Indo–Finnish Collaboration in Education & Science
Jarawa tribe, Andaman Islands

Garo tribe, Meghalaya

Sikh devotees

A woman from the Kalbeliya tribe in Rajasthan

Kathakali dance from Kerala

Buddhist monk in Leh

Saddhu

Orissa tribes

Ganga aarti in Varanasi
Facts about India

Population: 1.4 billion

Languages: more than 19,000 languages or dialects, 22 constitutional languages, Hindi and English spoken widely

Political system: Federal Parliamentary Democratic Republic

Current Government: Bharatiya Janata Party (BJP) since 2014

Religions: Hinduism, Islam, Buddhism, Jainism, Sikhism and Christianity among others
India’s Young Population

• Around 50% of Indians are under 25 years old

• A demographic window of opportunity, “youth bulge” that will last till 2025

• According to UNFPA projections, India will continue to have one of the youngest populations in the world until 2030
Economy of India

**GDP:** US$3.47 trillion, $2,466 per Capita (World Bank, 2022)

**GDP of other BRIC countries (2022):**

- Brazil: $1.89 trillion
- Russia: $1.70 trillion
- China: $18.32 trillion

**Economic growth:** 6.8% (OECD’s 2022-2023 estimate)
Main Industries in India

Iron & Steel
Textiles
Jute
Sugar
Cement
Paper

Petrochemical
Automobile
Information Technology (IT)
Banking & Insurance
Distribution of Workforce Across Sectors
THE INDIAN EDUCATION SYSTEM
**Education in India – Key Statistics**

**Gross Enrolment Ratio (2020)**
- Primary (6-10 yo): **99.9%**
- Secondary (11-17 yo): **75.5%**
- Tertiary (18-23 yo): **29.5%**

**School life expectancy (2020)**
- Males: **11.8 years**
- Females: **11.9 years**

**Literacy rate (over 15 yo):** **74.4%** (2018)
K-12 Education in India

- 1.49 million schools
- Over 250 million enrolled students

School ownership (UNESCO 2021)
- 67% government
- 26% private
- 3% quasi-government

Diagram:
- Kindergarten
- Primary
- Secondary
- High school
- Pre-University

- State board 96%
- CBSE 1%
- CISCE 0.1%
- Unrecognized 2%

Affiliated with
Ministry of Education

- Looks after education as a whole in India
- Two sub-departments
  1. Department of School Education and Literacy
  2. Department of Higher Education
Indian Basic Education – Key Needs & Challenges

• Gender disparity

• Regional disparity – need for better facilities for rural areas

• Public / private disparity

• Teacher quality (related to salaries, respect, education & training)
# National Education Policy 2020

Universalization of Education from pre-school to secondary level with 100% GER in school education by 2030

<table>
<thead>
<tr>
<th>GER in higher education to be raised to 50% by 2035; 3.5 crore seats to be added in higher education</th>
<th>NEP 2020 will bring 2 crore out of school children back into the main stream</th>
<th>New 5+3+3+4 school curriculum with 12 years of schooling and 3 years of Anganwadi/Pre-schooling</th>
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<tbody>
<tr>
<td>No rigid separation between academic streams, extracurricular, vocational streams in schools</td>
<td>Vocational Education to start from Class 6 with Internships</td>
<td>Teaching upto at least Grade 5 to be in mother tongue/regional language</td>
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</tbody>
</table>
NEP2020 and the Union Budget 22-23

- Education budget increased by 11.9% compared to the previous year – but mostly reversing budget cuts of the past couple of years
- 3.1% of GDP to education (NEP goal is 6%)
- Focus on digital education, improving employment skills and closing learning gap caused by the pandemic
- Despite progress, NEP vision remains mostly aspirational
Impact of COVID-19

• Many children could not access online learning – families could not afford devices and/or lack of reliable internet connection

• Only 8% of rural students and 24% of urban students studied online regularly

• Increase in school dropouts to 4.6% (pre-pandemic 1.4%)
HIGHER AND VOCATIONAL EDUCATION IN INDIA
The Indian Higher Education System

- About 50% of India’s population is under 25; by 2030 around 140 million people will be in the higher education age
- 3rd largest higher education system in world – 37.4 million students
- Over 1000 universities and over 40,000 colleges
Regulatory Framework of Higher Education

Current system

- Regulated by the University Grants Commission (UGC) and 14 professional councils such as the All India Council of Technical Education (AICTE), the Medical Council of India (MCI) and the Bar Council of India

NEP2020 suggested reform

- A single regulator for higher education (excluding legal and medical)
Universities

- **Central universities**: funded by the Central Government
- **State universities**: funded by State Governments
- **Deemed universities**: institutions recognised by government to have status equal to that of universities
- **Private universities**: sometimes subsidised by government
- **Institutes of National Importance**: top-tier universities outside normal regulatory system
Other Higher Education Institutions

- **Colleges**: affiliated to a university, can be public or private

- **Standalone institutes**: not affiliated to a university, award certificates and diplomas
Global Rankings of Indian Universities

QS University Ranking 2022

177 IIT Bombay
185 IIT Delhi
186 Indian Institute of Science (IISC)
255 IIT Madras
277 IIT Kanpur
Global Rankings of Indian Universities

Times Higher Education World University Rankings 2022

301-350 IISc, IIT Ropar

351-400 JSS Academy of Higher Education and Research

401-500 IIT Indore

501-600 Alagappa University, Thapar Institute of Engineering and Technology
Global Rankings of Indian Universities

Academic Ranking of World Universities (Shanghai Ranking) 2022

401-500 IISc

601-700 University of Calcutta

701-800 Banaras Hindu University, IIT Delhi, IIT Kharagpur, IIT Madras, Jawaharlal Nehru University, University of Delhi

801-900 All India Institute of Medical Sciences, Vellore Institute of Technology
Vocational Education in India – Challenges

- Skill education not embedded in general education
- Skill education is not aspirational
- The skilling capacity of the country remains inadequate, both in terms of quantity and quality
Focus Areas for Vocational education

IT
Retail
Media
Healthcare
Green jobs
Apparel
Food Processing
Beauty & Wellness
Tourism
Agriculture
Vocational Education in India – Challenges

• Number of skilling centers and their capacity is far below target
• Placement rates of the existing centers poor
• Employability after training: only 18% of students undergoing vocational education courses get jobs
• Only 32% of the National Skill Development Corporation (NSDC) certified workers were employed after 1-2 years of training
Possibilities for Collaboration

- Improvement of guidelines and processes
- Digital learning innovations in VET
- Development of standards & curriculum for future skills
- Market analysis and skill gap assessments
Possibilities for Collaboration

- Capacity building workshops for trainers and assessors
- Student exchange programs for upskilling Indian youth
- Joint certification programs for global labour demand
Indian Education Diaspora

- 277,000 outbound higher education students every year
- Main target countries Canada, USA, UK, Germany and Australia
- Now diversifying to other destinations too
- Factors influencing study destination decision: quality of education, research funding, affordability
- Roughly 65% of Indian students return after studying abroad
SCIENCE AND INNOVATION
Indian Science and Innovation

The history of Indian science and technology begins from the Indus Valley Civilization

Post 1947 Independence focus

- Automobile engineering
- Information technology
- Communications
- Space, polar, and nuclear sciences
Indian Science & Innovation

Nobel Prize winners from India

• C. V. Raman
• Har Gobind Khorana
• Rabindranath Tagore
• Subrahmanyan Chandrasekhar

Rabindranath Tagore, a Bengali poet, writer, musician and artist
Indian Science & Innovation

Key institutes

Indian Institutes of Technology (IITs)
Indian Institute of Science (IISC)
All India Institutes of Medical Sciences (AIIMS)
Tata Institute of Fundamental Research (TIFR)
Birla Institute of Technology and Science (BITS)
Indian Science & Innovation – Funding

Government uses **0.6-0.7% of GDP** for scientific research funding

**Key funders**

- Department of Science and Technology (DST)
- Department of Biotechnology (DBT)
- All India Council for Technical Education (AICTE)
- Council of Scientific and Industrial Research (CSIR)
- Department of Ayurveda, Yoga and Naturopathy
National S&T Missions

34 National Missions in various domains, like Green India, Digital India

- Waste to Wealth
- Quantum Frontier
- Supercomputing
- Biodiversity
- Biopharma
- AI
- Clean Ganga
Indian Science and Technology

Big Science Infra policies

• The Square Kilometer Array (radio telescope)

• International Thermonuclear Experimental Reactor

• An International Facility for Antiproton and Iron Research
Science, Technology and Innovation Policy 2020

• Collaboration between Office of the Principal Scientific Adviser to the Government of India (Office of PSA) and the Department of Science and Technology (DST)

• Decentralized, bottom-up and inclusive design process

• Goal: larger socio-economic welfare
R&D in Indian Industry

Biggest R&D investing companies

TATA
Wipro
Infosys
Tech Mahindra
R&D in Indian Industry

Key development areas

6G
Internet of things
Car batteries
Unmanned driving
Sustainability Research
Healthcare
Corporate Social Responsibility Programmes

• First country to make corporate social responsibility (CSR) mandatory in 2014

• Businesses can invest their profits in e.g. education, poverty, gender equality

• For large companies: net worth of US $70 million or more

• Requirement to spend 2% of net profits on CSR
Where is India Inc.’s CSR money going?

NOTE: The size of the bubble is representative of the number of people below poverty line and the colour represents the poverty rate in the region.

Source: Ministry of Corporate Affairs, Reserve Bank of India, Census 2011, Sattva Analysis

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INDO-FINNISH COLLABORATION
Finland and India: 74 Years of Diplomatic Ties

Most recent / significant high-level meetings:

• 2019 Minister of External Affairs Subrahmanyam Jaishankar visit to Finland

• 2019 Minister for Foreign Affairs Pekka Haavisto’s and Minister of Labour Timo Harakka’s visits to India

• 2021 Prime Ministers’ Virtual Meeting – Joint Declaration

Timo Harakka and Union MoS Culture and Tourism Prahlad Singh Patel after signing an MoU on tourism cooperation, in New Delhi on Nov 21, 2019
Finland and India: 74 Years of Diplomatic Ties

Most recent / significant high-level meetings:

• 2022 Minister of Economy Mika Lintilä visit to India

• 2022 Minister Science and Culture Petri Honkonen visit to India

• 2022 Minister of Labour Tuula Haatainen visit to India

• 2023 Minister for Foreign Affairs Ville Skinnari visit to India

Timo Harakka and Union MoS Culture and Tourism Prahlad Singh Patel after signing an MoU on tourism cooperation, in New Delhi on Nov 21, 2019
Indo-Finnish Collaboration in Education

Prime Minister’s Joint Declaration 2021 (S&T Commission)

- Digitalisation Partnership
  - 5-6G, AI, Quantum Technology (MoST-DST, MeitY-CDAC)
- Sustainability Partnership
  - Climate change, Atmospheric Research, Energy
Indo-Finnish Collaboration in Education

High-level dialogue on Education

• OKM-OPH - MoE-NCERT : Joint Working Committee
• Delhi Government
• Kerala Government
• Tamil Nadu Government
Indo-Finnish Collaboration in Education

India – Finland Collaboration in Research and Education (FICORE)
• Aalto – IITB coordinate

Global Innovation Network on Teaching and Learning (GINTL)
• JyU coordinates (NCERT, Delhi, Kerala, UNESCO India, Nordic Center India, Tata Steel 1000 Schools CSR Programme)
Future opportunities – Education

• Early Childhood Education & Care
• Teacher in-service training
• Education Research
• Learning Assessment
• STEM Education
• EdTech
Future opportunities – Higher Education

Traditional
• Project based
• Exchange Programs

Partnerships
• Joint courses, degrees
• Talent mobility schemes

Transnational Education
Joint Labs, Campuses
Future opportunities – Higher Education

• Talent Boost (Study and Work in Finland) Campaigns 2020-23
  1. Future is Made in Finland (online-hybrid)
  2. Student Fairs
  3. Tailored Events
    – Jointly with Study in Finland, Business Finland
    – Reached 30 million SoMe expressions
    – 17000 registrations
    – Doubled amount of applicants (900 to 1800) in 2022
Study & degree as a service

Complete service pathway

• Admission, residence permit, accommodation
• Grants & financial advice
• Cultural adaption, peer support, student clubs
• Study counselling & support
• Employment, entrepreneurship
• Start-up support & funding schemes