Jobs, Skills and Education

FUTURE OF JOBS

WHO IS BEING EDUCATED FOR THE FUTURE ECONOMY?

(Probably Not You!)

JOBS AT RISK OF AUTOMATION

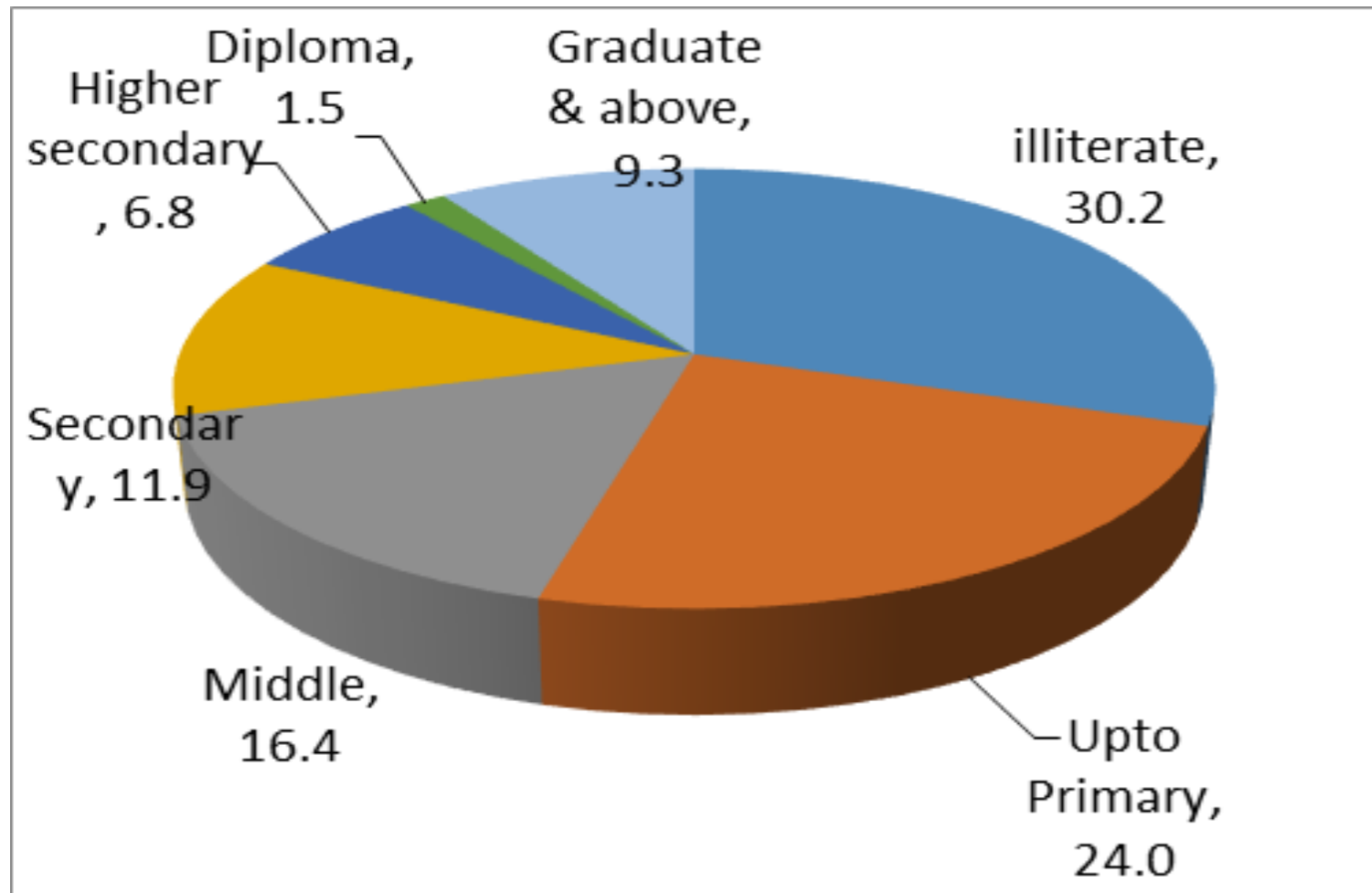| POSITION	PROBABILITY OF AUTOMATION
Loan officers	98%
Receptionists/clerks	96%
Paralegals/legal assistants	94%
Retail salespersons	92%
Taxi drivers/chauffeurs	89%
Security guards	84%
Cooks/fast food	81%
Bartenders	77%
Personal financial advisers	58%
Computer programmers	48%
Reporters/correspondents	11%
Musicians/singers	7.4%
Lawyers	3.5%
Elementary school teachers	0.4%
Physicians/surgeons	0.4%

Scenario in India

India: Youngest workforce in world with median age of 27 years. vis a vis China's 37 years.

Largest Human Resource Capital of the world.

Age Above	1971	2011	2022
0-14 yrs.	42.1%	30.7%	24.5%
15-59 Yrs.	52.8%	60.3%	65.9%
60 & above yrs.	5.2%	8.9%	10.3%

High ratio of working to dependent population- Demographic Dividend

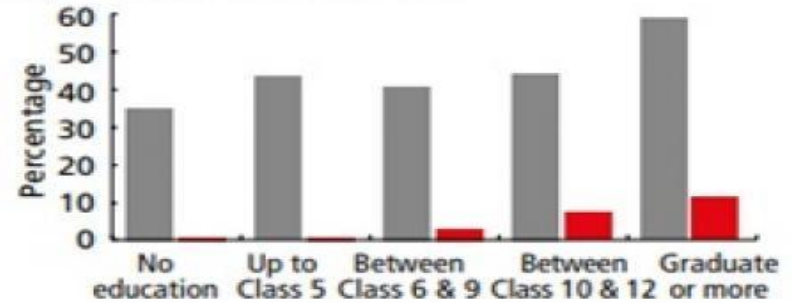# Education Profile of Labour Force in India (%)

Educated most unemployed | Unemployment rate among graduates was 13.17 per cent in
September-December 2018, up from 10.39 per cent in May-August 2017
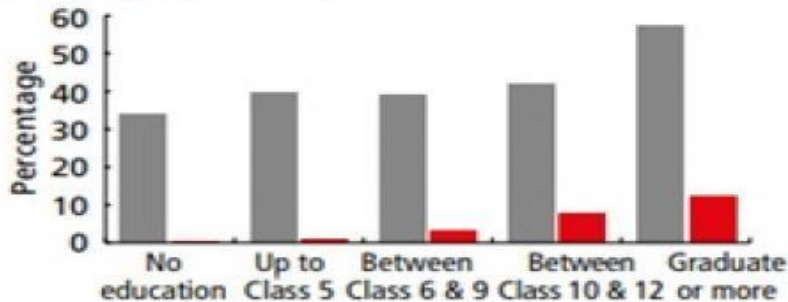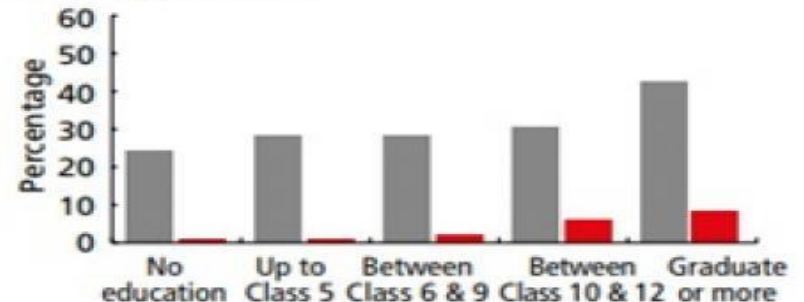
■ LPR %   ■ UER %

May-August 2017

September-December 2017

January-April 2018
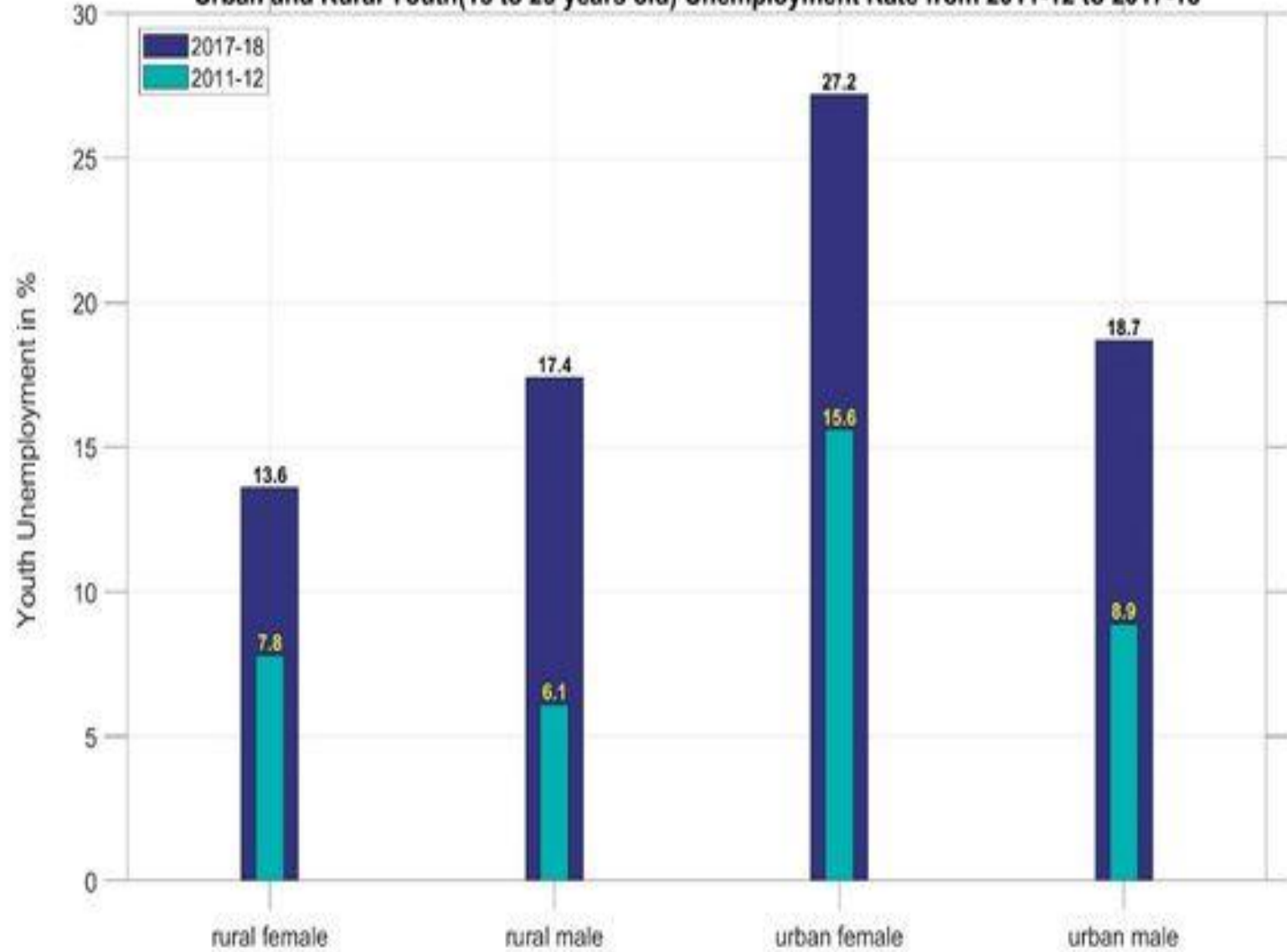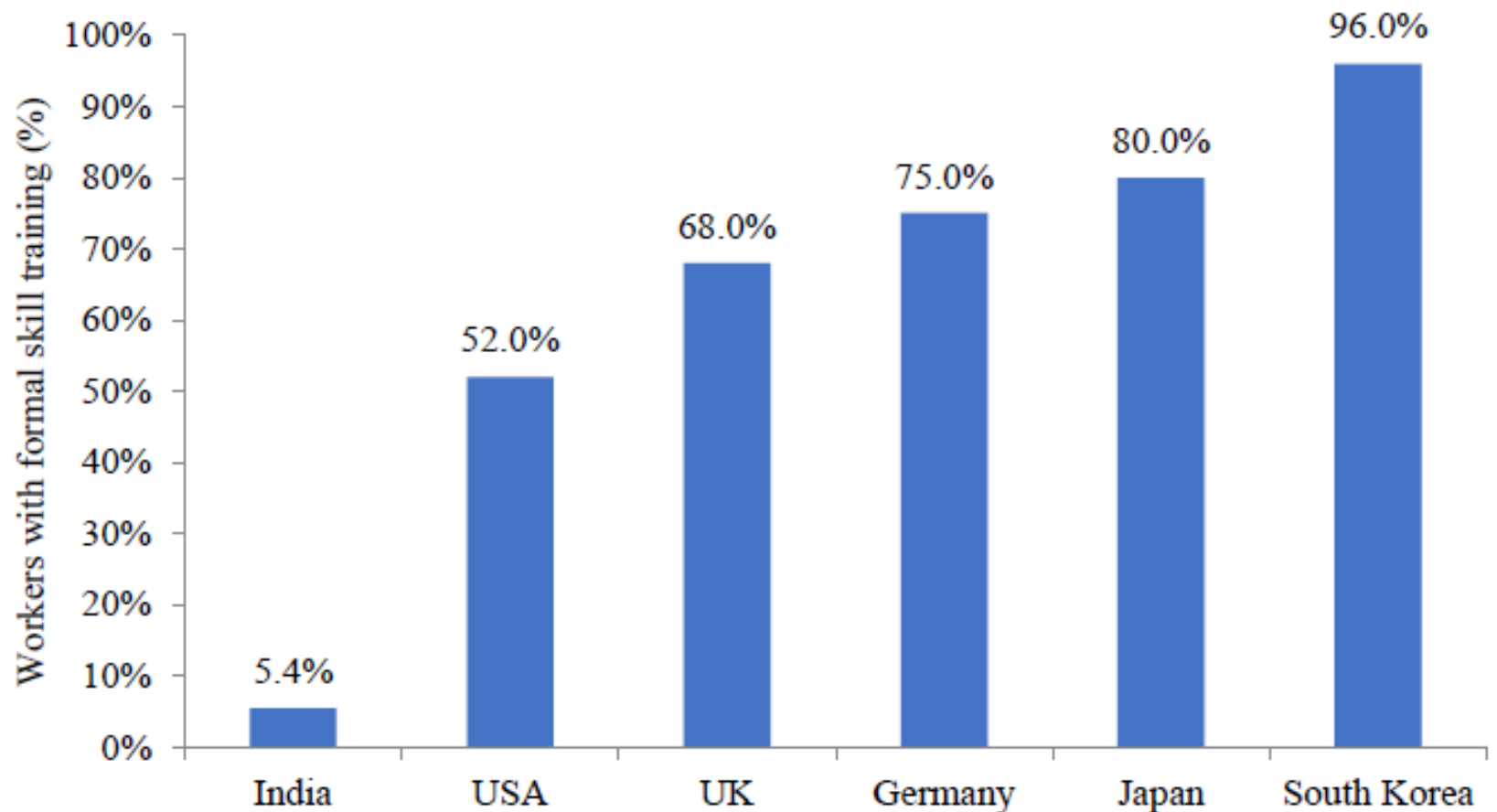

May-August 2018

September-December 2018

Urban and Rural Youth(15 to 29 years old) Unemployment Rate from 2011-12 to 2017-18

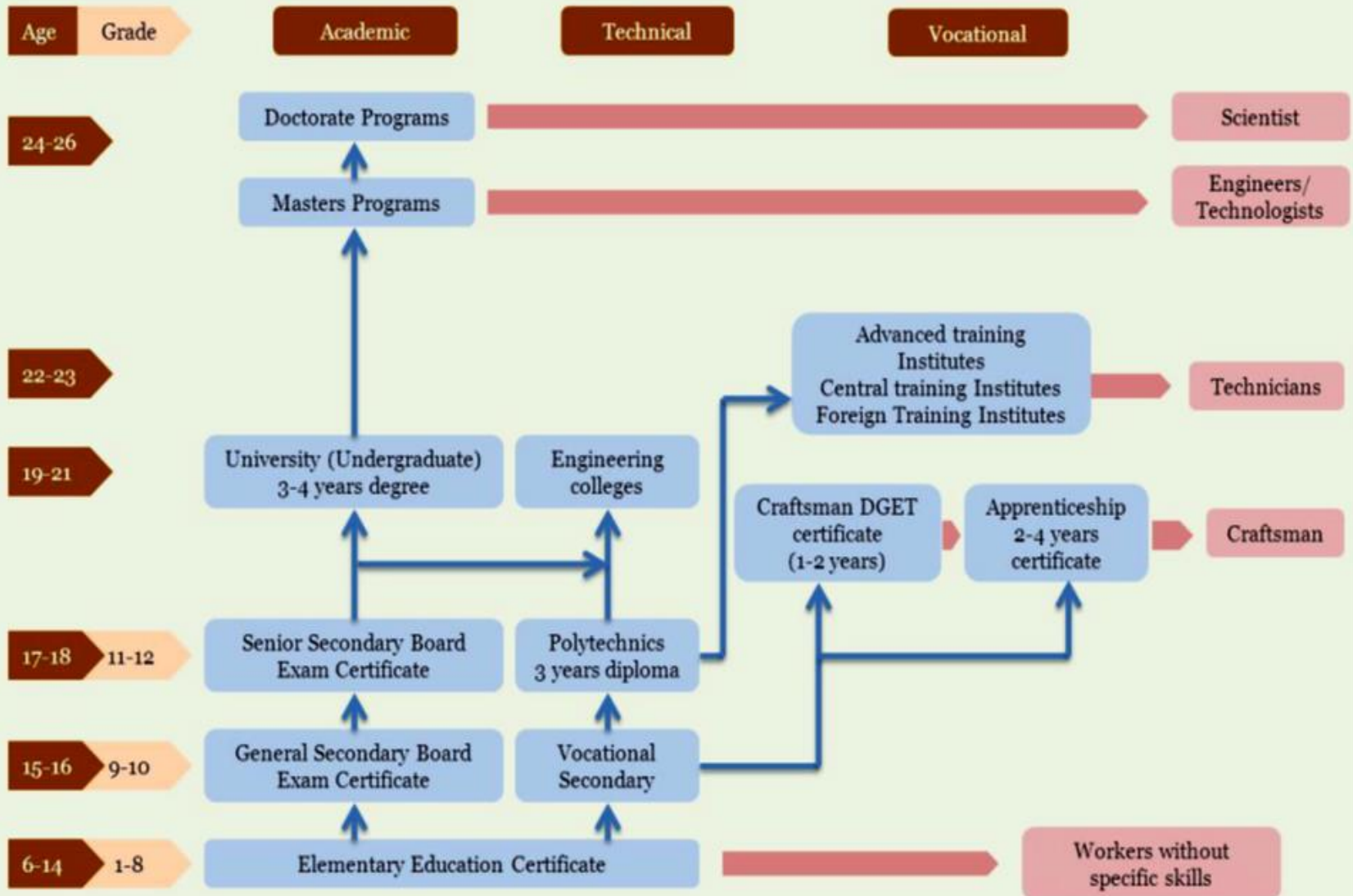# Workforce that has undergone formal skill training

Source: National Skill Development Policy

India's Education and Skill Development Structure

Age	Grade	Academic	Technical	Vocational

24-26 — Doctorate Programs → Scientist

Masters Programs → Engineers/Technologists

22-23 — Advanced training Institutes / Central training Institutes / Foreign Training Institutes → Technicians

19-21 — University (Undergraduate) 3-4 years degree | Engineering colleges

Craftsman DGET certificate (1-2 years) | Apprenticeship 2-4 years certificate → Craftsman

17-18 | **11-12** — Senior Secondary Board Exam Certificate | Polytechnics 3 years diploma

15-16 | **9-10** — General Secondary Board Exam Certificate | Vocational Secondary

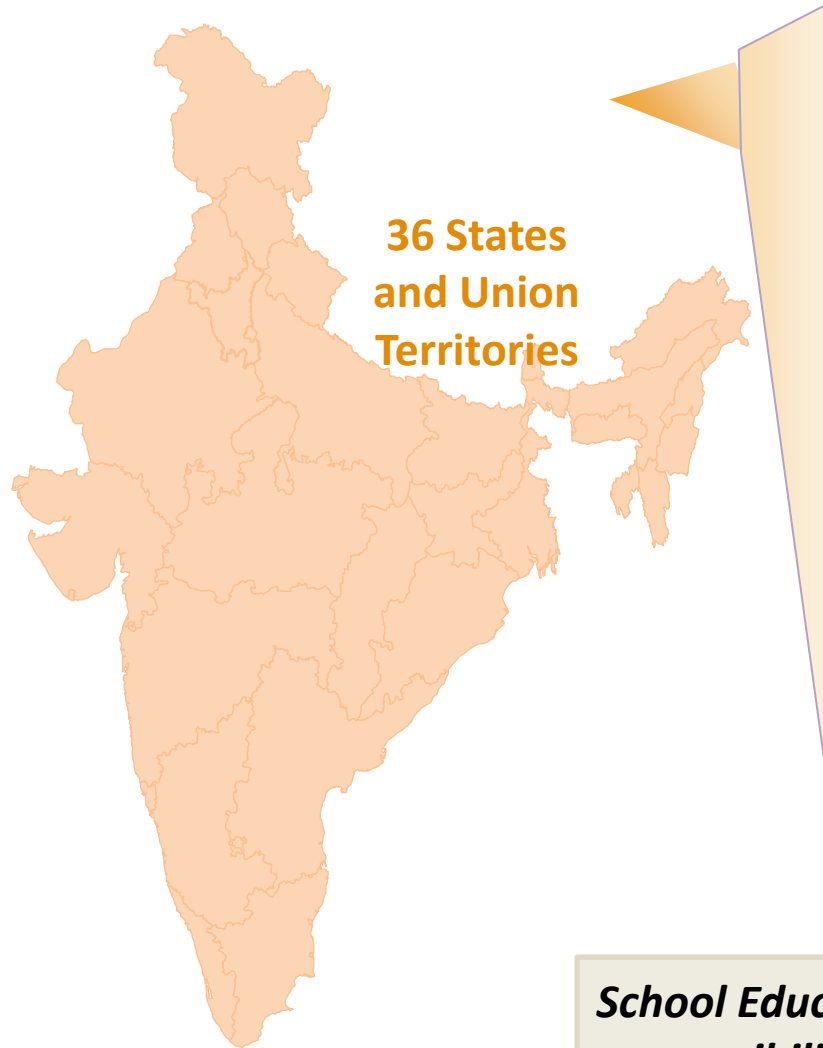**6-14** | **1-8** — Elementary Education Certificate → Workers without specific skills

Skills development has a long way to go in India, we all have to collectively take it forward.

SKILLING SCENARIO IN INDIA

Overview of India's Education Sector

36 States and Union Territories

Rapidly growing economy with a very young population…

- Population: **1.32 BN**[1], with ~**54%** of the population below 25 years of age[2]
- GDP: **7th highest** in the world with a **7.1%** growth rate[3]
- Average per capita income: USD ~**6,500** (PPP)[3]
- Literacy Rate: **73%**[4]

…with the world's largest school education system

- **1.52 MN** schools[5]
- **260 MN** students (~200 MN students enrolled in elementary grades)[5]
- **8.7 MN** teachers[5]

School Education is a concurrent subject with joint responsibility of the Centre and the State government

1. World Bank (2016); 2. Census of India 3. World Bank (2016); 4. MHRD Educational S
5. U-DISE 2015-16

India's Education Story: What has happened?

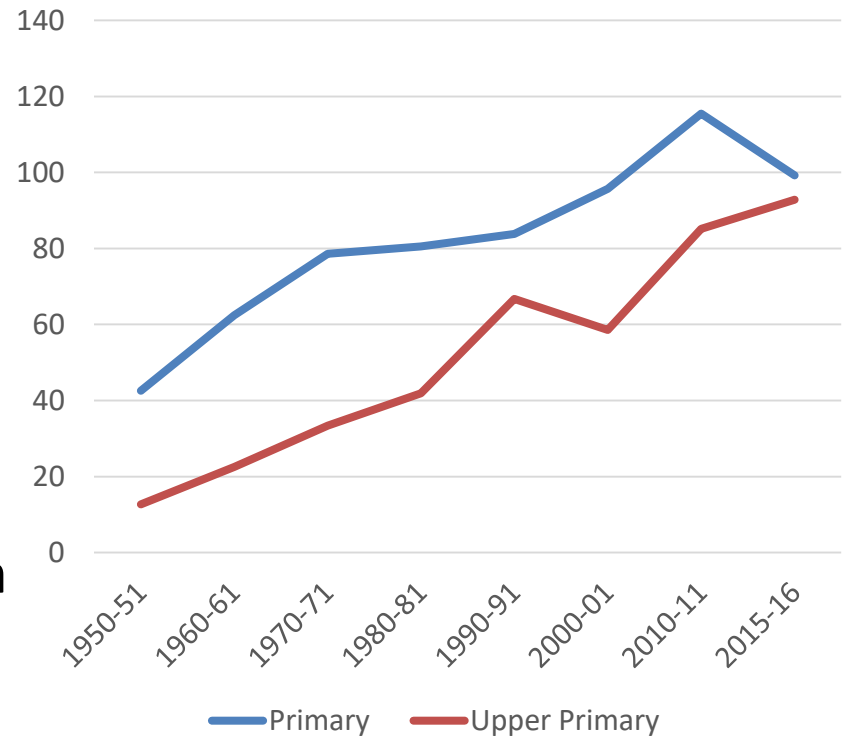There has been significant improvement in enrolment and key inputs over the last few decades

☐ **Enrolment:**

Increasing enrolment with **~99%** Gross Enrolment Ratio (GER) at primary level and **~93%** upper primary GER (2015-16)[1]

☐ **Human Resource:**

Pupil-Teacher Ratio reduced from **36** in 2005-06 to **24** in 2015-16[2]

Gross Enrolment Ratio trends

Legend: Primary, Upper Primary

X-axis: 1950-51, 1960-61, 1970-71, 1980-81, 1990-91, 2000-01, 2010-11, 2015-16
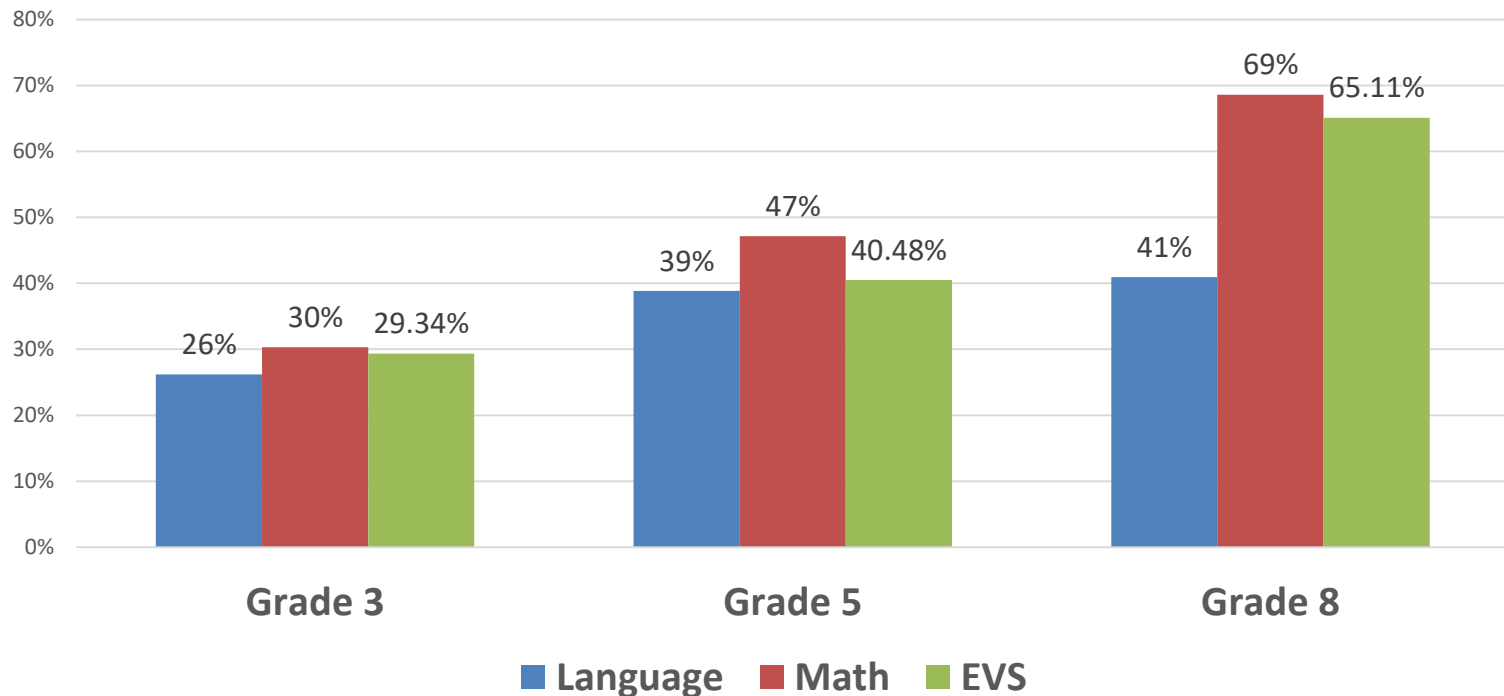
Y-axis: 0 to 140

1. The Gross Enrolment Ratio (GER) for a class-group is the ratio of the number of persons in t' of persons in the corresponding official age-group. Source: 1.MHRD Educational Statistics at a
2. U-DISE 2015-16

India's Education Story: Learning outcomes?

According to NAS 2017 results, a significant % of students are scoring <50% marks

Percentage of students scoring <50% marks by grade and subject (NAS 2017)

	Language	Math	EVS
Grade 3	26%	30%	29.34%
Grade 5	39%	47%	40.48%
Grade 8	41%	69%	65.11%

Source: National Achievement Survey, 2017

New Education Policy 2019-I

- Early childhood care and education (**ECCE**) as part of the Foundational stage of schooling.
- Creating **School Complexes** to share resources
- **Teacher Management** – Not to be deployed for non-teaching activities during school hours
- **Curriculum** & Pedagogy-
  - Reduce curriculum content to enhance essential learning and critical thinking; Flexibility in course choices
- National Mission on Education through **ICT**
- **Education Management** – Policymaking, Operations and Regulation to be separated

New Education Policy 2019-II

- **Multiple exit and entry options** for students from secondary stage till UG/PG/Research
- Integration of **vocational education** in all educational institutions
- Integrate humanities and arts with Science, Technology, Engineering, and Mathematics
- Institutional Framework for Education
  - National Education Commission(NEC) with PM as Chair
- Focus on high-quality research
  - National Research Foundation
- Central Educational Statistics Division (CESD) as an independent autonomous entity within NIEPA

Groups Discussions at Kevadia

- **Future of Jobs**

- **Rethinking Education**

- **4th Industrial Revolution Skills**

- **Re-engineering government**