Lessons from the World: How India's Education Stacks Up

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What is comparative education?

A branch of social science known as comparative education examines educational systems in other nations. It looks at how these systems relate to social aspects, as well as their similarities and contrasts. Enhancing educational systems and evaluating their efficacy are other topics covered by comparative education.

The subject matter of comparative education:

- It investigates the parallels and discrepancies among national educational systems.
- It examines how educational systems are shaped by historical factors.
- It analyzes the relationship between education and broader socioeconomic variables.
- It studies the issues that educational systems encounter and potential solutions.

Education System of India:

India's educational system has undergone substantial change, particularly as a result of initiatives like the New Education Policy (NEP) 2020. Its advantages, disadvantages, and potential areas for development can be identified by contrasting it with international models like Finland, the US, China, and Germany. The state-run public education system, which is governed by the federal, state, and local governments, is principally in charge of managing education in India. Children ages 6 to 14 are entitled to free and compulsory education as a fundamental right under many sections of the Indian Constitution and the Right of Children to Free and Compulsory Education Act, 2009. In India, there are around tenfold as many public schools compared with private institutions.

Early childhood education, primary education, secondary education, further education, and vocational education are covered in India's educational system. A number of factors, including caste, gender, religion, language, handicap, and geography (rural or urban), cause major differences. India's educational system has a lot of space for improvement. Some of these areas include expanding educational opportunities, raising educational standards, improving learning outcomes and employability, encouraging innovation and technology, and a dearth of job opportunities for recent graduates. In India, half of all graduates are deemed unemployed.

Numerous national and state-level programs and policies, including the National Education Policy 2020, the Samagra Shiksha Abhiyan, and the Rashtriya Madhyamik Shiksha, exhibit an impact on it. An extensive array of partners and stakeholders, including the World Bank, UNESCO, UNICEF, academic institutions, and media outlets, also support it.

India has a large and intricate educational system. The National Council of Educational Research and Training, the University Grants Commission, and the All-India Council for Technical Education are the three national bodies responsible for it. In addition, every state has a Ministry of Education or Department that oversees schooling inside its borders. Seventy-four percent of Indians aged seven and up are literate. The literacy rate for men is 82.14%, while the percentage for women is 65.46%. Higher education in India has a Gross Enrollment Ratio (GER) of 26.30%. The GER is the proportion of individuals between the ages of 18 and 23 who are enrolled in postsecondary educational institutions. There are 37,000 colleges and over 700 universities in India.

Objectives of the Research Paper

1. To examine the Indian educational system's structure and contrast it with international models from countries like Finland, the United States, China, and Germany.
2. To analyze curriculum, pedagogy, assessment techniques, teacher preparation, and technology utilization, among other important facets of education.
3. To evaluate the Indian educational system's advantages and disadvantages in light of international best practices.

4. To investigate how policy changes, such as the National Education Policy (NEP) 2020, have affected the competitiveness and inclusivity of India's educational system**.**

BACKGROUND OF INDIAN EDUCATION SYSTEM AND EVOLUTION

From the Gurukul educational system of antiquity to the EdTech period of modern technology, India's educational system has experienced a dramatic metamorphosis over the years. This trip shows how the nation has adapted to evolving societal demands, knowledge gains, and technological developments. This article examines the development of teaching strategies in India, stressing important turning points and notable shifts from the Gurukul system to the current EdTech environment.

The Gurukul education system, an ancient form of education in India, was a residential system where students lived with their teacher in a guru's home. It focused on academic knowledge and moral and spiritual development and emphasized values like discipline, respect, and humility. The system also promoted physical fitness through activities like yoga and archery.

The British colonial rule in India significantly impacted the education system, introducing a formal, western-style model. Lord Macaulay's Minute on Education in 1835 emphasized English as the medium of instruction. Numerous schools and colleges were established, including the University of Calcutta, the University of Bombay, and the University of Madras. The colonial education system focused on rote learning, examinations, and a standardized curriculum.

Post-independence India implemented national integration and education policies to create a unified, inclusive system. The Kothari Commission recommended a typical school system. The government expanded primary and secondary education through schemes like SSA and RTE, improving infrastructure and teacher training. Emphasis was placed on science and technology, with institutions like IITs and IIMs becoming centers of excellence.

In the late 20th century, ICT integration in education led to computer education and digital literacy initiatives. The growth of private schools and coaching centers in the 1990s encouraged innovation in teaching methods and curriculum design. The internet revolutionized education with online learning platforms like Khan Academy, Coursera, and edX, making quality education accessible to a broader audience and allowing students to learn at their own pace.

India’s Education Policy Evolution

a) Pre-Independence education emphasized holistic learning, scriptures, mathematics, and philosophy, while colonial education introduced English-medium education, specifically Macaulay's system, focusing on clerical jobs.

b) Post-Independence Reforms

University Education Commission (1948-49): Focus on higher education expansion.

Kothari Commission (1964-66): Laid the foundation for the 10+2+3 education system.

National Education Policy (NEP) 1986 & revised in 1992: Emphasis on universal education, vocational training, and technology.

NEP 2020 (Current Policy):

Shift from 10+2 system to 5+3+3+4 structure.

Focus on multidisciplinary learning, skill development, digital education, and mother tongue-based learning.

2. Global Models of Education Policy Evolution

a) Finland – Student-Centric & Research-Based Education

Pre-1970s: Traditional exam-based learning.

Post-1970s Reforms:

Abolished standardized exams; focus on creativity and conceptual understanding.

Highly trained teachers (Master’s degree required for all educators).

Equal education access, free meals, and a stress-free learning environment.

b) United States – Decentralized & Choice-Based Education

Pre-1950s: Basic public education, limited access to minorities.

1965 (Elementary and Secondary Education Act): Federal funding for underprivileged students. 2001 (No Child Left Behind Act): Focus on standardized testing (controversial).

2015 (Every Student Succeeds Act): More flexibility for states, focus on holistic learning. c) China – Competitive & Examination-Based Education

Pre-1980s: State-controlled education, limited higher education access.
Gaokao System (High-stakes university entrance exam).
STEM-focused curriculum, but recent policies aim for balanced education.
Education reforms (2021): Reduced homework burden, limited private tutoring to ease student stress.

d) Germany – Dual Vocational & Academic Education
Pre-1960s: Focus on academic education.
Dual education system: Students choose between academic (Gymnasium) or vocational (Berufsschule) paths.
Strong government-industry collaboration for skilled workforce training.
Less emphasis on standardized tests, more focus on practical learning.

3. Lessons India Can Learn from Global Models
Finland: Reduce exam pressure; focus on creativity and teacher autonomy.
USA: Encourage flexibility and diverse career pathways.
China: Balance STEM with holistic education while maintaining academic excellence.
Germany: Strengthen vocational education and industry-academia collaboration.

4.Comparative Analysis: Key Takeaways for India

Aspect	India	Finland	USA	China	Germany
Education Structure	5+3+3+4 (NEP 2020)	No rigid system	K-12	Gaokao-focused	Dual-system (Academic/Vocational)
Assessment	Board exams, entrance tests	No standardized tests	SAT, ACT, state-level tests	Gaokao (high-stakes)	Practical assessments, skills-based
Teacher Training	Bachelor's degree + B.Ed.	Master's degree mandatory	Varies by state	Highly trained but exam-oriented	Strong vocational teacher training
Vocational Education	Limited focus, improving under NEP 2020	Integrated in schools	Apprenticeship-based programs	Rigid exam-focused approach	Strongest vocational system
Higher Education Access	Competitive, expensive for private colleges	Free university education	Expensive, student loans issue	Exam-based selection	Free or low-cost, apprenticeships available

KEY ASPECTS OF COMPARISON
1. Educational Attainment
India ranks 65th globally in adult schooling, Finland ensures equal access, USA has high tertiary completion, China focuses on STEM, and Germany ranks 2nd with a strong emphasis on vocational training and higher education.
2. Expenditure on Education
India's education system currently enrolls 26.52 crore school students, 4.33 crore higher education students, and 11 crores in skill programs, with rising female participation but a recent drop of 37 lakh in school enrolment; India, Finland, the US, China, and Germany are all investing significantly in education. India's per-student expenditure is limited, but recent years have seen an increase. Finland invests in high-quality resources and support for students and

teachers. The US spent $15,500 per FTE student in 2019, 38% higher than the OECD average. China has substantial investment in higher education and research.

3. Science and Engineering (S&E) Degrees Awarded

India awarded 2.5 million first university degrees in science and engineering in 2020, the highest globally. China awarded 2.0 million degrees, surpassing the U.S. in annual doctoral degrees. The U.S. awarded 900,000 degrees in 2020 and remains a leader in S&E doctoral education. Germany's high educational ranking is attributed to its strong focus on engineering and applied sciences.

4. Educational Rankings

India is enhancing its education system through ongoing reforms, while Finland is renowned for its top-ranking system. The U.S. ranks 13th globally in higher education institutions and research output. China's education system is among the top, reflecting its strong emphasis on education and recent reforms. Germany ranks 2nd globally in education, focusing on vocational training and higher education.

Policy Recommendations -

To improve classroom overcrowding, recruit more trained educators and ensure a 1:25 ratio. Conduct yearly skill-enhancement programs for teachers in STEM, AI, and digital education. Strengthen vocational training in schools by implementing a Germany-style dual education system, integrating classroom learning with industry apprenticeships.

The plan includes industry-academia partnerships, mandatory internship programs, and a National Digital Skills Initiative to enhance employability and digital literacy among high school and university students. It also includes reforms in assessment and examination systems.

The proposed changes include replacing high-stakes exams with competency-based assessments, adopting alternative evaluation methods like project-based and AI-driven tests, and revising the university entrance system to allow multiple attempts for competitive exams like JEE and NEET.

Expand E-Learning Access: Provide free digital learning resources, online courses, and AI-powered learning tools for students across India. and also invest in digital boards, interactive teaching methods, and AI-driven personalized learning. Government Partnerships with Ed-Tech Firms, collaborate with platforms like BYJU's, Unacademy, and Coursera to modernize education.

The plan aims to strengthen international collaborations, establish startup and innovation labs in universities, and address the rural-urban education gap by upgrading rural schools with infrastructure and resources, deploying mobile education units, providing scholarships and financial support for underprivileged students, and increasing girls' education initiatives. These measures include strengthening ties with global universities, establishing incubation centers in colleges, deploying mobile education units, expanding education loan schemes, and ensuring safety for girls.

CONCLUSION

India’s National Education Policy (NEP) 2020 has taken a progressive step, but successful implementation requires:

- Investment in teacher quality & infrastructure
- Reduction in exam pressure
- More vocational & industry-linked education
- Use of AI & digital technologies
- Bridging the rural-urban education gap By adopting best practices from Finland, the USA, China, and Germany, India can transform its education system to be future-ready, skill-oriented, and inclusive