



NAS 2017

NATIONAL ACHIEVEMENT SURVEY

Class : 3, 5 and 8

ODISHA

State Learning Report

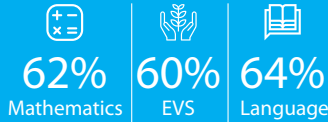


The National Achievement Survey (NAS) was conducted throughout the country on November 13, 2017 for Classes 3, 5 and 8 in government and government aided schools. The survey tools used multiple test booklets with 45 questions in Classes III and V and 60 questions in Class VIII in Mathematics, Language, Sciences and Social Sciences. The competency based test questions developed, reflected the Learning Outcomes developed by the NCERT which were recently incorporated in the RTE Act by the Government of India. Along with the test items, questionnaires pertaining to students, teachers and schools were also used.

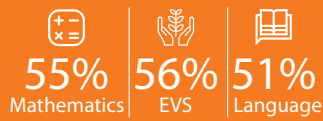
The learning levels of 2.2 million students from 1,10,000 schools across 701 districts in all 36 States/UTs were assessed. The findings of the survey, will help guide education policy, planning and implementation at national, state, district and classroom levels for improving learning levels of children and bringing about qualitative improvements.

HIGHLIGHTS

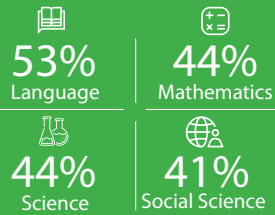
In Class 3, on an average, the correct responses to the subjects were as follows:



In Class 5, on an average, the correct responses to the subjects were as follows:



In Class 8, on an average, the correct responses to the subjects were as follows:



85%

Children could understand what the teacher says in the classroom.



44%

of the school buildings need significant repair.

Highest Performing Learning Outcomes

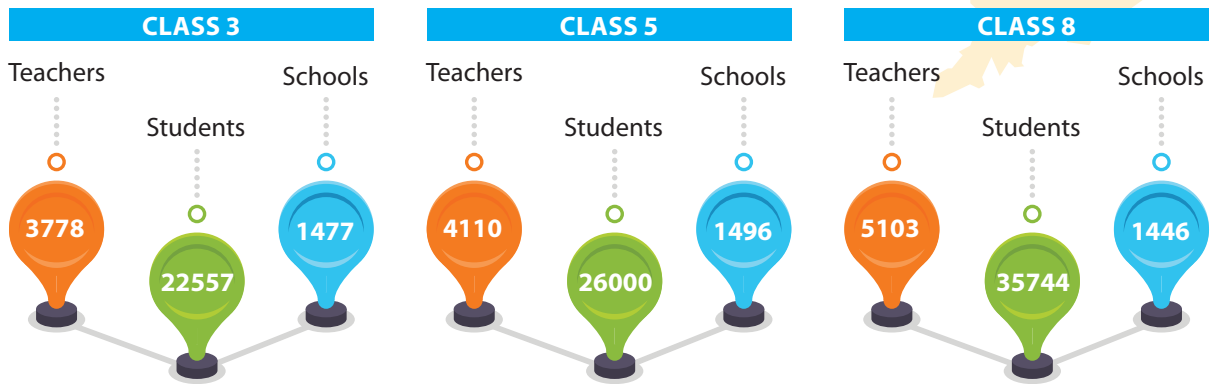
- **E314:** Voice opinion on good/bad touch, Stereotypes for tasks/play/food in family w.r.t gender, misuse/wastage of food and water in family and school (69%)
- **M302:** Compares numbers up to 999 based on their place values (70%)
- **E504:** Explains the role and functions of different institutions in daily life (Bank, Panchayat, cooperatives, police station, etc.) (70%)
- **M309:** Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc (75%)
- **M319:** Records data using tally marks, represents pictorially and draws conclusions (76%)

Lowest Performing Learning Outcomes

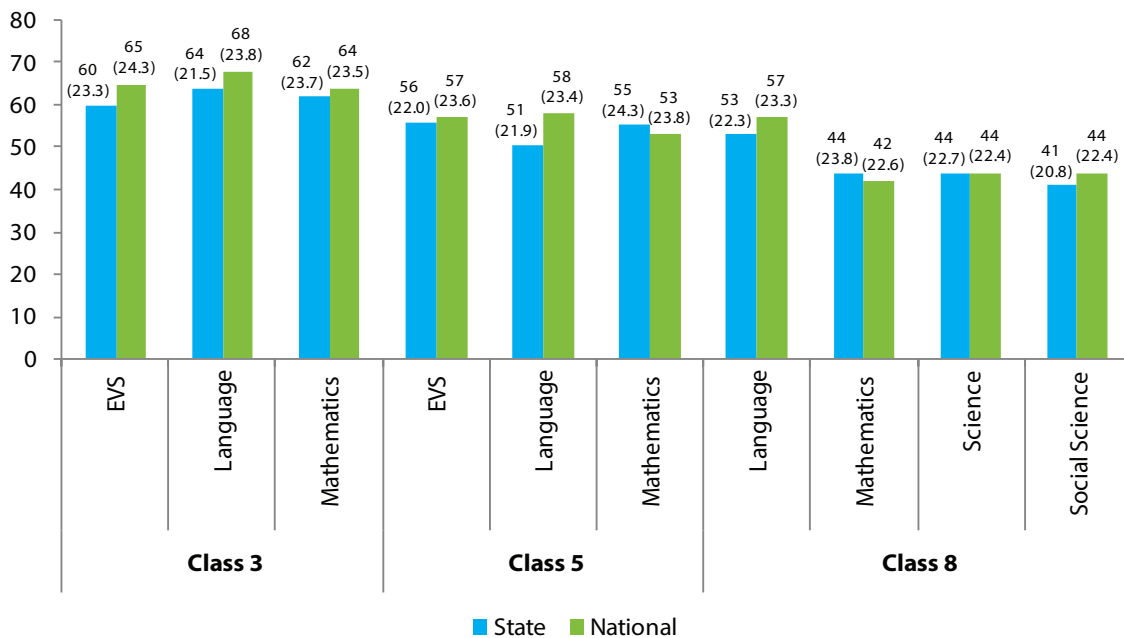
- **M311:** Fills a given region leaving no gaps using a tile of a given shape (13%)
- **SST816:** Analyses the decline of pre-existing urban centers and handicraft industries and the development of new urban centers and industries in India during the colonial period (24%)
- **SST610:** Locates important historical sites, places on an outline map of India (25%)
- **M818:** Finds surface area and volume of cuboidal and cylindrical object (27%)
- **SST625:** Describes the functioning of rural and urban local government bodies in sectors like health and education (28%)



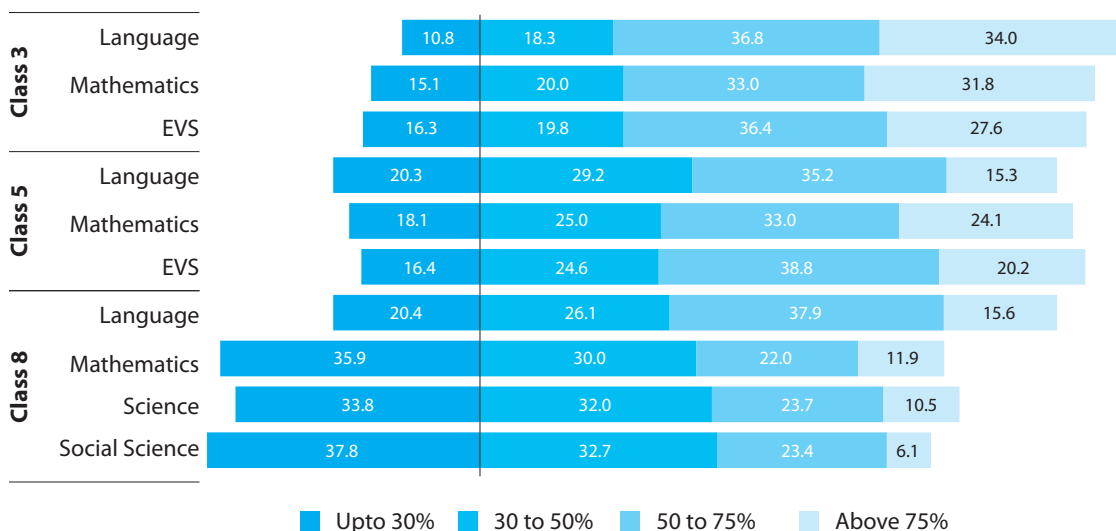
Participation



Average Achievement by Classes and Subjects



Distribution of Students Achievement by Classes and Subjects

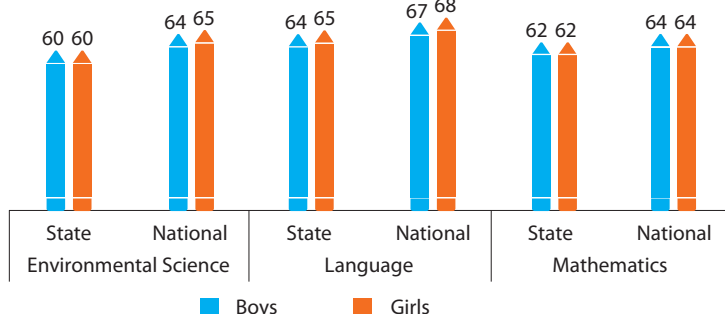


E.g. In Class 3 language, percentage of students achieving upto 30% is 10.8, between 30%-50% is 18.3, between 50%-75% is 36.8 and above 75% is 34.0.

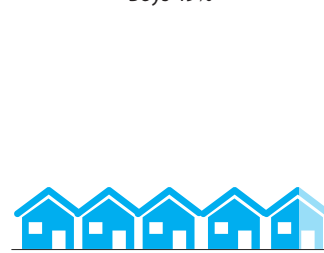
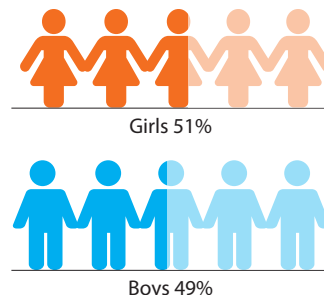
Class 3 State Results by Student Groups

PERFORMANCE

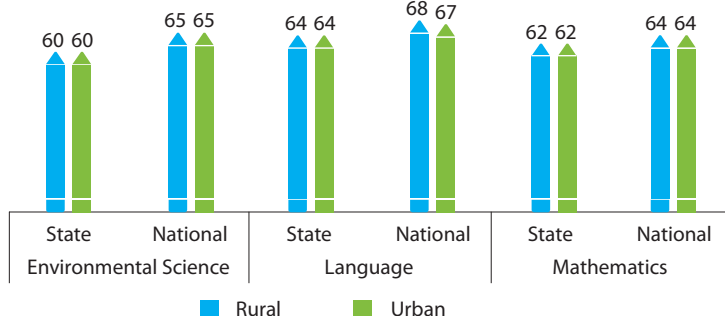
By Gender



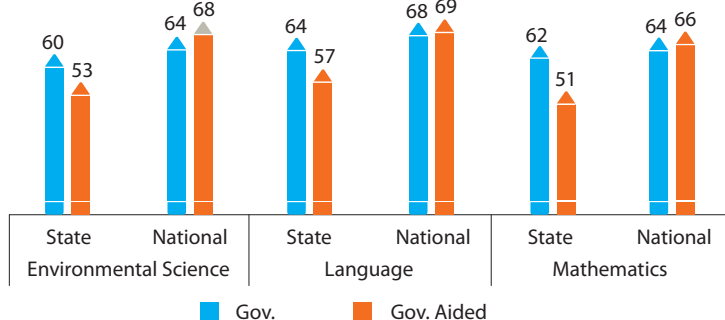
PARTICIPATION



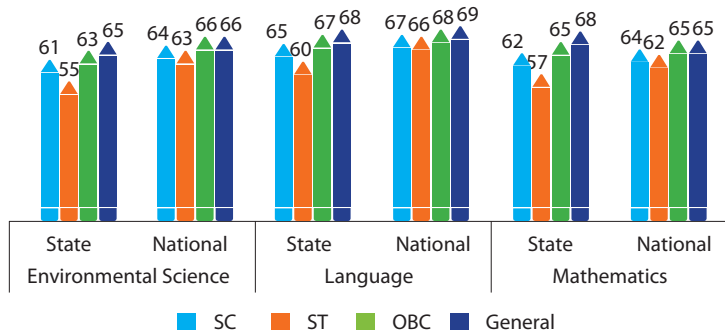
By School Location



By School Management



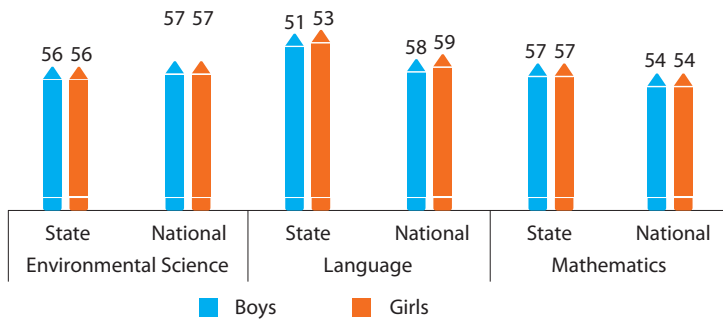
By Social Groups



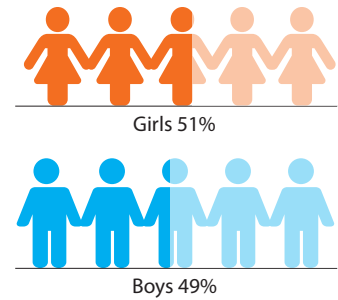
Class 5 State Results by Student Groups

PERFORMANCE

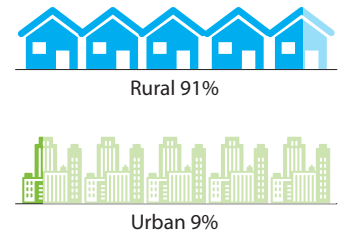
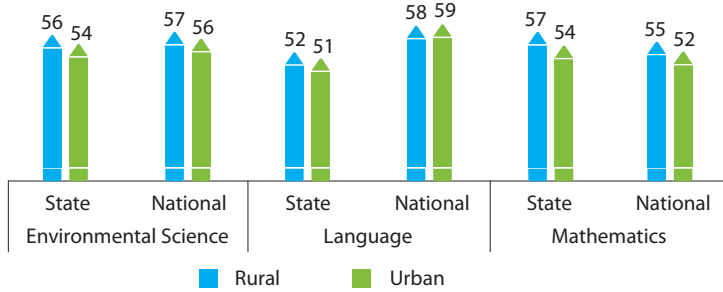
By Gender



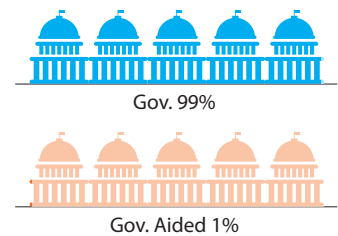
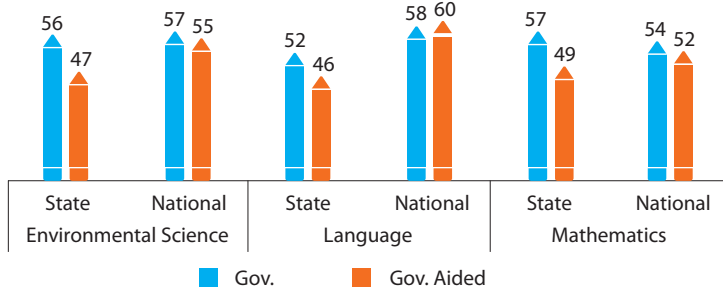
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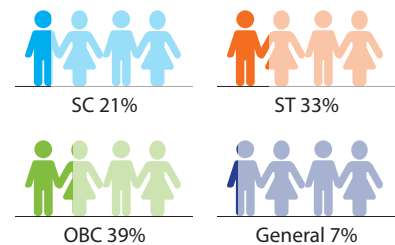
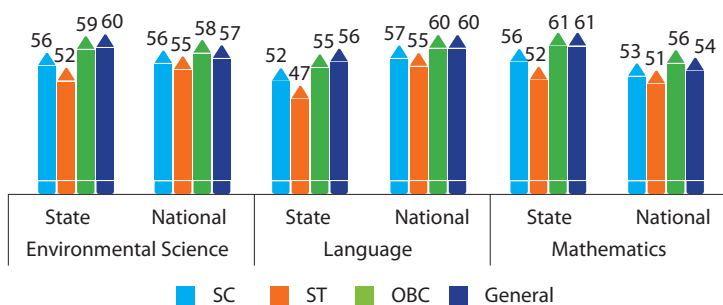
By School Location



By School Management



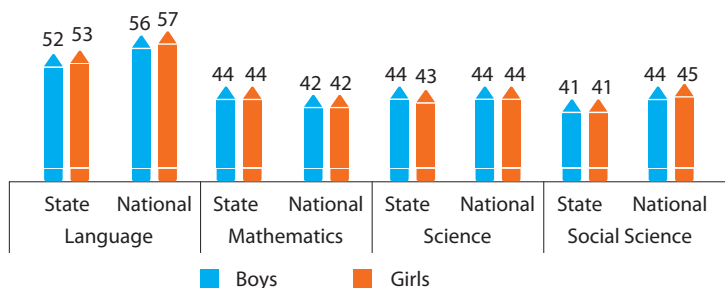
By Social Groups



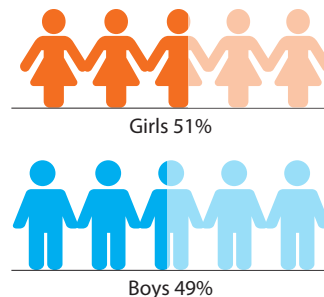
Class 8 State Results by Student Groups

PERFORMANCE

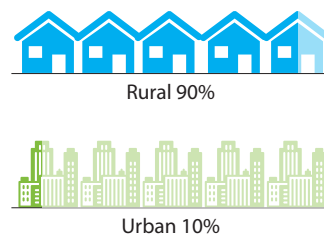
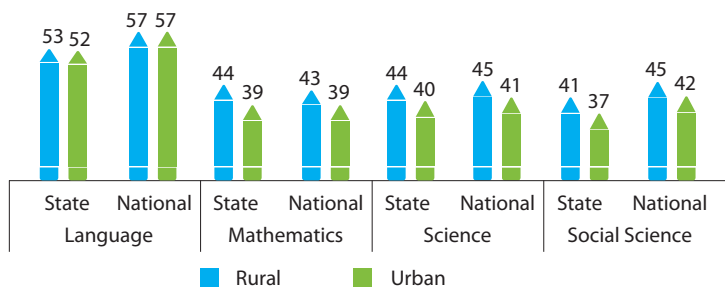
By Gender



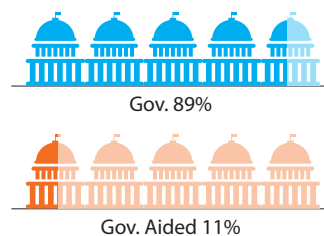
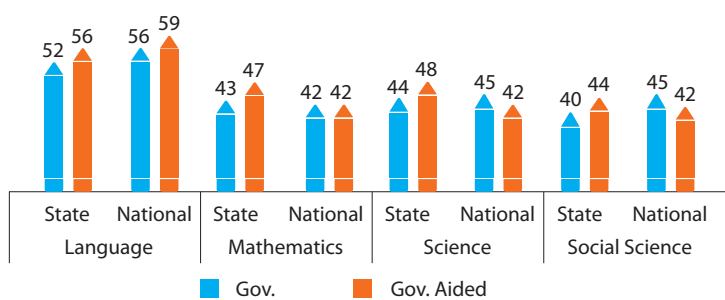
PARTICIPATION



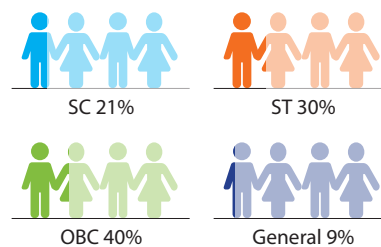
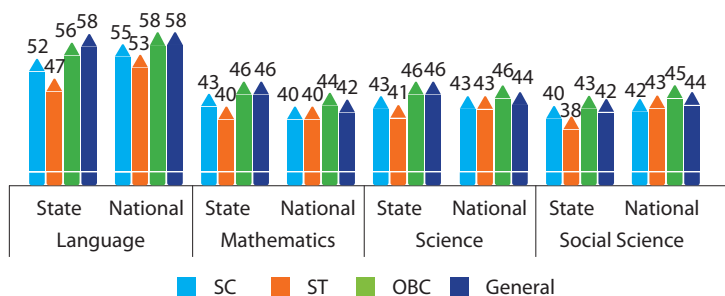
By School Location



By School Management



By Social Groups



What children say about schools?



97% children in **Class 3** and **98%** in **Class 5** and **Class 8** like to come to school.



14% students across the grades find it difficult to travel to school.

82% children in **Class 3**
83% in **Class 5** and **85%**
children in **Class 8**
could understand what teachers
say in the classroom.







For **72%** students in **Class 3**, **71%** in **Class 5** and **70%** students in **Class 8**, the language used at home and by the teachers is the same.




91% students in **Class 3** and **Class 5** and **87%** students in **Class 8** go out and play during the games period.


What teachers responded?


 **61%** teachers in Class 3,
 **60%** in Class 5 and
 **76%** in Class 8 are teaching the same subjects they have pursued during their higher studies.



73% teachers in the state fully understand the curricular goals.



26%
teachers responded that there is lack of adequate toilet facilities.



22%
teachers responded that there is lack of drinking water facilities.



44%
teachers responded that the school buildings needs significant repair.


36%
teachers responded that there is lack of electricity.


37%
Teachers in the state opined that they are overloaded with work.


45%
Teachers in the state are highly satisfied with their job.


86%
Teachers in the state have adequate instructional material and supplies.


84%
Teachers in the state have adequate work space.

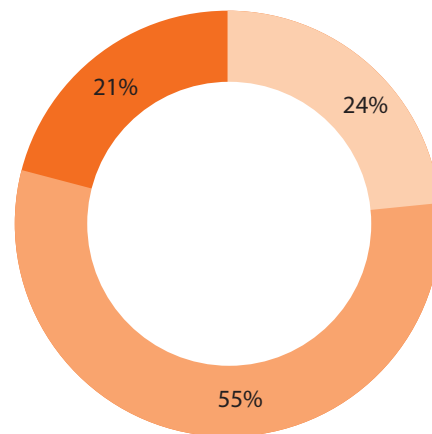
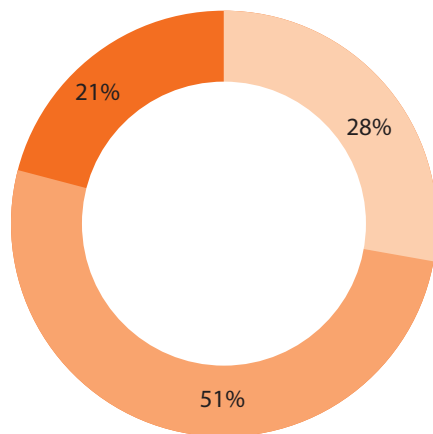
How do teachers assess children in the classroom?

	Never (in %)	For some lessons (in %)	Almost every lesson (in %)
Oral Tests	3	17	80
Written Tests	1	23	76
Multiple choice type	3	39	59
Observation	4	56	40
Home assignments	3	19	78
Student self assessment	6	38	56
Project work	5	56	40
Peer assessment	5	44	51
Portfolio	6	42	53

What teachers say about parent’s involvement?

Parental support for students’ Achievement

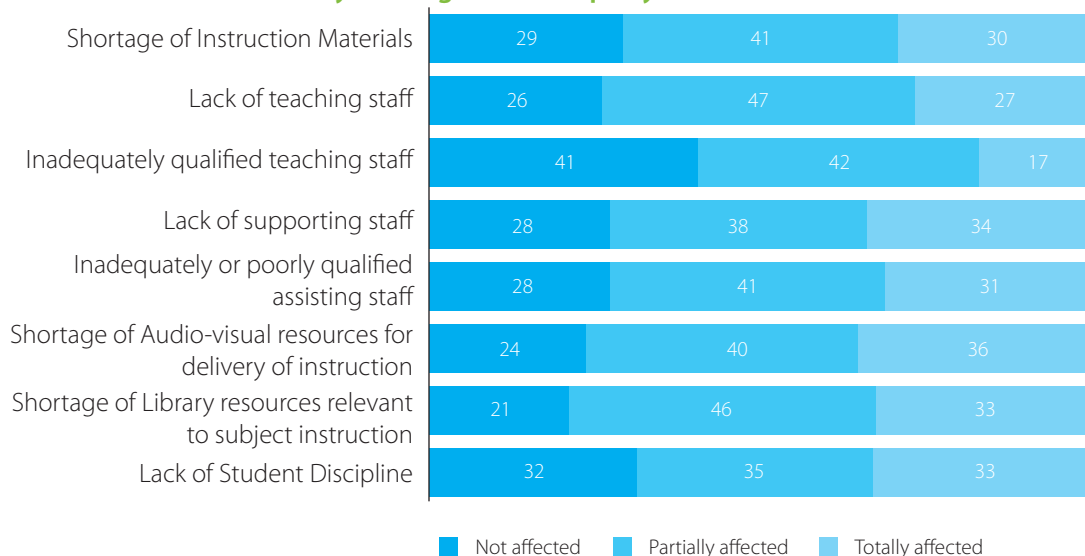
Parental involvement in school activities



Low Medium High

What the head teacher responded?

School activities affected by shortage or inadequacy



Eg. 29% of the head teacher responded that the school activities were not affected by the shortage of instructional materials.

Average Performance of the District

Class 3

District Name	District Mean
Jagatsinghpur	80
Cuttack	74
Nayagarh	70
Ganjam	69
Puri	68
Deogarh	66
Balasore	66
Bhadrak	65
Jajpur	65
Bolangir	64
Khordha	64
Angul	63
Nabarangpur	62
Malkangiri	61
Bargarh	61
Sonepur	60
Boudh	59
Jharsuguda	57
Sundergarh	57
Nuapada	57
Kalahandi	55
Keonjhar	54
Kendrapara	53
Gajapati	51
Dhenkanal	51
Mayurbhanj	51
Rayagada	50
Kandhamal	48
Sambalpur	46
Koraput	45

Class 5

District Name	District Mean
Jagatsinghpur	80
Cuttack	68
Ganjam	64
Balasore	62
Nayagarh	62
Nabarangpur	61
Puri	60
Angul	60
Bhadrak	59
Bolangir	58
Jajpur	57
Khordha	55
Bargarh	53
Deogarh	53
Malkangiri	52
Kendrapara	51
Nuapada	51
Boudh	50
Sonepur	50
Keonjhar	50
Jharsuguda	49
Kalahandi	49
Gajapati	49
Sundergarh	49
Dhenkanal	48
Mayurbhanj	45
Kandhamal	44
Koraput	42
Rayagada	42
Sambalpur	38

Class 8

District Name	District Mean
Jagatsinghpur	59
Cuttack	54
Jajpur	52
Ganjam	51
Angul	50
Balasore	50
Bhadrak	50
Bolangir	49
Nabarangpur	49
Puri	48
Nayagarh	47
Boudh	45
Malkangiri	45
Khordha	44
Nuapada	44
Deogarh	44
Jharsuguda	44
Dhenkanal	43
Sundergarh	43
Keonjhar	42
Bargarh	41
Sonepur	41
Kalahandi	39
Kendrapara	38
Kandhamal	36
Gajapati	36
Mayurbhanj	35
Koraput	35
Sambalpur	35
Rayagada	32

Performance of the State in Learning Outcomes (LOs)

Annex-1

LO Code	Learning Outcome Class 3	Average Performance (in Percent)
EVS		
E302	Identifies simple features (e.g. movement, at places found/ kept, eating habits, sounds) of animals and birds in the immediate surroundings	49
E303	Identifies relationships with and among family members	56
E304	Identifies objects, signs (vessels, stoves, transport, means of communication, transport, signboards etc.), places (types of houses/shelters, bus stand, petrol pump etc.) activities (work people do, cooking processes, etc.) at home/school/ neighbourhood	54
E305	Describes need of food for people of different age groups, animals/birds, availability of food and water and use of water at home and surroundings	58
E307	Groups objects, birds, animals, features, activities according to differences/similarities using different senses. (e.g. appearance/place of living/ food/ movement/likes-dislikes/ any other features)	63
E309	Identifies directions, location of objects/places in simple maps using signs/symbols/verbally	54
E310	Guesses properties, estimates quantities of materials/ activities in daily life and verifies using symbols/non-standard units	62
E311	Records observations, experiences, information on objects/ activities/places visited in different ways and predicts patterns etc	49
E313	Observes rules in games (local, indoor, outdoor)	41
E314	Voices opinion on good/bad touch, stereotypes for tasks/ play/food in family w.r.t gender, misuse/wastage of food and water in family and school	69
Language		
L304	Reads small texts with comprehension i.e., identifies main ideas, details, sequence and draws conclusions	64
L312	Reads printed scripts on the classroom walls: poems, posters, charts etc	59
Mathematics		
M301	Reads and writes numbers upto 999 using place value	61
M302	Compares numbers up to 999 based on their place values	70

LO Code	Learning Outcome Class 3	Average Performance (in Percent)
M303	Solves simple daily life problems using addition and subtraction of three digit numbers with and without regrouping	54
M304	Constructs and uses the multiplication facts (up till 10) in daily life situations	63
M305	Analyses and applies an appropriate number of operations in the situation/ context	59
M306	Explains the meaning of division facts by equal grouping/ sharing and finds it by repeated subtraction	58
M309	Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc	75
M311	Fills a given region leaving no gaps using a tile of a given shape	13
M312	Estimates and measures length and distance using standard units like centimetres or metres & identifies relationships	37
M317	Reads the time correctly to the hour using a clock/watch	67
M318	Extends patterns in simple shapes and numbers	53
M319	Records data using tally marks, represents pictorially and draws conclusions	76

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
EVS		
E403	Identifies relationships with and among family members in extended family	63
E410	Records observations/experiences/information for objects, activities, phenomena, places visited in different ways and predicts patterns and activities/ phenomena	62
E501	Explains the super senses and unusual features (sight, smell, hear, sleep, sound, etc.) of animals and their responses to light, sound, food etc	42
E503	Describes the interdependence among animals, plants and humans	62
E504	Explains the role and functions of different institutions in daily life (Bank, Panchayat, Cooperatives, Police station, etc.)	70
E505	Establishes linkages among terrain, climate, resources (food, water, shelter, livelihood) and cultural life. (e.g. life in distant/ difficult areas like hot/cold deserts)	30
E506	Group objects, materials, activities for features/properties such as shape, taste, colour, texture, sound, traits etc	29
E507	Traces the changes in practices, customs, techniques of past and present through coins, paintings, monuments, museums etc. and interacting with elders	64
E508	Guesses (properties, conditions of phenomena), estimates spatial quantities (distance, area, volume, weight etc.) and time in simple standard units and verifies using simple tools/ set ups	51
E509	Records observations/experiences/information in an organized manner (e.g. in tables/ sketches/ bar graphs/ pie charts) and predicts patterns in activities/phenomena to establish relation between cause and effect	50
E510	Identifies signs, directions, location of different objects/ landmarks of a locality /place visited in maps and predicts directions w.r.t. positions at different places for a location	58
E512	Voices opinions on issues observed/experienced and relates practices /happenings to larger issues of society	44
E513	Suggests ways for hygiene, health, managing waste, disaster/ emergency situations and protecting/saving resources	61
Language		
L504	Reads and comprehends independently storybooks, news items/ headlines, advertisements etc	47
L508	Reads text with comprehension, locates details and sequence of events	53

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
Mathematics		
M401	Applies operations of numbers in daily life situations	59
M412	Explores the area and perimeter of simple geometrical shapes (triangle, rectangle, square) in terms of given shape as a unit	52
M418	Calculates time intervals/duration of familiar daily life events by using forward or backward counting/addition and subtraction	65
M421	Represent the collected information in tables and bar graphs and draws inferences from these	62
M501	Reads and writes numbers bigger than 1000 being used in her/his surroundings	61
M504	Estimates sum, difference, product and quotient of numbers and verifies the same using different strategies like using standard algorithms or breaking a number and then using operation	53
M505	Finds the number corresponding to part of a collection	57
M506	Identifies and forms equivalent fractions of a given fraction	44
M508	Converts fractions into decimals and vice versa	53
M509	Classifies angles into right angle, acute angle, obtuse angle and represents the same by drawing and tracing	63
M512	Relates different commonly used larger and smaller units of length, weight and volume and converts larger units to smaller units and vice versa	49
M513	Estimates the volume of a solid body in known units	39
M514	Applies the four fundamental arithmetic operations in solving problems involving money, length, mass, capacity and time intervals	47
M515	Identifies the pattern in triangular number and square number	48
M516	Collects data related to various daily life situations, represents it in a tabular form and as bar graphs and interprets it	69

LO Code	Learning Outcome Class 8	Average Performance (in Percent)
Language		
L813	Read textual/non-textual materials with comprehension and identifies the details, characters, main idea and sequence of the ideas and events while reading	50
Mathematics		
M601	Solves problems involving large numbers by applying appropriate operations	35
M606	Solves problems on daily life situations involving addition and subtraction of fractions / decimals	45
M620	Finds out the perimeter and area of rectangular objects in the surroundings like floor of the class room, surfaces of a chalk box etc	45
M621	Arranges given/collected information in the form of table, pictograph and bar graph and interprets them	36
M702	Interprets the division and multiplication of fractions	40
M705	Solves problems related to daily life situations involving rational numbers	33
M706	Uses exponential form of numbers to simplify problems involving multiplication and division of large numbers	46
M707	Adds/subtracts algebraic expressions	51
M710	Solves problems related to conversion of percentage to fraction and decimal and vice versa	32
M717	Finds out approximate area of closed shapes by using unit square grid/ graph sheet	35
M719	Finds various representative values for simple data from her/ his daily life contexts like mean, median and mode	49
M721	Interprets data using bar graph such as consumption of electricity is more in winters than summer	36
M801	Generalises properties of addition, subtraction, multiplication and division of rational numbers through patterns	35
M802	Finds rational numbers between two given rational numbers	39
M803	Proves divisibility rules of 2, 3, 4, 5, 6, 9 and 11	49
M804	Finds squares, cubes, square roots and cube roots of numbers using different methods	47
M808	Use various algebraic identities in solving problems of daily life	51
M812	Verifies properties of parallelogram and establishes the relationship between them through reasoning	33
M818	Finds surface area and volume of cuboidal and cylindrical object	27
M819	Draws and interprets bar charts and pie charts	45

LO Code	Learning Outcome Class 8	Average Performance (in Percent)
Science		
SCI703	Classifies materials and organisms based on properties/ characteristics	42
SCI704	Conducts simple investigation to seek answers to queries	37
SCI705	Relates processes and phenomenon with causes	40
SCI708	Measures and calculates e.g., temperature; pulse rate; speed of moving objects; time period of a simple pendulum, etc	47
SCI710	Plots and interprets graphs	34
SCI711	Constructs models using materials from surroundings and explains their working	33
SCI801	Differentiates materials, organism and processes	51
SCI804	Relates processes and phenomenon with causes	39
SCI805	Explains processes and phenomenon	37
SCI807	Measures angles of incidence and reflection, etc	40
SCI811	Applies learning of scientific concepts in day-to-day life	41
SCI813	Makes efforts to protect environment	62
Social Science		
SST605	Identifies latitudes and longitudes, e.g., poles, equator, tropics, States/UTs of India and other neighbouring countries on globe and the world map	44
SST610	Locates important historical sites, places on an outline map of India	25
SST625	Describes the functioning of rural and urban local government bodies in sectors like health and education	28
SST703	Explains preventive actions to be undertaken in the event of disasters	48
SST704	Describes formation of landforms due to various factors	54
SST722	Explains the significance of equality in democracy	36
SST726	Describes the process of election to the legislative assembly	48
SST731	Explains the functioning of media with appropriate examples from newspapers	33
SST733	Differentiates between different kinds of markets	49
SST734	Traces how goods travel through various market places	47
SST802	Describes major crops, types of farming and agricultural practices in her/his own area/state	55
SST805	Locates distribution of important minerals e.g. coal and mineral oil on the world map	31
SST807	Justifies judicious use of natural resources	43
SST809	Draws inter-relationship between types of farming and development in different regions of the world	30

LO Code	Learning Outcome Class 8	Average Performance (in Percent)
SST810	Distinguishes the modern period from the medieval and the ancient periods through the use of sources	40
SST815	Explains the origin, nature and spread of the revolt of 1857 and the lessons learned from it	34
SST816	Analyses the decline of pre-existing urban centers and handicraft industries and the development of new urban centers and industries in India during the colonial period	24
SST818	Analyses the issues related to caste, women, widow remarriage, child marriage, social reforms and the laws and policies of colonial administration towards these issues	41
SST823	Applies the knowledge of the Fundamental Rights to find out about their violation, protection and promotion in a given situation	28
SST827	Describes the process of making a law. (e.g. Domestic Violence Act, RTI Act, RTE Act)	40
SST831	Identifies the role of Government in providing public facilities such as water, sanitation, road, electricity etc., and recognizes their availability	32
SST833	Draws bar diagram to show population of different countries/ India/states	51

Core Team

MHRD

Ms. Rina Ray, Secretary, School Education and Literacy (SE&L)

Shri Anil Swarup, Former Secretary, School Education & Literacy, SE&L, (till 30th June 2018)

Ms. Anita Karwal, Chairperson, CBSE and Chairperson, NCTE

Shri. Maneesh Garg, Joint Secretary, School Education and Literacy (SE&L)

Shri. Girish Chandrashekhar Hosur, Director, School Education and Literacy (SE&L)

Ms. R. Savithri, DDG, Statistics

NCERT

Prof. Hrushikesh Senapaty, Director, NCERT

Prof. Indrani Bhaduri, Head, ESD and National Coordinator NAS

Prof. Sridhar Srivastava, Professor, ESD

Prof. Veer Pal Singh, Professor, ESD

Prof. A.D. Tewari, Professor, ESD

Dr. Pratima Kumari, Associate Professor

Dr. Sukhvinder, Assistant Professor

Dr. Vishal D. Pajankar, Assistant Professor

Dr. Satya Bhushan, Assistant Professor

Dr. Gulfam, Assistant Professor

Shri N.L. Srinivas, Sr. System Analyst

Md. Arif Sadiq, Programmer

Shri Vishwa Bandhu, Programmer

UN ORGANIZATION /EXTERNAL

Dr. Rudra Sahoo, Education Specialist, UNICEF

STATE FUNCTIONARIES

State Directorate of Education, SCERTs, SIEs, DIETs, Schools

Examinations

An examination is a formal test of an individual student's knowledge or proficiency in a subject on the curriculum. The results of examinations apply to individual students, enabling them to progress through school or apply for further education or employment. Taken together, examination results provide an overall snapshot of students' performance at the end of a year of a course of learning at school. Examination results do not indicate the reasons behind high or low achievement of students.

Achievement Surveys

Achievement Surveys provide a measure of learning across a representative sample of students. They allow classification of students at a specific grade level by their ability (what students know and can do) in different subjects on the curriculum. National Achievement Surveys provide a "Health Check" to the education system by analyzing achievement based on a range of background factors (School, home, teachers). They potentially enable policy makers and practitioners to address the challenges to enhance student learning.

