the end of April 2020, which saw total expected investment boosted by 8.8% from the initial proposal of INR102.0tn to INR111.0tn.

Education Key for India's Development

As per Census 2011 data, India had the highest number of students in the world at over 315 million, with only three countries having a population higher than India's student population. With India's adult literacy rate currently at 74.5%, the GoI realizes that education needs to be a priority area and has increased budgetary allocation over the years, from INR3.54tn in FY15 to INR6.75tn in FY21. Yet, India's public spending on education, at 10.4% of the total government spending, lags other nations with the OECD countries spending over 11% of the total government spending on education. According to OECD's latest findings, India lags several other nations such as the USA, Chile, Mexico, UK, Korea, Israel etc in terms of total educational costs. While every national policy since 1968 has highlighted that India needs to spend 6% of her GDP on education, India has been spending only around 2.8%, though the budget estimate for FY21 pegs it at 3.5%.



To boost education, GoI launched the Samagra Shiksha Abhiyan (National Education Mission) in 2018 amalgamating four schemes viz. Saakshar Bharat, Sarva Shiksha Abhiyan, Rashtriya Madhyamik Shiksha Abhiyan and Centrally Sponsored Scheme on Teacher Education (CSSTE). Saakshar Bharat was launched in 2009 to create a literate society through a variety of teaching–learning programmes for the non-literate and neo-literate of 15 years and above. Sarva Shiksha Abhiyan was launched in 2002 with the aim to educate all children between the ages 6 to 14 by 2010, although the time limit has been pushed forward indefinitely. Rashtriya Madhyamik Shiksha Abhiyan was launched in 2009 with the aim to aims to provide universal education for all children between 15–16 years of age.

Programs and Schemes for School Education during 2020-21

Samagra Shiksha, an overarching program for the school education sector extending from preschool to class 12, is being implemented with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes. The vision of the Scheme is to ensure inclusive and equitable quality education from pre-school to senior secondary stage in accordance with the SDG for Education. The main outcomes of the Scheme are envisaged as Universal Access, Equity and Quality including Vocational Education, Inclusive Education, increased use of Technology and strengthening of Teacher Education Institutions (TEIs). The scheme was launched in 2018-19 with the following major features:

Holistic approach to education: Treat school education holistically as a continuum from Pre-school to Class 12 with inclusion of support for senior secondary levels and pre-school levels for the first time.

Focus on Quality of Education:

- Enhanced focus on improving quality of education and learning outcomes by focus on the two T's – Teachers and Technology.
- Enhanced Capacity Building of Teachers and School Heads, BRC, CRCs.
- Focus on strengthening Teacher Education Institutions like SCERTs and DIETs to improve the quality of prospective teachers in the system.
- Annual Grant per school for strengthening of Libraries: Library grant of INR5K to INR20K.
- Support for Rashtriya Avishkar Abhiyan to promote Science and Math learning.

Focus on Digital Education:

- Enhanced use of digital technology in education through smart classrooms, digital boards and DTH channels and ICT infrastructure in schools from upper primary to higher secondary level.
- Support to "DIKSHA", a digital platform which offers teachers, students and parents engaging learning material relevant to the prescribed school curriculum.

Strengthening of Schools:

- Improve the Quality of Infrastructure in Government Schools at all levels.
- Enhanced Transport facility to children from classes I to VIII for universal access to schools.
- Composite school grant increased from INR14.5-50K to INR25-100K and to be allocated on the basis of school enrolment, with at least 10% allocation for Swachhta activities – support 'Swachh Vidyalaya'

Focus on Girl Education:

- Upgradation of Kasturba Gandhi Balika Vidyalayas (KGBVs) from Class 6-8 to Class 6-12.
- Self-defense training for girls from upper primary to senior secondary stage
- Stipend for Children with Special Needs (CWSN) girls to be provided from Classes I to XII – extended from earlier scheme of only IX to XII.

- Enhanced Commitment to 'Beti Bachao Beti Padhao'

Focus on Inclusion:

- Allocation for uniforms under RTE Act enhanced from INR400 to INR600 per child p.a.
- Allocation for textbooks under the RTE Act, enhanced from INR150/250 to INR250/400 per child per annum. QR coded Energized textbooks introduced.
- Allocation for CWSN increased from INR3K to INR3.5K per child p.a. Stipend of INR200 per month for Girls with Special Needs from Classes 1 to 12.
- Special training for age-appropriate admission of out of school children at elementary level.

Focus on Skill Development:

- Vocational education for Class 9-12 as integrated with the curriculum and to be made more practical and industry oriented.

Focus on Sports and Physical Education

- Sports Education to be an integral part of curriculum and every school will receive sports equipment's at the cost of INR5K – INR25K to inculcate and emphasize relevance of sports.

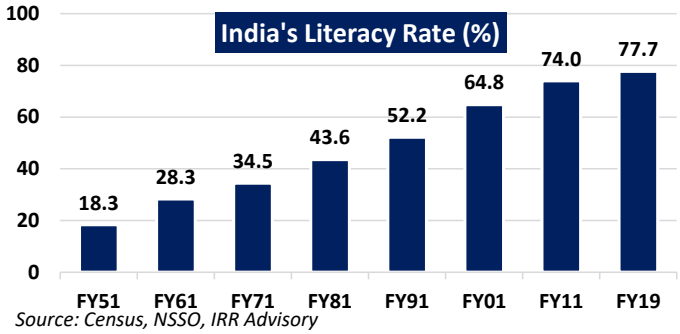
Focus on Regional Balance:

- Promote Balanced Educational Development
- Preference to Educationally Backward Blocks (EBBs), LWE affected districts, Special Focus Districts (SFDs), Border areas and the 115 aspirational districts identified by NITI Aayog
- Under the Samagra Shiksha scheme, a National Mission to improve learning outcomes at the elementary level through an Integrated Teacher Training Program called NISHTHA (National Initiative for School Heads' and Teachers' Holistic Advancement) was contextualized and made 100% online according to the needs of teaching and learning during the COVID-19 pandemic.
- Padhna Likhna Abhiyan: An adult education scheme has been introduced in FY 2020-21 with financial outlay of INR1.42bn with a target to make 57 lakh learners' literate.
- During 2019-20, the Mid-Day Meal (MDM) Program in schools covered 11.59 crore children enrolled in elementary classes (I-VIII) in 11.34 lakh eligible schools. During COVID-19 pandemic, it was decided to provide food grains and pulses, oil etc., (equivalent to cooking cost) as a one-time special measure to eligible children during the summer vacations.

In FY20, India allocated INR6.43tn of public funds for education, of which the central government allocated 60% of the funds (INR565.37bn) to school education while the balance was provided for higher education (INR383.17bn). The Centre accounts for 15% of education spending while the balance is provided by the states and Union Territories. Under Union Budget FY21-22, the Centre allocated an expenditure budget of INR383.5bn for higher education and INR548.7bn for school education and literacy. The government also allocated INR30bn under Rashtriya Uchchatar Shiksha Abhiyan.

3. OVERVIEW OF EDUCATION SECTOR IN INDIA

Education in India has an ancient tradition dating back to Vedic times. When the Britishers arrived in India, education used to be imparted in India through gurukuls and madrasas. The Britishers introduced the English education system in India, with its focus on science, mathematics, and literature. The University of Calcutta, the University of Bombay, and the University of Madras, were all founded in 1857 based on the model of British universities. At the time of India's independence in 1947, India had 17 universities and about 636 colleges teaching approximately 238,000 students. However, the British education system had transformed the country into a grossly unequal and elitist system, with an estimated 82% of illiteracy at the time of independence, which meant four out of five people could not read or write. Adult literacy rate is defined as the percentage of people aged 15 and above who can both read and write with understanding a short simple statement about their everyday life. India has made significant improvement since then, and literacy rate has now improved to 77.7%.



Source: Census, NSSO, IRR Advisory

Education in India is primarily managed by the state-run public education system, which follow a three-level hierarchy: Centre, State and local. India is comprised of 28 states and 8 Union Territories. As per the constitution of India, school education was originally a state subject with the role of GoI limited to coordination and deciding on the standards of higher education. In 1976, education was made a 'concurrent subject', with the Centre and State governments sharing formal responsibility for funding and administration of education. However, for a country as vast and diverse as India, the chances of variations between States in the policies and implementation of education is vast, and periodically, national policy frameworks are created to guide States in their creation of State-level programs and policies.

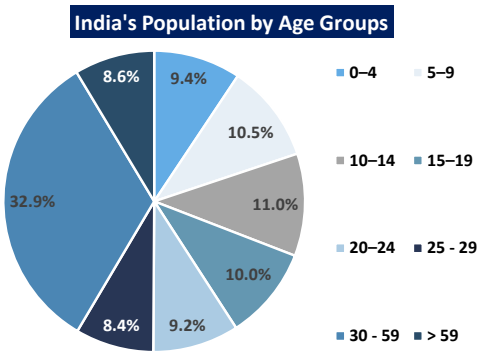
There is a national organization that plays a key role in developing policies and programs, called the National Council for Educational Research and Training (NCERT) that prepares a National Curriculum Framework. Each state has its counterpart called the State Council for Educational Research and Training (SCERT). These are the bodies that essentially propose educational strategies, curricula, pedagogical schemes, and evaluation methodologies to the states' departments of education. The SCERTs generally follow guidelines established by the NCERT.

The school system in India has four levels: lower primary (age 6 to 10), upper primary (11 to 13), high (14 to 16) and higher secondary (17 and 18). There are mainly three streams in school education in India. Two of these are coordinated at the national level, of which one is under the Central Board of Secondary Education (CBSE) and was originally meant for children of central government employees

who are periodically transferred and may have to move to any place in the country. The second central scheme is the Indian Certificate of Secondary Education (ICSE) which was started as a replacement for the Cambridge School Certificate. Both the CBSE and the ICSE council conduct their own examinations in schools across the country that are affiliated to them at the end of 10 years of schooling (after high school) and again at the end of 12 years (after higher secondary). Each state in the country has its own Department of Education that runs its own school system with its own textbooks and evaluation system. In addition to the above, there are a relatively small number of schools that follow foreign curricula such as the International General Certificate of Secondary Education (IGCSE).

Each state has three kinds of schools that follow the state curriculum. The government runs its own schools in land and buildings owned by the government and paying the staff from its own resources. These are generally known as government schools. The fees are quite low in such schools. Then there are privately owned schools with their own land and buildings. Here the fees are high, and the teachers are paid by the management. Such schools mostly cater to the urban middle class families. The third kind consists of schools that are provided grant-in-aid by the government, though the school was started by a private agency in their own land and buildings. The grant-in-aid is meant to help reduce the fees and make it possible for poor families to send their children. In some states like Kerala, these schools are very similar to government schools since the teachers are paid by the government and the fees are the same as in government schools.

In India, government spending on school education is mainly for government schools, with a small part going to government-aided schools. However, both the Central and the State Governments spend on education. The Centre contributes to education either through centrally sponsored schemes – such as the Samagra Shiksha Abhiyan, a central government programme for school education and teacher training, which are mostly funded in the ratio of 60:40 by the Centre and the State – or through the Central sector schemes such as scholarships for Scheduled Castes and Tribes, the Navodaya school network for exceptionally talented children in rural areas, and the Kendriya Vidyalayas for the children of government employees. While the Central sector schemes are completely funded by the Centre, they form an insignificant 1~2% of education funding in India. Government spending on school education is mainly for government schools, with a small part going to government-aided schools, with the bulk of funds for government schools coming from State Governments.



Source: Census 2011, IRR Advisory

India's population, which was 1.21bn in 2011 when the last Census was conducted, was estimated at 1.37bn in 2019. While China's population is slightly higher, India is expected to overtake China as the largest country on earth by 2022. India also enjoys a significantly better demographic profile than China and has the largest student population in the world. With over 580 million students in the age bracket of 5-24, the education sector presents a huge opportunity.

The education infrastructure in India is summarized below:

No. of Recognised Educational Institutions in India (FY19)										
Up to Higher Secondary	Up to Secondary	Up to Upper Primary	Only Primary Schools	Universities	Colleges	Polytechnics	PGDM	Nursing	Teacher Training	Institutions under Ministries
1,30,020	1,50,573	4,43,379	8,27,028	993	39,931	3,440	291	3,039	3,759	100

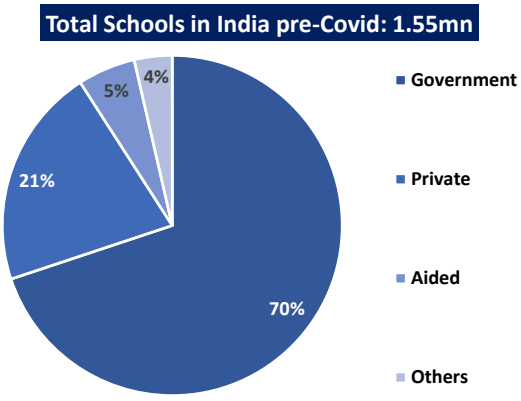
Source: NSSO, IRR Advisory

Between FY12 to FY19, the number of universities increased by 54.7% while secondary/ senior secondary schools increased by 30.2%. The number of colleges increased by 14.6%, but primary and upper primary schools increased by only 3.6%. As per UNICEF, 67,385 babies are born daily in India which means 25mn new students join the education system every year. The low growth rate in primary and upper primary schools reflects the growing unrecognized/ unlicensed preschools and Montessori schools.

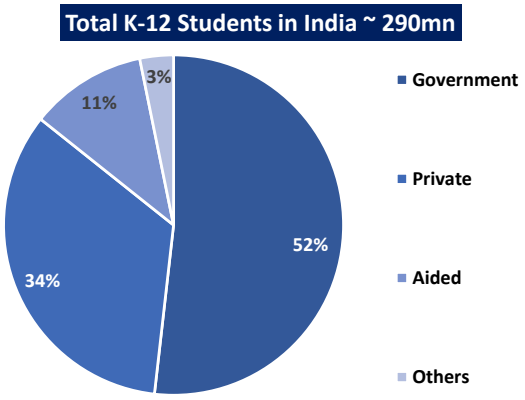
Increase in Number of Recognized Schools, Colleges and Universities Infrastructure				
Year	Primary & Upper Primary Schools (in lakhs)	Secondary/ Sr. Secondary Schools (in lakhs)	Colleges	Universities
FY12	11.93	2.12	34852	642
FY19	12.37	2.76	39931	993

Source: Education Statistics at a Glance, 2018 & U-DISE+ Report and AISHE Report 2018-19; IRR Advisory

In terms of the recognized schools, the break-up of schools and students attending them is provided below:



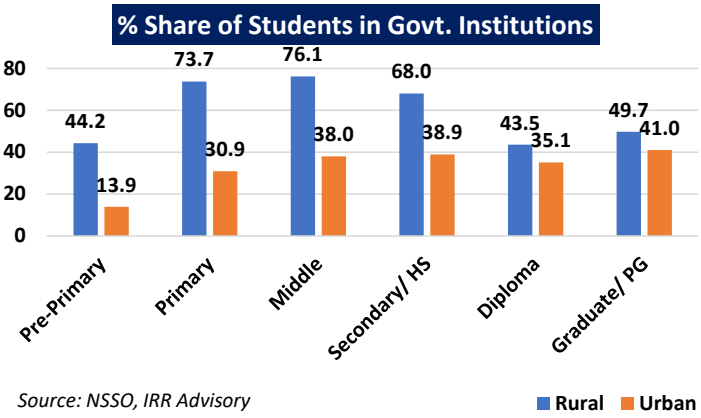
Source: UNDP, NEP 2020, IRR Advisory



Source: UNDP, NEP 2020, IRR Advisory Estimates

With more than 1.5 million schools and around 300 million students, India has the world's second-largest school system after China. While government schools dominate in terms of numbers and account for over 70% of the schools in India, students prefer to enroll in Private and aided schools. Private schools are quickly growing in popularity, particularly in the cities. Between FY11 and FY15, enrollments in private schools increased by 16mn, while public school enrollments dropped by 11.1m. As per NSSO survey 2018, over 60% of the students in urban India are enrolled in private schools, whereas the higher numbers in rural India till secondary stage reflects the lack of private schools. This points to the declining state of India's underfunded public/ government schools and the growing interest in English-medium instruction which is common in private schools.

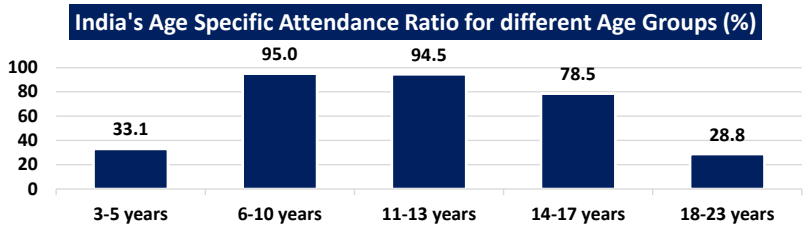
Low-fee private schools are spreading rapidly, attracting students from low-income households, by charging relatively modest tuition costs because of paying lower salaries to their teachers, while being English-medium schools. These schools were expected to enroll 30% of India's students but their operations have been impacted by the pandemic. Alongside, increased public distrust in government schools is also reflected in the rapid proliferation of unlicensed schools. The fact that parents opt to send their children to unrecognized, fee-charging private schools is striking testimony to the scarcity of public schools in underserved areas and low public confidence in government schools. As of now, most children in rural India still enroll in public schools, at least at lower levels of schooling.



Source: NSSO, IRR Advisory

Through initiatives such as the Sarva Shiksha Abhiyan (now the Samagra Shiksha) and the Right to Education Act, India has made remarkable strides in attaining near-universal enrolment in elementary education. In 2009, GoI introduced the Right of Children to Free and Compulsory Education Act to ensure that free and compulsory education is provided as a fundamental right to every child aged 6 to 14. The gross enrollment ratio (GER) for primary education is over 95% while GER for Grades 6-8 was 90.9%, though for Grades 9-10 and 11-12 it was only 79.3% and 56.5%, respectively – indicating that a significant proportion of enrolled students drop out after Grade 5 and especially after Grade 8.

The age specific attendance ratio (ASAR) indicates the proportion of children of a particular age group actually attending schools/ colleges irrespective of the level or class in which they are studying. As per the 75th round household survey by NSSO in 2017-18, children in the age-group of 6-13 years have reported almost 95% and above attendance across States, though it drops subsequently in higher age groups.



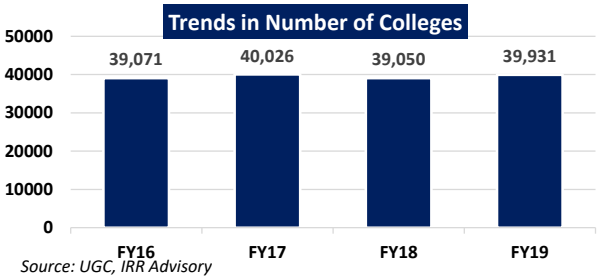
Source: NSSO, IRR Advisory

To improve the ASAR among students, the midday meal scheme was designed to better the nutritional standing of school-age children nationwide. Children are unable to learn optimally when they are undernourished or unwell. Hence, the nutrition and health of children was addressed through healthy meals. The program supplies free lunches on working days for children in primary and upper primary classes in government, government aided, local body, Education Guarantee Scheme, and alternate innovative education centers, Madrasa and Maqtabs supported under Sarva Shiksha Abhiyan, and National Child Labor Project schools run by the Ministry of Labor. The scheme serves 120mn children

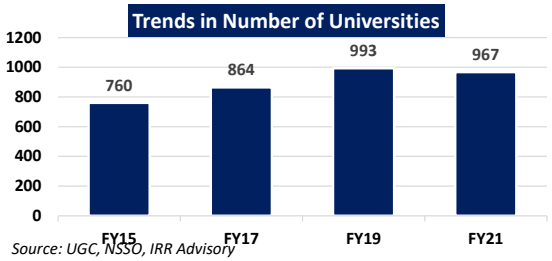
in over 1.2mn schools and Education Guarantee Scheme centers and is the largest of its kind in the world.

Aside from troubling dropout rates, India's school system remains plagued by problems like high teacher-to-student ratios, poorly educated teachers, and mediocre learning outcomes. While much of the available comparative data is somewhat dated, it demonstrates substantial weaknesses in India's system. Mean years of schooling among the population above the age of 25, for instance, stood at only 5.4 years in 2011 compared to more than 13 years in Western countries like the U.S., the UK, or Germany. Pupil Teacher Ratio (PTR) for elementary and secondary education in India was 29 in FY19, compared to 16 in China, 20 in Russia and 21 in Brazil.

India has the world's largest higher education system, ranking second globally in terms of student enrolment, with 37.4mn students enrolled in higher education in FY19. In FY21, the number of universities in India included 418 State Universities, 125 Deemed Universities, 54 Central Universities and 370 Private Universities. The growing number of universities and colleges reflect the higher proportion of students enrolling for higher education. Apart from colleges and universities, there are 10.725 standalone institutions approved by AICTE.



Source: UGC, IRR Advisory



Source: UGC, NSSO, IRR Advisory

To understand the progress made in education and realign educational strategy accordingly, the NSSO conducts survey at periodical intervals. The last survey prior to the recent one was conducted in 2014. A sample of 64,519 rural households from 8,097 villages and 49,238 urban households from 6,188 blocks was surveyed all over India in 2018. The key findings are summarized alongside.

Findings of NSSO Survey 2018

Access to Secondary Schools	Literacy Rate Aged 7 & Above	Access to Computers
RURAL: 38%	RURAL: 73.5%	RURAL: 4%
URBAN: 70%	URBAN: 87.7%	URBAN: 23%
% of Population - Graduates	**Annual Expenditure – Secondary Level**	**Annual Expenditure – Sr. Secondary**
RURAL: 5.7%	RURAL: 5,856	RURAL: 9,148
URBAN: 21.7%	URBAN: 17,518	URBAN: 23,832

Source: NSSO, IRR Advisory

In terms of the findings, the survey highlighted the digital divide within the country across states, cities and villages, and income groups. Nearly 4% of rural households and 23% of urban households possessed computers and 24% of the households in the country had internet access. Among persons of age 15-29 years, nearly 24% in rural areas and 56% in urban areas were able to operate a computer. Literacy rate among persons (aged 7 years and above) in India was about 77.7%. In rural areas, the literacy rate was 73.5% compared to 87.7% in urban areas. Male literacy rate was higher (84.7%) than

female literacy rate (70.3%). Only 5.7% were graduates or above in rural areas while the percentage was 21.7% in urban areas. 96.1% of students were in general education and remaining were in technical/professional education. ASAR at primary level was nearly 100% for both males and females in rural and urban areas.

At all-India level nearly 14% students attending formal education received scholarship/ stipend/ reimbursement. 77% of the students studying in Government institutions were receiving free education. Percentage of students studying in private unaided institutions and receiving free education was nearly 2% in rural areas and 1% in urban areas. At pre-primary level nearly 33% students were getting free education in India. At primary level, the proportion of students receiving free education was 62%. Nearly 20% of students attending pre-primary and above level were taking private coaching in India. Incidence of taking private coaching was maximum at secondary level (31% of male students and 29% of female students).

Average expenditure per student incurred during FY18 for basic courses was nearly Rs. 8,331 for general courses and Rs. 50,307 for technical/professional courses. The average annual expenditure on education for secondary school students is Rs. 9,013, of which Rs. 4,078 went towards regular school fees. About Rs. 1,632, or just over 18%, goes towards private coaching. In higher secondary school, students spend more than Rs. 2,500, also about 18% of the total expenditure, on private coaching. The percentage of persons in the age group of 3-35 years dropping out of studies were nearly 14% in rural areas and 10% in urban areas. For the males of age 3-35 years engagement in economic activities was the most common major reason for currently not attending education, whereas for the females it was engagement in domestic activities.

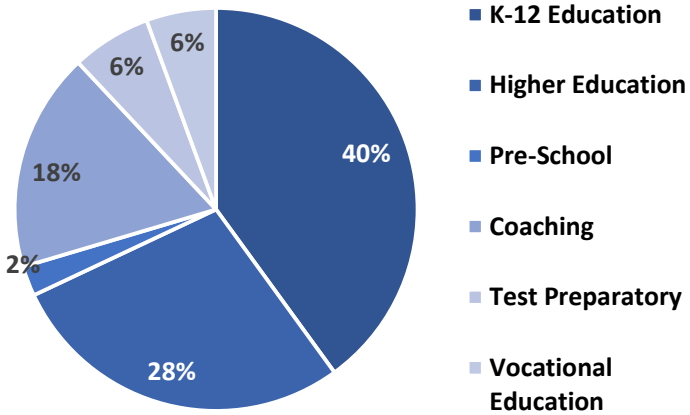
The key concerns that were highlighted out of the survey include:

- **Digital Divide:** Online education is yet to reach out to all parts of the country and overreliance on this mode will foster selective reach of education.
- **Gender Divide:** Difference in literacy rates between men and women not only leads to increased gender divide but also leads to low participation of women in the workforce and R&D activities. The reason for women dropping out of schools due to domestic activities reflect the deep-ingrained patriarchy in the society.
- **Private Coaching:** Dependence on private coaching leads to the affluent having more access to education thus acerbating the disparities between different social groups.
- **High Cost of Education:** Despite various government initiatives to promote and improve education in governmental institutions, the cost of education remains high and unaffordable. The percentage of students receiving free education is still low and many needy students are outside its coverage.
- **Rural-Urban Divide:** The huge differences in some parameters like internet access and ability to use the internet reflect that there is a need for separate policies to cater to the separate needs of both, based on local input and community-led approaches.

4. OVERVIEW OF THE OFFLINE EDUCATION AND TRAINING MARKET

Post-independence, India followed the British structure and continued with the K-12 segment (Kindergarten to Grade 12) followed by higher education (graduation and post-graduation in both traditional and professional courses) for formal education. However, parallelly, a non-formal education segment has also grown in India comprising segments such as pre-school, vocational training, test preparation and coaching classes. Test preparatory coaching primarily refers to private coaching for competitive exams while coaching classes refer to 'curriculum-based coaching' for K-12, undergraduate and graduate courses. The non-formal segment, while being an integral part of the Indian education system, has low levels of regulations vis-a-vis the highly regulated formal segment. Both institutional players and informal players are present in the non-formal segment. Given the presence of the informal segment in the market, it is difficult to accurately determine the market. However, based on reasonable estimates, IRR Advisory believes the Indian education market was US$125bn before the pandemic started.

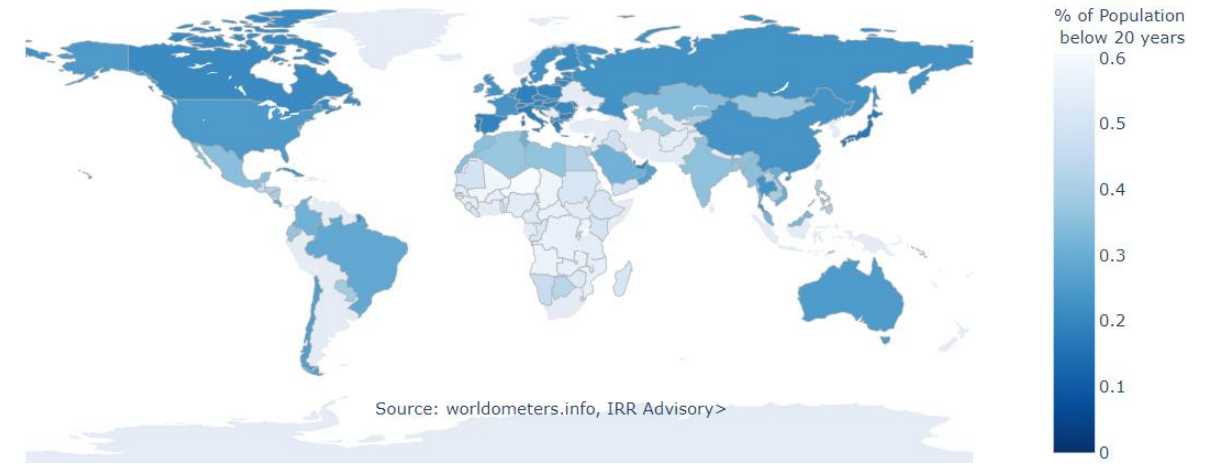
Education Industry Size: US$125bn



Source: IRR Advisory estimates

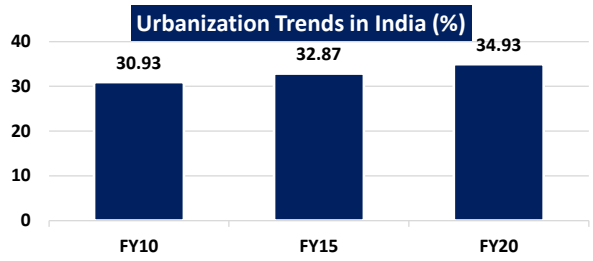
The education sector has been growing at a CAGR of 14% over the past decade, due to India's demographic profile, rapid urbanization, increased educational spend, lack of premium educational institutions, highly competitive market, and low penetration of education.

Demographic Profile of Population Below 20 Years of Age



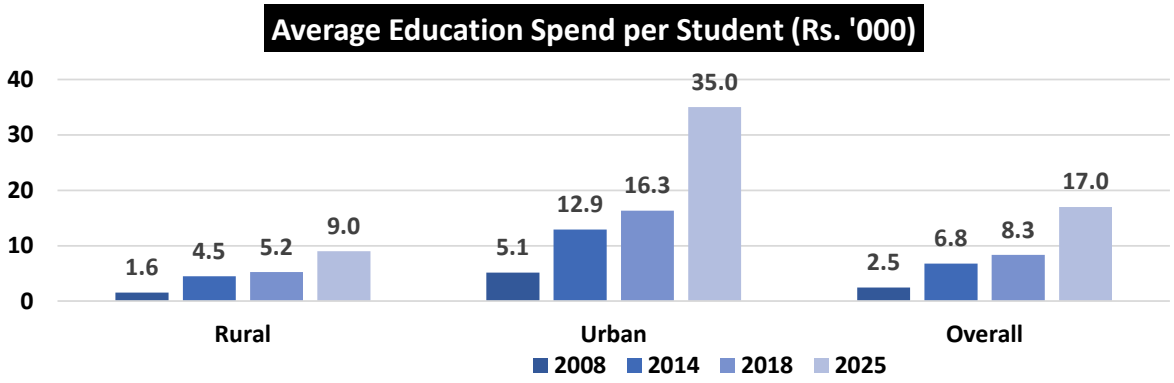
Source: worldometers.info, IRR Advisory

India not only has one of the largest populations in the world, but 35.80% of her population is below 20 years of age. In contrast, in China, only 23.60% of her population was below 20 years of age. The median age of India's population is 26.4 years. This large share of young population will drive India's growth in the education sector, both in the formal and the non-formal segment. Alongside, population and economic growth has fostered urbanization in the country and the number of urban towns and cities have drastically increased. India's urban population is growing at 2.3% p.a., as compared to India's overall population growth rate of 1.0%. Urban areas offer better job opportunities and higher wages, while providing better access to quality education. Accordingly, increased urbanization will also result in higher spending on education.



Source: Statista, IRR Advisory

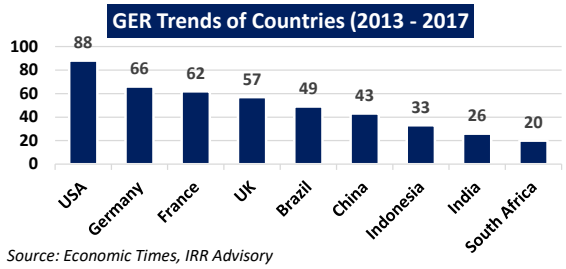
India's growing prosperity and rising disposable income has seen increased spending by households on education. During the period FY08-FY14, average spending on education per student in rural areas increased at a CAGR of 19.4%, whereas in urban areas, it increased at a CAGR of 16.6%. Due to demonetization, the growth was affected and between FY14-FY18, average spending on education per student in rural areas increased at a CAGR of 4.0%, while in urban areas, it increased at a CAGR of 6.0% only. IRR Advisory expects average education spend per student to increase from INR 8,300 in FY18 to INR17K in FY25.



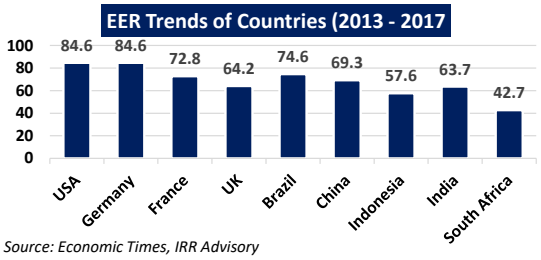
Source: NSSO, IRR Advisory

The premium institutes in India number slightly over 100, and include the four Indian Institutes of Information Technology (IIITs), the sixteen Indian Institutes of Technology (IITs), the three Schools of Planning and Architecture (SPAs), the twenty National Institutes of Technology (NITs), the thirteen Indian Institutes of Management (IIMs), the five Indian Institutes of Science Education and Research (IISERs), the seven All India Institute of Medical Sciences (AIIMS), the fifteen National Law Universities (NLU), the Indian Institute of Science, the Indian Institute of Space Science and Technology (IIST) and the government medical colleges. Given the shortage of quality educational institutions, there is immense competition to seek admission in these institutions. Thus, in FY21, over 22 lakh students have registered for JEE, the admission test for IITs and NIITs. Only 16,000 students will be gaining admission at IIT which points to the tremendous competition that exists. Hence, parents are willing to spend money for their children to attend coaching classes and secure admission in their preferred institutions.

Meanwhile, the last three decades have witnessed an unprecedented expansion in India's higher education sector. However, the GER in higher education at 26.3 is low, and lags most of the developed nations. GoI has fixed a target of 50% by 2030. However, GER in higher education is low in India because of low enrolments and high dropout rates at higher-secondary level. Several factors, including gender, language of instruction and socio-economic compulsions may be responsible for the gradual decrease in the number of students at higher secondary grade. Hence, for fair comparison, the eligible enrolment ratio (EER) may be a more appropriate indicator to measure the access to higher education. As seen, the difference between GER and EER for India is 37.4, which is the highest among the selected countries, and indicates the poor state of the school system linked to lesser access to higher education.



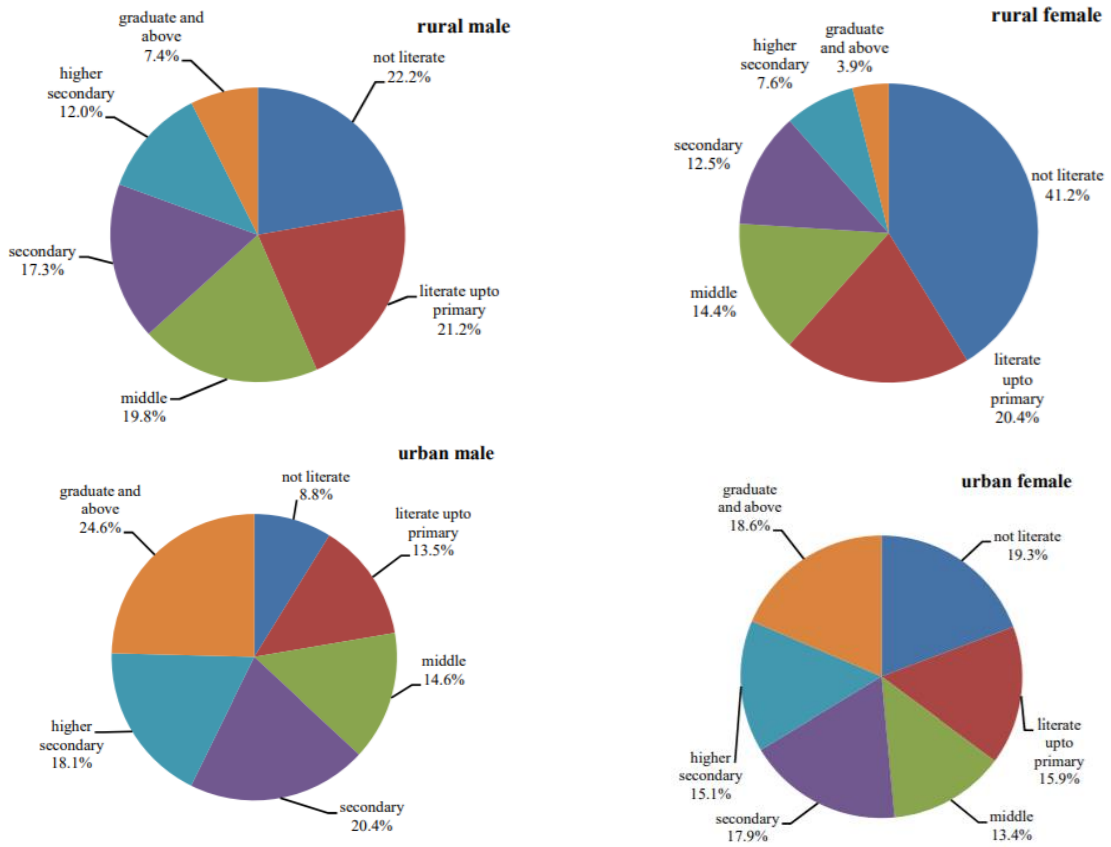
Source: Economic Times, IRR Advisory



Source: Economic Times, IRR Advisory

The socio-economic and gender factors affecting education in India is evident from the chart below:

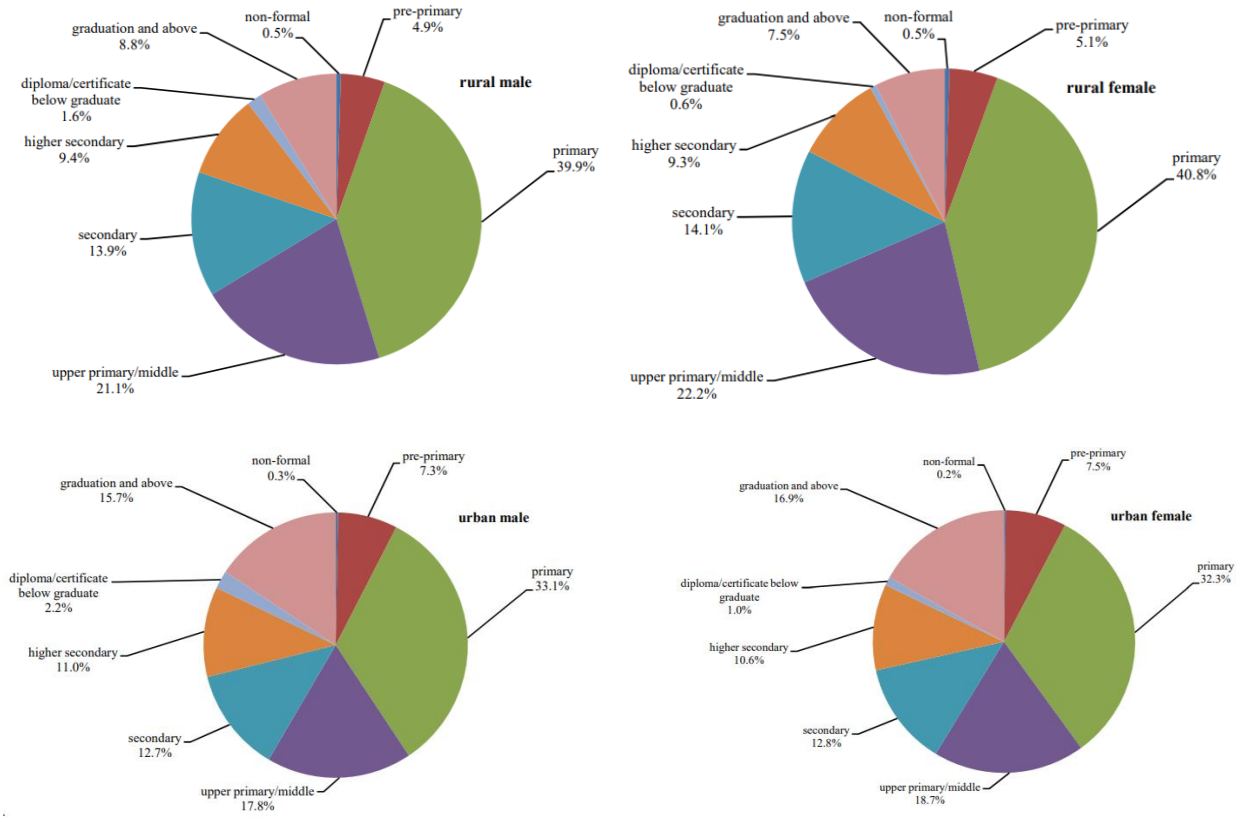
% Distribution of person of age 15 years and above by highest level of Education



Source: NSSO, IRR Advisory

As seen, illiteracy is more prevalent in the rural areas and female illiteracy is almost double the male illiteracy. However, the rapid strides India has made to address illiteracy is evident when one looks at the current population group between 3 years to 35 years.

% Distribution of person of age 3 - 35 years and Current level of Attendance



Source: NSSO, IRR Advisory

The following table provides a break-up of discipline followed post higher-secondary. At Ph.D. level, maximum number of students is enrolled in science stream followed by Engineering and Technology. On the other hand, at Post-Graduate (PG) level, maximum students are enrolled in Social Science followed by Management.

% Distribution of Students pursuing Technical/Professional course by Course Type

	Rural			Urban			Rural + Urban		
	Male	Female	Overall	Male	Female	Overall	Male	Female	Overall
Medicine	3.8	9.2	5.5	5.9	16.9	10.0	4.9	13.8	8.0
Engineering	30.1	20.2	27.0	51.6	33.6	44.9	41.6	28.2	37.0
Agriculture	4.1	3.0	3.8	1.6	1.6	1.6	2.7	2.1	2.5
Law	1.2	0.7	1.1	2.1	2.6	2.3	1.7	1.8	1.8
Management	2.7	6.9	4.0	6.4	7.8	6.9	4.7	7.4	5.6
Education	7.2	21.2	11.6	3.6	10.1	6.0	5.3	14.6	8.5
CA/ B.Com	0.6	1.7	0.9	3.1	2.6	2.9	1.9	2.2	2.0
IT/ Computer	9.5	10.4	9.8	8.9	9.7	9.2	9.2	10.0	9.5
ITI/ Vocational Training	30.4	10.3	24.0	11.1	3.7	8.3	20.0	6.4	15.3
Others	10.3	16.4	12.2	5.8	11.3	7.9	7.9	13.4	9.8
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: NSSO, IRR Advisory

Offline market impacted by Covid-19

It is estimated that there are over 40mn kids in the preschool age group. Because of growing rise in double income, nuclear families, parents are enrolling their children in preschools, and the market size is estimated at US$3bn before the onset of the pandemic. About a quarter of the market is organized and dominated by mir-to-large players like Euro Kids, Kidzee and KLAY. Organized players are gaining market share at the expense of neighborhood preschools by serving to the unmet needs of the parents. The entire pre-school market is offline and has been impacted by the lockdown.

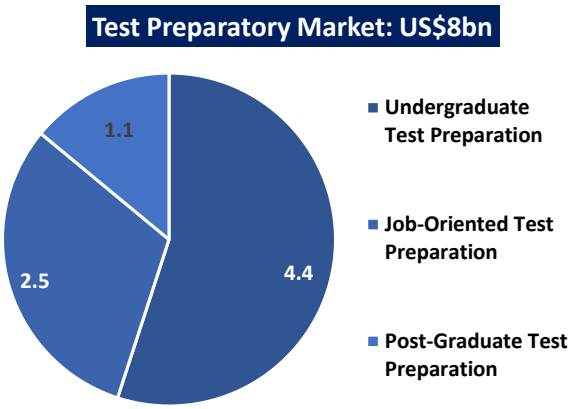
Primary and secondary education, collectively known as K-12 education, dominates the Indian education system with a market size of US$50bn. The K-12 education sector is followed by the higher education sector with an estimated market size of US$35bn. Both the K-12 and the higher education segments have grown at 13-14% CAGR over the past decade. Both K-12 and higher education segments fall under the domain of the formal sector. Traditionally, both these segments were offline, but due to the lockdown and physical distancing, online classes are now being offered by the schools and the institutions.

However, the Indian internet infrastructure is still far from ready to support the shift. Only 24% of the households have access to the internet, while in rural India, only 4% households have internet access. AS per a 2018 NITI Aayog report, 55,000 villages in India did not have mobile network coverage while another survey by the Ministry of Rural Development revealed that 36% of schools in India operated without electricity. The emphasis on technology-driven education is also alienating many children from the underprivileged sections, preventing them from continuing their studies. It is therefore expected that physical classes will start soon, at least for the middle, secondary, higher secondary and degree courses, once all the students are vaccinated.

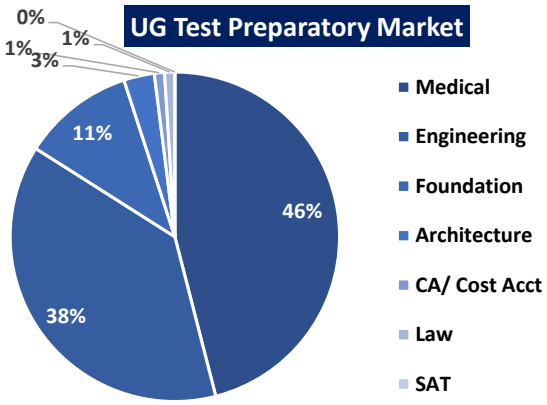
The non-formal coaching sector benefits from the K-12 and the higher education segments, with the NSSO report stating that 18% of the education spend is on curriculum-based coaching. The curriculum-based coaching market is estimated at US$22bn, although most of this market is informal and offline. Offline coaching has been impacted due to Covid-19 and EdTech companies have slowly gained market share in this segment. The offline coaching market has been badly impacted by the pandemic.

Test preparatory coaching institutes train students for competitive exams, including engineering, medicine, civil services exams and management institutions. Foundation courses are also offered at the secondary level for competitive tests like NTSE and Olympiad. Training is imparted through classroom courses, digital learning and distance learning. While classroom courses dominate, digital learning and distance learning have gained market share in the last decade. The outbreak of the Covid-19 pandemic had a major impact on the offline test preparation market in India. The imposition of lockdowns resulted in the temporary closure of universities, schools, and other educational institutions. This created a setback for the offline test preparation market. Training centers witnessed a 40% reduction in enrollments due to the pandemic, forcing them to slash the fees drastically. While major online educators see this as an opportunity to capture maximum market share, the demand for online learning as the primary mode of education will recede as students get vaccinated.

IRR Advisory estimates the test preparatory market at US$8bn. The market can be segregated into undergraduate test preparation, post-graduate test preparation and job-centered test preparation. The undergraduate test preparation market, which trains students for premier engineering colleges like IIT and medical colleges like AIIMS, dominates the test preparatory market. Over 50% of the market is dominated by training for JEE and NEET. Since candidates can appear multiple times for medicine competitive examinations unlike two appearances at JEE, the market size for NEET is larger.



Source: IRR Advisory estimates



Source: IRR Advisory estimates

Over the last five years, the undergraduate test preparatory market has grown at a CAGR of ~11%, primarily driven by a ~15% growth in the medical test preparatory market. Going forward, growth is expected to accelerate to 16%, driven by increased competition among students to enroll in premier institutions. The overall test preparatory market is expected to grow at a CAGR of 14% over the next five years and almost double from current size.

Key players operating in the test preparatory market include Aakash, Allen, FIITJEE, PACE, MT Educare, Resonance, Vidyamandir and Vidyalankar. A brief overview of the players are provided below:

- Aakash Educational Services Limited is the largest player in the coaching industry in India and provides comprehensive test preparatory services for students preparing for medical and engineering entrance
- examinations for Class 11 and Class 12 students, and foundation courses (covering school boards and junior competitive examinations) for students across Class 8 to Class 10. The services are provided through classroom-based coaching and digital and distance learning. Aakash has over 220 centres across India.
- Allen Career Institute is a premier coaching institute for the preparation of JEE (Main + Advanced), JEE (Main), Pre-Medical (NEET-UG), Pre-Nurture & Career Foundation (Class VI to X, NTSE & Olympiads). Currently, 143,000 students are studying online in Allen. Allen also has 35 study centres, 120 classroom campuses and 148 test centres.
- FIITJEE is a test preparatory centre for JEE and other competitive exams. It has a pan-India network of 88,274 branches in over 50 cities. It offers courses for students of grades 6 to 12 aspiring to appear in JEE, JEE advanced, SAT, NTSE, KVPY, JSTSE, INChO, INMO, INPhO and various other examinations.

- PACE IIT & Medical provides coaching for IIT JEE, NEET, AIIMS, International Olympiads and Study Abroad programs. It has its institutions in Mumbai, Delhi NCR, Pune and other cities of India and Dubai.
- provides coaching for IIT JEE, NEET, AIIMS, International Olympiads and Study Abroad programs.
- MT Educare Ltd is an education support and coaching services provider for students in the secondary and higher secondary school and for students pursuing graduation degree in commerce preparing for various competitive examinations and undertaking chartered accountancy examinations. The company has operations across the states of Maharashtra Tamil Nadu Karnataka and Gujarat through 188 Coaching Centres in 110 locations.
- Resonance operates through its test centres in 28 locations across India and offers classroom programs for JEE (Main & Advanced). The institution also provides distance learning program for JEE (Advanced), JEE (Main), NEET, AIIMS, KVPY, NTSE, IJSO, CBSE and other national and international Olympiads. Resonance also provides coaching for commerce faculty preparing for CA (CPT, IPCC & Final), CS (Foundation, Executive, and Professional), CLAT, XII (CBSE/RBSE), XI (CBSE/RBSE), B.Com and M.Com. Resonance is also offering coaching for various other competitive examinations such as Bank, Insurance and finance, Railway, Defence & Police, Teachers' recruitment, National level public services, State level public services and others.
- Vidyamandir classes (VMC) is a premier coaching institute for IIT JEE, NEET, Foundation and other prestigious exams like BITSAT, KVPY etc. VMC uses extensive classroom sessions to impart learning.
- Vidyalankar is one of the largest groups of educational institutes and offers training in test preparatory and runs colleges. Vidyalankar provides training for engineering entrance exams like IIT JEE, JEE-Main, MT-CET, GATE and CAT/ CET. It also runs 3 colleges and a polytechnic institute.

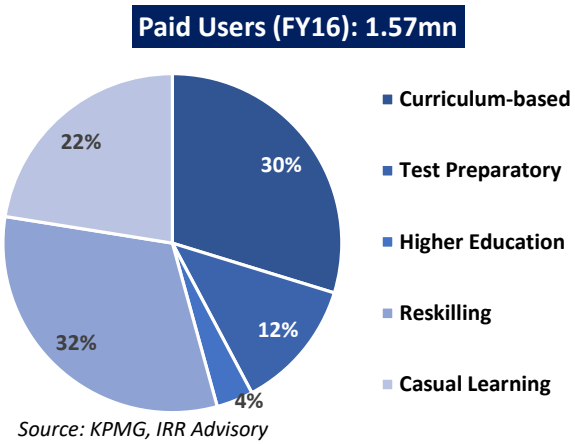
5. OVERVIEW OF ONLINE EDUCATION AND TRAINING MARKET

Online education is learning that takes place over the Internet and may be defined as electronically supported learning that is based on the Internet for teacher-student interactions and the distribution of class materials. Online education in India offers a variety of course categories, including curriculum-based coaching, test preparatory coaching, higher education degree courses, reskilling and skill enhancement programs, and language and casual learning. Before the pandemic, online education was mostly preferred by non-traditional students – students who were working fulltime or raising families, though it was gaining popularity due to wider access to internet and lack of quality coaching centres in Tier-2/ Tier-3 cities.

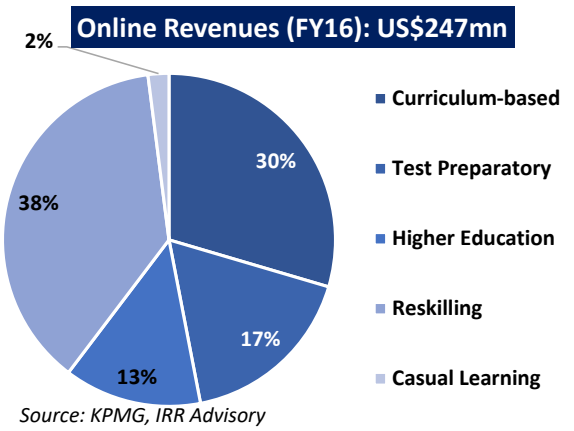
Categories of Online Education

CURRICULUM BASED	Online coaching supplement to formal learning for students enrolled in K-12, undergraduate and graduate courses
TEST PREPARATORY	Programs aimed at coaching students for competitive examinations
HIGHER EDUCATION	Online graduation and other programs which offer an alternative to traditional higher education courses
RESKILLING	Online certification programs designed to learn or enhance skillsets for better placement opportunities
CASUAL LEARNING	Online programs for teaching non-academic subjects like language, photography or playing an instrument

A study by KPMG in 2016 had estimated the online education market in India at US$247mn with approximately 1.57mn paid users.

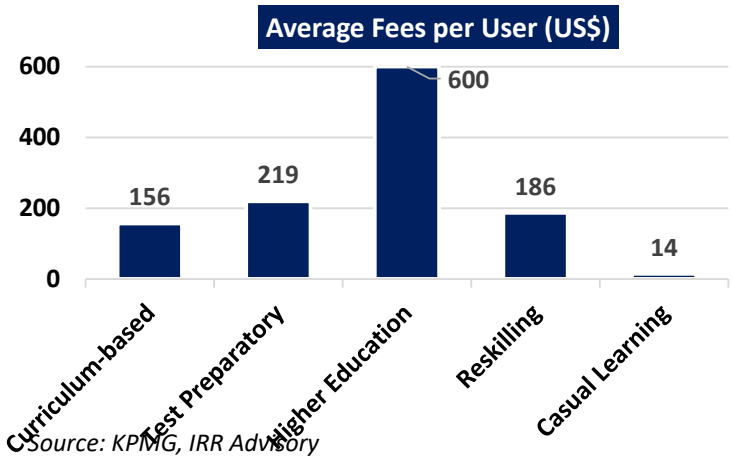


Source: KPMG, IRR Advisory



Source: KPMG, IRR Advisory

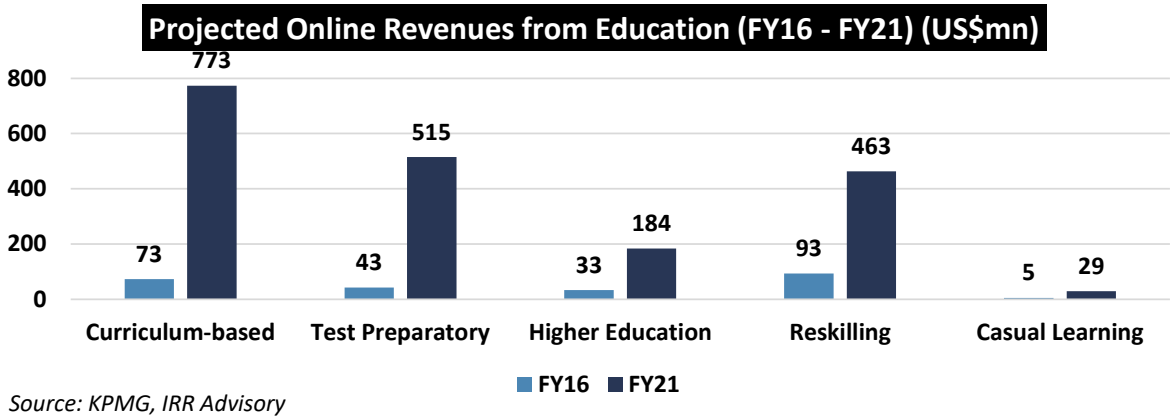
As per IRR Advisory, India's school and college going population is estimated at around 350mn, based on India's demographic profile and age-wise GER. As per IRR Advisory, students pursuing reskilling and casual learning would be non-traditional students. Thus, the profile of over 50% of the paid users were non-traditional students and only 0.72mn were traditional students that highlighted less than 0.2% of India's total student population were engaged in online education. In online education, reskilling, curriculum-based coaching, and casual learning accounted for over 84% of the paid users. However, revenue opportunities from casual learning were minimal – while casual learning accounted for 22% of the paid users in FY16, it accounted for only 2% of the revenues. In terms of revenues, reskilling and curriculum-based training accounted for the bulk of the revenues. However, higher education – which accounted for just 4% of the paid users – accounted for 13% of the revenues.



Source: KPMG, IRR Advisory

This is reflected in the average fees charged for online higher education, which is almost three times the average fees charged for online test preparatory. On the other hand, online casual learning is price sensitive as reflected in price levels which are significantly lower. Meanwhile, there has been a growing parental demand for quality education of their children - resulting in purchase of after-school learning offerings – which has resulted in the increased market share of online curriculum-based courses. Given the growing demand for academic coaching outside school, the EdTech industry attracted $1.6 billion in funding during 2014–19 crucial to bridging learning gaps.

KPMG estimated that the online education market would octuple over the next five years to US$2bn by FY21, as shown below:



Source: KPMG, IRR Advisory

However, both domestic EdTech and foreign EdTech companies operate in the online education and training space. Indian EdTech companies are preferred for curriculum-based and test-preparatory courses, while foreign EdTech platforms are preferred for reskilling and casual learning. Thus, as per colorwhistle, the top 6 online learning platforms in the world are Coursera, Skillshare, LinkedIn Learning, Udacity, Udemy and edX. A brief overview of the leading EdTech companies is provided below:

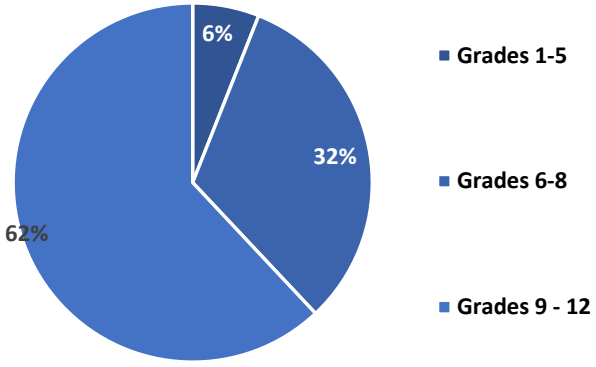
- Coursera partners with over 200 universities - including Stanford, Duke, Penn, Princeton, Michigan, Peking, and HEC Paris - and companies - like IBM, Google, and PwC - to provide real learning experiences, including earning certifications and degrees entirely through Coursera, which can then potentially lead to professional benefits. Coursera offers a variety of courses across multiple disciplines and each course is individually priced.
- Skillshare is aimed at improving one's creative skills and most of the courses are in creative fields: e.g., photography, film, animation, visual arts, writing, interior design, and more. The focus is on

teaching practical skills that students can then use to create their own projects. Skillshare has a subscription model, rather than a per-course payment plan, with premium plans starting from $8 per month.

- LinkedIn Leaning is an MOOC (massive open online courses) website that covers a wide variety of creative, technology, and business courses, and serves over 10,000 organizations, including renowned ones such as Adobe, Full Sail University, Patagonia, NBC and USC. There is a one-month free trial program after which price starts from $29.99 per month.
- Udacity is a MOOC platform that gives importance to job training and also offers a micro-credential called Nanodegree that focuses on in-demand skills in technology like artificial intelligence, self-driving cars, and robotics. Their customers include Accenture, AT&T, Cisco, Mazda, Shell and more. Their curriculum partners include GitHub, Bosch, BMW, Amazon, Google, Twitter, Mars and more. The platform offers up to 200 courses completely free of charge. A Nanodegree course can cost from $200/month and could go up to $2400/month.
- Udemy is a portal or repository where students can access well over 100,000 courses on every topic imaginable. Because each class is created and taught individually, they're also priced separately: Lifetime access to a single course can range from inexpensive (about $11 to $15) to pricey (roughly $200 or more).
- edX is a MOOC platform that offers university-level online courses. It has over 120 institutional partners like Harvard, MIT, Berkeley, Delft, RWTH, Sorbonne and more. Unverified courses are free of charge. Verified courses start from $50 and may go up to $300.

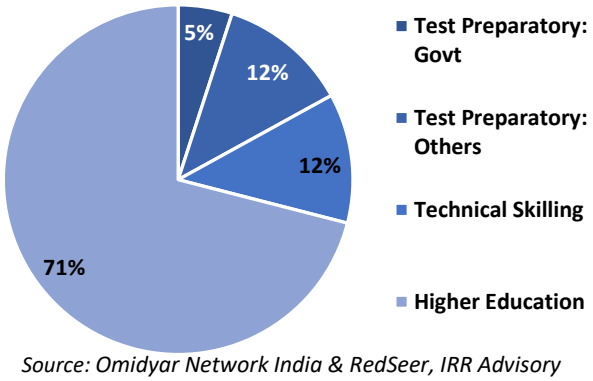
Hence, from the perspective of analysing the Indian EdTech players and their market potential, it is advisable to focus on the curriculum-based and test preparatory courses. As per an Omidyar Network India & RedSeer report published in June 2020, the total Indian online education market for domestic players was US$735mn, with the K-12 segment accounting for 36% of the market. The break-up of the K-12 segment and post K-12 segment is provided below:

K-12 Market (2019): US$265mn



Source: Omidyar Network India & RedSeer, IRR Advisory

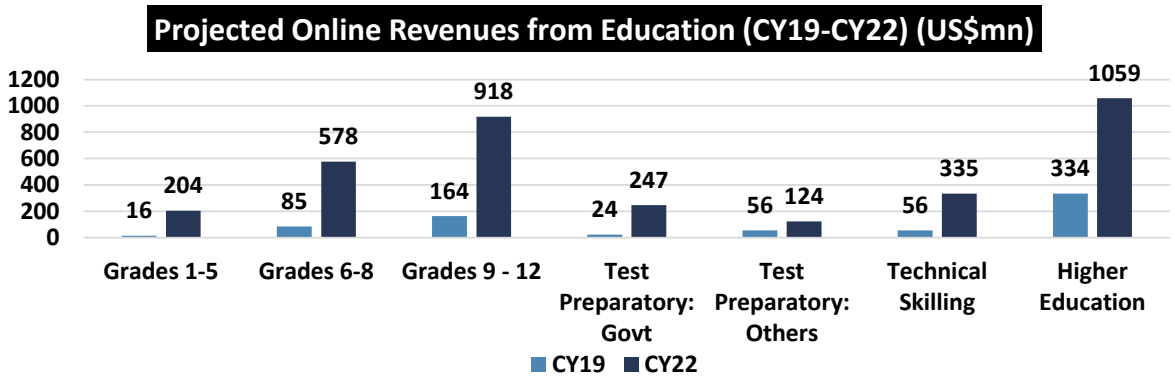
Post K-12 Market (2019): US$470mn



Source: Omidyar Network India & RedSeer, IRR Advisory

The K-12 market consists of 261 million learners of which 9% belong to elite private schools, 36% to budget private schools and 55% to government schools. Most of the top EdTech players are focusing on the top 9% of the population who have awareness of digital education and adequate resources to afford premium subscriptions. The Omidyar Network India & RedSeer report estimated that over 25mn students in the K-12 segment were accessing the online education market and they would more

than quadruple over the next three years, resulting in six-fold jump in revenue. The non-EdTech K-12 market would grow at a CAGR of ~8% during that corresponding period. The post K-12 market would grow three-fold between 2019 to 2022 as per the report.



Source: Omidyar Network India & RedSeer, IRR Advisory

However, till the pandemic set in, the leading EdTech platforms were focussing on students in the Tier 1 cities. The COVID-19 pandemic and the subsequent lockdown forced all educational institutions — schools, colleges, universities — across the country to shift from offline to online mode. This resulted in a dramatic increase in the number of students studying online in India since March 2020. Parallelly, there was unprecedented demand for EdTech platforms from Tier II, III, semi-urban and rural areas, with requirement for courses in local vernaculars. Some EdTech platforms have seen their user base double March 2020 in both segments - paid and free unique users in the K-12 and post K-12 segments. The number of online students currently stands at 90mn and will grow further as blended education mode becomes the new normal.

Source: SimilarWeb, IRR Advisory

A brief overview of the top Indian EdTech companies is given below:

- Byju's is India's largest EdTech company that runs on a freemium model, with free access to content limited for 15 days after the registration. IT offers online learning programs in the K-12 category, and trains students for examinations in India such as IIT JEE, NEET, CAT, IAS, and international examinations such as GRE and GMAT. Founded in 2011, the company launched their tutoring app in 2015 and is reported to have 50mn users overall, 4mn annual paid subscribers and an annual retention rate of about 85%. As of June 2021, Byju's is valued at $16.5bn, making it the world's most valuable EdTech company. Byju's is on a major acquisition focus to build itself into a

digital and online learning powerhouse, focused on everything from K-12 to competitive test preparation and professional education. Byju's turnover in FY20 was US$390mn.

- Toppr is an after-school learning app that provides learning courses and entrance exam tutoring. Founded in 2013, the online learning app is personalized for CBSE, ICSE & State Board students. It was acquired by Byju's in Kuly'21 for US$150mn.
- Founded in 2011, Vedantu is an Indian online tutoring platform where teachers provide tuitions to students over the internet, using a real-time virtual learning environment named WAVE (Whiteboard Audio Video Environment) a technology built in-house. It is said to operate on a marketplace model for teachers, where students can browse, discover and choose to learn from an online tutor. It primarily provides services to students of grade 4th to 12th for ICSE and CBSE, and also provides test preparation courses for IIT JEE and NTSE exams.
- Started in 2016, Doubtnut is an Indian interactive online tutoring app which uses image recognition technologies to provide solutions of some mathematical and science questions. Doubtnut focusses on mathematics and science coaching for CBSE, NCERT, IIT JEE, NEET and for classes 6 1 12.
- Unacademy, founded in 2015, is an Indian EdTech company that has a network of over 18,000 educators and offers preparation material for several professional and educational entrance exams. Unacademy provides comprehensive courses for UPSC, SSC, IIT JEE, CAT and other competitive exams.
- Launched in 2017, Sarthaks focuses on students living in semi-urban and rural areas. With its multi-lingual online learning platform, Sarthaks eConnect uses text, audio and image recognition to provide instantaneous and interactive solutions to K-12, JEE and NEET students.
- Founded in 2009, Meritnation claims to be India's first online learning platform for school students and at one point had over 25mn students across CBSE, ICSE, and leading state boards.
- Founded in 2012, Embibe claims to be the world's most powerful EdTech platform and uses AI to improve student learning outcomes at scale.
- Extramarks Education is an education technology company, that sells online and offline schooling and curricula. Founded in 2009, Extramarks had tied up with 9,000 government and private schools and had over 8mn students and over 1.1mn online users in March'18. Extramarks operates in India, Singapore, Indonesia, Ghana, South Africa, and the Middle East. Mukesh Ambani bought a 38.5% stake in Extramarks in 2011.
- Hashlearn is projected as a personal learning assistant to clear doubts of a student. The app covers mathematics, physics, chemistry and biology lessons of classes VIII-XII. It also helps students preparing for 14 different entrance exams including JEE and NEET.

The Next Half Billion (NHB) driving India's Online Education

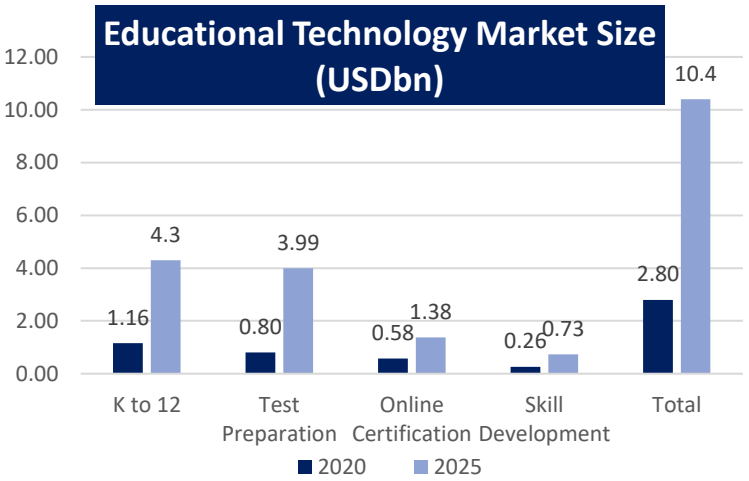
India's sustained economic growth since liberalization has resulted in rising prosperity and higher per capita income and propelled over a half billion people to middle- or high-income status. It is the next half billion (NHB) population, the aspirational segment – consisting of workers across different segments including electricians, masons, security guards, retail vegetable vendors and domestic helps – who want a better future for their children that will drive the EdTech business in India. This segment earns an annual household income of INR150K – 250K, are largely unschooled and deprived of basic necessities, and want their children to be financially secure.

Online education provides a low-cost alternative to traditional education due to lower infrastructure costs and a larger student base. Thus, online education costs almost half of attending offline courses, and the average price for online graduation courses vary around INR15-20K. The pricing makes higher education affordable for the NHB. This aspiring class, which was under-served by formal educational institutions, will benefit from the digital transformation due to lower data cost, affordable handsets, vernacular options and flexible payment schemes. The NHB is expected to add a 100mn EdTech user base in the next couple of years. The upside potential of online education has seen a dramatic increase in acquisitions and consolidations in the Indian online education market space.

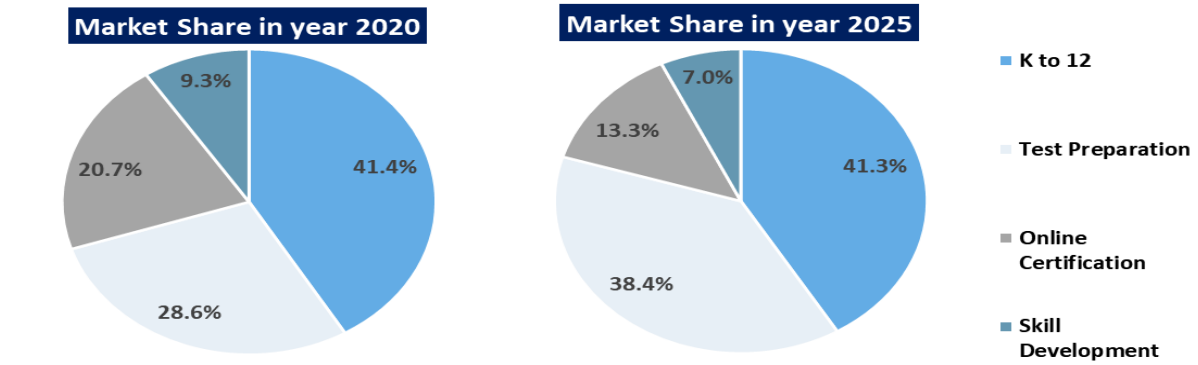
India today is the second largest market for online education after the US. Encouraged by the prospects of online education in India, Byju's has proceeded on an acquisition mode. In July'21, Byju's acquired Singapore based Great Learning, which specialises in online higher and professional education, for US$600mn; bought Toppr – which offers online content for schools and competitive exams – for US$150mn; and acquired US digital reading platform Epic – targeted for kids aged 12 and under – for US$500mn. In April, Byju's had acquired Aakash Educational Services Ltd for US$1bn. Byju's has acquired some 15 companies till date spending nearly US$3bn and raised US$2.7bn from investors. Byju's acquisition of Aakash reflects the requirement of hybridization in education.

6. PEER GROUP ANALYSIS

In India, educational technology market size is expected to increase by 3.7x and a CAGR of 39% from US$2.8bn in 2020 to US$10.4bn in 2025. Kindergarten to 12th grade education (K to 12) has the highest market share of 41.4% in 2020 and is expected to retain the top spot with an expected market share of 41.3% in 2025, followed by test preparation and online certification. Test preparation market share is expected to increase fastest from 28.6% market share in 2020 to 38.4% market share in 2025. Market size details in educational technology is provided along side and market share details are provided in the chart below.

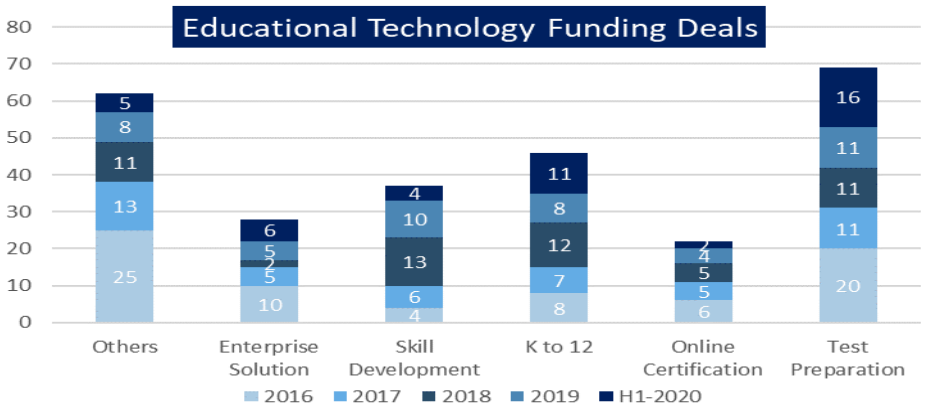


Source: Statista, IRR Advisory



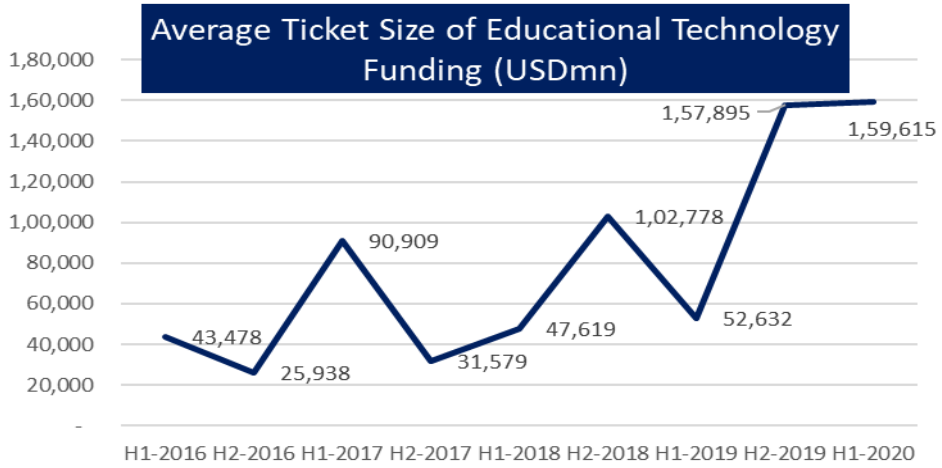
Source: Statista, IRR Advisory

In India, 264 deals in educational technology has taken place between 2016 and H1-2020. Test preparation has bagged 26% of the total educational technology funding in the country.



Source: Inc42, IRR Advisory

Average ticket size of funding in educational technology has been US$159,615mn in H1-2020 and increased by 3x from US$52,632mn in H12019 and 55% from US$102,778mn in H2-2018. Test preparation and skill development start-ups had the highest medium funding amount of US$12.5mn and US$10.2mn in H1-2020 respectively.



Source: Inc42, IRR Advisory

Details of key players in Education Sector are provided below:

Think and Learn Private Ltd. (TLPL) - Byju's

TLPL is Byju's flagship company, and is one of the largest educational technology (ed-tech) company and school learning app. Launched in 2015, Byju's currently offers personalised and effective learning programs for classes 1 - 12 (K-12), and aspirants of competitive exams like JEE, IAS, State board exams, Government exams, etc. Byju's has 50million registered students and 3.5mn paid subscriptions on its education platform.

Aakash Educational Services Ltd. (AESL)

AESL provides comprehensive test preparatory services for students preparing for medical and engineering entrance examinations for Class 11 and Class 12 students, and foundation courses (covering school boards and junior competitive examinations) for students across Class 8 to Class 10. The services are provided through classroom-based coaching, digital and distance learning. The programs offered are categorized into three brands namely Aakash Medical, Aakash IIT-JEE and Aakash Foundations. The company provides the above services both classrooms based (offline) and in digital mode (online). Aakash Digital enables students preparing for JEE, NEET and grades 8-12 school, board and competitive exams get quality online test preparation at the convenience of their home. In April 2021, Byju's had acquired AESPL for about US$1bn.

Grade Stack Learning Pvt. Ltd. (GSLPL) - Gradeup

GSLPL incorporated in the year 2013, is online coaching application and website for Government and competitive exams. GSLPL has helped over 30mn registered students for competitive exams, including Banking, SSC, Railway, NDA, CDS, NRA CET, Teaching, UPSC, State PCS Exams, CLAT, CAT, GATE, AE/JE, BBA, hotel management, Class 9, 10, JEE, NEET and others.

Great Lakes E-learning Services Pvt. Ltd. (GLESPL)

GLESPL incorporated in the year 2010, offers online and blended learning programs for working professionals in collaboration with Great Learning, a leading technology enabled online and blended learning platform. Learning programs are offered in analytics and data science, artificial intelligence, management and cloud computing. Great learning, founded in 2013, has delivered over 60 million hours of learning to 1.5 million learners from over 170 countries. It leverages a carefully curated network of over 2800 industry expert mentors to deliver high-quality learning outcomes and works with more than 500 corporate partners for their upskilling and talent needs. Great Learning said its approach is differentiated by its mentored learning model and its deep and proven commitment to quality. In July 2021, Byju's had acquired Singapore based Great Learning for about US$600mn comprising cash, stock and earnout.

Simplilearn Solutions Pvt. Ltd. (SLSPL)

SLSPL incorporated in 2010, is one of the world's leading certification training providers. It has partnered with various companies and individuals to address their unique needs, to provide training and coaching that helps working professionals achieve their career goals. SLSPL has over 2mn professionals trained, offers 400+courses, has 2000+ qualified trainers with 40+ global accreditations. It provides training in disciplines such as Cyber Security, Cloud Computing, Project Management, Digital Marketing, and Data Science, among others.

Sorting Hat Technologies Pvt. Ltd. (SHTPL) – Unacademy

SHTPL incorporated in 2015, is engaged in the business of providing online education platform to connect educators and learners. It provides training for competitive exams and for class 6 to 12 and has over 60 exam categories and more than 14,000 educators.

Toppr Technologies Pvt. Ltd. (TTPL)

TTPL incorporated in 2013, has four learning verticals catering to students which include Toppr learning app for students from class 5 to class 12, Toppr Codr for 1 to 1 coding classes for class 1 to class 12 students, Toppr Answr for providing homework help answers for class 5 to class 12 students and Toppr School OS to provide end to end school operating system for K to 12 along with courses for competitive exams. TTPL caters to 22 boards, 58 competitive exams and 17 subjects and has 22mn registered students. In July 2021, Byju's had acquired Toppr for about US$150mn.

Upgrad Education Pvt. Ltd. (UEPL)

UEPL incorporated in 2012, provides online higher education degree and certifications and has tied up with universities internationally. It has on board more than 1mn learners, 300+ hiring partners, 100+ learner support team, 700+ industry experts and 50+ placement team.

Vedantu Innovations Pvt. Ltd. (VIPL)

VIPL incorporated in 2011, provides online training for children and entrance exams courses. Training programs include english reading for age 4 to 6 years, English speaking for age 7 to 14 years, coding courses for age 6 to 14 years and various exam entrance exams training such as JEE, NEET, board exams, etc. Vedantu has more than 41mn registered students.

Parameters	Veranda - Consolidated	TLPL (Byju's) - Consolidated			AESL (Aakash) - Standalone			GSLPL (Grade Stack)- Standalone			GLESPL (Great Lakes)- Standalone		
	FY21	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20
Total Income (INRmn)	26.6	5,002.2	13,669.8	NA	9,804.8	11,406.3	12,570.4	42.8	57.1	240.8	506.0	760.4	2,310.5
EBITDA (INRmn)	-76.7	-47.9	636.7	NA	2,732.0	3,283.9	4,259.0	-119.9	-207.1	-293.2	44.0	-177.6	-74.7
EBITDA Margin	-288%	-1%	5%	NA	28%	29%	34%	-280%	-363%	-122%	9%	-23%	-3%
EBIT	-78.6	-352.0	-47.8	NA	2,422.8	2,977.3	3,041.6	-121.4	-209.7	-316.4	41.0	-192.6	-87.2
PAT	-78.6	-371.5	-88.3	NA	1617.0	1969.2	1658.0	-122.7	-211.7	-333.8	27.1	-141.4	-75.3
PAT Margin	-295.6%	-7.4%	-0.6%	NA	16.5%	17.3%	13.2%	-286.6%	-370.7%	-138.6%	5.4%	-18.6%	-3.3%
Equity (INRmn)	8.3	8,335.9	40,367.0	NA	588.6	1,288.4	801.4	33.2	24.9	-298.9	-22.4	-163.5	-184.4
Debt (INRmn)	61.6	101.0	92.6	NA	471.5	704.6	6,238.4	22.3	12.3	354.7	0.0	0.0	12.5
Debtor Days	35.1	20.2	21.2	NA	8.0	4.0	4.7	11.9	20.8	14.1	6.0	0.4	0.7

Source: Company Annual Reports and Website, IRR Advisory

Parameters	SLSPL (Simplilearn) - Consolidated			SHTPL (Unacademy) - Standalone			TTPL (Toppr)- Standalone			UEPL (Upgrad) - Standalone			VIPL (Vedantu) - Standalone		
	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20
Total Income (INRmn)	1,584.3	2,046.7	2,560.7	52.3	219.0	860.2	256.6	609.7	NA	364.4	852.19	1,625.7	56.3	124.4	358.0
EBITDA (INRmn)	-8.1	-82.0	45.7	-233.2	-893.5	-2,963.0	-576.34	-854.4	NA	-300.4	-404.1	-741.2	-186.6	-259.6	-1,541.4
EBITDA Margin	-1%	-4%	2%	-446%	-408%	-344%	-225%	-140%	NA	-82%	-47%	-46%	-332%	-209%	-431%
EBIT	-29.7	-93.3	18.6	-236.0	-902.6	-3,007.6	-585.1	-862.7	NA	-310.8	-419.3	-763.8	-196.9	-270.0	-1,565.7
PAT	-43.2	-101.3	13.5	-235.9	-902.7	-3007.6	-598.6	-934.5	NA	-310.8	-433.58	-788.9	-194.9	-273.1	-1585.8
PAT Margin	-2.7%	-5.0%	0.5%	-451.4%	-412.2%	-349.6%	-233.3%	-153.3%	NA	-85.3%	-50.9%	-48.5%	-346.5%	-219.5%	-443.0%
Equity (INRmn)	353.7	249.1	272.1	872.6	1,527.9	7,605.2	-15.0	449.7	NA	56.3	-327.3	-1,116.2	308.7	343.1	2,939.6
Debt (INRmn)	197.43	115.74	89.13	4.32	0	0	2.67	521.77	NA	0	430	999.83	0	0	119.7
Debtor Days	20.8	36.2	26.7	13.8	9.4	11.5	0.0	0.0	NA	72.6	55.1	43.5	0.0	0.0	0.0

Source: Company Annual Reports and Website, IRR Advisory

7. OVERVIEW OF NEW EDUCATION POLICY

The 2030 Agenda for Sustainable Development, adopted by India in 2015, seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030. Education Is evolving towards less content and more emphasis on critical thinking, problem solving, creativity and multidisciplinary skills, with the new mantra being innovativeness and adaptability. Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centered, discussion-based, flexible, and, of course, enjoyable. The curriculum needs to include science and mathematics, along with language, literature, basic arts, crafts, humanities, games, fitness, culture, and values, to deliver a well-rounded education to the students. Education must build character, enable learners to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment. The National Education Policy 2020 (NEP) is an attempt to address the imbalances in our current education structure through revising and revamping the educational framework, including its regulation and governance, and align the system with the aspirational goals of the 21st century education while leveraging on India's traditions and value systems.

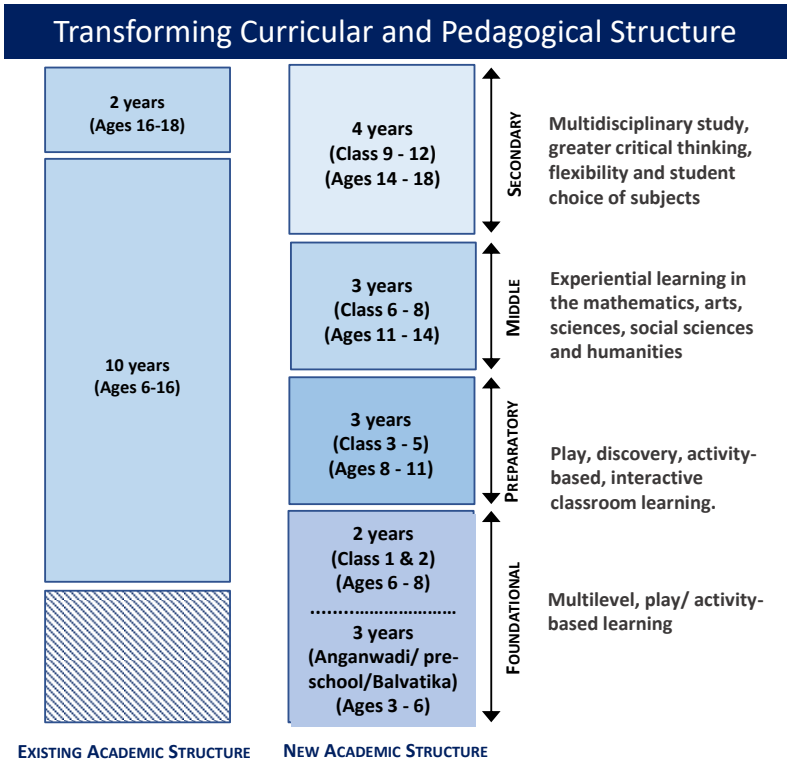
Highlights of National Education Policy (NEP) 2020
• Universalization of education from pre-school to secondary level with 100 per cent Gross Enrolment Ratio (GER) in school education by 2030. • To bring 3.2 crore 'out of school' children back into the mainstream through universalization of access and expanding the open schooling system. • The current 10+2 system to be replaced by a new 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years, respectively • Class 10 and 12 board examinations to be made easier to test core competencies rather than • memorized facts. • School governance is set to change, with a new standards framework based on online self-declaration in the public domain for both public and private schools. • Emphasis on foundational literacy and numeracy, and no rigid separation between academic streams, extra-curricular, vocational streams in schools. • Vocational Education to start from Class 6 with Internships. • Teaching up to at least Grade 5 to be in mother tongue/regional language, wherever possible. No language will be imposed on any student. • Assessment reforms with 360-degree Holistic Progress Card, tracking student progress for achieving learning outcomes • A new and comprehensive National Curriculum Framework for school education, Early Childhood Care & Education, Teacher Education and Adult Education. • By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree.

The NEP envisions an education system rooted in Indian ethos that contributes directly to transforming India into an equitable and vibrant knowledge society, by providing high-quality

education to all, and thereby making India a global knowledge superpower. The vision of the policy is to instill among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen. To reflect the thrust that the GoI is putting on education, the Ministry of Human Resources Development (MHRD) will be renamed as Ministry of Education and public spending on education by States and Centre, combined, to be increased to 6% of GDP. There will be a separate technology unit to develop global educational resources. Alongside, the policy addresses issues in school education, higher education, and other affiliated areas.

Transforming Curricular and Pedagogical Structure in School Education

NEP envisages that the extant 10+2 structure in school education will be modified with a new pedagogical and curricular restructuring of 5+3+3+4 corresponding to ages 3-8, 8-11. 11-14 and 14-18. The curricular and pedagogical structure and -the curricular framework for school education will henceforth consist of the Foundational Stage (in two parts, that is, 3 years of Anganwadi/pre-school + 2 years in primary school in Grades 1-2: both together covering ages 3-8), Preparatory Stage (Grades 3-5, covering ages 8-11), Middle Stage (Grades 6-8, covering ages 11-14), and Secondary Stage (Grades 9-12 in two phases, i.e., 9 and 10 in the first and 11 and 12 in the second, covering ages 14-18).



Source: National Education Policy 2020, IRR Advisory

The new system introduces Early Childhood Care and Education (ECCE) for the uncovered age group of 3-6 years under school curriculum, since it has been observed that over 85% of a child's cumulative brain development occurs prior to the age of 6. ECCE will consist of flexible, multi-faceted, multi-level, play-based, activity-based, and inquiry-based learning, comprising of alphabets, languages, numbers, counting, colors, shapes, indoor and outdoor play, puzzles, and logical thinking, problem-solving, drawing, painting and other visual art, craft, drama and puppetry, music and movement. It will also focus on developing social capacities, sensitivity, good behavior, courtesy, ethics, personal and public cleanliness, teamwork, and cooperation. For universal access to ECCE, NEP proposes to strengthen the Anganwadi Centers with high-quality infrastructure, play equipment, and well-trained Anganwadi

workers/teachers. It is also proposed to introduce ECCE in Ashramshalas in tribal-dominated areas and in all formats of alternative schooling in a phased manner.

As per NEP, the Foundational Stage will consist of five years of flexible, multilevel, play/activity-based learning and the curriculum and pedagogy of ECCE. The Middle Stage will comprise three years of education, building on the pedagogical and curricular style of the Preparatory Stage, but with the introduction of subject teachers for learning and discussion of the more abstract concepts in each subject that students will be ready for at this stage across the sciences, mathematics, arts, social sciences, and humanities. Experiential learning within each subject, and explorations of relations among different subjects, will be encouraged and emphasized despite the introduction of more specialized subjects and subject teachers. The Secondary Stage will comprise of four years of multidisciplinary study, building on the subject-oriented pedagogical and curricular style of the Middle Stage, but with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility and student choice of subjects. Students will have the option of exiting after Grade 10 and re-entering in the next phase to pursue vocational or any other courses available in Grades 11- 12, including at a more specialized school, if so desired.

The policy proposes to reduce curriculum content in each subject to its core essentials and to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based learning. The mandated content will focus on key concepts, ideas, applications, and problem-solving. In all stages, experiential learning will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy, among others, as standard pedagogy within each subject, and with explorations of relations among different subjects. Students will be given increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education, the arts and crafts, and vocational skills – so that they can design their own paths of study and life plans. Holistic development and a wide choice of subjects and courses year to year will be the new distinguishing feature of secondary school education. There will be no hard separation among ‘curricular’, ‘extracurricular’, or ‘co-curricular’, among ‘arts’, ‘humanities’, and ‘sciences’, or between ‘vocational’ or ‘academic’ streams. While the Board exams for Grades 10 and 12 will be continued, the existing system of Board and entrance examinations shall be reformed to eliminate the need for undertaking coaching classes.

The highest priority of the education system will be to achieve universal foundational literacy and numeracy in primary school by 2025. On the curricular side, there will be an increased focus on foundational literacy and numeracy - and generally, on reading, writing, speaking, counting, arithmetic, and mathematical thinking - throughout the preparatory and middle school curriculum, with a robust system of continuous formative/adaptive assessment to track and thereby individualize and ensure each student's learning.

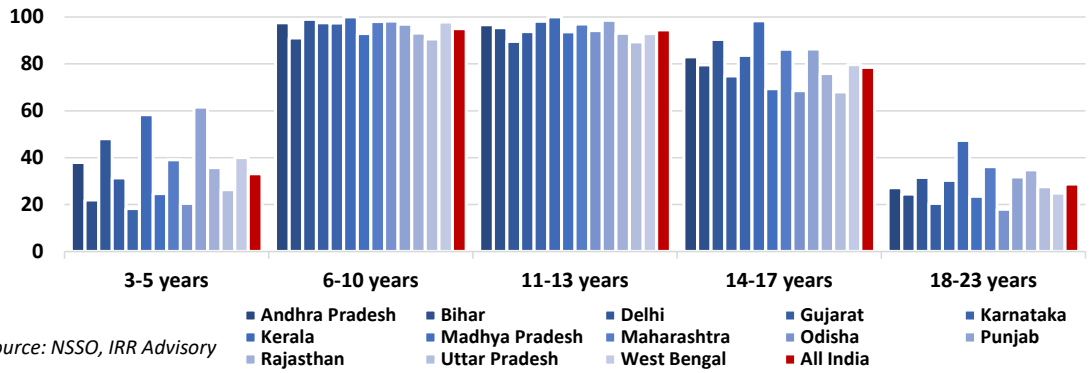
Curtailing Dropout Rates and Ensuring Higher GER

One of the primary goals of the schooling system is to ensure that children are enrolled in and are attending school. Through initiatives such as the Sarva Shiksha Abhiyan (now the Samagra Shiksha) and the Right to Education Act, India has made remarkable strides in attaining near-universal

enrolment in elementary education. However, the data for later grades indicates some serious issues in retaining children in the schooling system. As per the 75th round household survey by NSSO in 2017-18, the number of out of school children in the age group of 6 to 17 years is 3.22 crore. It will be a top priority of the NEP to bring these children back into the educational fold as early as possible, and to achieve 100% Gross Enrolment Ratio in preschool to secondary level by 2030.

As per the NSSO survey, children in the age-group of 6-13 years have reported almost 95% and above ASAR across States. But the attendance rate in the early childhood education, which the NEP 2020 emphasizes on is low and diverging irrespective of the achievement in education status of the States concerned. While Punjab reported a high attendance rate of 61.6% of the children in the age groups of 3-5 years (i.e. early childhood education), Karnataka reports the lowest attendance rate of only 18.3 per cent. In the 14-17 years age group, which covers the secondary and higher secondary education level, the attendance rates are low as compared to national average in Madhya Pradesh, Odisha, Assam, Gujarat, and Rajasthan. In the 18-23 years age bracket, which comprises students pursuing higher education, Kerala and the hilly States have reported higher attendance compared to rest of India.

India's State-wise Age Specific Attendance Ratio for different Age Groups (%)



Source: NSSO, IRR Advisory

Under the NEP, two overall initiatives will be undertaken to bring children who have dropped out back to school and to prevent further children from dropping out. The first will be to provide effective and sufficient infrastructure so that all students have access to safe and engaging school education at all levels from pre-primary school to Grade 12. Besides providing regular trained teachers at each stage, special care shall be taken to ensure that no school remains deficient on infrastructure support. Alternative and innovative education centers will be put in place in cooperation with civil society to ensure that children of migrant laborers, and other children who are dropping out of school due to various circumstances are brought back into mainstream education. The second will be to achieve universal participation in school by carefully tracking students, as well as their learning levels, to ensure that they are enrolled in and attending school and have suitable opportunities to catch up and re-enter school in case they have fallen behind or dropped out. For providing equitable and quality education from the Foundational Stage through Grade 12 to all children up to the age of 18, suitable facilitating systems shall be put in place. Counsellors or well-trained social workers connected to schools/school complexes and teachers will continuously work with students and their parents and will travel through and engage with communities to ensure that all school-age children are attending and learning in school.

New and Forward-looking Vision for India's Higher Education System

The main thrust of NEP regarding higher education is to end the fragmentation of higher education by transforming higher education institutions into large multidisciplinary universities, colleges, and higher education institution (HEI) clusters/ Knowledge Hubs, each of which will aim to have 3,000 or more students. This would help build vibrant communities of scholars and peers, break down harmful silos, enable students to become well-rounded across disciplines including artistic, creative, and analytic subjects as well as sports, develop active research communities across disciplines including cross-disciplinary research, and increase resource efficiency, both material and human, across higher education.

This vision of higher education will require, in particular, a new conceptual perception/understanding for what constitutes a HEI, i.e., a university or a college. A university will mean a multidisciplinary institution of higher learning that offers undergraduate and graduate programs, with high quality teaching, research, and community engagement. Meanwhile, an autonomous degree-granting college (AC) will refer to a large multidisciplinary institution of higher learning that grants undergraduate degrees and is primarily focused on undergraduate teaching.

By 2040, all HEIs shall aim to become multidisciplinary institutions and shall aim to have larger student enrolments preferably in the thousands, for optimal use of infrastructure and resources, and for the creation of vibrant multidisciplinary communities. Since this process will take time, all HEIs will firstly plan to become multidisciplinary by 2030, and then gradually increase student strength to the desired levels. More HEIs shall be established and developed in underserved regions to ensure full access, equity, and inclusion. By 2030, there should be at least one large multidisciplinary HEI in or near every district. Steps shall be taken towards developing high-quality higher education institutions both public and private that have medium of instruction in local/ Indian languages or bilingually. The aim of NEP is to increase the GER in higher education including vocational education from 26.3% (2018) to 50% by 2035.

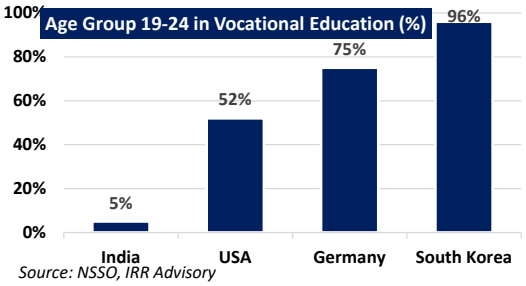
Institutions will have the option to run Open Distance Learning (ODL) and online programs, provided they are accredited to do so, to enhance their offerings, improve access, increase GER, and provide opportunities for lifelong learning. All ODL programs and their components leading to any diploma or degree will be of standards and quality equivalent to the highest quality programs run by the HEIs on their campuses. Top institutions accredited for ODL will be encouraged and supported to develop high-quality online courses. Such quality online courses will be suitably integrated into curricula of HEIs, and blended mode will be preferred.

India will be promoted as a global study destination providing premium education at affordable costs. An International Students Office at each HEI hosting foreign students will be set up to coordinate all matters relating to welcoming and supporting students arriving from abroad. Research/ teaching collaborations and faculty/ student exchanges with high-quality foreign institutions will be facilitated, and relevant mutually beneficial MOUs with foreign countries will be signed. High performing Indian universities will be encouraged to set up campuses in other countries, and similarly, selected

universities e.g., those from among the top 100 universities in the world will be facilitated to operate in India. A legislative framework facilitating such entry will be put in place, and such universities will be given special dispensation regarding regulatory, governance, and content norms on par with other autonomous institutions of India. Furthermore, research collaboration and student exchanges between Indian institutions and global institutions will be promoted through special efforts. Credits acquired in foreign universities will be permitted, where appropriate as per the requirements of each HEI, to be counted for the award of a degree.

Focus on vocational education and conceptual understanding

The 12th Five-Year Plan estimated that only a small percentage (<5%) of the Indian workforce in the age group of 19–24 received formal vocational education with respect to countries such as the USA, Germany and South Korea. These numbers only underline the urgency of the need to hasten the spread of vocational education in India.



Source: NSSO, IRR Advisory

One of the primary reasons for the small numbers of students receiving vocational education is the fact that vocational education has in the past focused largely on Grades 11–12 and on dropouts in Grade 8 and upwards. Moreover, students passing out from Grades 11–12 with vocational subjects often did not have well-defined pathways to continue with their chosen vocations in higher education. The admission criteria for general higher education were also not designed to provide openings to students who had vocational education qualifications, leaving them at a disadvantage relative to their compatriots from 'mainstream' or 'academic' education. This led to a complete lack of vertical mobility for students from the vocational education stream, an issue that has only been addressed through the announcement of the National Skills Qualifications Framework (NSQF) in 2013.

The efforts towards integration of Vocational Education and Training (VET) in general education has received a big fillip with the NEP, envisioning giving 50% of school and higher education candidates exposure to VET over the next 5 years. Some of the key ingredients of VET integration includes offering vocational courses in schools and equal weightage to vocational courses for admission in undergraduate courses have been implemented. The draft Credit Framework for vertical and horizontal mobility from vocational to general and vice versa is being developed. A 'hub-and-spoke' model is also being piloted in two States with the conceptual framework of early introduction of VET in schools and an ITI becoming a 'Hub' for providing VET related training and exposure to students of adjoining 5-7 schools. It is hoped that the artificial separation of the education system into formal and vocational shall end with such enabling frameworks allowing seamless integration.

The NEP aims to overcome the social status hierarchy associated with vocational education and requires integration of vocational education programs into mainstream education in all education institutions in a phased manner. Beginning with vocational exposure at early ages in middle and secondary school, quality vocational education will be integrated smoothly into higher education. Vocational education will be integrated into all school and higher education institutions in a phased

manner over the next decade. It will ensure that every child learns at least one vocation and is exposed to several more. By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and timelines will be developed.

The NSQF will be detailed further for each discipline vocation and profession. Further, Indian standards will be aligned with the International Standard Classification of Occupations maintained by the International Labor Organization. This framework will provide the basis for recognition of prior learning. Through this, dropouts from the formal system will be reintegrated by aligning their practical experience with the relevant level of the framework. The credit-based framework will also facilitate mobility across 'general' and vocational education.

Catalyzing Quality Academic Research in All Fields

Knowledge creation and research are critical in growing and sustaining a large and vibrant economy, uplifting society, and continuously inspiring a nation to achieve even greater heights. A robust ecosystem of research is perhaps more important than ever with the rapid changes occurring in the world today, e.g., in the realm of climate change, population dynamics and management, biotechnology, an expanding digital marketplace, and the rise of machine learning and artificial intelligence. Despite this critical importance of research, the research and innovation investment in India is, at the current time, only 0.69% of GDP as compared to 2.8% in the United States of America, 4.3% in Israel and 4.2% in South Korea.

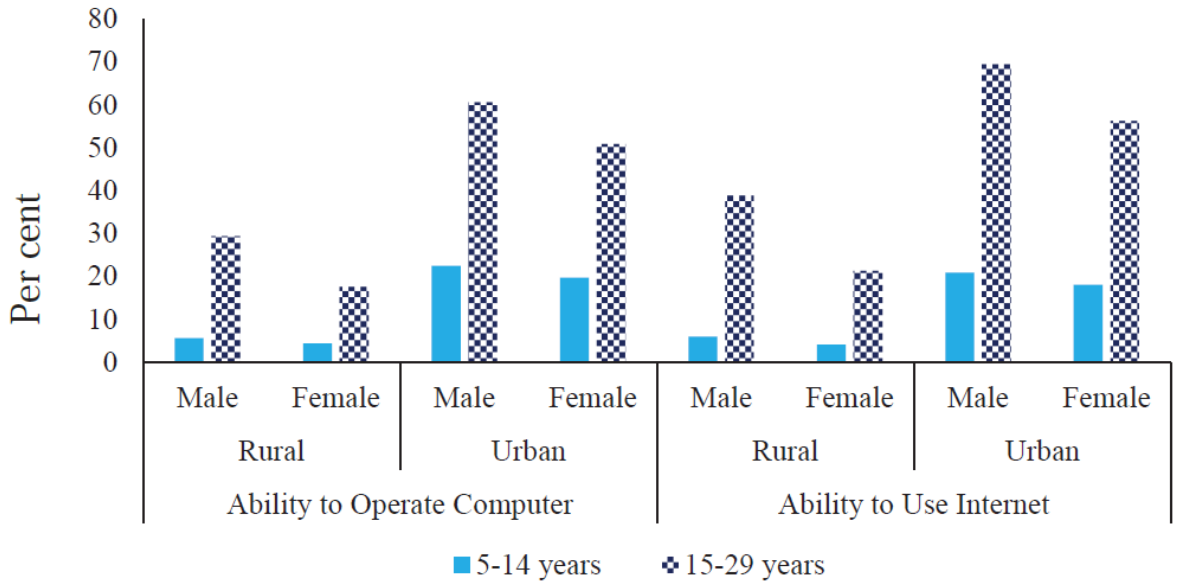
The NEP envisions a comprehensive approach to transforming the quality and quantity of research in India. This includes definitive shifts in school education to a more play and discovery- based style of learning with emphasis on the scientific method and critical thinking. This includes career counselling in schools towards identifying student interests and talents, promoting research in universities, the multidisciplinary nature of all HEIs and the emphasis on holistic education, the inclusion of research and internships in the undergraduate curriculum, faculty career management systems that give due weightage to research, and the governance and regulatory changes that encourage an environment of research and innovation. All of these aspects are extremely critical for developing a research mindset in the country. Accordingly, a National Research Foundation (NRF) will be established to enable a culture of research to permeate through the universities. In particular, the NRF will provide a reliable base of merit-based but equitable peer-reviewed research funding, helping to develop a culture of research in the country through suitable incentives for and recognition of outstanding research, and by undertaking major initiatives to seed and grow research at State Universities and other public institutions where research capability is currently limited. The NRF will competitively fund research in all disciplines. Successful research will be recognized, and where relevant, implemented through close linkages with governmental agencies as well as with industry and private/philanthropic organizations.

8. WAY FORWARD

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. Universal high-quality education is the best way forward for developing and maximizing the country's rich talents and resources for the good of the individual, the society, the country, and the world. India will have the highest population of young people in the world over the next decade, and her ability to provide high-quality educational opportunities to them will determine the future of India.

Since March 2020, most of the schools are closed due to the COVID-19 induced restrictions and children are taught online from their homes using available assets at home. Access to data network, electronic devices such as computer, laptop, smart phone etc. gained importance due to distance learning and remote working. As per Annual Status of Education Report (ASER) 2020 Wave-1 (Rural), released in October 2020, percentage of enrolled children from government and private schools owning a smartphone increased enormously from 36.5% in 2018 to 61.8% in 2020 in rural India. If utilized well, the resultant reduction in the digital divide between rural and urban, gender, age and income groups is likely to reduce inequalities in educational outcomes. To enable this process, the Government has implemented several initiatives to make education accessible to children during this pandemic.

Students by Ability to Operate Computer and Ability to Use Internet



Source: NSS Report No.585-Household Social Consumption on Education in India, 2017-18

Some of the key initiatives undertaken include:

1) **PM eVIDYA:** This initiative was announced for school and higher education under the Atma Nirbhar Bharat programme in May 2020. It is a comprehensive initiative to unify all efforts related to digital/online/on-air education to enable multi-mode and equitable access to education for students and teachers. The four PM e-Vidya components of school education are:
   a) **One nation, one digital education infrastructure:** Under this component all States/UTs have free access to a single digital infrastructure i.e, DIKSHA. It is artificial intelligence based, highly scalable, and can be accessed through a web-portal and mobile application. It provides access to a large number of curricula linked e-content through several use cases and solutions such as QR coded Energized Textbooks (ETBs), courses for teachers, quizzes and others. DIKSHA has experienced more than 800 crore hits since lockdown. In April 2020, VidyaDaan portal was launched on Diksha as a national content contribution program that leverages the DIKSHA platform and tools to seek and allow contribution/donation of e-learning resources for school education by educational bodies, private bodies, and individual experts.
   b) **One class, one TV channels through Swayam Prabha TV Channels:** Swayam Prabha DTH channels are meant to support and reach those who do not have access to the internet. 12 channels are devoted to telecast high quality educational programmes in school education. The pilot/beta version has been launched in October 2020.
   c) **Extensive use of Radio, Community radio and Podcasts:** Radio broadcasting is being used for children in remote areas who are not online. 303 pieces of curriculum-based radio programmes (for Classes 1-8) have been produced by CIET-NCERT for its dissemination/ broadcast on 12 GyanVani FM Radio Stations, 60 Community Radio Stations, iRadio and Jio Saavn Mobile apps. 289 Community Radio Stations have also been used to broadcast content for NIOS for grades 9 to 12. A Podcast of CBSE called Shiksha Vani is being effectively used by learners of grades 9 to12. It contains over 430 pieces of audio content for all subjects of grades 9 to 12.
   d) **For the differently abled:** One DTH channel is being operated specifically for hearing impaired students in sign language. For visually and hearing-impaired students, study material has been developed in Digitally Accessible Information System (DAISY) and in sign language; both are available on NIOS website/ YouTube. 25 NCERT textbooks have also been converted into DAISY format.
2) **Swayam MOOCs for open schools and pre-service education:** Online MOOC courses relating to NIOS (grades 9 to 12 of open schooling) are uploaded on SWAYAM portal. Around 92 courses have started, and 1.5 crore students are enrolled under Swayam MOOCs.
3) **Funding support for digital initiative:** To mitigate the effect of COVID-19, INR8.2bn is allotted to states/UTs to promote online learning through digital initiatives, and INR2.7bn crore for online teacher training to ensure continuous professional development of teachers under Samagra Shiksha Scheme.
4) **National Repository of Open Educational Resources (NROER):** NROER is an open storehouse of e-content. Nearly 17,500 pieces of e-content are available for various school subjects in all grades.
5) **PRAGYATA guidelines on digital education** was developed with a focus on online/ blended/ digital education for students who are presently at home due to the closure of schools.

6) **MANODARPAN:** The 'Manodarpan' initiative for psychosocial support has been included in the Atmanirbhar Bharat Abhiyan, as part of strengthening and empowering the human capital to increase productivity and efficiency through reforms and initiatives in the education sector.

Since the onset of the pandemic, GoI has allowed phased re-opening of schools after October, but most states only began classes for Class 9 and higher. Because of the pandemic, government schools had to incorporate digital learning, a challenge as only 28% of government schools in FY19 had computers and only 12% had an internet connection. Covid-19 also impacted State budgets and the release of central government education funds to the States and Union Territories. In FY21, education Budgets fell in 16 large states and GoI released only 29% of the Samagra Shiksha Budget to the states till November and States had spent only 26% of their total approved Budget till October. Meanwhile, the pandemic also reduced family incomes, and this could see the number of children attending government schools rise. Thus, predicting the likely trajectory of the Indian education system would be a difficult task and would depend on the recovery patterns of the various social segments. However, IRR Advisory believes that the future of education is going to be a blended or hybrid learned approach with a mix of online and offline, and combining the best of both the worlds. Institutions will aim to offer the students powerful learning experience by introducing the best of online education into the classroom. While pure-play EdTech startups have seen an exponential growth during the pandemic, it will be easier for traditional offline players to launch a hybrid mode of education given the logistics of physical infrastructure they enjoy. Nevertheless, as all players start offering both online and offline courses, it will be difficult to differentiate between the various modes of education channels and offline and online will morph into hybrid mode. IRR Advisory believes that the Indian educational market will touch US$200bn over the next 5 years.

In terms of SWOT analysis, India's population, demographic profile, rapid urbanization, increasing prosperity and aspirations, and high competition level are the strengths. Opportunities prevail in terms of low GER, increased adoption of technology and online learning, and emergence of international schools and private schools adopting franchise models. The weaknesses remain high dropout rates in secondary education, socio-economic and gender factors, and low levels of internet penetration. The digital divide is also a threat, along with growing focus on specialized courses where international players dominate.

India is a rapidly changing country which requires inclusive, high-quality education for its future prosperity. India currently benefits from her demographic dividends, with a child being born every two seconds, and her demographic profile could be a powerful catalyst of economic growth and development provided India can modernize her education system, raise educational standards, and enhance skills of her youth. India derives significant competitive advantage over swiftly ageing countries like China because of her young workforce, entrepreneurial skills, technical skills, and English-speaking abilities. Needless to say, the education sector will be the driver behind India's growth story.

9. ABBREVIATIONS

AC:	Autonomous degree-granting College	INR:	Indian Rupee
AESL:	Aakash Educational Services Ltd.	K-12:	Kindergarten to Class XII
AI:	Artificial Intelligence	LPA:	Long Period Average
ASAR:	Age Specific Attendance Rate	MDM:	Mid-day Meal
B.Ed:	Bachelor of Education	mnT:	Million Tonnes
BE:	Budget Estimate	MOOC:	Massive Open Online Courses
bn:	Billion	MOU:	Memorandum of Understanding
BRC:	Block Resource Centre	MSP:	Minimum Support Price
CAT:	Common Admission Test	NCERT:	National Council of Educational Research and Training
CBSE:	Central Board of Secondary Education	NEET:	National Eligibility cum Entrance Test
CRC:	Cluster Resource Centre	NEP:	New Education Policy
CSSTE:	Centrally Sponsored Scheme on Teacher Education	NHB:	Next Half Billion
CWSN:	Children with Special Needs	NIP:	National Infrastructure Pipeline
CY:	Calendar Year	NRF:	National Research Foundation
DAISY:	Digitally Accessible Information System	NROER:	National Repository of Open Educational Resources
DIET:	District Institute for Education and Training	NSQF:	National Skills Qualifications Framework
DTH:	Direct to Home	NSSO:	National Sample Survey Office
EBB:	Educationally Backward Blocks	ODL:	Open Distance Learning
ECCE:	Early Childhood Care and Education	p.a.	Per Annum
EdTech:	Educational Technology	PFCE:	Private Final Consumption Expenditure
FY:	Fiscal Year	RE:	Revised Estimate
GDP:	Gross Domestic Product	SCERT:	State Council of Educational Research and Training
GER:	Gross Enrollment Ratio	SDG:	Sustainable Development Goals
GFCE:	Government Final Consumption Expenditure	SFD:	Special Focus Districts
GFCF:	Gross Fixed Capital Formation	SHTPL:	Sorting Hat Technologies Pvt. Ltd.
GLESPL:	Great Lakes E-learning Services Pvt. Ltd.	SLSPL:	Simplilearn Solutions Pvt. Ltd.
GMAT:	Graduate Management Admission Test	SSC:	Staff Selection Commission
GoI:	Government of India	TEI:	Teacher Education Institutions
GRE:	Graduate Records Examination	TLPL:	Think and Learn Private Ltd.
GSLPL:	Grade Stack Learning Pvt. Ltd.	tn:	Trillion
HEI:	Higher Education Institutions	TTPL:	Toppr Technologies Pvt. Ltd.
IAS:	Indian Administration Services	UEPL:	Upgrad Education Pvt. Ltd.
ICSE:	Indian Certificate of Secondary Education	UPSC:	Union Public Service Commission
ICT:	Information and Communication Technology	US$:	US Dollar
IIT JEE:	Indian Institute of Technology Joint Entrance Examination	VET:	Vocational Education and Training
IMD:	India Meteorological Department	VIPL:	Vedantu Innovations Pvt. Ltd.
IMF:	International Monetary Fund		

For any information on this document, please contact:

IRR Advisory Services Private Limited
Wockhardt Towers, West Wing, Level 4, Bandra Kurla Complex, Bandra E, Mumbai – 400051. India
T +91 22 4000 1700 **F** +91 22 4000 1701 www.irradvisory.com