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The school education system in India

An overview

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ROAD SAFETY
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Foreword

The school education system in India is the largest in the world, catering to over 260 million young people each year. Jointly managed at the national and state levels, many initiatives have been undertaken to improve access to quality schooling – particularly for those who are economically or socially disadvantaged. With thriving competition from private schools, there have been clear efforts within the government sector to offer parents and children what they most need and want: quality education leading to improved life opportunities.

This report, five years after our first overview of the education system in India, is being published at a time when India appears to be at a significant crossroads with its approach to education policy and its implementation. Since the previous report in 2014, significant changes have been made to address issues of quality and equity of provision, for example with the implementation of the Right to Education Act and the widespread adoption of new technologies and approaches to improve teachers' and learners' access to resources and content for learning.

The draft National Education Policy released in May 2019 further demonstrates an ongoing commitment to quality provision, revising a policy which was last updated in 1992. The draft includes a strong focus on teachers' continuing professional development and a push towards greater access for mother-tongue-based instruction – both areas that the British Council understands as fundamental to educational success.

In our 70 years in India, we have been privileged to work with hundreds of thousands of teachers, teacher educators, school leaders, administrators and policymakers, bringing together expert practitioners from India and the United Kingdom to support multiple programmes and initiatives seeking to improve educational outcomes. We are looking forward to continuing to build these connections to enable mutual learning and development, benefiting millions of young people from across the country.

This report will provide a useful overview of this complex system for those who are interested to learn about the structure, mechanisms and policies that ultimately drive both individual and national development.

Barbara Wickham OBE
Director India
British Council

Abbreviations

ABL	Activity-based learning
ASER	Annual Status of Education Report
ADEPTS	Advancement of Educational Performance through Teacher Support
AINET	All India Network of English Teachers
AISSCE	All India Senior School Certificate Examination
AISSE	All India Secondary School Examination
BEd	Bachelor of Education
CAIE	Cambridge Assessment International Education
CBSE	Central Board of Secondary Education
CCE	Continuous and Comprehensive Evaluation
CIET	Central Institute of Educational Technology
CISCE	Council of Indian School Certificate Examinations
COBSE	Council of Boards of School Education
DIET	District Institute of Education and Training
ECE	Early childhood education
ELTAI	English Language Teachers Association of India
EM	English medium
EMI	English medium instruction
GDP	Gross Domestic Product
HM	Hindi medium
IB	International Baccalaureate
IBO	International Baccalaureate Organisation
ICSE	Indian School Certificate Examinations
ICT	Information and Communications Technology
IGCSE	International General Certificate of Secondary Education
INSET	In-service teacher training
MEd	Master of Education
MHRD	Ministry of Human Resource Development
MOI	Medium of instruction
NCERT	National Council of Educational Research and Training
NCF	National Curriculum Framework
NCTE	National Council for Teacher Education
NDP	No Detention Policy (under RTE)
NEP	National Education Policy
NGO	Non-governmental organisation
NIEPA	National Institute of Educational Policy and Administration (also NUEPA)
NIOS	National Institute of Open Schooling
NPE	National Policy on Education

NSSO	National Sample Survey Office
NUEPA	National University of Educational Policy and Administration (also NIEPA)
PINDICS	Performance Indicators (for teacher evaluation)
RMSA	Rashtriya Madhyamik Shiksha Abhiyan
RTE	Right of Children to Free and Compulsory Education
SC	Scheduled Caste
SCERT	State Council for Educational Research and Training
SMC	School Management Committee
SSA	Sarva Shiksha Abhiyan
SSC	Secondary School (Completion) Certificate
ST	Scheduled Tribe
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund

Introduction

India, with over 1.5 million schools, over 8.7 million primary and secondary teachers and more than 260 million enrolments,[1] is home to the largest and most complex education system in the world. This report provides an overview of this system, including the following:

- key facts and figures on the school sector
- overviews of schooling at each level
- language in education policy and practice
- teacher education and evaluation
- a history of recent education policies
- main government initiatives since independence
- details of the major national and international boards of school education.

It also provides discussion of recent successes and ongoing challenges in the education sector, making it of use to readers seeking both to understand the development of education in India since independence and its future trajectory.

Immediately after independence from British rule in 1947, the Department of Education was set up under the Ministry of Human Resource Development (MHRD), with a mandate to increase both access to education and quality, leading to the first National Policy on Education in 1968. Initial expansion of the education sector was limited by India's economic growth but continued steadily until the end of the 20th century. Since committing to the Millennium Development Goals in 2000, India has made great progress towards achieving universal primary education. The World Bank reports that between 2000 and 2017, elementary school enrolment increased by more than 33 million: from 156.6 million in 2000–01 to 189.9 million in 2017–18.[2] While achievement varies greatly between India's 29 states and seven union territories, two-thirds of these have claimed to have achieved universal primary enrolment.

Two prominent initiatives of the Indian government, Sarva Shiksha Abhiyan (SSA – 'Education for All Campaign' in Hindi) in 2001 and the Right of Children to Free and Compulsory Education (RTE) Act, 2009, have promoted greater foci on issues of access, inclusivity and quality in education. The mean years of schooling of the working population (those over 25 years old) increased from 4.19 years in 2000 to 6.4 years in 2017.[3] India has also committed to the achievement of the UN Sustainable Development Goals, with the initiation of several further large-scale and ambitious programmes in recent years to help achieve these objectives.

At the time of writing, the education system in India is at a significant crossroads. A draft version of the revised National Education Policy (NEP – Ministry of Human Resource Development, 2019) has been released for comment, with expectations that it will take effect later in 2019–20. If fully implemented, the proposed policy will change the governance structure of the education system, revise the RTE Act (Ministry of Law and Justice, 2009) and impact on several other key areas. In addition, the National Council of Educational Research and Training (NCERT) has announced a comprehensive review of the 2005 National Curriculum Framework (NCF) – another initiative which has the potential to bring considerable changes to practices in schools and classrooms across the country. As far as possible, as well as providing an overview of the system as currently enacted, this report aims to highlight where proposed changes may affect current provision.

1 http://mospi.nic.in/
2 See https://www.worldbank.org/en/country/india/overview#3 and https://databank.worldbank.org/data/reports.aspx?source=2&country=IND#
3 http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/IND.pdf

This report also discusses some of the challenges faced by the Indian education system today. While mean years of schooling has greatly improved, this still lags behind those of other emerging market economies such as China (7.8 years in 2017) and Brazil (7.8 years in 2017).[4] While pupil retention rates have improved over the last ten years in both urban and rural areas,[5] dropout rates from government schools remain comparatively high (12.3 per cent at primary level in 2016[6]) and enrolment gaps from primary to secondary are matters of concern. While official and independent statistics vary, survey data from 2014 reported that over 50 per cent of 'ever-enrolled persons' did not continue their study beyond upper primary; the most common reason given for dropping out of school was engagement in economic activities for males and engagement in domestic activities for females.[7]

Disadvantaged groups continue to face greater challenges,[8] despite a number of government initiatives to reduce differences, with achievement levels lower and dropout rates higher[9] particularly for students from Scheduled Castes (SC) and Scheduled Tribes (ST) (two official indicators of disadvantaged status in India).[10] While official pupil–teacher ratios are improving (from 40:1 in 2000 to 35:1 in 2016[11]) these tend to fluctuate locally, leading to significant challenges in some contexts. Other challenges currently faced by the Indian school education system include a large urban–rural achievement gap,[12] the low school readiness of many primary learners,[13] a shortage of professionally trained teachers,[14] low learner proficiency in media of instruction[15] and overly ambitious curricula – a matter of particular concern in rural areas.[16] These challenges are compounded by the structure of the system itself, which involves both centralised and devolved elements, government, private and partly private initiatives that interact in complex ways, making it more of an organic, evolving ecosystem than a single, centrally managed operation.

4 http://hdr.undp.org
5 ASER (2019).
6 http://data.uis.unesco.org
7 www.icssrdataservice.in/datarepository/index.php/catalog/14
8 www.ncert.nic.in/departments/nie/esd/pdf/NASSummary.pdf (2015 figures)
9 https://www.thehindu.com/education/percentage-of-school-dropouts/article25909306.ece
10 Scheduled Caste (SC) and Scheduled Tribe (ST) refer to groups of people who have been historically disadvantaged due to previous and existing social structures, as recognised by the Constitution of India. A third term, 'Other Backward Castes' (OBC) is also used to denote those who are also deemed to have been disadvantaged but who are not defined as such in the Constitution.
11 https://data.worldbank.org
12 www.ncert.nic.in/departments/nie/esd/pdf/NASSummary.pdf
13 Bhattacharjea and Ramanujan (2019).
14 https://www.business-standard.com/article/economy-policy/1-in-6-elementary-school-teachers-not-professionally-trained-in-india-119013100138_1.html
15 Borah (2018).
16 Banerji (2019).

India demographics

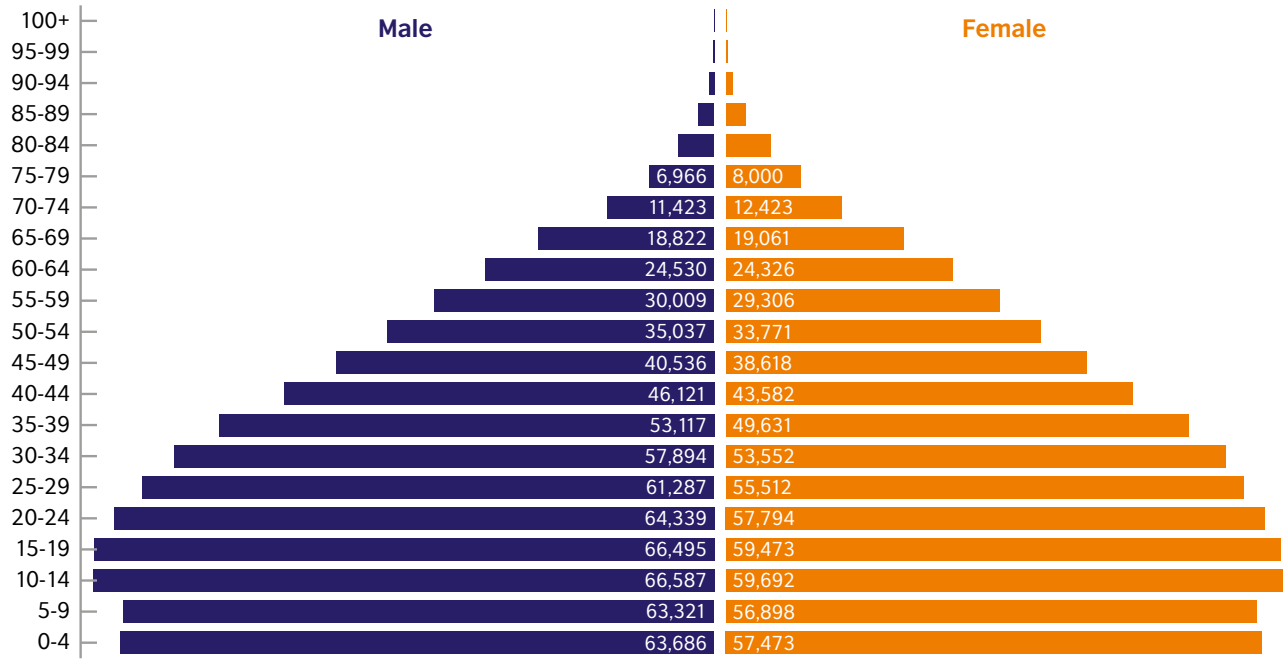
India's population in 2020 is estimated at 1.38 billion, predicted to overtake China's 1.42 billion in the near future.[17] However, due to the higher percentage of younger people, it already has the largest number of schools (over 1.5 million) and school-goers (over 260 million):

- 0–14 years: 26.6 per cent (male 194 million, female 174 million)
- 15–24 years: 17.9 per cent (male 131 million, female 117 million)
- 25–54 years: 41.1 per cent (male 294 million, female 275 million)
- 55–64 years: 7.8 per cent (male 55 million, female 54 million)
- 65 years and over: 6.6 per cent (male 43 million, female 47 million).[18]

While India is demographically one of the youngest countries in the world, evidence of declining birth rates[19] can be seen when the 0–9 age group (241 million) is compared with the 10–19 age group (252 million) – India today may therefore be at the peak of its demand for educational provision.

According to 2011 census data,[20] Uttar Pradesh is the most populous state, accounting for 17 per cent of the country's total population, followed by Maharashtra (nine per cent), Bihar (nine per cent) and West Bengal (eight per cent). The same census estimated the national literacy rate at 74 per cent, with Kerala highest (at 94 per cent) of the 20 largest states, followed by Delhi NCT (National Capital Territory – 86 per cent) and Maharashtra (82 per cent). The lowest literacy rate was reported in Bihar (64 per cent), one of several states with high rural population and low literacy rates, suggesting a correlation between these two factors (see Figure 4). These rates have increased significantly, by around 9.5 per cent since the 2001 census, when national rates were reported at almost 65 per cent overall.

Figure 1: India's changing age demographic (2020, thousands)



17 https://population.un.org
18 https://population.un.org
19 https://ourworldindata.org/indias-population-growth-will-come-to-an-end
20 http://censusindia.gov.in

Figure 2: India's 20 largest states by size (showing rural urban split): 2011 figures

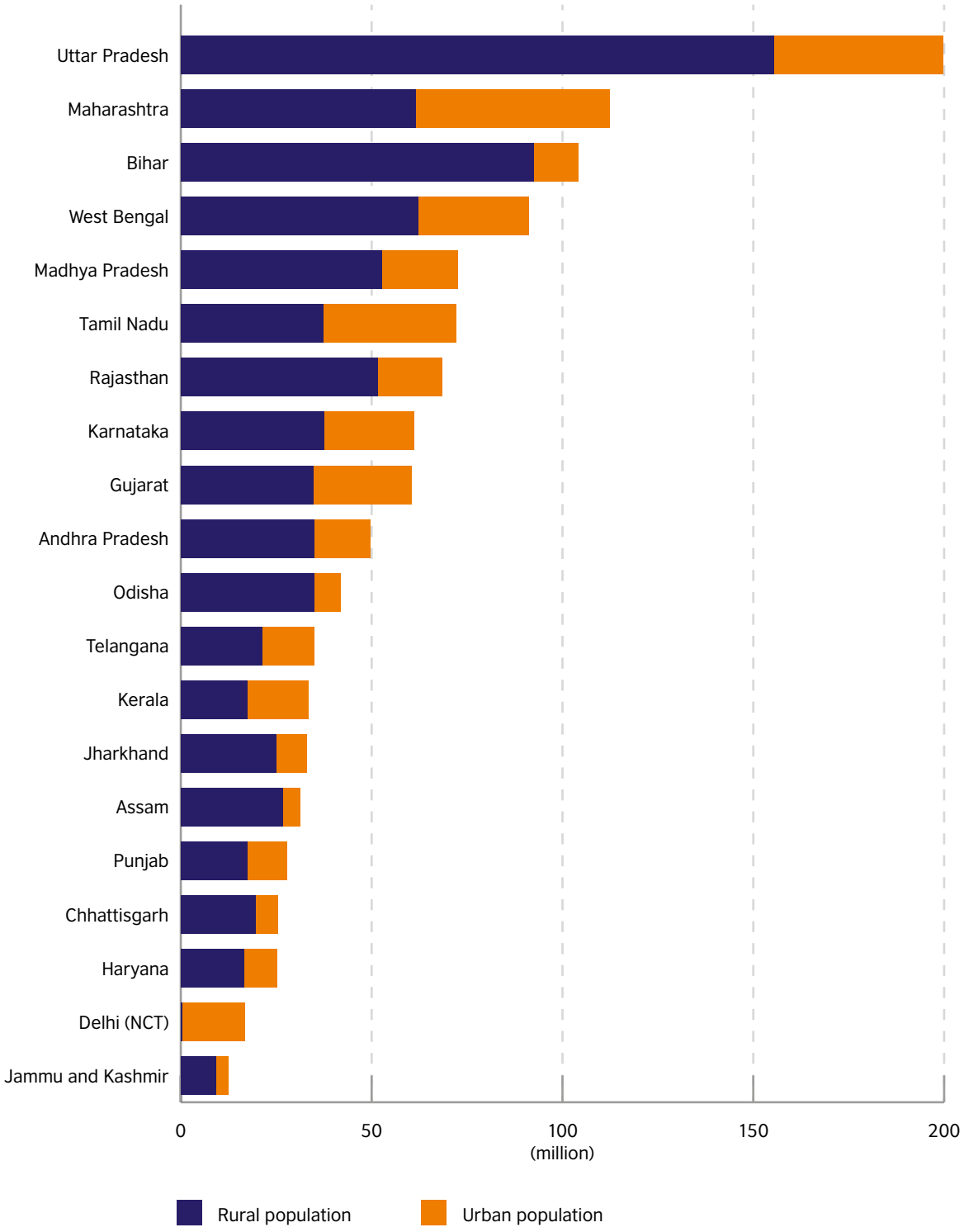


Figure 3: Literacy rates by state in 2001 and 2011

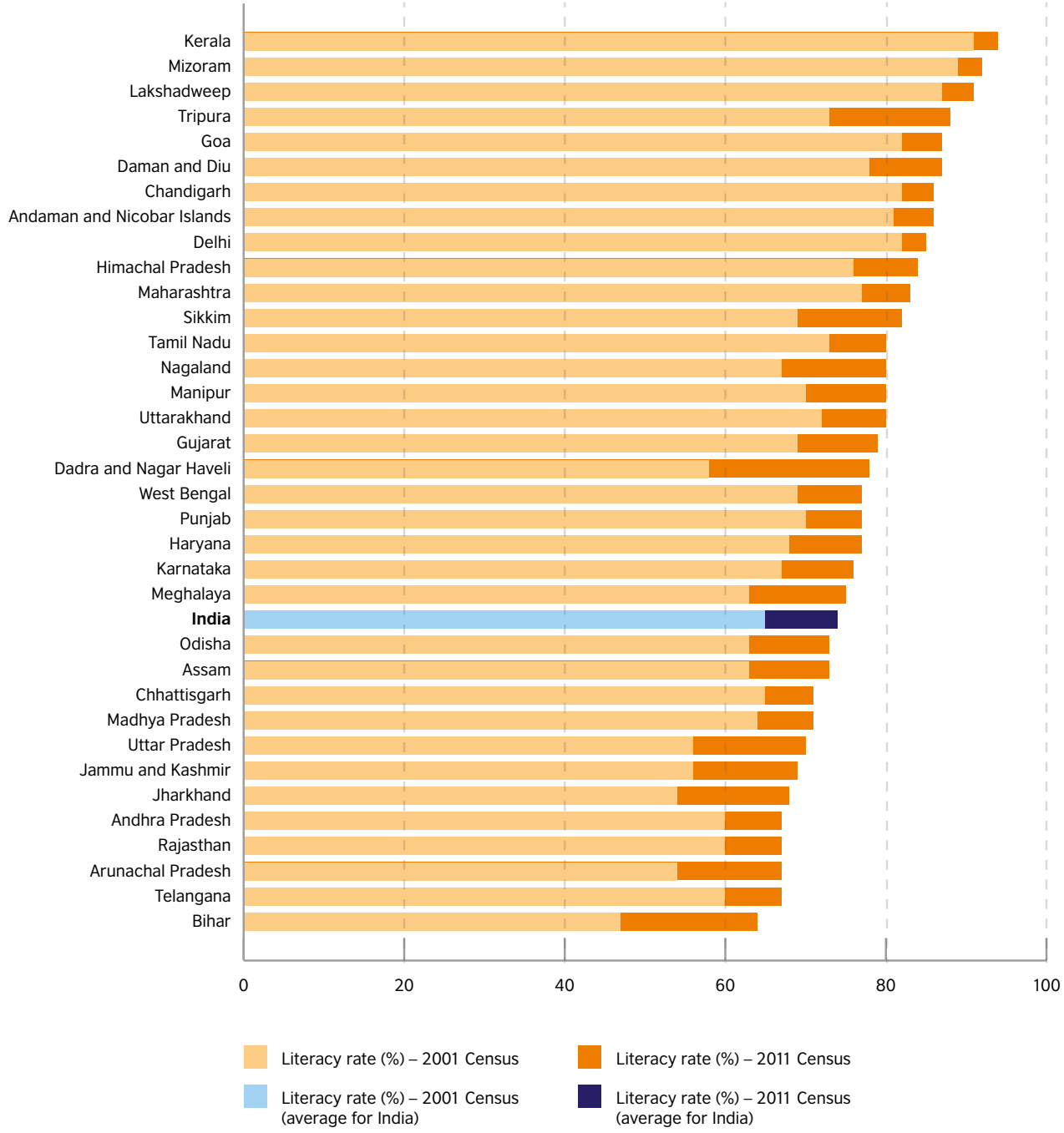
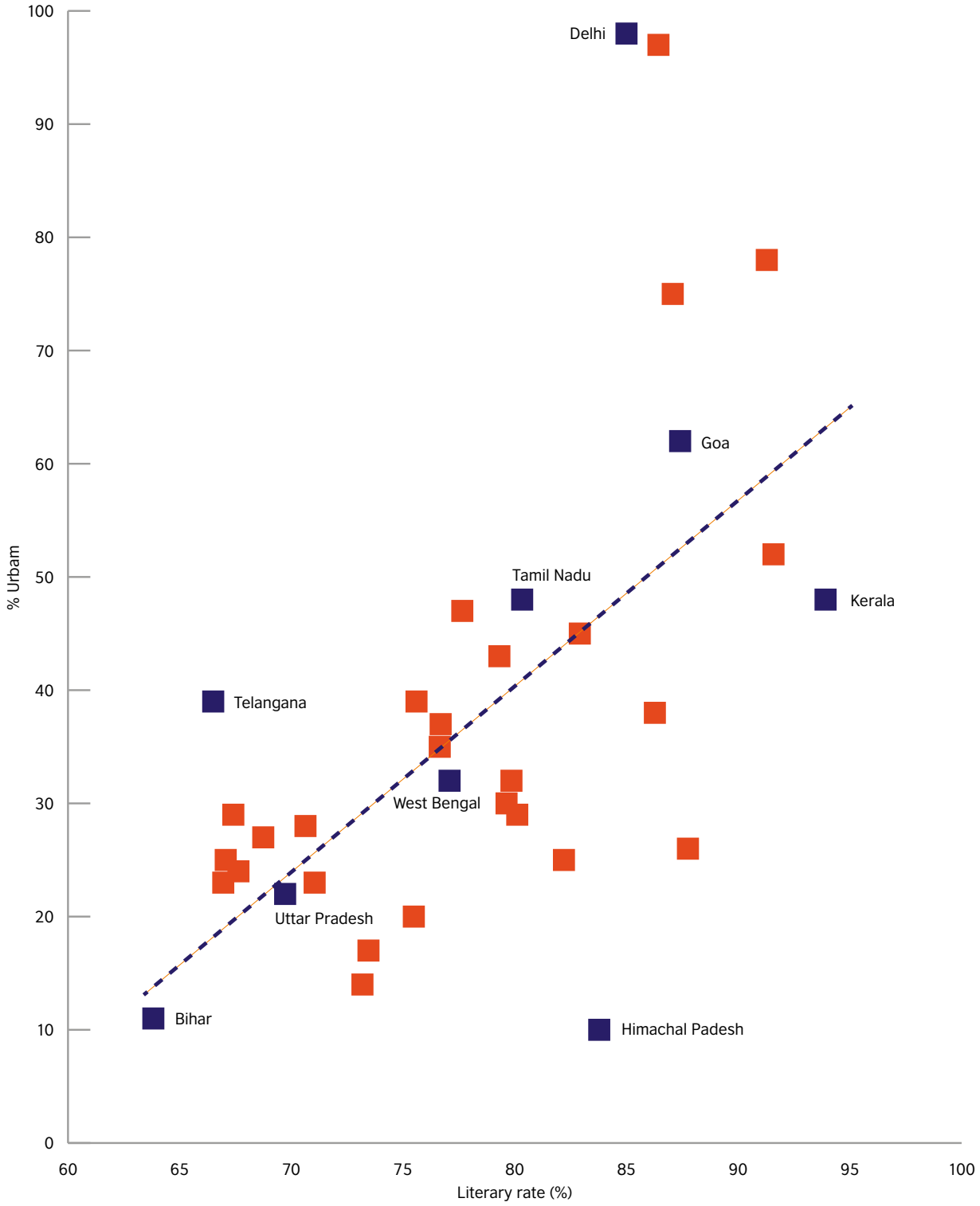


Figure 4: Correlation between state literacy rates and percentage urban population 2011 (selected states highlighted)



Overview of the K-12 sector

It is widely agreed that the Indian education system has made significant progress in recent years – particularly in terms of access. Recognising the importance of education in national development, the Twelfth Five Year Plan (2012–2017), alongside a continued focus on expanding education, also included a clear focus on improving the quality of education and on ensuring that access to educational opportunities are provided to all sections of society.

Expenditure on education has increased rapidly in recent years, from Rs 97,000 crore (around £11 billion) in 2004–05, to Rs 560,000 (around £63 billion) in 2015–16, according to MHRD budget analyses.[21] While this increase appears impressive, when expressed as a percentage of gross domestic product (GDP), spending on education can be seen to have fluctuated since the turn of the century, from 4.1 per cent in 2000–01 down to 3.3 per cent in 2004–05, back up to 4.4 per cent in 2013–14[22] and down again to 3.3 per cent in 2019–20, according to government figures.[23] UN figures indicate slight increases from 3.2 per cent in 2005 to 3.8 per cent in 2018.[24] However, recent strategy documentation released by NITI Aayog[25] (the body that in 2015 replaced the Planning Commission responsible for the five-year plans) has recognised the need to increase this spending to six per cent of GDP by 2022. This is in line with recommendations from the multilateral Education 2030 Framework for Action[26] that spend on education should be four to six per cent of GDP or 15–20 per cent of overall spending, and reflected in the Draft NEP (2019), which envisions a doubling of spending on education over a ten-year period (from ten to 20 per cent of overall public expenditure).[27]

According to World Bank statistics,[28] government expenditure per student (primary) has also fluctuated in India, from a high of 13.9 per cent in 2001 down to 7.6 per cent in 2009, and up to 9.8 per cent in 2013. Private household spending on education has greatly increased since 2000, according to the NSSO (National Sample Survey Office) survey of 2009–10, which documented 378 per cent and 345 per cent increases in rural and urban areas respectively.[29] In 2014, an NSSO survey[30] indicated that average household expenditure per student in general education was Rs 6,788 (just over £75), and that 26 per cent of students were taking private tuition, especially at secondary levels, where this figure rises to 37 per cent. A 2016 report estimated that this private tuition sector was worth £19 billion in 2013, and was used especially for preparation for final exams by students from a range of socio-economic backgrounds.[31]

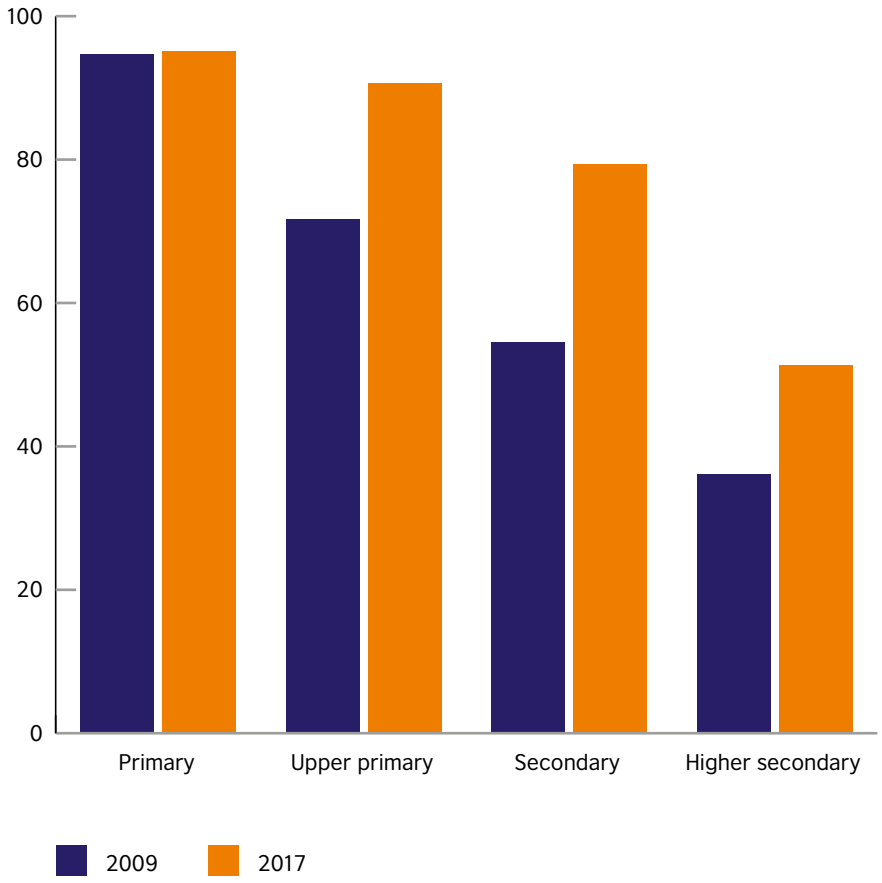
The 2009 RTE Act stipulates that schooling is free and compulsory for all children aged six to 14, although the Draft NEP (under review in 2019) recommends 'government provision for free and compulsory education for all children and adolescents between the ages of 3 and 18',[32] extending this significantly in both directions. It should be noted that in practice, ages for both enrolment and completion can vary. For example, despite the fact that the RTE recommends schooling start at age six, 26 of India's states and union territories currently allow children to enter Standard 1 at age five, and 34 per cent of five-year-olds were found to be in school in rural contexts in 2018.[33]

According to government figures,[34] initiatives to provide access to school for all children have led to increases in the total number of schools in India, from 971,000 in 2000 to 1.52 million in 2015. Over the same period, higher education institutions multiplied five-fold, from just over 10,000 in 2000 to nearly 52,000 in 2015. Enrolments during this period have increased, from 186 million students in schools (primary and secondary) in 2000 to 261 million (197 million primary, 64 million secondary) in 2015, and from 8.6 million higher educational enrolments (universities, colleges and standalone institutions) in 2000 to 33.6 million in 2014. Of particular note among these figures is a 60 per cent increase in female school enrolment to 48 per cent

21 Comparison of 'Analysis of Budgeted Expenditure on Education'. See https://mhrd.gov.in/statistics-new
22 https://mhrd.gov.in
23 https://www.indiabudget.gov.in
24 http://data.un.org/en/iso/in.html
25 National Institution for Transforming India: https://niti.gov.in/writereaddata/files/Strategy_for_New_India.pdf
26 UNESCO (2015).
27 Ministry of Human Resource Development (2019: 402–403).
28 https://data.worldbank.org
29 Parruck and Ghosh (2014).
30 http://mospi.nic.in/sites/default/files/publication_reports/nss_rep_575.pdf
31 RMSA Technical Cooperation Agency (2016a).
32 Ministry of Human Resource Development (2019: 193).
33 Bhattacharjea and Ramanujan (2019).
34 https://mhrd.gov.in/statistics-new

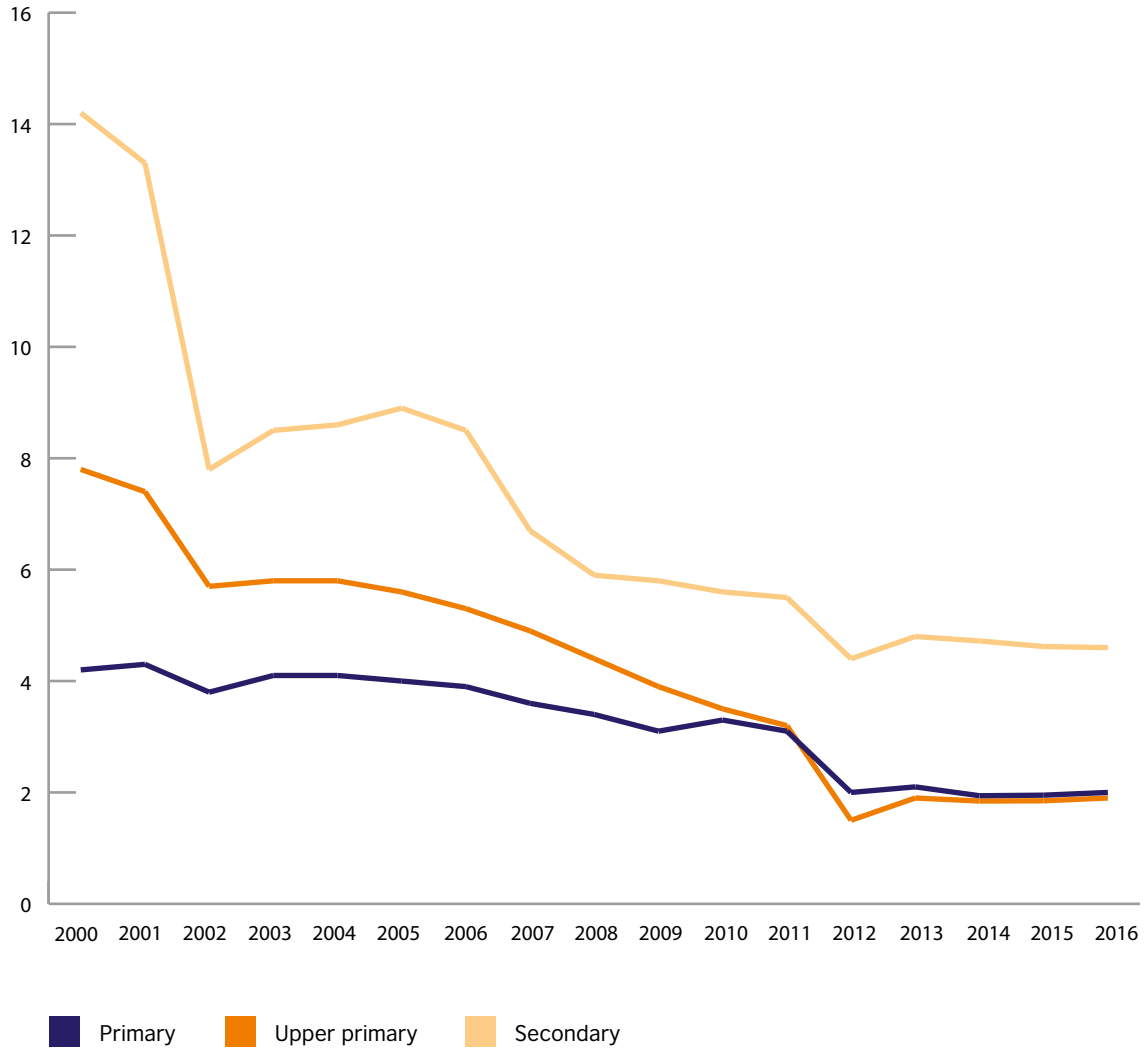
of total school enrolments by 2015–16, and a 484 per cent increase in female higher educational enrolments to 46 per cent of the reported total in 2014 (all Ministry of Human Resource Development statistics). UN figures[35] from 2016 indicate slightly higher female than male enrolment at primary (reported at over 100 per cent for both), secondary (76 per cent female, 75 per cent male) and tertiary (27 per cent female, 26.9 per cent male) levels. As a result of this drive to achieve universal access, the number of small (fewer than 150 students) and very small (fewer than 30 students) government schools has increased during the same period, which has brought fresh challenges, including inequity of learning resources, insufficient subject-specialist teachers in small secondary schools, and an increase in need for multigrade teaching practices. In addition, a number of such schools have been either merged or closed over recent years, across the country.[36] A 2015 report noted that small schools constitute over 70 per cent of all secondary schools in at least 20 states, and estimated a three-fold increase in per-student costs in these schools, where pupil–teacher ratios can be as low as 8:1, compared to those with over 300 students.[37] The Draft NEP (Ministry of Human Resource Development, 2019) also notes the increased financial burden of very small schools, recommending 'school complexes' as a potential partial solution to this challenge to enable peer support, sharing of resources and improved governance.[38]

Figure 5: Changes in gross enrolment ratio 2009–17



35 http://data.un.org/en/iso/in.html
36 https://www.livemint.com/Education/K3Fgbf1GDrptRvqo0OKFTM/Govt-looks-at-locationspecific-mergers-of-260000-schools-t.html
37 RMSA Technical Cooperation Agency (2015a).
38 Ministry of Human Resource Development (2019: 157–175).

Figure 6: Enrolment gap between male and female students (millions)




WAY
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Schooling at different levels

Typical school weeks and years

In most states the government school week runs from Monday to Saturday, with either a half or full day on Saturday, or study on every other Saturday. In some locations – mainly urban – oversubscription of enrolment means that some schools offer a double shift: morning classes, followed by a repeat in the afternoon for a different cohort. The school year usually includes around 200 days of study, typically from June or July to April or early May. May, as the hottest month in many states, is the time of the longest school holidays. October and November in many states include a number of public holidays (e.g. Diwali). Exam preparation typically begins as early as February, with exams in March or April, although in grades of high-stakes exams (10 and 12), the whole academic year may be oriented towards exam preparation (see sections *(Lower) secondary education* and *Higher secondary education* below).

Grades and promotion

The Draft NEP (Ministry of Human Resource Development, 2019) is suggesting significant changes to the structure of schooling at different grades.[39] Table 1 shows both the pre-2019 system (including pre-primary, primary, upper primary, secondary and higher secondary) and the proposed revised system with a strong focus on early childhood education (ECE) that transitions into early primary education (foundational stage), followed by a preparatory stage (previously upper primary), then middle and high stages that continue until Grade 12. Ages provided are indicative – in practice there is significant state and local variation. The terms 'standard', 'grade' and 'class' are all commonly used to refer to different grades.

Table 1: Pre-2019 and proposed post-2019 structure of education in India

Age (typical)	Current (2019)	Grade	Proposed in revised National Education Policy*
17–18	Higher secondary	12	High stage
16–17		11	
15–16	Secondary	10	
14–15		9	
13–14	Upper primary	8	Middle stage
12–13		7	
11–12		6	
10–11	Primary	5	Preparatory stage
9–10		4	
8–9		3	
7–8		2	Foundational stage
6–7		1	
5–6	Pre-primary		
4–5			
3–4			

*Based on Draft NEP.

39 Ministry of Human Resource Development (2019: 75).

Before the RTE Act (Ministry of Law and Justice, 2009), many children who did not make the grade standard in end-of-year exams were held back ('grade retention') for another year. As part of the RTE, the 'No Detention Policy' (NDP; Section 16 of the RTE) in theory outlaws this practice, meaning that ages in each grade are more homogeneous than before 2009. A study conducted in 2018[40] found that the NDP had a positive effect on academic learning outcomes in reading and maths at primary level, which the authors argue has led to the 'likely outcome of improved motivation and the creation of a "fear free" learning environment'. Another study, also from 2018, found that students taught exclusively under the NDP 'are able to show the same level of performance as those students who have partly been taught the same concept under the detention system, by the time they reach Class 7.'[41] Despite this, it has remained a highly contentious aspect of the RTE and in 2019 parliament proposed an amendment which could lead to the renewal of detention at certain key grade levels (5 and 8).[42] Pratham (an NGO involved in education in India) has responded to the policy with its Teaching at the Right Level programme (in conjunction with J-PAL). This aims to ensure that children have the necessary foundational skills, whatever grade they may be in, to enable them to thrive and continue to learn.[43]

There is much variation as to which grade levels co-occur within the same school. For example, it is common in some states (e.g. Telangana and Maharashtra) for upper primary and lower secondary levels to be together in the same 'secondary school', and teachers teaching across grades 6–10. Schools that include children from grades 1–12 can sometimes be confusingly named 'senior secondary' or 'higher secondary' schools, despite the inclusion of primary sections. With regard to language of instruction, schools, or sometimes different 'sections' in a school, will often be labelled 'English medium' or 'L1 (e.g. Hindi or Tamil) medium' at any level from primary upwards, although the actual language use practices vary in complex ways (see separate section: *Languages in education in India*, below).

Syllabus, subjects and assessment at different grades

The design of educational provision in the school sector is governed by the NCF,[44] most recently updated in 2005 but expected to be revised in 2019–20. The framework sets out five broad principles:

1. 'connecting knowledge to life outside the school
2. ensuring that learning shifts away from rote methods
3. enriching the curriculum so that it goes beyond textbooks
4. making examinations more flexible and integrating them with classroom life, and
5. nurturing an overriding identity informed by caring concerns within the democratic polity of the country' (p. viii).

While the NCERT (see below) makes recommendations regarding curricula and syllabus content, and produces textbooks that can be used at the state level, responsibility for a school's syllabus lies with the specific educational board involved but in theory must be aligned to the NCF (2005). For example, those schools operating under the CBSE (Central Board of Secondary Education – see *Educational boards in India* below) generally use the NCERT-produced textbooks (sometimes producing their own or sourcing from other private publishers at the school level, including international ones) while those under State Boards of Education (the majority of government sector schools) will use textbooks produced at the state level (usually by the State Councils of Educational Research and Training – SCERTs), at least until the end of upper primary.

With the exception of the 'board exams' taken at the end of Grade 10 and Grade 12 (see *(Lower) secondary education* and *Higher secondary education* sections below) and the National Achievement Survey (see *National Council of Educational Research and Training* section below), much of the assessment conducted in government sector schools is devised and delivered by the teachers at the individual institutions. For schools following some particular boards of education (especially in the private sector), there may be additional prescribed assessments that are centrally managed (see *Educational boards in India* below and Appendix 1).

40 Ahsan et al. (2018).
41 Saraf and Deshmukh (2018).
42 https://idronline.org/no-detention-why-did-a-popular-policy-get-scrapped/?gclid=CjwKCAjw8qjnBRA-EiwAaNvhwP17Iv86vbVAqcwtPthCDxLRoQ2uKSy6jzfD3RTYmzoSoAuAzvZI2RoCJeoQAvD_BwE
43 https://www.teachingattherightlevel.org/
44 NCERT (2005).

A significant initiative arising after the ratification of the Right to Education Act (2009) was Continuous and Comprehensive Evaluation (CCE) – a system whereby teachers are expected to use formative as well as summative assessment techniques to track learner progress in both academic and non-academic (extracurricular) domains, particularly from grades 1–9. This was adopted both by schools operating under state boards of education and those adhering to the CBSE. Implementation of the system has had a mixed response – while the introduction of CCE is widely acknowledged as a positive move, with its intention of providing more timely feedback on learning, reducing the emphasis on using *only* end-of-year exams for assessment, there has been confusion among teachers about how to effectively incorporate CCE into current practices and use the results constructively. For example, an evaluation study conducted in Haryana in 2013 found no discernible difference in learning outcomes in schools where CCE had been adopted compared to those where it had not.[45]

Early childhood education

A wide range of types of ECE and daycare are available in India, including both government and privately managed lower and upper kindergarten and Anganwadi (meaning 'courtyard shelter') care centres, which are common in rural areas and fall under the Ministry of Women and Child Development. ASER (Annual State of Education Report) statistics (rural only) indicate that in 2018, 67 per cent of three-year-olds, 74 per cent of four-year-olds, 58 per cent of five-year-olds and 26 per cent of six-year-olds were attending 'preschool' in 2018.[46] Attendance in urban areas is likely to be higher.

A large-scale, longitudinal study published in 2017[47] found that preschool facilities were present in all the villages of the three states involved, with private provision expanding rapidly. It also found that levels of school readiness were 'far below expectations' (p. 95), and that there was significant variation as to the paths that children took through ECE. It noted that the quality of preschool education, in private and state facilities as well as Anganwadis was not developmentally appropriate, reporting that alongside limited use of songs, rhymes and games, children were often being taught aspects of formal literacy and numeracy too early through rote learning methods, due in many cases to parental pressure. Workers in Anganwadis were described as 'semi-trained', and those in private preschools as, in most cases, 'local, untrained youth' often willing to make use of corporal punishment. Play opportunities were 'largely missing' from ECE in such rural areas. A study from 2009, in Mumbai reported developmentally appropriate practices in approximately half the classes observed.[48]

As highlighted earlier, the proposed revisions to the National Education Policy (Ministry of Human Resource Development, 2019) include bringing early childhood care and education under the Right to Education Act. Importantly, the policy also refers to putting in place a regulatory framework to address some of the issues of developmentally inappropriate practices discussed above.

Primary education

Primary education in India currently covers five grades, typically from ages six to 10 (although note the revised foundational stage in Table 1, proposed for the 2019 NEP above). However, there is much variation at local level, with ASER[49] reporting that in rural areas ten per cent of children in primary education were four, and 34 per cent were five, while ten per cent of those still in preschool were seven. As well as 'first' language (see discussion of *Languages in education in India* below), subjects often include English, mathematics and usually a combined social studies and science lesson (e.g. 'environmental science' or 'social science'). In addition to these, physical education is offered on most timetables, but remains very much 'on the fringe', with less than 20 per cent of rural schools having dedicated physical education teachers.[50] In some states (e.g. West Bengal), art is also explicitly included on the primary curriculum. The Draft NEP[51] envisions a greater variety of subjects at primary level, with renewed emphases on art, music and physical education indicated. While retention to upper primary has improved since 2000, with government statistics stating that over 90 per cent of students transitioned to upper primary in 2015/16, according to NSSO (2014), 37 per cent of males and 39 per cent of females left their study after completing primary education.[52]

45 https://www.povertyactionlab.org/evaluation/improving-learning-outcomes-through-government-school-system-india
46 Bhattacharjea and Ramanujan (2019).
47 Kaul et al. (2017).
48 Hegde and Cassidy (2009).
49 ASER (2019).
50 Bhattacharyya (2019).
51 Ministry of Human Resource Development (2019: 90–92).
52 http://pib.nic.in/newsite/PrintRelease.aspx?relid=159811

In response to concern about the overuse of rote learning at primary level, a number of states have attempted to implement variations on a model of child-centred education, called activity-based learning (ABL) at lower primary grades in efforts to make learning more interactive, social and differentiated. A UNICEF evaluation of ABL initiatives across India conducted in 2015 reported mixed findings, with 27 per cent of classes reported as 'child-friendly' but only 11 per cent 'implementing ABL as intended'.[53] A statistically significant impact on learning outcomes was reported from only one of seven states (Gujarat). Findings agreed with other research on learner-centred initiatives conducted in primary contexts in India[54] that teachers' beliefs and attitudes (as well as the technical side of implementation) must be addressed for such initiatives to demonstrate sustainable success.

Upper primary education

Upper primary education, also sometimes referred to as middle school (and middle 'stage' in the 2019 NEP), lasts three years from grades 6–8 (ages approximately 11–14), and within the government sector is often located in larger schools that include primary and/or lower-secondary grades (larger private schools often offer all grade levels, with the exception of low-cost private schools which often offer only primary grades). The number of subjects taught increases and becomes more specialist than at primary levels. According to India's Three Language Formula, three languages are taught: first language (often the state official language, rather than the child's first language, where these differ), English and a third language (usually Hindi, except where this is the designated first language, where Sanskrit is often offered).[55] In practice, the number of languages taught has depended on a variety of sociopolitical factors. In many cases, the fact that multilingual classrooms are the norm rather than the exception means that actual language use during instruction becomes quite fluid both within and across schools in the same district (see section *Translingual practices in the classroom*, below).

Social studies and general or environmental science are also key foci of the curriculum. Art and physical education may also be present, and computer studies/IT is becoming increasingly common particularly in urban schools (see section on *Technology in education in India* below). As for primary level, the Draft NEP proposes a wider range of subjects at upper primary level, including potential foci on 'critical issues' and 'moral reasoning' between grades 6–8.[56]

As curricula become more ambitious at upper primary level, achievement gaps between the higher and lower-achieving learners become more evident, and for many children, a focus on basic literacy in the medium of instruction is still important to ensure they are able to deal with the increased cognitive challenges of subject content. As one study on such overambitious curricula demonstrates, 'paradoxically, learning could go faster if curricula and teachers were to slow down'.[57] Such challenges are reflected in NSSO statistics (2014), which indicate that over 50 per cent of 'ever-enrolled persons' do not continue their education beyond upper primary level.[58]

(Lower) secondary education

Lower secondary education covers two grades, 9 and 10 (ages approximately 15–16), leading to the first major high-stakes exam, the All India Secondary School Examination (AISSE, also known as 'Board exams', leading to the Secondary School (Completion) Certificate, SSC). Enrolment figures at secondary level (currently non-compulsory, according to the Right to Education Act (2009), but proposed in the 2019 Draft NEP) are approximately at 75–79 per cent for both girls and boys,[59] although these are lower in rural areas, where around 70 per cent of all secondary education takes place.[60] Historically, secondary enrolment levels were also lower for students from disadvantaged backgrounds (SCs and STs), although government gross enrolment ratios for 2015–16 reported SC secondary enrolment ratios higher than overall ratios (85 per cent versus 79 per cent respectively); ST ratios were reported at 75 per cent.[61]

53 UNICEF (2015).
54 Brinkmann (2015); Sriprakash (2012).
55 Meganathan (2011).
56 Ministry of Human Resource Development (2019: 98–100).
57 Pritchett and Beatty (2012).
58 www.icssrdataservice.in/datarepository/index.php/catalog/14
59 http://data.un.org/en/iso/in.html
60 NUEPA (2014).
61 http://udise.in/

Subjects become slightly more diverse at lower secondary level, with greater local variation. As well as the three languages of upper primary, and mathematics, sciences tend to separate into 'physical' and 'biological/life' science, and social studies may separate into history and geography. Due to the pressure for students to perform well in the board exams, these core subjects remain the focus, particularly at Grade 10, which in practice frequently becomes an exam-preparation year.[62] Students are expected to study harder, including in remedial (often after-school) classes with many families paying significant amounts of money for private tuition. The board exams are seen as key determiners of students' future education and career paths. In 2019, 91.1 per cent of candidates passed the exams.[63]

At district level, school exam results are often compared and used to evaluate school and teacher performance, despite widespread variation in implementation and regulation,[64] leading a number of studies to conclude that they are an unreliable measure of teacher impact.[65] There is a practice in many states, particularly among private schools, for student exam performance to be advertised as a mark of effectiveness.

The Draft NEP (2019) recognises many of these issues with the current high stakes exam system, proposing 'easier' board exams that focus on 'core capacities' only, and arguing that the system 'must shift from one that primarily tests rote memorisation skills to one that is more formative, promotes learning and development for our students, and tests higher-order skills, such as analysis, critical thinking, and conceptual clarity'.[66]

Higher secondary education

Higher (also called 'senior') secondary education comprises two years from grades 11–12 (ages approximately 17–18), leading to a second high-stakes exam. There is a noticeable drop in the enrolment rate at this level (gross enrolment ratio of 51.3 per cent, compared to 79.3 per cent at lower secondary in 2017).[67] A second high-stakes exam (the All India Senior School Certificate Examination, AISSCE) is taken at the end of Grade 12 that determines entrance into universities, colleges, or acceptance at job interview for a number of career paths. Places at the top universities frequently demand results above 95 per cent for students to be considered – an inevitable effect of the large numbers of students competing each year for these elite institutions. These top universities also, in some cases, have their own entrance exams such as the Joint Entrance Exam for the Indian Institutes of Technology and Indian Institutes of Management. The results of the school-leaving certificate can be the gateway to preparation courses for these further exams.[68]

At the senior secondary level, subject choices diversify greatly, and students can choose particular subjects or vocations to pursue, depending on the desired career or academic path. Streaming is common at this level, for example with science streams (including maths, physics, chemistry, biology and ICT) often seen as more prestigious than humanities streams (including history, politics and geography) in some schools. Widespread concern among employers that school-leavers are unprepared for work in contemporary industries, often reported in the popular press,[69] is leading to an increase in vocational subjects being offered alongside the above, such as computer science, accountancy and commerce, among others.

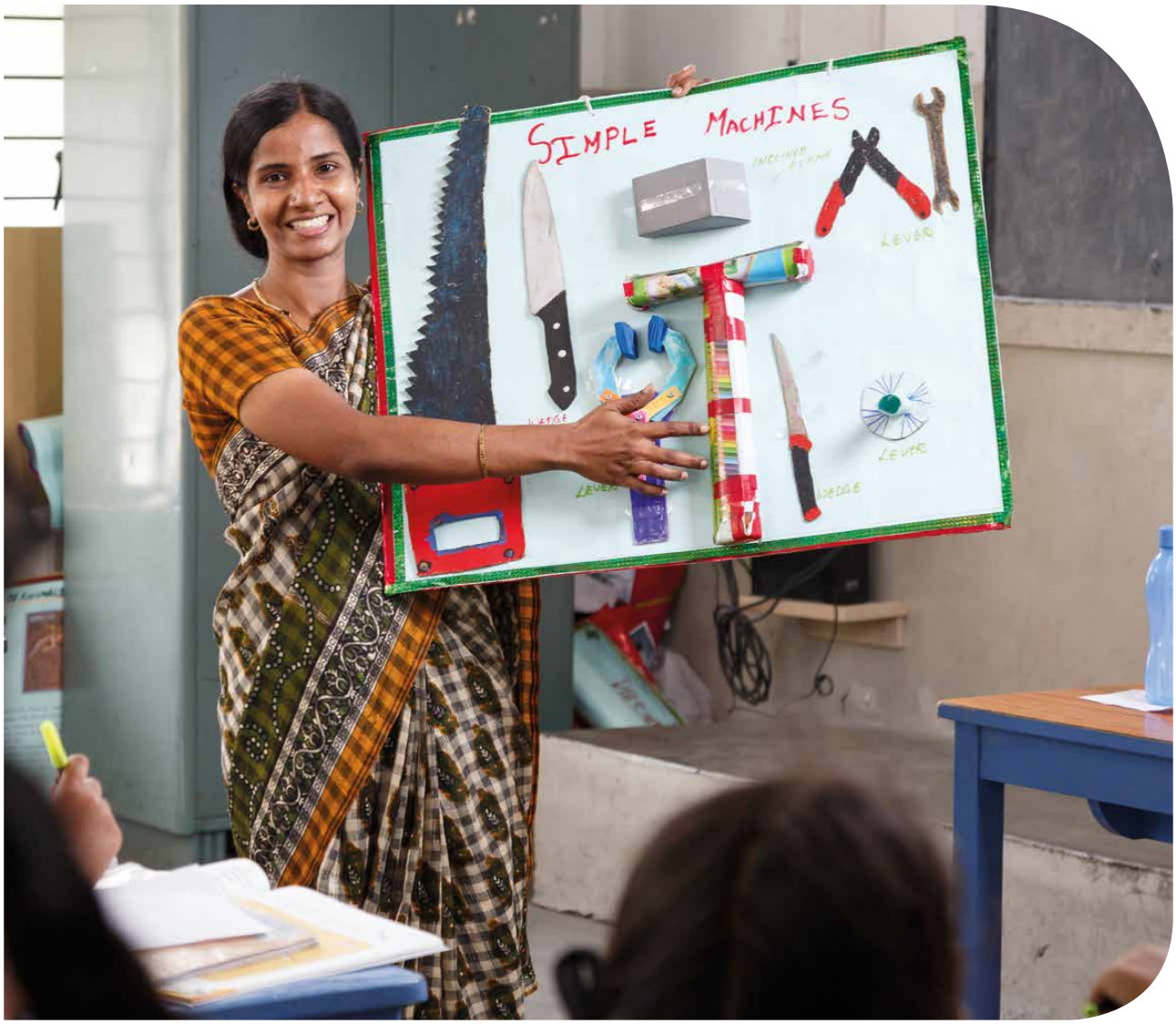
However, concerns about streaming remain, especially the issue of students being pressured to take specific subjects based on their academic achievement, rather than personal choice. The Draft NEP (2019) suggests that there will no longer be a 'hard separation' between arts and sciences or between vocational and academic streams.[70]

62 Mody (2013).
63 http://cbseresults.nic.in/cbseresults_cms/Public/Home.aspx
64 e.g. Sriprakash (2012: 135).
65 e.g. Bambawale et al. (2018); British Council (2016); Gandhi Kingdon (2007); Graddol (2010).
66 Ministry of Human Resource Development (2019: 104–105).
67 http://udise.in/Downloads/Publications/Documents/Analytical_Table_2016-17.pdf
68 https://www.jeemain.nic.in
69 For example, https://www.wsj.com/articles/SB10001424052748703515504576142092863219826 and https://www.indiatoday.in/education-today/featurephilia/story/engineering-employment-problems-329022-2016-07-13
70 Ministry of Human Resource Development (2019: 78–79).

School ownership and management

Schools and other educational institutions in India are owned either by the government (central, state or local government bodies) or by the private sector (individuals, trusts or societies), with two distinct types of private sector institutions common. Those that are 'aided' (often called 'government-aided' schools) receive financial support from the government and are largely free to students (although nominal fees may be collected). Those that are 'unaided' support themselves most commonly through student fees. In practice, therefore, both government and government-aided schools constitute what are internationally often called state schools (UK English) or public schools (American English), and private unaided schools constitute 'private schools' as the term is internationally understood.

According to 2017 figures,[71] just over half of all schools were classified as government (including around nine per cent 'local body schools', discussed separately below), 12 per cent were classified as government-aided and just under a third as private unaided, although this varies by age group, with the percentage of government schools falling at secondary and higher secondary levels (see Figures 7 and 8). Madrasas and Tribal/Social Welfare Department schools each constitute less than two per cent of schools nationwide. Note, however, that these national statistics may not capture unregistered schools or alternative models of schooling (including home schooling by individual or groups of families), numbers of which are difficult to estimate.



71 http://udise.in/Downloads/Publications/Documents/U-DISE-SchoolEducationInIndia-2015-16.pdf

Figure 7: Proportion of school management (all levels) 2016–17

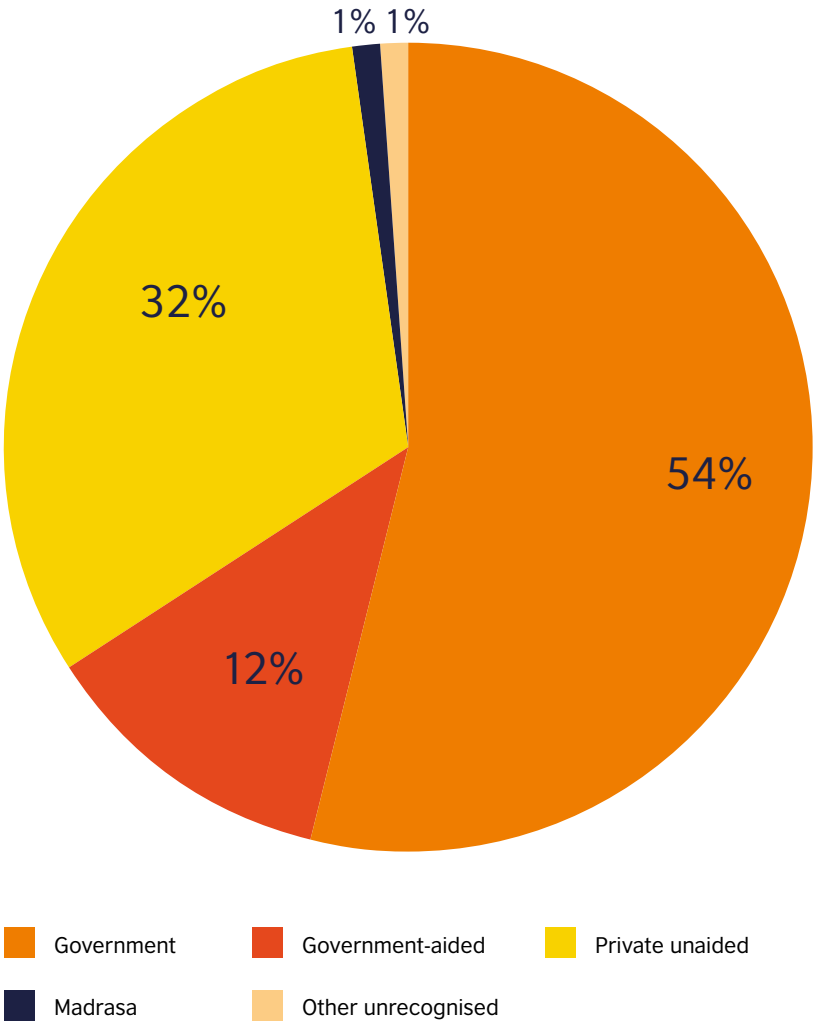
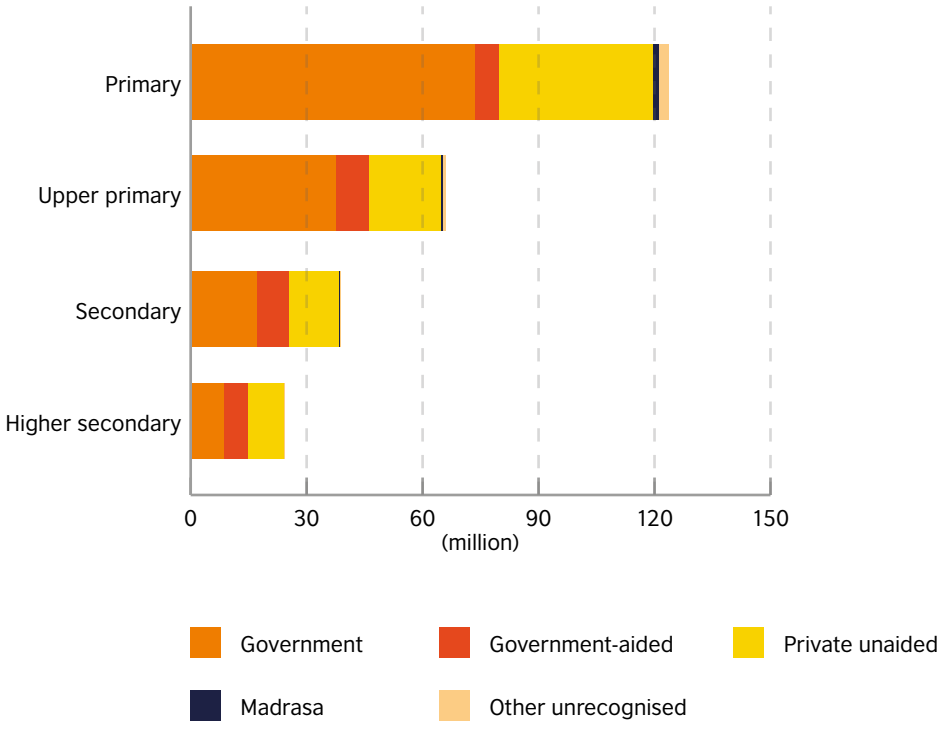


Figure 8: Total number of enrolments at each level by management type (2016–17)



The following section provides an overview of the four main types of school.

Government educational institutions

These are run by the central government, state governments or public sector bodies, and are wholly financed by the government. Examples of these types of schools include state government schools (by far the largest single group), Kendriya Vidyalayas, Navodaya Vidyalayas, Sainik schools, military schools, air force schools and naval schools.

Private aided (or government-aided) institutions

These are managed privately but receive regular maintenance grants from the government, local body or other public authority, and as such are subject to regulations applied to government schools. Curricula, study materials, syllabus and examinations at all levels are similar to or the same as government schools in the same district, and students usually take either one of the two main Indian secondary school exams (the AISSE and the AISSCE at grades 10 and 12 respectively), or comparable state-level exams managed by the state education boards. Fees (if any) are nominal and are collected from the students according to government regulations. Even the recruitment of faculties here follows norms of government schools. There is no specific criteria for the admission of students in these institutions, but this is somewhat dependent on the proportion of funding that is provided by the government.

Local body institutions

These are run by municipal committees, corporations, education societies (e.g. the Deccan Education Society[72]), Zilla Parishads, Panchayat Samitis, Cantonment Boards, etc. Examples of these types of schools include the ones run by New Delhi Municipality Council and the Delhi Cantonment Board.

Private unaided institutions

These are managed by a private organisation, trust, society or NGO and do not receive maintenance grants either from government, local bodies or any other public authority (except public–private partnership schools – see below). The fee structure for the students may vary greatly, from low-cost private schools to elite institutions more common in larger cities. Students are often admitted to private schools according to criteria (entrance examinations, interviews, etc.) designated by the school management. These schools may implement their own curriculum and examinations or may offer national or international curricula, such as the International Baccalaureate (see below). Under the Right to Education Act (2009), all private unaided schools are required to reserve at least 25 per cent of school places for children 'belonging to weaker section[s] and disadvantaged group[s]', as determined by socio-economic status, caste and religion. The current exceptions are 'minority schools' catering to specific religious or tribal groups, as per a ruling by the Supreme Court in 2014.[73] However, implementation of the 25 per cent quota has been problematic for a variety of reasons. The Draft NEP (2019) notes that 'the large amounts of money and effort spent on implementing this [reservation] clause may be more effectively spent, e.g. by investing the money on the public schooling system – particularly in disadvantaged areas – which would directly support many more students from underprivileged backgrounds in a sustainable manner'.[74] It therefore remains to be seen whether this policy will remain. An initiative to set up 6,000 public–private partnership 'model' schools by 2015 combines government funding for 40 per cent of students (from disadvantaged sectors of society) with typical private school funding (fees from the remaining 60 per cent).[75] These public–private partnership schools are largely independent in governance, like other private schools, and while no evidence of impact was found at the time of writing, this initiative has met with some concern from the popular press.[76]

72 https://www.despune.org
73 http://indiatoday.intoday.in/education/story/sc-rte-act-not-applicable-to-minority- schools/1/359483.html
74 Ministry of Human Resource Development (2019: 194).
75 https://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/Scheme-MS-PPP_-_clean-NEW_0.pdf
76 https://www.thehindu.com/opinion/lead/Public-private-partnership-in-education/article16303142.ece

The increase and impact of private school education in India

While there has been a rapid increase in the number of private schools since 2000, ASER reports (rural only) indicate that the 'year on year increase in private school enrolment seems to have stopped' at primary level, reporting of the proportion of private schools at 31 per cent in both 2016 and 2018.[77] The increase documented prior to this tends to have been in low-cost private schools, the quality of which has been called into question by a number of studies.[78] In such schools in India, teachers are often poorly paid, underqualified and the schools themselves may also be poorly resourced. However, due in part to the different background demographics and motivation of the families that elect to send their children to such schools, they can often demonstrate better results than government and government-aided schools nearby, despite little or no evidence of improved quality in classroom teaching.[79]

Data analysis from a number of studies indicates that when factors such as socio-economic background are controlled for, the differences in outcome falls significantly. One recent review[80] noted that this learning-gap 'falls but, in most studies, it does not disappear', also arguing that, due to the higher wages received by government-employed teachers, low-cost private schools can offer better value for money in terms of 'cost per unit of learning'. However, a study including both rural and urban contexts[81] found that 'the private school benefit becomes largely, statistically, insignificant' when background factors are controlled for. Moreover, it found specifically that children in 'low-fee' private schools 'may perform no better than their public school counterparts'. The Draft NEP (2019) proposes a number of measures to ensure tighter regulation of private schools, expressing concern at the 'rampant commercialisation and economic exploitation of parents by many for-profit private schools'.[82]

School Management Committees

According to the RTE (Ministry of Law and Justice, 2009), each school must have a functioning School Management Committee (SMC), comprising parents and guardians (75 per cent), local authority officials, teachers and 'local educationists or children' to create a bridge between the school administration (usually head teacher) and the local community.[83] While this requirement technically excludes private unaided schools, these also typically have parent–teacher associations which are getting stronger and more powerful in many cases.

The SMC should meet once a month and, as well as ensuring various rights in the RTE are upheld, prepare a yearly School Development Plan, as well as monitoring the utilisation of grants and the whole school environment. More recent reports indicate a number of challenges to the effective functioning of SMCs, particularly with regard to issues of participation and accountability. One study[84] noted varying levels of community participation in meetings and frequent misjudgements about school functioning among committee members. Another report[85] indicated challenges related to non-democratic member selection, inadequate training and confidence building for members, a lack of autonomy for SMCs and ambiguities with regard to decision-making responsibilities relating to local authorities. Nevertheless, the involvement of parents and community in decision-making and holding schools to account continues to be supported at policy level. The Draft NEP (2019) suggests that this should be increased, making more information available to parents so that they can 'become the de facto regulator' (p. 180).

77 Wadhwa (2019: 17).
78 Chudgar and Quin (2012); Erling et al. (2017); Simpson (2017).
79 Wadhwa (2010, 2019).
80 Gandhi Kingdon (2017).
81 Chudgar and Quin (2012).
82 Ministry of Human Resource Development (2019: 178, 190).
83 See http://righttoeducation.in and https://mhrd.gov.in
84 CREATE (2011).
85 Central Square Foundation (2013).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Languages in education in India

Language diversity and the three-language formula

Twenty-two languages are afforded official status in India, referred to as 'scheduled languages' in the Constitution. According to one source, these constitute the 'first' spoken language of over 96 per cent of the population.[86] However, estimates of the total number of languages in India (depending on how language–dialect divisions are drawn) have varied from over 1,600 (based on the 1971 self-reported census data)[87] to less than 300, with Ethnologue (in 2019) estimating 447 living languages. To add to this diversity, there are 25 distinct writing scripts used in India today, including variants on the Northern Brahmic (e.g. Hindi) and Southern Brahmic (e.g. Tamil) scripts. This creates a complex situation for language in education policy, both in the classroom and in the community, where language, culture and ethnicity are inextricably linked.

Attempts to establish Hindi as the national language in the 1960s were challenged – particularly in the southern states – and today it is designated as a co-official or 'associate' language along with English. While Hindi operates as a lingua franca in the north (where many languages are in the Indo-Aryan family to which Hindi belongs), many from states in the south of India (where languages are in the Dravidian family) prefer to use English, not Hindi, as a lingua franca within the country, and politicians from Tamil Nadu in particular have consistently asserted its right as a state to not mandate the teaching of Hindi in its schools – including in response to the initial draft of the new National Education Policy.[88]

Both the Indian Constitution[89] and the Right to Education Act assert that the medium of instruction shall, as far as practicable, be the child's mother tongue.[90] However, it is only scheduled languages which officially receive financial support from central government towards their conservation and it is therefore difficult for many groups to secure adequate funding for schooling provision in minority languages. As a result, one study found that there were just 31 languages used as mediums of instruction across the country in 2011.[91]

In order both to recognise India's linguistic diversity and support the naturally multilingual practices of its people, the government developed a three-language formula (1968) for schools, which was implemented in most states (except Tamil Nadu). This formula envisaged that students should study three languages, including two Indian languages and English. In many non-Hindi-speaking states, the two most commonly chosen Indian languages are the state language and Hindi. The former of these most often constitutes the medium of instruction (MOI) for those classes that are not in an English-medium (EM) or Hindi-medium (HM) school or 'section' (some schools can have two sections with different MOIs).

While this means that many learners gain initial literacy in a language they know well (it may be their parents' language or the language of the local community), others living in areas with higher linguistic diversity may be forced to learn to read and write in a language they do not know well, if at all – a challenge that is known to hinder development of initial literacy significantly.[92] In such situations, state governments may attempt to provide early primary education in a minority language, but often the lack of textbooks and other materials, as well as a smaller pool of qualified teachers who speak the language, make this a logistical challenge. In Hindi-speaking states, the third language chosen may be an ancient language, such as Sanskrit, a second non-indigenous language (e.g. Spanish or German) or another Indian language. The Draft NEP (2019) continues to support the three-language policy and advocates a stronger focus on modern national languages – particularly for majority-Hindi-speaking states[93] – although wording in this particular section has been contested and may lead to future revisions.

86 Graddol (2010: 50).
87 Meganathan (2011).
88 https://www.indiatoday.in/india/story/draft-education-policy-stirs-hindi-debate-tamil-nadu-leaders-warn-of-protests-1540337-2019-06-01
89 Government of India (2012: Part XVII Chapter IV p. 177).
90 Ministry of Law and Justice (2009: Chapter V section 29.1 (f)).
91 Meganathan (2011).
92 E.g. Coleman (2011); McIlwraith (2013); Simpson (2017). A longitudinal research project (Multilingualisms and Multiliteracies) is currently being undertaken by a consortium of UK and Indian partners – led by the University of Cambridge – to further explore the issues and contribute to the evidence base – see https://www.mam.mml.cam.ac.uk
93 Ministry of Human Resource Development (2019: 84).

The rise of English medium instruction

Not surprisingly, given the rise of English as a global lingua franca, demand for English medium instruction (EMI) has greatly increased over the last 20 years at all levels, even primary.[94] While some states have introduced EMI across the board (e.g. Jammu and Kashmir), others have tried to resist early transition to EM. Despite this, an increasing number of private schools have offered it, and in so doing contributed to attracting learners away from government schools, likely due to parents' believing that starting to learn 'in' English sooner will somehow confer an advantage. In fact, it often has the opposite effect, particularly if English literacy precedes mother tongue literacy,[95] or if the transition to English is too abrupt or poorly implemented.[96]

This pull of students from government schools into private schools, many of which advertise as 'English medium', but practice a more translingual melange,[97] has caused some government school and district authorities to switch to EM to attempt to reverse the loss of students. For others, due to the pull to EM private education being strongest on children from more affluent backgrounds,[98] a higher percentage of less-privileged learners have been left in nearby government schools. This movement may help explain recently documented falls in average government student learning outcomes, which have reflected negatively (and potentially unjustly) on the government schools themselves. This is a possibility acknowledged by Wadhwa (2019), as an explanation for why, between 2008 and 2014, primary learner reading skills, mathematics ability and English proficiency fell in rural government schools, as reported by ASER. A second possible cause of this fall in rural outcomes may be the pull of more affluent families to the cities.[99]

The Draft NEP (2019) is critical of the 'unfortunate trend in schools and society towards English as a medium of instruction and a medium of conversation'. While it recognises that 'English must also be available', it states that 'when possible the medium of instruction – at least until Grade 5 but preferably till at least Grade 8 – will be the home language/mother tongue/local language', indicating a clear intention to discourage early transition to EMI.[100]

Higher educational institutions are increasingly offering courses in English medium, particularly those which rely on reference to academic or specialist literature (e.g. medicine, engineering), which in turn creates demand earlier in the education system. Elite institutions such as the Indian Institutes of Management and Indian Institutes of Technology offer the majority, if not all, of their courses in English, with student intake coming primarily from private sector schools, but with some places reserved for those from disadvantaged communities or backgrounds (as in the school system). English language levels of students entering tertiary institutions is often very low and there has been an increase in universities organising language booster programmes for new undergraduates (e.g. at Ambedkar University Delhi).

Translingual practices in the classroom

The above discussion of separate mediums of instruction may give the impression that what happens in each classroom happens in one language. However, the reality is somewhat different, particularly when teacher and learner proficiency in the MOI is low. There is ample evidence[101] that the reality of language use in English lessons across India involves a more complex, pragmatic mixture of languages – a practice known as translanguaging – both among learners and in interaction with teachers in ways that mirror the reality of language use in Indian society at large.

Practices in other classes where the MOI is not the main language of the learners' community are also likely to be translingual, even if the teacher does not share this language. Such realities call into question the rationale of designating a single 'medium' of instruction, a policy choice that derives from more monolingual communities, rather than recognising and facilitating the inclusion of all learners' languages as media of instruction, or 'languages of learning'.[102]

94 Meganathan (2011).
95 Anderson (2015).
96 Simpson (2017).
97 Erling et al. (2017).
98 Credit Suisse Emerging Market Consumer Survey (2011).
99 Kundu (2011) cites the Eleventh Five Year plan as a cause of increasing urbanisation over the term in question (p. 1), and also provides evidence (p. 36) of non-migrants being poorer than rural–urban migrants.
100 Ministry of Human Resource Development (2019: 80–82).
101 For example, Anderson and Lightfoot (2018).
102 Anderson (2019).

Technology in education in India

The use of technology to augment learning in India has become a key focus for many policymakers and education professionals in recent years. This has spawned a number of national initiatives to try to facilitate and encourage the adoption of technology within schools, along with more local innovations led by motivated teachers and their colleagues. A large number of edtech (educational technology) start-ups have also emerged, ranging from whole-school solutions which seek to integrate complete systems of learning and assessment into schools, to free downloadable apps aimed at learners or teachers to develop specific skills and knowledge.

National programmes seeking to harness the benefits of technology have included the broad-ranging 'Digital India' campaign, which aims to make government services more easily available to the population across all sectors, including education.[103] Building on programmes in place since the 1970s, where schools were provided with tape recorders and other audiovisual materials, several initiatives have been undertaken to equip schools (e.g. with Smartboards and links to satellite-enabled educational TV), train staff and teachers, reach rural schools and develop e-content (such as by the Central Institute for Educational Technology – see below).[104] For example, SWAYAM[105] is an online platform making courses available for all subjects for students from Grade 9 through to postgraduate education, in a massive open online course (MOOC) format.[106] The platform draws content from a large number of providers, including the prestigious Indian Institutes of Technology and Indian Institutes of Management. DIKSHA (see *Teacher education and evaluation in India* below) is a further platform that has been set up for teachers to access learning resources and for professional development purposes. Several states have undertaken projects to augment existing textbook content with online materials through the use of QR codes to allow students and teachers to access them on mobile or other devices.

A recent project by the British Council and Central Square Foundation[107] invited educationalists from across India to submit case studies detailing examples of effective technology use. Attracting over 430 entries, the project provided insight into some of the ways that technology is being used in classrooms and (to a lesser extent) for professional development in India.

The most popular use identified in the project focused on edtech's ability to facilitate visualisation across a range of subjects, typically involving the use of video or animation to bring a particular concept to life. Other common uses included students using tools such as PowerPoint to facilitate class projects and in some cases for teachers to provide additional scaffolding to learners to support conventional classroom teaching (including using a flipped learning model). While many of the cases submitted involved teaching and learning in comparatively privileged contexts, a number focused on the potential of educational technology to reach rural or underprivileged communities and provide educational content to address gaps in learning and/or other access to appropriate input. In this way, technology is being used by a variety of actors within the system to attempt to address issues of equity and inclusion. Interestingly, almost all of the cases submitted represented bottom-up, local approaches to technology integration, as opposed to initiatives that had been implemented on a larger scale.

The use of technology to support learning is likely to become more widespread in the coming years as connectivity and infrastructure spread and improve, although the often-cited belief that educational technology might replace teachers needs to be tempered by understanding of the complexity of teaching as a social practice and schools as part of society, not just preparation for it.[108] As Trucano notes, 'Experience from around the world shows us that, over time, teachers' roles become more central – and not peripheral – as a result of the introduction of new technologies.'[109] The draft National Education Policy sets out the objective of:

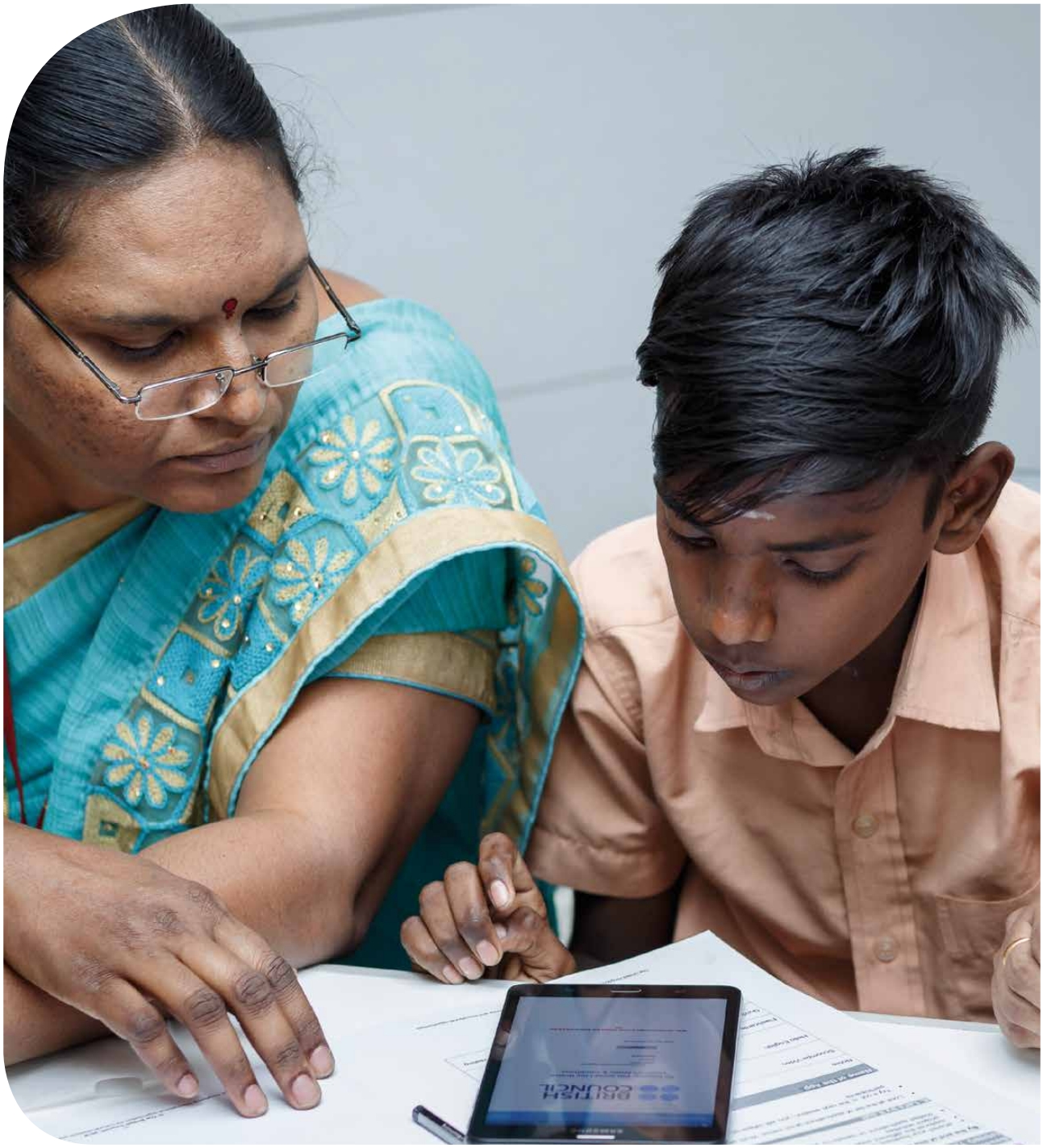
> *appropriate integration of technology into all levels of education – to support teacher preparation and development; improve teaching, learning and evaluation processes; enhance educational access to disadvantaged groups; and streamline educational planning, administration and management* (p. 339).

103 https://www.digitalindia.gov.in/
104 https://ictschools.ncert.gov.in/wp-content/uploads/2017/08/ICTscheme.pdf
105 Study Webs of Active-learning for Young Aspiring Minds.
106 https://swayam.gov.in/
107 Motteram (2017).
108 Bruner (1996).
109 Trucano (2015).

The policy recognises four key areas where technology can benefit education in India:

1. for initial teacher training and their continuing professional development
2. to 'support the classroom processes of teaching, learning and evaluation'
3. 'to improve access to education for disadvantaged groups, including differently-abled students, girls and women, and students living in remote areas'
4. in 'the planning, administration and management of the entire education system' (p. 339).

However, it also recognises the ongoing challenges in terms of ensuring all schools have access to basic electricity, hardware and software and/or the capacity to maintain installed systems, along with often quite low digital literacy skills among teachers and school leaders and the need to ensure the safeguarding of data shared online. The draft policy recommends the establishment of a new autonomous body – the National Educational Technology Forum – to support future initiatives and research. There is also a large and increasing number of private companies and non-government organisations seeking to support learning through the use of their platforms, software and applications – including international organisations.



Teacher education and evaluation in India

Of India's 10.1 million teachers (2015–16 figures), MHRD statistics[110] indicate that over five million (approximately 53 per cent) work at primary and upper primary levels, over three million (34 per cent) at secondary and senior secondary levels and over a million (13 per cent) at higher education level. Despite these huge numbers, India's ongoing commitment to universal access means that there was still a shortfall, estimated at one million teachers in 2017.[111]

Although there are more male than female teachers in India today, especially at secondary level, significant progress has been made to reduce this discrepancy. Government figures from 2012–13 indicated female-to-male teacher ratios at 79:100 at primary level (compared to 55:100 in 2000–01), and 66:100 at secondary level (compared to 54:100 in 2000–01), and figures from higher education report 66 per cent of students on BEd courses in 2016 and 62 per cent on 'teacher training' courses in 2017 were female,[112] a strong indication that this gender imbalance will continue to fall in the near future. Evidence from Andhra Pradesh[113] indicates that reducing this gender imbalance 'would improve overall learning outcomes and be especially useful as a tool for bridging gender gaps in learning trajectories over time.'

Teacher education, qualification, support and evaluation all currently fall under the jurisdiction of the Ministry of Human Resource Development (MHRD) in India (proposed to be renamed as the Ministry of Education according to the Draft National Education Policy). The MHRD is responsible for formulating and implementing the National Policy on Education, developing and expanding educational provision, supporting disadvantaged groups (poor, female and minorities) and liaising with foreign bodies, such as UNESCO. National policy legislation, such as the RTE Act (Ministry of Law and Justice, 2009), requires central government to develop and enforce standards for pre-service teacher training, ensure minimum qualification standards are met by education providers, maintain acceptable pupil–teacher ratios, and ensure schools meet staff recruitment requirements. It also organises the yearly National Award to Teachers, celebrating the contributions of India's finest teachers.[114]

Under the MHRD, responsibility for teacher education falls partly to the National Council for Teacher Education (NCTE; see separate section below), including qualification requirements and oversight of recognised teacher training institutions, and partly to the National Council of Educational Research and Training (NCERT; see separate section below). Regional teacher education responsibilities are co-ordinated in most states by SCERTs, under the jurisdiction of which are District Institutes of Education and Training (DIETs; over 500 across India). Professional development of lecturers and teachers in higher education falls under the jurisdiction of the University Grants Commission.

Pre-service teacher training and qualifications

Oversight for pre-service teacher training falls under the responsibility of NCTE, which publishes the National Curriculum Framework for Teacher Education (NCTE, 2009). Training is carried out in over 170 Colleges of Teacher Education and over 17,000 Teacher Education/Training Institutes across India, 92 per cent of which are private.[115]

The NCTE recognises a number of teacher qualification programmes,[116] including the Bachelor of Education (BEd) and Master of Education (MEd) qualifications, mainly for secondary levels and above, as well as a number of diploma courses (e.g. Diploma in Education) for early childhood, primary, and specialist teacher education (e.g. physical education and arts education). Exact qualifications required for a given position will depend on the board involved[117] and in practice, due primarily to teacher shortages, teachers lacking minimum requirements are sometimes appointed at all levels. These teachers are sometimes referred to as 'contract', 'assistant' or 'para-teachers' and generally do not receive the same salary or benefits (or access to development) as regular teachers. Nevertheless, there have been a number of recent initiatives to train up all practising teachers in some states to enable parity of knowledge and skills.[118]

110 https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/ESG2016.pdf
111 https://www.ndtv.com/education/indias-teachers-crisis-country-falls-short-of-1-million-school-teachers-1778220
112 https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/AISHE2017-18.pdf
113 Muralidharan and Sheth (2016).
114 www.nationalawardtoteachers.com/
115 Ministry of Human Resource Development (2019: 114–115).
116 www.ncte.gov.in
117 www.ncte.gov.in/Website/MinimumQualifications.aspx
118 https://www.livemint.com/Education/iwUT3pamWXWjvZb5G6ZQ3O/Parliament-passes-bill-to-allow-RTE-teachers-time-till-2019.html

The BEd is the most commonly taken higher education programme recognised by NCTE, with 530,000 students enrolled (66 per cent female) in 2016,[119] constituting approximately half of the 1.1 million teachers trained each year, according to government figures.[120] DIETs typically offer diploma-level qualifications that are recognised by NCTE and usually administered by the SCERT at state level.[121] Government figures indicate that in 2017–18, 279,000 students were enrolled in 'teacher training courses' (62 per cent female) in both public and private sectors.[122] The Draft NEP (2019) proposes a four-year BEd, 'combining content, pedagogy and practical training' as the minimum qualification by 2030, alongside a two-year BEd for graduates of relevant subjects. It also proposes teacher internships under the supervision of 'mentoring teachers' in local schools, suggesting an increased focus on the practicum.[123]

The Teacher Eligibility Test was an initiative established in 2011 to try to standardise the way that pre-service teachers were qualified, and in some cases practising teachers who often did not hold additional qualifications were required to take the test. The assessment is managed both centrally (for teachers in schools working under central boards of education) and at the state level. Technically, passing the TET is mandatory for all teachers working with grades 1–8. However, there have been issues with the quality of the assessment and specific questions asked, with many complaining that it is highly theoretical and requires memorisation of facts as opposed to understanding of practical teaching approaches. Pass rates have been extremely low but it is not clear whether this is because of a true lack of the required skills and knowledge or problems inherent in the test design and/or implementation. Nevertheless, in some states the inability to pass the exam has led to teachers losing their jobs.[124]

Prior to 2014, there was significant criticism of teacher education in India, including what one author called a 'deeply entrenched dichotomy of theory and practice' from which trainees often emerge without the necessary practical skills and understanding,[125] and a lack of focus on reflection that would enable teachers to continue developing autonomously.[126]

Since then, revised NCTE regulations (2014) extended the BEd to two years (from nine months), including at least 25 per cent 'school-based activities and internship',[127] in part to respond to these criticisms. The Draft NEP notes that a large number of private teacher education institutions function as 'commercial shops' that do not meet the minimum of curricular requirements, stating that these 'will be shut down as soon as possible'. It also proposes the phasing out of para-teachers by 2022.[128]

In-service teacher development and support

In-service teacher training (INSET) is most often organised at state level through the SCERT, and more locally through DIETs, which provide support for a number of Block Resource Centres and Cluster Resource Centres within each district. Both planning and financial support for INSET comes mainly through SSA (see separate section under *Indian government education initiatives)*, within which 20 days of INSET per year should currently be provided to experienced teachers, more to new recruits.[129]

According to the National Curriculum Framework for Teacher Education (NCTE, 2009: 64), which also provides suggestions for teacher development programmes, continuing professional development programmes should encourage teachers to:

- 'explore, reflect on and develop one's own practice
- deepen one's knowledge of and update oneself about one's academic discipline or other areas of school curriculum
- research and reflect on learners and their education
- understand and update oneself on educational and social issues
- prepare for other roles professionally linked to education/teaching, such as teacher education, curriculum development or counselling
- break out of intellectual isolation and share experiences and insights with others in the field, both teachers and academics working in the area of specific disciplines as well as intellectuals in the immediate and wider society.'

119 https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/AISHE2015-16.pdf
120 Reported in Bambawale et al. (2018).
121 www.ncte.gov.in
122 https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/AISHE2017-18.pdf
123 Ministry of Human Resource Development (2019: 134–135).
124 https://timesofindia.indiatimes.com/city/chennai/tamil-nadu-govt-to-sack-1500-teachers-who-havent-cleared-tet/articleshow/69123972.cms
125 Srinivasan (2016: 209).
126 Pandey (2011).
127 www.ncte.gov.in/Website/about.aspx
128 Ministry of Human Resource Development (2019: 115–123).
129 http://ncte-india.org/ncte_new/pdf/NCFTE_2010.pdf

A number of NGOs and development partners are acknowledged as providers of teacher education support in the curriculum (p. 70) especially with regard to the introduction of learner-centred initiatives. These include UNICEF, which focuses on early childhood and K12 education, and the British Council, which focuses on English language teaching and teacher education.

According to government figures, 3.5 million teachers receive INSET each year,[130] although there seems to be significant variation between states regarding how much INSET teachers receive and how systematic, and useful, it is. Recent research indicates largely top-down initiatives, and while evidence of impact and participant satisfaction is presented in one government report,[131] other studies have painted a less positive picture. A study from one state (Uttarakhand) in 2017 found that only 19 per cent of teachers had participated in INSET in 2015–16, down from a high of 54 per cent in 2010–11.[132] It was noted that a large number of teachers skip mandatory training for a number of reasons, including logistical difficulties (particularly for women, who may have more responsibilities at home and so sometimes are unable to travel), a lack of interest or scepticism towards the value of the training. A study from 2017 found that none of the teachers in two schools in Tamil Nadu had ever undergone 'training'.[133] Another study conducted by the British Council among English teachers in Maharashtra in 2013 found evidence of training 'fatigue' and a lack of belief in the training due to poor planning, unsuitable resource persons and little follow-up.[134] 'Reform fatigue' was also found among teachers on one NGO-led project in Karnataka.[135] In response to challenges identified in both these and the government report mentioned above, detailed guidelines for teacher continuing professional development were issued for secondary level in 2015.[136] MHRD has also shared proposals to restructure DIETs in 2017 to enable a greater emphasis on more bottom-up continuing professional development and support for school-level innovations and research projects.[137] The Draft NEP proposes a minimum of 50 hours of 'choice-based' continuing professional development per year for each teacher based on a 'well-integrated' curriculum that makes extensive use of ICT and avoids cascade-model training typical of top-down initiatives.[138]

Online resources for teacher support

In 2017, NCTE launched DIKSHA (https://diksha.gov.in/), a national digital portal to support teacher education through the hosting of resources for teachers including materials for in-class use, teacher training content, assessment aids and opportunities for teachers to interact through online communities. 2017 also saw the launch of ShaGun (http://ssashagun.nic.in./), a web portal designed to support SSA by both championing success stories and measuring performance and progress.

NGO-led websites offering support and resources for teachers include Teachers of India (http://teachersofindia.org/en) of the Azim Premji Foundation, TESS India (www.tess-india.edu.in/) set up by the Open University and Save the Children, Firki (initially for Teach for India fellows but now open to all – https://www.firki.co) and the British Council India's website (https://www.britishcouncil.in/teach), mainly for English teaching. English language teachers in India are supported by two national organisations, ELTAI (English Language Teachers Association of India – http://eltai.in/) and AINET (All India Network of English Teachers – http://theainet.net/), and a number of state-level organisations, such as the 15 (in 2019) chapters of ELTAI across India.

Recently, a number of projects and programmes have had some success with establishing communities of practice using social media including Facebook and WhatsApp. Some of these have operated at large scale, attracting thousands of teachers across a single state. Their function as a tool for motivating teachers and a platform for sharing experiences has been documented, but in some cases they have also indicated a lack of depth to reflection on practice and the need for greater support in some fundamental aspects of classroom teaching.[139]

130 According to Bambawale et al. (2018).
131 RMSA Technical Cooperation Agency (2016b).
132 Akhtar (2017).
133 Meganathan (2017).
134 Mody (2013).
135 Sriprakash (2012).
136 RMSA Technical Cooperation Agency (2015b).
137 Ministry of Human Resource Development (2017).
138 Ministry of Human Resource Development (2019: 128–129).
139 Parnham et al. (2018).

Teacher evaluation

A number of tools and initiatives have recently been developed to facilitate in-service teacher evaluation in India, including:

1. Advancement of Educational Performance through Teacher Support (ADEPTS; 2007)
2. PINDICS performance indicators (2013) for both self-assessment and supervisor assessment of primary school teachers[140]
3. the National Programme on School Standards and Evaluation, known as the Shaala Siddhi framework (2015), which focuses on school evaluation and improvement.[141]

While ADEPTS appeared to be losing momentum at the time of writing (2019), a draft version of a new set of performance indicators, the Teacher Performance Assessment Rubrics, was also being circulated by NCERT for use both by teachers (self-assessment) and supervisors to assess teacher performance at all levels (i.e. potentially replacing PINDICS) if rolled out in future. In addition to these tools, there are moves in some states to attempt to link learner achievement (through exam results) to teacher evaluation, and potentially performance-related pay,[142] despite evidence of considerable challenges in accurately assessing the value-added impact of a single teacher.[143] This is due to multiple, confounding factors influencing a child's learning at school, how this learning is assessed and how valid and reliable this assessment is, even in contexts where assessment procedures are more valid and more reliable than is practically possible in the vast majority of schools in India today. The same source indicates that such measures, if implemented, could unfairly penalise those teachers working with the most disadvantaged learners, who may make slower progress and have lower overall attainment levels.

A review of teacher evaluation procedures in India from 2018 concluded that while many of the tools developed centrally generally provide for appropriate teacher evaluation, they were often used inappropriately and were ineffective as a result. The review made several recommendations:

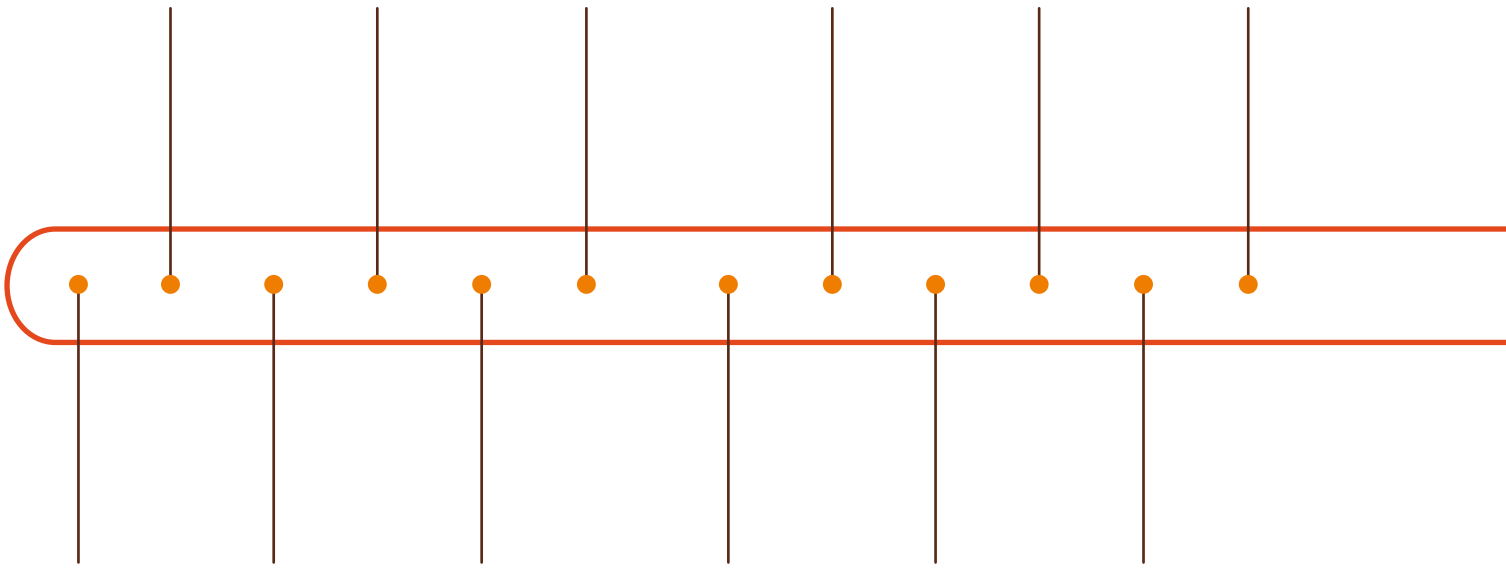
- increased transparency (in use) of evaluation criteria and how these relate to classroom processes and skills from pre-service education onwards
- a shift in mindset at all levels of the system to value the formative (learning) potential of teacher evaluation, rather than seeing it simply as a procedural requirement
- development of skills for self-assessment by teachers, and triangulated assessment by supervisors
- the prioritisation of classroom teaching responsibilities and school-based professional development over non-academic work
- the need to improve perceptions of the status of teaching as a profession and to encourage commitment to professional development
- improved accountability mechanisms within the system.[144]

The Draft NEP proposes a framework for teacher performance appraisal that recommends 'multiple sources of evidence' including classroom observations, peer review and feedback on progress of students. This implies a qualitative – rather than value-added – approach, although it indicates that SCERTs will have some freedom to develop specific procedures for each state.[145] It also prohibits the involvement of teachers in 'government work that is not directly related to teaching', providing examples of electioneering and preparation of midday meals as inappropriate. Such practices are common across the country and often lead to teachers being away from their classes for significant amounts of time each year.[146]

140 www.ncert.nic.in/pdf_files/PINDICS.pdf
141 http://14.139.60.151/sse/doc/THREE.pdf
142 https://timesofindia.indiatimes.com/city/mumbai/teachers-upset-as-state-links-pay-hikes-to-students-learning/articleshow/61211885.cms
143 Darling-Hammond (2012).
144 Bambawale et al. (2018).
145 Ministry of Human Resource Development (2019: 132).
146 Ministry of Human Resource Development (2019: 118).

Indian education policy: a timeline

The following timeline documents important policies introduced by the Indian government since independence.



1952–53
Secondary Education Commission

Established aims and made recommendations for secondary education regarding age groups, objectives, and importance of mother tongue, curriculum content and 'multipurpose schools'.

1964–66
Kothari Commission

Made recommendations to reform education by ensuring relevance to needs, improved productivity, national integration, a focus on moral values, and closer involvement of universities in pursuing these aims, leading to the National Policy on Education in 1968.

1968
National Policy on Education (NPE)

Included stipulations on compulsory education to age 14, greater equality of opportunity, the (then new) three language formula, and improved teacher education.

1976
42nd Constitutional Amendment

Reinforced national and integrative role of education, emphasising quality standards for teachers and encouraging increased personnel development, research and internationalisation. Education became a 'concurrent subject' with dual responsibility at both central and state levels.

1986
(New) National Policy on Education (NPE)

Emphasised greater integration of women, SCs and STs, expansion of adult education, incentivisation for low-income families, recommending a 'child-centred approach' at primary level and expanding the open university system.

1987–88
Centrally Sponsored Scheme of Teacher Education

Established the District Institutes of Education and Training (DIETs) and strengthened the role of the SCERTs in teacher education.

1993
District Primary Education Programme

Aimed to achieve universal primary education, leading to SSA in 2000.

1995
Midday Meal Scheme

Aimed to improve the nutritional status of primary school children through the compulsory provision of free midday meals for all primary pupils. Revised in 2001 and 2004 and set for expansion to include breakfast in 2019–20.

2000–02
Sarva Shiksha Abhiyan (SSA)

Introduced to achieve universal primary education through the provision of new schools (access) and the strengthening of existing school facilities, as well as increasing teacher capacity and support, and improving teaching-learning materials (quality) (see Indian government education initiatives section below).

2002
Right to Education Amendment

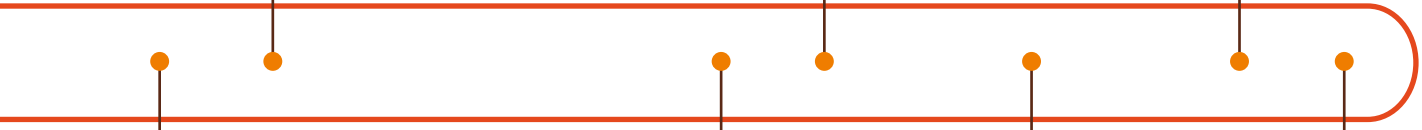
The 86th Constitutional Amendment introduced the Right to Education for all children to age 14 and the right to early childhood care to age six.

2005
National Curriculum Framework (NCF)

Developed by the National Council for Educational Research and Training, the NCF strongly advocated a move away from rote learning and toward more child-centred practices.

2007–08
Model School Scheme

Public–private partnership initiative that planned 6,000 model schools (one in each block) as a 'benchmark of excellence' to ensure access to quality schooling for 'talented rural children'.



2008
National Scheme for Incentive to Girls for Secondary Education

Aimed to promote increased enrolment of girls in secondary (14–18) education, with a specific focus on girls from SC and ST communities. Included a financial deposit (Rs 3,000) for eligible students to withdraw upon successful completion of secondary education at age 18.

2008
Girls' Hostel Scheme

The Scheme for Construction and Running of Girls' Hostel for students of Secondary and Higher Secondary Schools aimed to provide accommodation for girls near schools to reduce dropout due to distance to school, financial constraints and related societal factors, with a focus on disadvantaged girls in 'Educationally Backward Blocks'.

2008
National Means-Cum-Merit Scholarship Scheme

Introduced means-tested scholarships of Rs 6,000 per annum to 'meritorious' students from disadvantaged backgrounds to continue education from grades 9–12.

2009
Rashtriya Madhyamik Shiksha Abhiyan (RMSA)

A major programme that aimed to improve quality, equity of access (irrespective of gender, socio-economic background and disabilities) and enrolment and completion ratios at secondary level, with specific foci on teacher training, provision of basic facilities, science and ICT education and inclusivity (see Indian government education initiatives section below).

2009–10
RTE Act

Provided all children aged six to 14 with the right to 'free and compulsory education' in a local school and laid out a rights-based framework that casts legal obligations on central and state government. Also specifies teacher-pupil ratios, school working days and teacher working hours and qualifications as well as prohibiting physical punishment, mental harassment and selective admission of pupils. Currently under review as part of the National Education Policy development process (2019).

2009–10
Inclusive Education of the Disabled at Secondary Stage

Provided assistance for all students with disability to continue studying in grades 9–12 after completion of primary education.

2012
Justice Verma Commission on teacher education

The report published after this commission's deliberations made a series of important recommendations to improve the provision of teacher education in India.

2014
Beti Bachao Beti Padhao

Aims both to celebrate the girl child and to ensure the survival, safety and education of girls, including commitments to building more girls' toilet and drinking water facilities, thereby reducing the number of female dropouts.

2014
Scheme to Provide Quality Education in Madrasas

Aims to provide for the modernisation of madrasa education through the National Institute of Open Schooling. Aims to reach one million Muslim children.

2015
Rashtriya Avishkar Abhiyan

Launched to encourage greater enquiry, creativity and interest in science, maths and technology, and to develop stronger links between schools and higher education institutions.

2018
Samagra Shiksha Abhiyan

Aims to subsume and merge SSA, RMSA and Teacher Education, with a focus on ensuring a 'continuum' from preschool right up to senior secondary level, and ensuring 'inclusive and equitable quality education', in line with UN Sustainable Development Goal 4.

2019
National Education Policy

A draft of the revised National Education Policy was released for public comment in May 2019. The policy seeks to overhaul key aspects of the education system including revisions to the Right to Education Act and governance structure of the system. Implementation of the policy is expected to begin in late 2019/ early 2020.

Indian government education initiatives

Indian central government has in recent years funded a large number of specific policy initiatives, aimed at improving both access to and quality of education. The 2019–20 Indian central budget allocated Rs 93,848 crore (over £10 billion) to education (3.3 per cent of the budget total and an increase of over Rs 10,000 crore on 2018–19), with Rs 56,387 crore for school education and literacy, and Rs 37,461 crore allocated for higher education.[147] It is, however, important to understand these figures in the context of overall population growth. As noted in the *Introduction* above, when expressed as a percentage of GDP, spending has actually fluctuated unpredictably between 3.3 and 4.4 per cent since 2000.

While much of this funding goes into maintaining and supporting the ever-expanding education sector (e.g. staff salaries, teacher education, materials development and provision of schools in remote areas), funds have also been diverted into projects specifically designed to meet India's needs, many of which correspond to its commitments to achieving both Millennium Development Goals and Sustainable Development Goals. The Draft NEP envisions a doubling of spending on education over a ten-year period (from ten to 20 per cent of overall public expenditure), arguing that the rapid pace of economic growth will provide sufficient financial support for this commendable, yet ambitious target.

India's commitment to UN development goals

The Millennium Development Goals established universally agreed and measurable indicators for global development in 2000, including in the field of education, and were integrated by India into its national development agenda. This included the initiation of the SSA programme, which had considerable success in achieving near-universal enrolment at primary level. More recently, the Sustainable Development Goals have also been integrated into India's educational initiatives, particularly goal 4 (quality education), both through further support for ongoing programmes, such as Rashtriya Madhyamik Shiksha Abhiyan (recently subsumed under Samagra Shiksha Abhiyan), and through the funding of new initiatives, such as Rashtriya Avishkar Abhiyan (see below), both of which focus on aspects of quality in education. Goals 2 (Zero hunger), 3 (Good health and well-being) and 6 (Clean water and sanitation) continue to be tackled through school-based initiatives such as the Midday Meal Programme (1995) and the Beti Bachao Beti Padhao programme (2014; see below) with its focus, among other things, on providing safe, adequate separate female toilets and clean drinking water. Goal 10 (Reduced inequalities) is also being addressed in education through continued support for SSA, and while challenges remain, particularly with regard to disadvantaged students, progress is also being made here.[148]

Sarva Shiksha Abhiyan and Rashtriya Madhyamik Shiksha Abhiyan

Since 2000, two major initiatives have received significant funding: SSA, receiving an average of Rs 24,000 crore each year from 2012 to 2019,[149] and Rashtriya Madhyamik Shiksha Abhiyan (RMSA; 'National Secondary Education Campaign' in Hindi), the allocation for which has grown steadily from Rs 3,172 crore in 2012–13 to 4,213 crore in 2018–19.[150] SSA was launched in 2001, with the aims of achieving universal primary education through the provision of new schools, the strengthening of existing school facilities, increasing teacher capacity and support, and improving teaching-learning materials.[151] The RMSA programme was launched in 2009, aiming to achieve secondary gross enrolment ratios of 75 per cent within five years, universal access by 2017, and universal retention by 2020, and while the last of these is likely to take longer to achieve, significant progress has been made (see above). The programme has also included a focus on quality and equity.

With regard to quality, key initiatives aim to improve pupil teacher ratios to 30:1, to provide effective in-service teacher training and development, to reform curricula and to improve science and ICT facilities in secondary schools. With regard to equity, key initiatives included aiming to give priority to areas with disadvantaged students for new schools, to increase female teacher numbers at secondary level, and to ensure there are separate toilet blocks for girls in all schools.[152] In 2018, an announcement

147 https://www.indiabudget.gov.in/
148 http://ris.org.in/sdg/india-and-sustainable-development-goals-way-forward
149 https://union2018.openbudgetsindia.org/en/sectors/children/sarva-shiksha-abhiyan-ssa/
150 http://pib.nic.in/newsite/PrintRelease.aspx?relid=187952
151 https://www.aicte-india.org/reports/overview/Sarva-Shiksha-Abhiyan
152 http://rmsaindia.gov.in/en/about-rmsa.html

was made that the two initiatives would be merged under the umbrella of Samagra Shiksha Abhiyan, along with teacher education (see below).

Rashtriya Avishkar Abhiyan

Launched in 2015, Rashtriya Avishkar Abhiyan ('National Invention Campaign') aims to encourage greater enquiry, creativity and interest, specifically within the areas of science, mathematics and technology in education.[153] The campaign, which received Rs 198 crore in 2017–18, intends to create stronger links between schools and higher educational institutions through school mentoring programmes, student exchanges and development of science labs, linked to RMSA initiatives.[154]

Samagra Shiksha Abhiyan

More recently, the Samagra Shiksha Abhiyan ('Composite Education Campaign'),[155] launched in 2018 and allocated Rs 30,254 crore,[156] aims to bring together SSA and RMSA along with teacher education under one scheme that views education more holistically from preschool to higher secondary education. The focus on full access, quality education and greater equity and inclusion are continued in line with Sustainable Development Goal 4, along with vocational, digital and physical education elements and further strengthening of teacher education institutions. Local quality initiatives under Samagra Shiksha Abhiyan include the 'Happiness Curriculum' launched in over 1,000 Delhi government schools in 2018,[157] focusing on holistic, values-based education and mental health from preschool to upper primary levels, and the 'Joyful Saturday' initiative in Rajasthan in 2018.[158] This had similar aims, including developing values, honing creativity and play across all primary and secondary classes, with Rs 1,000 per school for provision of necessary resources.

National Education Policy 2019

The Draft NEP follows the initiative of Samagra Shiksha Abhiyan to create a more holistic, unified education system, with greater continuity, foci on longer free and compulsory education (from age three to 18), and a Foundation stage that ensures greater school readiness when children begin primary school. It proposes a reduction in core curriculum content to allow for subjects previously perceived as being co- or extra-curricular to be integrated into a curriculum that promotes a wider range of interests (including music, art and physical education) and provides for vocational subjects at higher levels. It also stresses a need to move away from rote learning and high-stakes exams towards more 'constructivist', 'discovery-oriented', 'student-centred' pedagogy that involves more formative assessment of a wider range of cognitive, social and '21st century skills'.

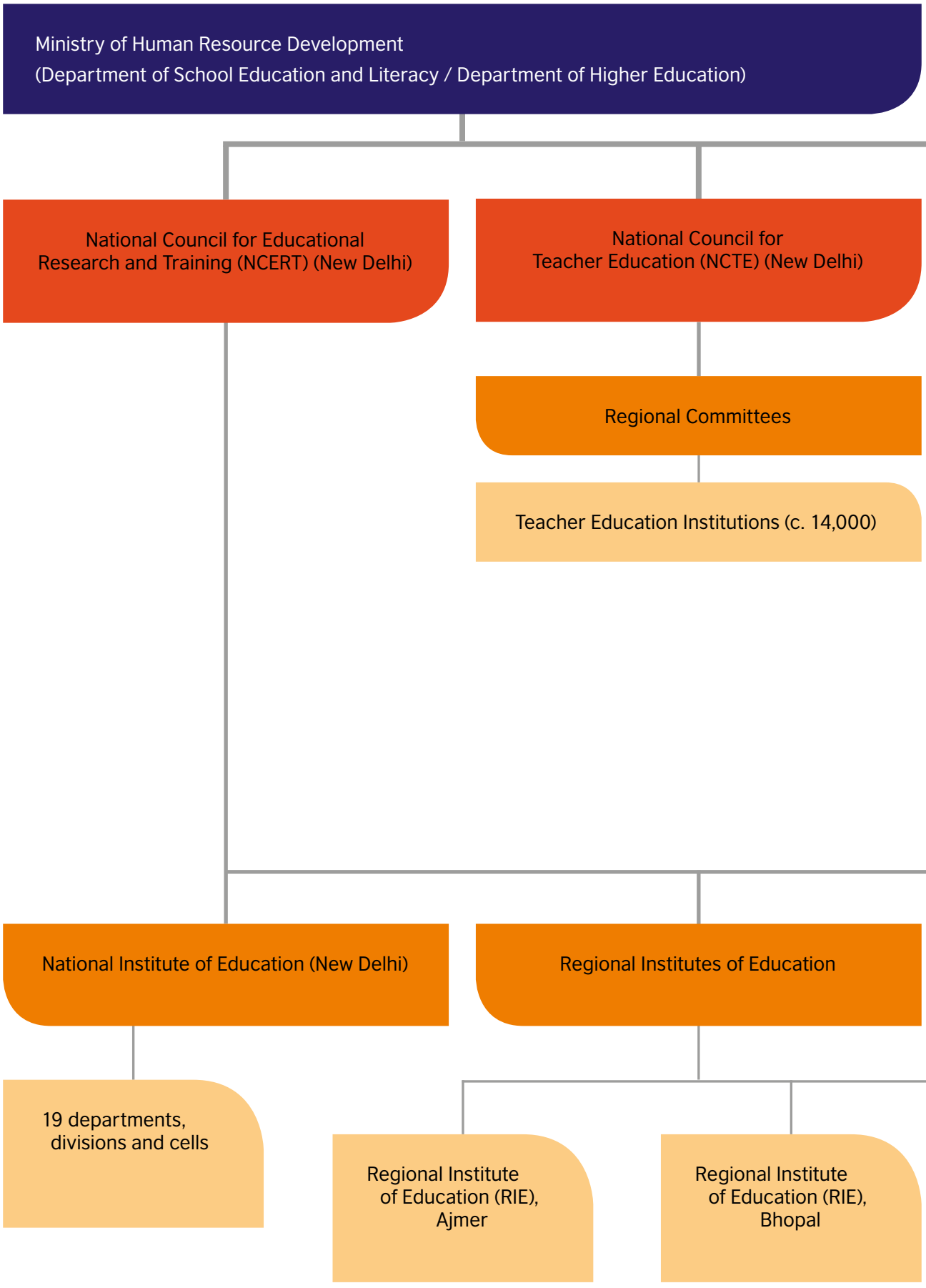
Other recent initiatives

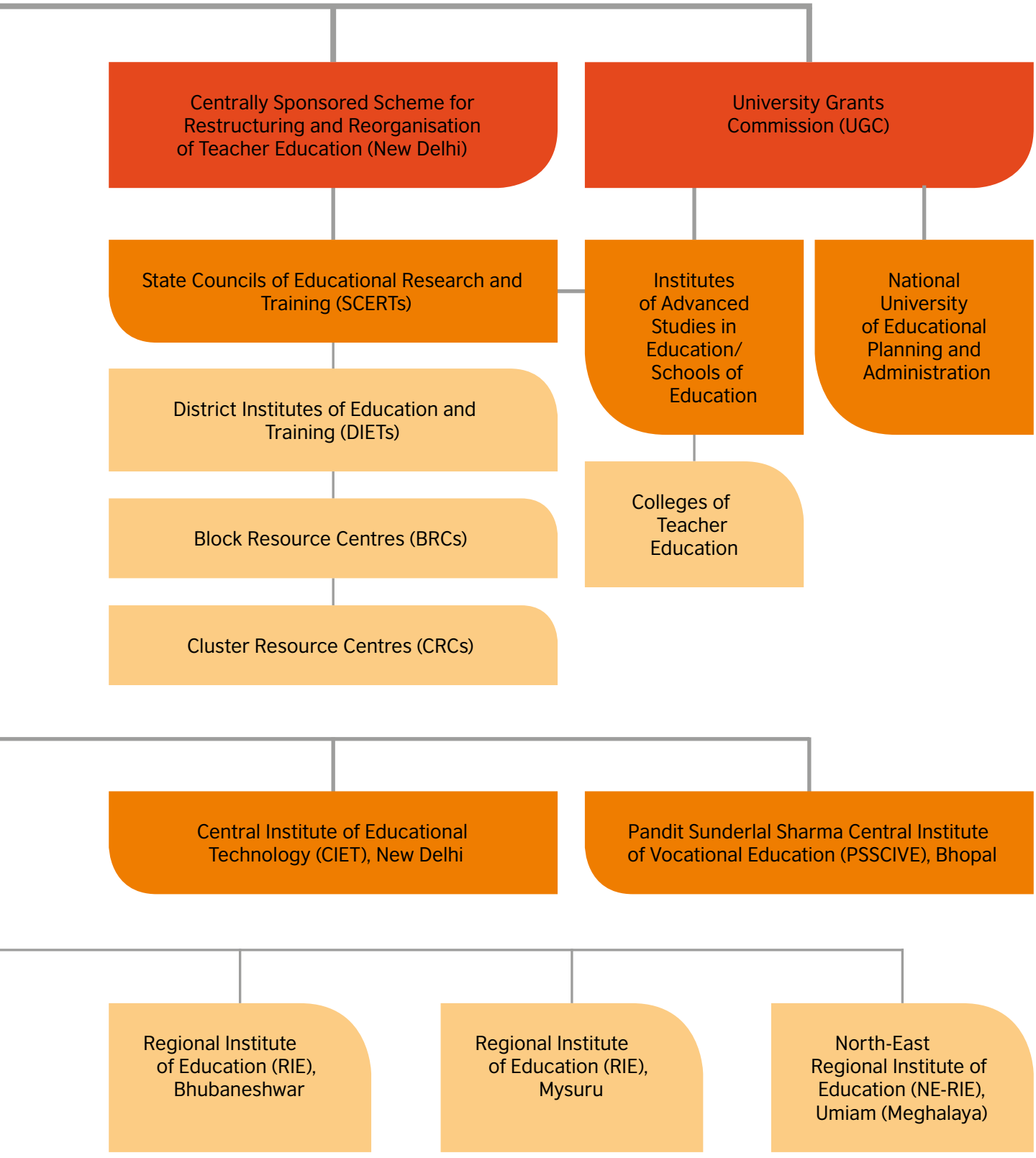
Other initiatives include a focus on girls' education through the Beti Bachao Beti Padhao (literally 'Save girls, educate girls') scheme, launched in 2014, aiming both to celebrate the girl child and to ensure the survival, safety and education of girls. This included a commitment to building 100,000 girls' toilet and drinking water facilities in schools to benefit ten million girls in its initial phase, thereby reducing the number of female dropouts.[159] Provision for the modernisation of madrasas (traditional Muslim schools) has also been made through the Scheme to Provide Quality Education in Madrasas,[160] aiming to provide education at national standards to one million Muslim children, certified through the National Institute of Open Schooling (NIOS). Quality initiatives include the School Assessment Programme (2014–15, Rs 0.3 crore; 2018–19, Rs 0.7 crore[161]), and the Pandit Madan Mohan Malviya's Teacher Training Programme (2014–15, Rs 900 crore[162]), which aims to benefit nearly 20,000 teacher trainees studying at teacher education institutions.

153 https://mhrd.gov.in/rashtriya-avishkar-abhiyan
154 www.pib.nic.in/Pressreleaseshare.aspx?PRID=1527326
155 http://samagra.mhrd.gov.in/about.html
156 http://samagra.mhrd.gov.in/docs/letter_240418.pdf
157 http://vikaspedia.in/education/education-best-practices/promoting-activity-based-learning-through-happiness-curriculum-a-delhi-government-initiative
158 http://vikaspedia.in/education/education-best-practices/joyful-saturday-initiative-by-the-rajasthan-government
159 https://www.savethechildren.in/articles/five-education-initiatives-that-are-changing-india
160 https://mhrd.gov.in/spqem
161 http://pib.nic.in/newsite/PrintRelease.aspx?relid=187952
162 https://mhrd.gov.in/sites/upload_files/mhrd/files/PMMNMTT%20English.pdf

Apex educational organisations in India

Figure 9: Organogram of apex and state-level organisations in school education system in India




Centrally Sponsored Scheme for Restructuring and Reorganisation of Teacher Education (New Delhi)
University Grants Commission (UGC)
State Councils of Educational Research and Training (SCERTs)
Institutes of Advanced Studies in Education/ Schools of Education
National University of Educational Planning and Administration
District Institutes of Education and Training (DIETs)
Colleges of Teacher Education
Block Resource Centres (BRCs)
Cluster Resource Centres (CRCs)
Central Institute of Educational Technology (CIET), New Delhi
Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), Bhopal
Regional Institute of Education (RIE), Bhubaneshwar
Regional Institute of Education (RIE), Mysuru
North-East Regional Institute of Education (NE-RIE), Umiam (Meghalaya)

India functions as a federalised country, with 29 states and seven union territories. Significant powers are allocated at state level for policy creation and implementation across all sectors. In 1976, education became a 'concurrent subject': the central and state governments both have responsibility for its development (NUEPA, 2014). In practice, this means that the central government develops overarching policy which the states adapt as necessary according to the context and create implementation plans. The Ministry of Human Resource Development has responsibility for education at the central level, with two departments: School education and literacy, and Higher education. To support these departments and the state governments, apex organisations have been established with specific responsibilities for different aspects of education. The sections below outline the main areas of focus for three of these bodies most relevant to the schools sector (see also Figure 9).

National Council of Educational Research and Training

NCERT[163] was set up by the government of India in 1961 as an autonomous organisation registered under the Societies Registration Act (Act XXI of 1860) to advise and assist the formulation and implementation of policies and major programmes in the field of education. The major constituent units of NCERT are:

1. National Institute of Education, New Delhi
2. Central Institute of Educational Technology (CIET), New Delhi
3. Pandit Sunderlal Sharma Central Institute of Vocational Education, Bhopal
4. Regional Institute of Education, Ajmer
5. Regional Institute of Education, Bhopal
6. Regional Institute of Education, Bhubaneswar
7. Regional Institute of Education, Mysuru
8. North-East Regional Institute of Education, Umiam (Meghalaya).

For realisation of its objectives, NCERT and its constituent units:

- undertake, promote and co-ordinate research in areas related to school education
- prepare and publish model textbooks, supplementary material, newsletters, journals and develop educational kits, multimedia digital materials, etc.
- organise pre-service and in-service training of teachers
- develop and disseminate innovative educational techniques and practices
- collaborate and network with state educational departments, universities, NGOs and other educational institutions
- act as a clearing house for ideas and information in matters related to school education
- act as a nodal agency for achieving the goals of Universalisation of Elementary Education.[164]

NCERT is perhaps best recognised for its work in producing curriculum frameworks and textbooks, drawing on the NCF published in 2005. Most recently it has also been responsible for the implementation of the National Achievement Surveys – a standardised initiative first conducted in 2010. The latest iteration in 2017 involved over 2.2 million students in grades 3, 5 and 8 to measure learning outcomes across several subjects: mathematics, language, science and social studies.

Within NCERT the constituent units as outlined above undertake a variety of responsibilities and activities. The National Institute of Education is composed of 19 different departments as shown in Table 2, all of which are located in Delhi. These departments function as 'think-tanks' and many focus on the production of teaching and learning resources – including, but not limited to, textbooks. In recent years there has been a significant increase in the development of e-resources and the use of technology in general (see section *Technology in education in India* for further details). The departments also carry out research and training programmes related to their area of focus.

163 www.ncert.nic.in/index.html
164 NCERT (2018).

Table 2: National Institute of Education departments

1.	Department of education in science and mathematics
2.	Department of education of groups with special needs
3.	Department of educational psychology and foundations of education
4.	Department of teacher education
5.	Department of elementary education (includes focus on primary and ECE)
6.	Department of education in languages (content development focuses only on Hindi, English, Sanskrit and Urdu – Classes I–XII)
7.	Department of education in social sciences
8.	Department of education in arts and aesthetics
9.	Department of gender studies
10.	Division of educational research
11.	Educational survey division
12.	Division of educational kits (largely focused on science, technology, engineering and maths)
13.	Planning and monitoring division
14.	RMSA project cell (see also section *Indian government education initiatives* below)
15.	International relations division
16.	Department of curriculum studies
17.	Hindi cell
18.	Publication division
19.	Library and documentation division

NCERT acts as a major agency for implementing bilateral cultural exchange programmes with other countries in the field of school education. NCERT also interacts and works with international organisations, visiting foreign experts and delegations to offer various training facilities to educational personnel from developing countries.

Regional Institutes of Education

The five Regional Institutes of Education are located in the north (Ajmer), west (Bhopal), east (Bhubaneswar), south (Mysuru) and northeast (Umiam) of the country. Their mandate is to provide training for both pre-service and in-service teachers although in practice they are predominantly focused on training pre-service teachers and/or ensuring that teachers already working in schools have got the minimum qualifications required for their employment. They are less involved with the continuing professional development aspect of in-service teacher education. The Regional Institutes of Education also have some responsibility for training administrative staff of the District Institutes of Education and Training and other more local bodies within their region.

Central Institute of Educational Technology

Established in 1984, CIET develops and promotes the use of edtech through a variety of modes including broadcast (radio/TV), satellite communications and online media. There have been a number of initiatives utilising satellite networks to bring educational content into schools across the country. 'Extension of ICT resources among schools, students and teachers in every nook and corner of the country' is the motto of the division.[165] CIET includes four main departments which focus on improving infrastructure for the use of technology in schools along with producing resources and training educators in how they can best be integrated in classrooms.

165 NCERT (2018: 23).

National Council for Teacher Education

The NCTE [166] was originally (from 1973) a teacher education advisory body for the central and state governments, with its secretariat at NCERT. Following the development of the National Policy on Education (NPE) in 1986, the NCTE gained the necessary statutory status and resources to support more significant changes to the system of teacher education through the National Council for Teacher Education Act (No. 73 of 1993) in 1995.

The NCTE supports the design and delivery of teacher education across the country, under the overarching National Framework for Teacher Education, published in 2010. At the ground level, its policies and approaches are largely implemented by resource persons working out of local bodies such as the Block Resource Centres and Cluster Resource Centres.

The NCTE's focus is mainly on ensuring norms and standards in relation to pre-service training are upheld by the large number of private and government institutions offering initial teacher training courses across the country. It maintains a database of recognised institutions (along with a list of recognised qualifications) on its website. This is challenging given the large numbers of institutions involved – 90 per cent are said to be privately run [167] – and in the past the credibility of the NCTE has been affected by charges of corruption. [168]

With a focus on research as well as training, the NCTE's policies and programmes relate to teachers at all levels of the system from schools to non-formal and adult education, to courses offered in a distance mode. NCTE has its headquarters in New Delhi and four Regional Committees at Bengaluru (south), Bhopal (west), Bhubaneswar (east) and Jaipur (north) to look after its statutory responsibilities.

National Institute of Educational Planning and Administration

NIEPA (also called NUEPA – 'university') was founded in 1962 when UNESCO established the Asian Regional Centre for Educational Planners, Administrators and Supervisors, which then became the Asian Institute of Educational Planning and Administration in 1965. This later merged with the National Staff College for Educational Planners and Administrators as its Asian Programmes Division in 1973. Subsequently, with the increasing role and functions of the National Staff College, particularly in capacity building, research and professional support services to the state governments, it became NIEPA in 1979.

NIEPA was given the status of a university by the Ministry of Human Resource Development in 1956 and it is therefore maintained by the government of India (as are all centrally governed universities). It conducts capacity building, research in planning and management of education not only in India but also in South Asia.

NIEPA is organised into eight academic departments and three centres. Its academic departments are:

1. Department of Educational Planning
2. Department of Educational Administration
3. Department of Educational Finance
4. Department of Educational Policy
5. Department of School and Non-Formal Education
6. Department of Higher and Professional Education
7. Department of Educational Management Information System
8. Department of Training and Capacity Building in Education.

There are three academic centres:

1. National Centre for School Leadership
2. Centre for Policy Research in Higher Education
3. School Standards and Evaluation – Shaala Siddhi.

Research and other activities are supported by a project management unit.

166 www.ncte-india.org
167 Vijaysimha (2013).
168 http://indianexpress.com/article/news-archive/web/tainted-national-council-for-teacher-education-chief-to-be-shunted-out/

Educational boards in India

National boards

State government boards

State government boards are regulated and supervised by the Department of School Education with support from the SCERT, the nodal body responsible for secondary and senior secondary education in each state. The majority of Indian schools are affiliated with state government boards. The oldest state board is in Uttar Pradesh – the Uttar Pradesh Board of High School and Intermediate Education, established in 1922 as an autonomous body under the Department of Education. Uttar Pradesh, as the most populous state, has the highest number of state board schools, followed by Madhya Pradesh, Rajasthan, Andhra Pradesh and Maharashtra.

The Central Board of Secondary Education

Established in 1962 under the purview of MHRD, the CBSE provides affiliations both to public and private schools.[169] In 2019, over 21,000 schools were affiliated under the CBSE, up from around 15,000 in 2014.[170] The board conducts final examinations, including the AISSC at Grade 10, and the AISSCE at Grade 12. It also annually conducts the AIEEE[171] and AIPMT[172]/NEET-UG[173] examinations for admission to undergraduate courses in engineering (and architecture) and medicine in numerous colleges across India. The CBSE is recognised by the Indian government and by most of the universities and colleges in India. There is also an international CBSE offered to expatriate students.

The Council of Indian School Certificate Examinations

The Council of Indian School Certificate Examinations (CISCE) conducts the ICSE (Indian School Certificate Examinations, at Grade 10) and Indian School Certificate (at Grade 12) examinations in India. Over 2,100 schools were affiliated with the privately run CISCE, up from around 1,900 in 2014.[174] Established in 1956, the board was initially created to administer the University of Cambridge Local Examinations Syndicate's Examinations in India. It was later recognised as a public examination board by the Delhi Education Act, 1973.

National Institute of Open Schooling

NIOS is the board responsible for distance education under the government of India.[175] It was established by the MHRD in 1989 (previously known as the National Open School) to provide low-cost, quality education to learners in rural and remote areas of the country. It provides a range of vocational, life-enrichment and community-oriented courses in addition to general and academic courses at secondary and senior secondary level. According to the NIOS website, there were 3,530 accredited institutes, 1,379 vocational centres and 1,313 accredited agencies in 2019 (compared to 3,827, 1,830 and 690 respectively in 2014).[176] It enrols around 350,000 students annually, with 2.71 million students 'currently' enrolled according to its website, making it the largest open schooling system in the world.[177]

169 http://cbse.nic.in/
170 http://cbseaff.nic.in/cbse_aff/schdir_Report/userview.aspx
171 All India Engineering Entrance Examination.
172 All India Pre-Medical Test.
173 National Eligibility Entrance Test – Undergraduate.
174 https://timesofindia.indiatimes.com/home/education/cisce-cuts-pass-marks-for-boards/articleshow/61827357.cms
175 www.nios.ac.in
176 https://www.nios.ac.in/media/documents/NIOS%20PROFILE%20FINAL_Curve_English.pdf
177 https://www.nios.ac.in/about-us/profile.aspx

International boards

International Baccalaureate Organisation

The International Baccalaureate Organisation (IBO) was founded in 1968 as an international, non-governmental, non-profit educational organisation based in Geneva, Switzerland.[178] International Baccalaureate (IB) World Schools in India offer three IB programmes – the Primary Years Programme, the Middle Years Programme and the IB Diploma Programme. According to the IBO website, there were 167 IB World Schools in India (up from 109 in 2014), offering one or more of the three IB programmes. Eighty-nine schools offer the Primary Years Programme, 34 schools offer the Middle Years Programme and 135 schools offer the Diploma Programme. The IB is recognised by the Association of Indian Universities as an entry qualification (equivalent to +2 qualification of an Indian Board) to all universities in India.

Cambridge Assessment International Education

Cambridge Assessment International Education (CAIE) is a provider of international qualifications offering examinations and qualifications to 10,000 schools in 160 countries (2019 figures).[179] It is an examination board under Cambridge Assessment, founded in 1858 as a department of the University of Cambridge. There are over 400 Cambridge schools in India, up from 310 in 2014, making over 50,000 examination entries for Cambridge IGCSE, 'the world's most popular international qualification for 14 to 16-year olds', according to their website,[180] and Cambridge International AS- and A-Levels, offering 55 subjects to enable learners to gain university places.[181]

The Council of Boards of School Education

The Council of Boards of School Education (COBSE)[182] is a voluntary association of all the Boards of School Education in India. It works in close collaboration with the Ministry of Human Resource Development, government of India, other national-level educational organisations and agencies including NCERT, NUEPA and NCTE (see above).

COBSE was established in 1979 by the CBSE to provide a forum for discussion and mutual learning. Since 1989, it has functioned as an independent secretariat. It had 62 members in 2019 (up from 51 in 2014 – see list in Appendix 2),[183] with some foreign boards recognised as its associate members (including Edexcel in the UK).[184]

The major functions of COBSE are:

- to provide a forum to its members to discuss issues related to quality in education
- to conduct curriculum reform and bring about improvements in evaluation systems
- to respond to national concerns like population, education and disaster management
- to provide opportunities for professional development of officers of the member boards
- to interact with NCERT and NUEPA on professional issues.

178 www.ibo.org
179 See www.cie.org.uk and https://www.cambridgeinternational.org/about-us/what-we-do/
180 https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-secondary-2/cambridge-igcse/
181 https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-advanced/cambridge-international-as-and-a-levels/
182 www.cobse.org
183 www.cobse.org/member7.htm
184 www.cobse.org/aboutus.htm

Looking to the future

This report was written shortly after the Draft NEP was released, and as such, it marks an important moment in both the history and future of school education in India. Given the extensive diversity of contexts and challenges for schooling in a country with one of the longest histories of education in the world, the achievements made so far should not be underestimated. These include India's success in providing access to schooling to some of the most remote and socio-economically disadvantaged peoples in the world, its commitment to equity, its continued recognition and promotion of multilingualism, and its ability to embrace a wide range of schooling solutions with a single system.

These threads are continued and reinforced in the Draft NEP, which now directs attention to continuity, pluralism and national identity, and also re-emphasises India's historical interest in the moral and civil development of its learners.[185] It also pledges to extend free compulsory schooling to an ambitious 15 years in total, underlining India's commitment to its investment in future generations.

While this report makes no attempt to predict the future of school education in India, recent signs that emphases on quality over the last decade are starting to pay dividends[186] indicate that the future is promising. The government's commitment to re-enter the Programme for International Student Assessment in 2021 demonstrates a confidence that progress is being made and an ambition for India to have an education system that can compete on the world stage.

Rather than introducing a radical overhaul of the system, any incipient changes will need to build on both gradual achievements that can all too easily go unnoticed as well as its many recent notable successes. Public–private partnerships are increasingly common within the sector, and it is clear that there are a wide range of organisations and actors who share a similar vision for the improvement of the education system alongside the national and state governments. By continuing to work together, the vision for India's economic growth and opportunities for individuals to achieve their aspirations and live to their full potential can be realised.

185 cf. Ministry of Human Resource Development (2019: 96–99) and Kumar (2005).
186 Chavan (2019).

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Appendices

Appendix 1: Comparative study of CBSE, CISCE, IB and CIE education boards in India

Programme structure

	Grades and ages	Curriculum	Assessment	Key subjects taught
National Boards: CBSE	1–8 (ages 6–14)	No prescribed syllabus from board, but recommends syllabus laid down by NCERT	Internal assessment conducted by the teachers (no formal periodic tests, no awarding of grades or marks for primary levels; no detention till Grade 8)	Languages, Env. Studies (Science and Social Science integrated), Mathematics
	9, 10 (ages 14–16)	Syllabus as prescribed by the CBSE	Grade 9 – Internal assessment in accordance with the guidelines of the Continuous and Comprehensive Evaluation (CCE) system Grade 10 (having higher secondary levels) – Internal assessment; students are provided a Certificate of School Based Assessment Grade 10 (secondary schools, or for students who wish to move out of the CBSE system) – External assessment (AISSE examination)	Mathematics, Social Studies, Science, English and one other language as compulsory and one out of Information Education, Home Science and Physical Education as optional
	11, 12 (ages 16–18)	Syllabus as prescribed by the CBSE	Grade 11 – Internal assessment conducted by the teachers Grade 12 – External assessment in the form of AISSCE examination	Various combinations of subjects as per interest

	Grades and ages	Curriculum	Assessment	Key subjects taught
National Boards: CISCE	1–8 (ages 6–14)	No prescribed syllabus from board, but recommends the Inter-State Board for Anglo Indian Education	Internal assessment with annual examinations conducted at the school level	English, Env. Edu, Maths, Science (Physics, Chemistry, Biology)
	9, 10 (ages 14–16)	Syllabus as prescribed by the CISCE	Grade 9 – Internal assessment with annual examinations conducted at the school level Grade 10 – Internal and external assessments (ICSE examination)	Compulsory subjects: English, 2nd language, History, Civics, Geography, Environmental Education, + 3 electives to be chosen from a list of courses
	11, 12 (ages 16–18)	Syllabus as prescribed by the CISCE	Grade 11 – Internal assessment with annual examinations conducted at the school level Grade 12 – Internal and external assessments (ISC examination)	Compulsory subjects: English and Environmental Education, + 3, 4 or 5 electives to be chosen from the list of courses
International Boards: International Baccalaureate Organisation	**Grades and ages**	**Curriculum**	**Assessment**	**Key subjects taught**
	Primary Years Programme (ages 3–12)	Curriculum prescribed by IBO	Internal assessment with a continuous evaluation and conducted by the teachers based on certain pre-decided criterion (by the IB)	Language; Mathematics; Science; Social Studies; Arts; Personal, Social and Physical Education
	Middle Years Programme (ages 11–16)	Curriculum prescribed by IBO	Internal assessment with a continuous evaluation and conducted by the teachers based on certain pre-decided criterion (by the IB)	Languages (2), Humanities, Sciences, Mathematics, Arts, Physical Education, Technology
	Diploma Programme (ages 16–19)	Curriculum prescribed by IBO	External assessment in the form of examinations conducted at the end of the diploma program. These are marked by external examiners. Marks are awarded from 1 (lowest) to 7 (highest) for each subject. A minimum of 24 points is required for the student to receive the diploma certificate	One subject from each of the following groups – Languages, Individuals and Societies, Experimental Sciences, Arts, Mathematics and Computer Science

International Boards: Cambridge Assessment International Education	Grades and ages	Curriculum	Assessment	Key subjects taught
	Primary (ages 5–11)	Curriculum prescribed by CAIE	Cambridge Primary Progression Tests (marked in school) Cambridge Primary Checkpoint (marked by Cambridge examiners)	Mathematics, English and Science Global perspectives ICT
	Lower secondary I (ages 11–14)	Curriculum prescribed by CAIE	Cambridge Lower secondary Progression Tests (marked in school) Cambridge Lower secondary Checkpoint (marked by Cambridge examiners)	Mathematics, English and Science Global perspectives ICT
	Upper secondary – IGCSE, O-level (ages 14–16)	Curriculum prescribed by CAIE	Assessments include written, oral, coursework and practical assessment. Grading provided using eight internationally recognised grades, A* to G (six grades for O-level), with clear guidelines to explain standard of achievement for each. Marks and percentage provided for Indian learners	Over 70 subjects offered (40 subjects for O-level) divided into five groups
	Advanced – A-/ AS-levels, Pre-U (ages 16–19)	Curriculum prescribed by CIE	AS-level only (syllabus content is half that of A-level) 'Staged' assessment route All papers of A-level course in the same examination session, usually at the end of the course	About 55 subjects offered (for A/AS); 26 subjects offered for Pre-U

Appendix 2: COBSE member boards

The following is the list of member boards of COBSE.

1. Board of Intermediate Education, Andhra Pradesh
2. Board of Secondary Education, Andhra Pradesh
3. AP Open School Society, Andhra Pradesh
4. Assam Higher Secondary Education Council
5. Board of Secondary Education, Assam
6. Assam Sanskrit Board
7. State Madrassa Education Board, Assam
8. Aligarh Muslim University Board of Secondary and Senior Secondary Education, Aligarh
9. Bihar School Examination Board
10. Bihar Board of Open Schooling and Examination
11. Bihar State Madrasa Education Board
12. Bihar Sanskrit Shiksha Board
13. Banasthali Vidyapith
14. Central Board of Secondary Education
15. Chhatisgarh Board of Secondary Education
16. Chhatisgarh State Open School
17. Chhatisgarh Sanskrit Board, Raipur
18. Chhatisgarh Madrasa Board
19. Council for The Indian School Certificate Examinations
20. Dayalbagh Educational Institute (Deemed University)
21. Goa Board of Secondary and Higher Secondary Education
22. Gujarat Secondary and Higher Secondary Education Board
23. Board of School Education, Haryana
24. Gurukula Kangri Vishwavidyalaya
25. Himachal Pradesh Board of School Education
26. Jammu and Kashmir State Board of School Education
27. Jharkhand Academic Council, Ranchi
28. Government of Karnataka Department of Pre-University Education
29. Karnataka Secondary Education Examination Board
30. Kerala Board of Public Examination
31. Kerala Board of Higher Secondary Education
32. Board of Vocational Higher Secondary Education, Kerala
33. Maharashtra State Board of Secondary and Higher Secondary Education
34. Board of Secondary Education Madhya Pradesh
35. Madhya Pradesh State Open School Education Board
36. Maharishi Patanjali Sanskrit Sansthan (Department of School Education, Government of Madhya Pradesh)
37. Board of Secondary Education, Manipur
38. Council of Higher Secondary Education, Manipur
39. Meghalaya Board of School Education
40. Mizoram Board of School Education
41. Nagaland Board of School Education
42. National Institute of Open Schooling
43. Council of Higher Secondary Education, Odisha
44. Board of Secondary Education, Odisha
45. Punjab School Education Board
46. Board of Secondary Education, Rajasthan
47. Rajasthan State Open School, Jaipur
48. Rashtriya Sanskri Sansthan
49. State Board of School Examinations and Board of Higher Secondary Examinations, Tamil Nadu

50. Telangana State Board of Intermediate Education, Nampally, Hyderabad
51. Board of Secondary Education, Telangana
52. Telangana Open School Society
53. Tripura Board of Secondary Education
54. Uttar Pradesh Board of High School and Intermediate Education
55. Uttar Pradesh Secondary Sanskrit Education Council
56. Board of School Education, Uttarakhand
57. Uttarakhand Sanskrit Shiksha Parishad
58. West Bengal Board of Secondary Education
59. Uttarakhand Madrasa Education Board
60. West Bengal Council of Higher Secondary Education
61. West Bengal Board of Primary Education
62. West Bengal Board of Madrasah Education
63. The West Bengal Council of Rabindra Open Schooling

COBSE associate members

1. National Examinations Board, Nepal
2. Mauritius Examinations Syndicate, Reduit Mauritius
3. Bhutan Council for School Examinations and Assessment
4. The Aga Khan University Examination Board, Karachi, Pakistan
5. Inter Board Committee of Chairmen, Islamabad, Pakistan
6. Cambridge International Examinations, UK
7. Edexcel, London, UK
8. International Baccalaureate, Singapore

India is home to the largest and most complex education system in the world. This report provides an overview of this system, including key facts and figures on the school sector, outlines of schooling at each level, language in education policy and practice, and teacher education. It also provides a brief history of recent education policies, main government initiatives since independence and details of the major national and international boards of school education. Recent successes and ongoing challenges in the education sector are also documented and discussed, making it of use to readers seeking to understand both the development of education in India since independence and its future trajectory.

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