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Student Coding Landscape in India

The coding and programming market in India has always been a high interest sector for professionals looking for a lucrative and challenging career option. These incentives seem to have percolated to children that have shown deep interest in learning to code. In response to this need, many national and international enterprises have introduced courses that teach children how to code and become inventors of technology.

A rapidly emerging market, coding and programming is swiftly becoming a high traction sector within the Edtech space. This has only been precipitated by the nationwide lockdowns that has resulted in a rising customer adoption and emergence of new innovative service offerings. In this monograph, a nationwide outline has been presented that examines the potential, competitiveness and product offerings within this market.

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Domestic demand indicators peg the market size to be 10 mn+ students

The market is expected to be propelled by middle income group families that consistently aspire to empower their children with skills relevant to the job market in the future:

Total Addressable Market (TAM)

No. of HH in India — 248 Mn

No. of Urban HH in India — 79 Mn

No. of Urban HH in India earning > 10 LPA — 29 Mn

No. school kids from families earning > 10 LPA — 22 Mn

Coding Segmented Addressable Market (SAM)

~20 Mn Students

- 90% of parents that want their children to learn skills relevant to computing
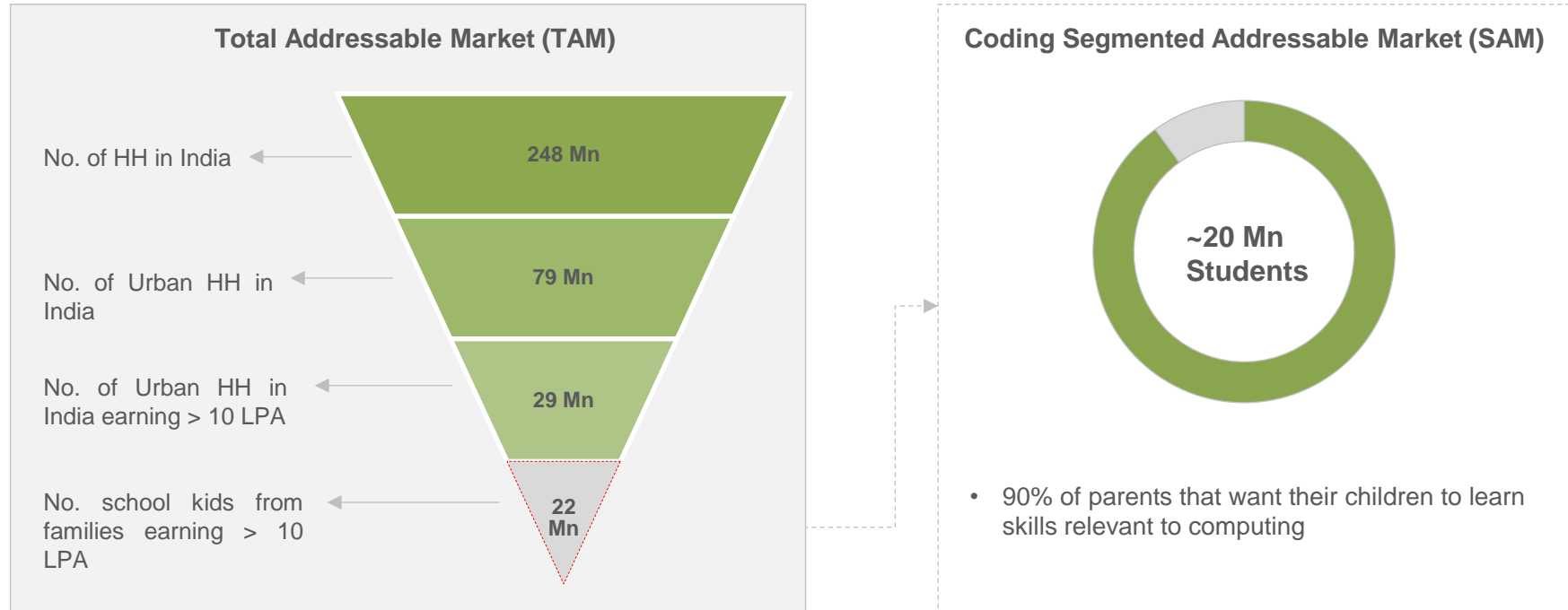
➢ The middle income group is likely to become the defining market for technology and cognitive centric learning as it is expanding the fastest amongst all income groups

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The Indian ecosystem is warming up to early years development programs

The Indian coding & programming industry is not very different from the global environment where coding centers across the country are servicing the needs of parents seeking to upskill their children for the future

Regulatory Mindset Shift:

➢ Responding to global trends, with a new National Education Policy in place, the Ministry of Education, has decided **to teach coding as a subject** to students from Class 6 onwards
➢ The Government has identified **257 schools across states** to set up Atal Tinkering Labs
➢ Assessment to shift from testing rote memorization skills to more competency-based testing of higher-order skills, such as analysis, critical thinking, and conceptual clarity

Investor Attractiveness

➢ Over the last 5 years, several start-ups have committed a portion of their investor funding into coding & programming related efforts amounting to an **estimated US$ 20 mil+** and an **estimated US$2 mil** into critical thinking related efforts in last 8 years
➢ According to Franchise India Education, coding schools are one of the **most emerging franchise trends** since 2019 with foreign enterprises actively looking for partners in India to enter the market

Demand Expansion

➢ Edtech enterprises offering coding & programming courses to the audience have recently started to see great traction across **Tier-II and Tier-III cities in India**, like Balangir in Odisha, Sikar in Rajasthan, among others, with 50% of their consumers now coming from non-metros
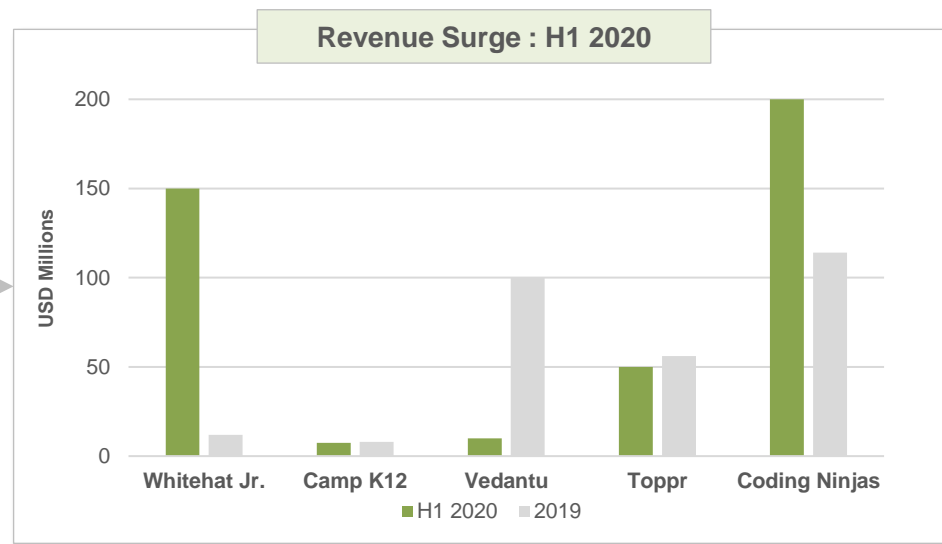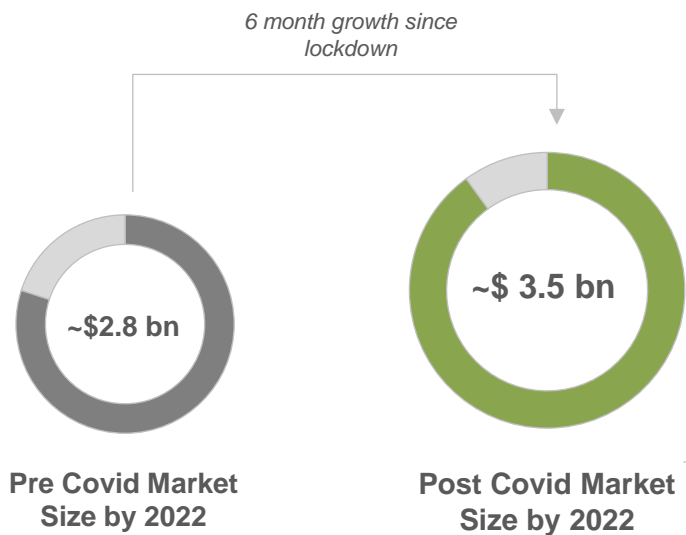
Market Response

➢ First movers in the segment have reported staggering market reception **with over 7 lakh student sign on(s)** in less than a year of operation
➢ HOTS recent startup beGalileo has reported 100% growth year on year

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Revenue bookings have skyrocketed since COVID triggered lockdowns

The boom in the industry is reflected by the spike in revenues noted by leading service providers as enumerated below

6 month growth since lockdown

~$2.8 bn

Pre Covid Market Size by 2022

~$ 3.5 bn

Post Covid Market Size by 2022

Revenue Surge : H1 2020

USD Millions

| | Whitehat Jr. | Camp K12 | Vedantu | Toppr | Coding Ninjas |

■ H1 2020   ■ 2019

Key Takeaways:

➢ Segment leaders have already outdone their revenues for 2019 over a period of just 6 months thereby becoming one of the largest growing sectors within Edtech

➢ The booming demand in the sector in fact prompted large service providers to pivot into online coding for children owing to which they have already billed at least 10% of their ARR's

H1 2020 – Jan'20 to Jul'20. For further details, refer appendix.

Source: NASSCOM

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User enrollments are up by 100% on average

The fundamental acceptance of online learning has brought about an unprecedented spike is user base of leading service providers

6 month growth since lockdown (K12)

~40 mn

Pre Covid Subscribers

~ 90 mn

Post Covid Subscribers

Registered User Growth : H1 2020

Chart: % Growth in User Base — H1 2020
- Whitehat Jr.: 100%
- Camp K12: 60%
- Vedantu: 220%
- Toppr: 100%
- Coding Ninjas: 150%
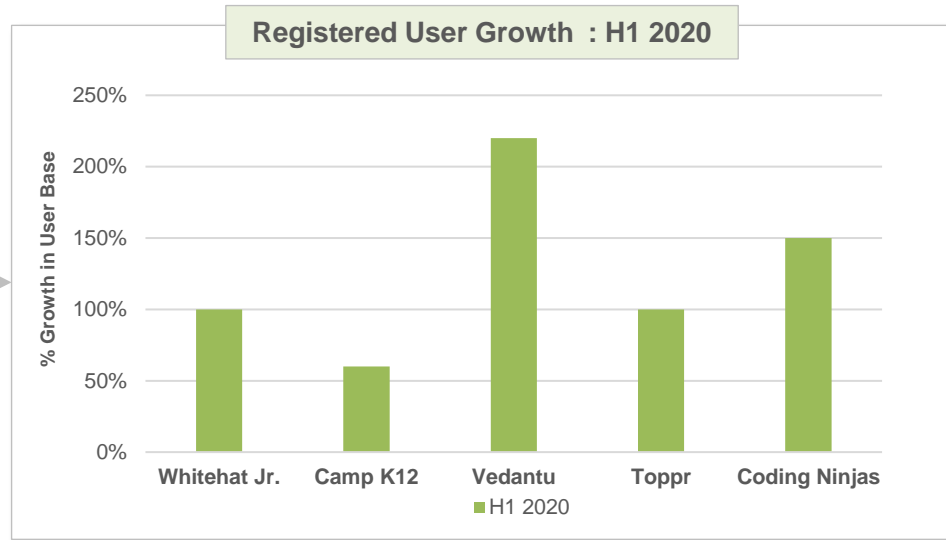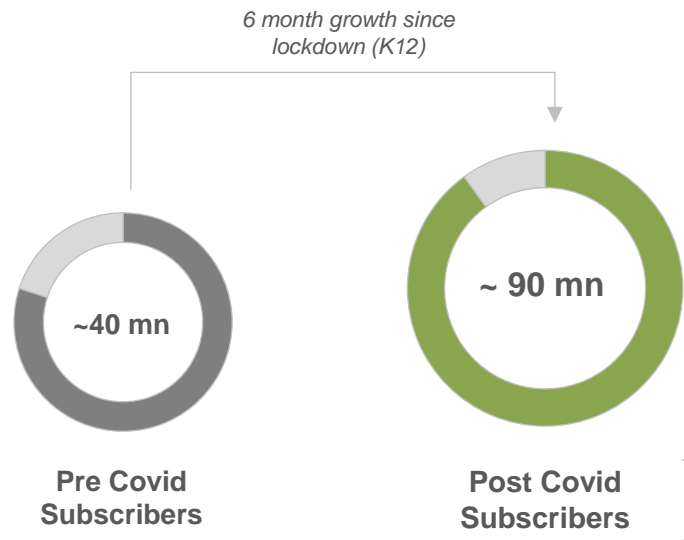
Key Takeaways:

➢ The changing customer mindset has resulted in an exponential increase in registrations estimated at a 2x month on month increment for segment leaders

➢ The market is expected to expand even further as a large portion of fresh enrollments have been reported to be from tier 2 & tier 3 cities outperforming even the metros

H1 2020 – Jan'20 to Jul'20. For further details, refer appendix.

Source: NASSCOM

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Even component resellers have pivoted to become intermittent service providers

The Indian, 'Coding For Kids' environment has seen exponential interest amidst the Startups over the last 5 years and has enough potential to be at the forefront of Indian Edtech by 2025:

Noteworthy Players

Hackberry

avishkaar
Make! We Can

CODESHALA

Eupheus Learning

RoboGenius
India's Premier Coding Classes

MINDCHAMP

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- Seeking to teach kids in the most innovative ways possible, almost all players in the segment offer both **text based** as well as **block based** coding courses to their learners.

- Servicing the growing needs in India are a great number of coding and programming centers in Bengaluru, Delhi, Mumbai, Gurugram, and Chandigarh. Most of these places use a **common pool of tools and platforms** - such as Code Studio, LightBot, Blockly or MIT's Scratch.

- While most enterprises provide an application or browser based curriculum, the recent introduction of **companion personable robots** that not only teach programming to the children but also respond to emotional cues could prove to be a gamechanger in the future.

- There are both online/offline and blended learning models that drive the industry at present. Vendors in the segment have also **established D2C channels** of distribution and provide DIY kits to children and parents to test their code's on electronically controlled robots.

- Artificial intelligence and Machine learning are becoming increasingly popular amongst parents of young children that are now ready to **send even their toddlers** to learn coding in fun and non-intimidating ways.

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Segment leaders offer competitive services at diverse price points

India is home to several prominent players focused on coding & programming for children of all ages. The most successful of these have been detailed below:

	WhiteHat Jr	CAMPK12	Vedantu Super Coders	toppr codr	Leap Learner
Founded	2018	2010	2020	2020	2020
Grades	Ist - XIIth	Ist - XIIth	Ist - VIIIth	Ist - XIIth	Ist - VIth
Programming Languages	• Python • Java • HTML	• Python • HTML • Java	• Python • HTML • Java	• Python • HTML • CSS	• Python • HTML • CSS
Application Areas	• App Development • Web Development • Game Design • AI Based Design • Space Tech • UI/UX Design • Data Analytics	• App Development • Web Development • AI Based Design • Game Development • AR/VR Development • Machine Learning • Coding for 3D Design	• App Development • Web Development • UI/UX Design • Internet of Things (IoT) • Chatbot Coding • AI Based Design • Game Design	• App Development • Web Development • AI Based Design • Machine Learning • Space Tech • UI/UX Design • Game Development	• App Development • Web Development • Data Sciences • Machine Learning • API & Modules • Autonomous Robotics

AI: Artificial Intelligence

Source: YourStory, Company Websites

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Program depths and perceived diversities are a key differentiator

India is home to several prominent players focused on coding & programming for children of all ages. The most successful of these have been detailed below:

	Coding Ninjas	CodeMonkey	logiscool	Codevidhya	CODINGZEN
Founded	2016	2014	2014	2016	-NA-
Grades	IIIrd - VIIIth	K - IXth	Ist — XIIth	Ist - Xth	Ist - XIIth
Programming Languages	• Python • HTML • CSS	• Python • CoffeeScript	• Stage Script • C++ • HTML	• Python • Scratch • Java • HTML	• Python • Unity 3D • HTML • C++
Application Areas	• App Development • Web Development • Game Design • Animations • Chatbot Design • Machine Learning	• Game Design • Chatbot Coding	• Game Development • App Development • Minecraft Mods • Web Design	• App Development • Web Development • Game Development	• App Development • Web Development • 3D Printing • Robotics • Data Analytics • AI Based Design • Machine Learning

AI: Artificial Intelligence

Source: YourStory, Company Websites

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Summary & Observations

Looking at the rapidly evolving landscape, the coding and programming market in India is well positioned for exponential growth in the coming years. Specifically

- The large market opportunity has made the landscape fairly competitive however the **homogenous nature of services** creates an avenue for truly revolutionary new products to establish a stronghold and scale rapidly

- The **rising international investor interest** has also propelled the sector exponentially leading to fast paced innovation and competitive product pricing within the segment.

- The growing customer base and COVID triggered Edtech adoption in general has lead to a **monumental shift in customer mindset** that now accepts digital mediums as an enabler in the practice of cognitive development

- Indian middle income group, have always been aspirational and have international dreams for their children. This has become a **strong pillar for companies marketing** and communication strategies leading to large scale student enrolments

- While early adopters were initially noted in Tier I cities, the changing dynamic has now led to **rising demand across Tier II & III cities** with over 30% of new sign-up's emerging from non metro towns thereby expanding the scope of the opportunity

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Unique perspectives on the Indian education sector

Monograph: June 2021

Thank You

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