



**Ministry of Education**  
Government of India

विद्यया ऽ मृतमश्नुते



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NCERT



# PARAKH RASHTRIYA SARVEKSHAN 2024

State Report

**Bihar**





शिक्षा मंत्रालय  
MINISTRY OF  
EDUCATION

विद्यया ऽ मृतमश्नुते



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# PARAKH RASHTRIYA SARVEKSHAN 2024

STATE REPORT  
**Bihar**



Performance Assessment, Review, and  
Analysis of Knowledge Skills and Attitudes (PARAKH)

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**PARAKH Rashtriya Sarvekshan 2024  
State Report Bihar**

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**Shri Sanjay Kumar**  
*Secretary*



Department of School  
Education & Literacy,  
**Ministry of Education**  
Government of India



## MESSAGE

PARAKH Rashtriya Sarvekshan 2024 is a significant step forward in our ongoing efforts to assess and enhance the quality of education in India. This national survey marks a significant milestone in our journey towards educational excellence, reflecting our unwavering commitment to the transformative goals set forth by the National Education Policy (NEP) 2020.

The NEP 2020 envisions an education system that is holistic, flexible, multidisciplinary, and aligned with the needs of the 21st century, aiming to bring out the unique capabilities of each student. Central to this vision is the emphasis on competency-based learning and assessment, ensuring that our students not only acquire knowledge but also develop critical thinking, problem-solving abilities, and a love for lifelong learning. PARAKH Rashtriya Sarvekshan 2024 assessed these competencies across diverse stages of schooling, providing us with invaluable insights into the effectiveness of our educational interventions.

The findings from PARAKH Rashtriya Sarvekshan 2024 help identify both our achievements and the challenges that lie ahead. They provide a clear roadmap for targeted interventions, enabling us to channel our resources and efforts where they are most needed. Moreover, this survey fosters a culture of accountability and continuous improvement, encouraging educators, administrators, and policymakers to collaborate effectively in enhancing the competencies of our students.

Moving beyond the assessment itself, the next phase of this initiative is focused on enabling systemic action. To facilitate this, a comprehensive multi-level strategy has been planned to translate the findings of the PARAKH Rashtriya Sarvekshan 2024 into meaningful actions. This includes a phased dissemination of data through workshops at the national, regional, state, and district levels. These workshops will focus not only on understanding the survey results but also on preparing district-specific roadmaps, where roles and responsibilities are clearly defined. A layered set of interventions—short-, mid-, and long-term—will support this process. These range from teacher training and community engagement to the development of intervention handbooks, digital learning materials, and a Management Information System for continued data use. The integration of survey insights into Annual Work Plans and Budgets (AWPBs) will help embed these efforts into ongoing planning cycles, ensuring that the survey serves as a lever for sustained system strengthening.

Let us celebrate our successes, learn from our shortcomings, and renew our commitment to providing an education that equips our students to navigate and contribute positively to an ever-evolving world.



**Shri Anandrao V Patil**  
*Additional Secretary*



Department of School  
Education & Literacy,  
**Ministry of Education**  
Government of India



## MESSAGE

Education is not just about imparting knowledge; it is about nurturing minds, shaping perspectives, and equipping students with the skills to navigate an ever-changing world. The PARAKH Rashtriya Sarvekshan 2024 serves as a critical initiative that helps us understand how well we are achieving these objectives. By assessing students' competencies across various educational stages, this survey enables us to measure learning outcomes, evaluate educational policies, and enhance the teaching-learning process in schools across the country.

One of the most significant contributions of this initiative is its role in bridging the gap between assessment and action. The findings from the PARAKH Rashtriya Sarvekshan provide an accurate reflection of student performance, allowing for targeted interventions that cater to the diverse learning needs of children across geographies, socio-economic backgrounds, and linguistic diversities. Furthermore, the survey brings into focus the importance of teacher training, curriculum refinement, and pedagogical innovations in improving learning outcomes.

The National Education Policy 2020 advocates for a shift toward competency-based education, where learning is not just about memorization but about understanding, application, and problem-solving. This survey plays a key role in evaluating this transition, ensuring that students are not only absorbing knowledge but also developing critical skills that will prepare them for future academic and professional challenges.

As we move into the implementation phase, the focus shifts to helping states and districts make effective use of the findings through structured and responsive planning. The post-survey interventions are being designed to support this shift, beginning with detailed workshops that bring together local education officials, academic experts, and practitioners to examine their district-level data in depth. These workshops will inform the creation of action-oriented district plans, tailored to address specific learning needs. Alongside these efforts, practical tools are being developed, such as subject- and stage-specific handbooks, orientation guides for training functionaries, and digital resources, to assist teachers and school leaders in translating insights into instructional practices. The emphasis is on usability, clarity, and adaptability, so that those at the frontlines of education have what they need to respond effectively. These initiatives are not isolated but are being integrated with broader administrative cycles, such as state academic planning and budgeting, to ensure coherence and long-term continuity in interventions.

I would like to express my sincere gratitude to the Secretary (Department of School Education & Literacy), the State Project Directors (SPDs), Directors of SCERTs, and the Principals of State Institutes of Education (SIEs) for their tireless efforts in facilitating the successful execution of this nationwide assessment. Their leadership, commitment, and coordination have been invaluable in ensuring that this initiative reaches schools across the country.

I also extend my gratitude to Central Board of Secondary Education (CBSE) for their valuable support in facilitating the administration of the PARAKH Rashtriya Sarvekshan 2024. Their cooperation in ensuring smooth coordination and execution has contributed to the successful completion of this large-scale assessment.



**Prof. Dinesh Prasad Saklani**  
*Director*



**National Council of Educational  
Research and Training**



## FOREWORD

Education serves as the foundation for a nation's progress, and ensuring its quality, accessibility, and relevance is a continuous endeavour. PARAKH Rashtriya Sarvekshan 2024 is a significant step in this direction, offering a comprehensive, data-driven insight into student learning outcomes, school environments, and educational effectiveness across India. This initiative reflects our commitment to evidence-based reforms, providing key findings that will guide future educational strategies and help bridge gaps in learning.

In an era of rapid socio-economic and technological transformation, education must equip students with competencies that go beyond rote learning. The focus should be on critical thinking, creativity, problem-solving, and adaptability, ensuring that learners are prepared for a dynamic future. The findings from this survey enable schools, teachers, and policymakers to assess how effectively these competencies are being nurtured at different stages of schooling. By analyzing student performance in language, mathematics, science, and social sciences, alongside teacher training, infrastructure, and pedagogical approaches, the survey provides a holistic overview of the current education landscape.

One of the most valuable aspects of PARAKH Rashtriya Sarvekshan 2024 is its role in facilitating targeted interventions. The data collected does not merely identify learning gaps—it serves as a catalyst for informed decision-making, curricular improvements, and teaching innovations. This approach is essential in ensuring that our education system is inclusive, equitable, and aligned with the principles of competency-based learning as envisioned in NEP 2020.

As we analyze and act upon these findings, our collective goal should be to create an education system that is responsive, forward-thinking, and centered on student development. This requires collaboration among educators, policymakers, and communities to implement meaningful changes that enhance both teaching and learning experiences.



# Preface

PARAKH Rashtriya Sarvekshan 2024 is a significant step toward understanding and improving student learning outcomes and overall school effectiveness across India. This nationwide survey serves as a comprehensive reflection of the education system, offering valuable insights into how students at different stages of schooling develop competencies and how various factors contribute to their learning experiences. Designed as a large-scale competency-based assessment, the survey provides a structured analysis of student achievement, teacher preparedness, school infrastructure, and pedagogical practices. Through this initiative, we aim to bridge the gap between policy and classroom realities, ensuring that education remains dynamic, inclusive, and aligned with contemporary learning needs.

At the core of this survey is the principle that education should not only focus on content mastery but also on the development of critical thinking, problem-solving, and application-based skills. By examining student performance in language, mathematics, science, and social sciences, the study highlights both areas of progress and challenges that require targeted interventions. The findings provide a deeper understanding of learning trends across different regions and socio-economic backgrounds, emphasizing the need for a more equitable and responsive education system. The survey also explores how teachers are equipped to facilitate meaningful learning, assessing their engagement with professional development programs, use of technology in teaching, and implementation of innovative classroom strategies. The role of school infrastructure and access to digital learning tools is also examined, underscoring the importance of creating an environment that supports holistic education.

One of the key takeaways from this study is the need to transform data into action. The insights gained from the survey must serve as a foundation for informed decision-making, guiding improvements in curriculum design, teacher training, and resource allocation. The assessment is not merely a measurement of where we stand today but a tool to shape the future of education in the country. Strengthening foundational skills, ensuring inclusive learning opportunities, and fostering an adaptive and innovative approach to teaching will be critical in achieving the objectives envisioned under the National Education Policy (NEP) 2020. The findings also emphasize the importance of integrating technology into

learning processes, addressing regional disparities in student performance, and enhancing social-emotional learning to create a more supportive educational framework.

To ensure that the findings of PARAKH Rashtriya Sarvekshan 2024 lead to meaningful interventions, a multi-level post-survey intervention strategy has been planned. Workshops at the national, regional, state, and district levels will be organized to disseminate results, analyze key insights, and develop targeted action plans. These workshops will bring together education department officials, SCERTs, school leaders, and teachers to collectively interpret the survey results, identify learning gaps, and formulate strategies to strengthen the teaching-learning process. The district-level workshops, in particular, will play a crucial role in enabling local functionaries, including teachers, principals, and community stakeholders, to engage with the findings and develop district-specific interventions. These efforts will help in formulating short-, mid-, and long-term strategies aimed at addressing gaps in student learning and enhancing the overall quality of education.

As we look ahead, PARAKH Rashtriya Sarvekshan 2024 stands as a cornerstone for shaping the future of assessment-driven education in India. The journey toward an inclusive, competency-based, and future-ready education system requires sustained commitment and continuous reflection. Through collaboration and innovation, we can ensure that every learner, regardless of background or location, has access to meaningful learning experiences that empower them for life. It is my hope that this report will serve as a catalyst for positive change, fostering an education system that is both forward-looking and deeply rooted in the principles of equity and excellence.

**Prof. Indrani Bhaduri**

*Programme Co-ordinator*

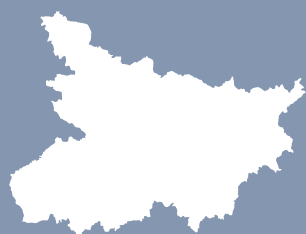
*CEO and Head PARAKH, NCERT*



## PARAKH Rashtriya Sarvekshan 2024

PARAKH Rashtriya Sarvekshan 2024 was conducted by PARAKH, NCERT under the aegis of the Department of School Education and Literacy, Ministry of Education, to understand the baseline performance in the development of competencies at the end of the Foundational, Preparatory, and Middle stages at the district level for Grades 3, 6, and 9 respectively. Through Rashtriya Sarvekshan 2024, PARAKH provides a system-level reflection on effectiveness of school education.

### State Report: Bihar



Languages in which  
Survey was Administered

ENGLISH, HINDI, SANSKRIT,  
URDU



#### Total Number of Schools Participated

Grade 3	Grade 6	Grade 9
1,248	1,259	1,333



#### Total Number of Teachers Participated

Grade 3	Grade 6	Grade 9
3,354	3,544	4,995



#### Total Number of Students Participated

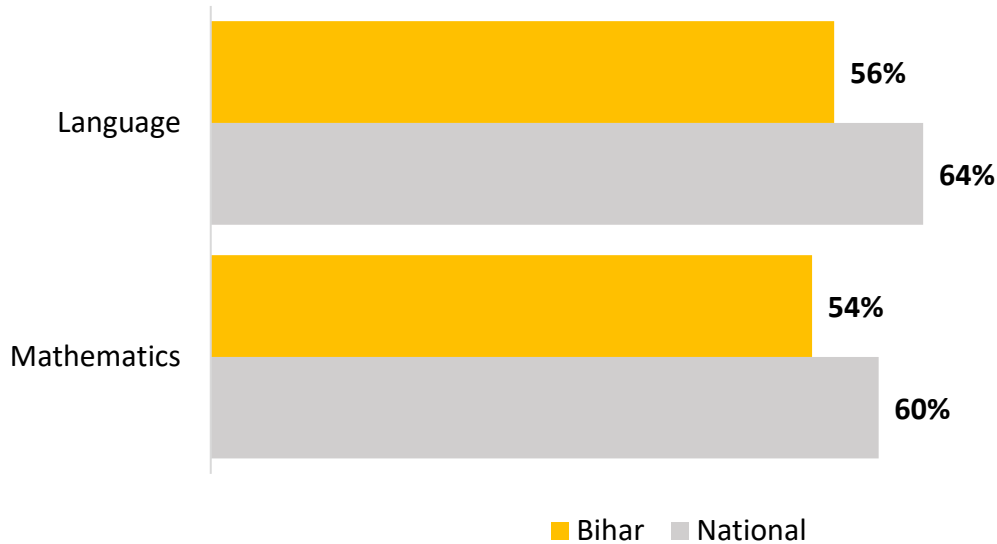
Grade 3	Grade 6	Grade 9
27,013	30,386	35,045





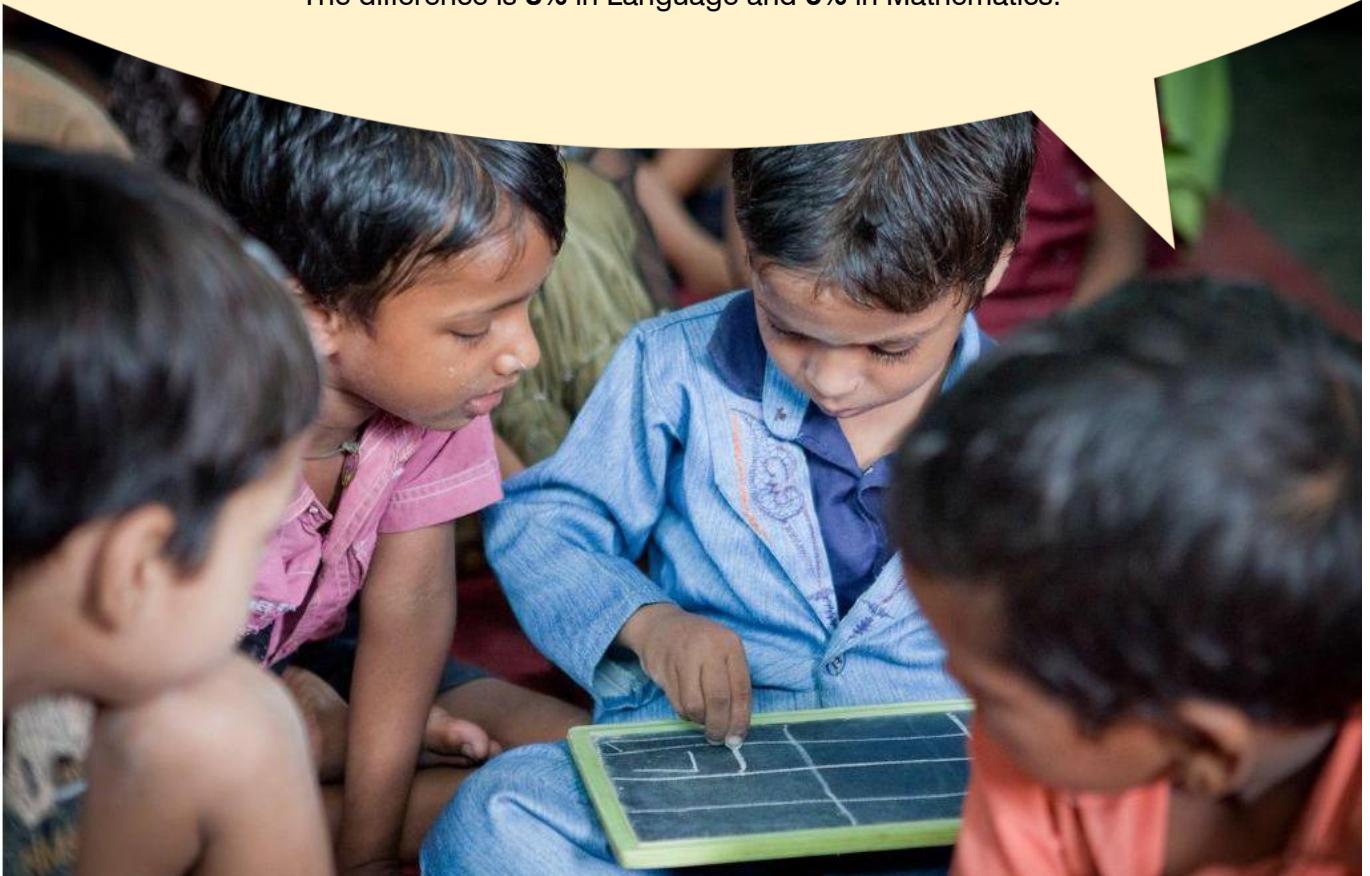
## Assessing Foundational Stage Competencies (Grade 3)

Comparison of State Average with National Average Across Subjects

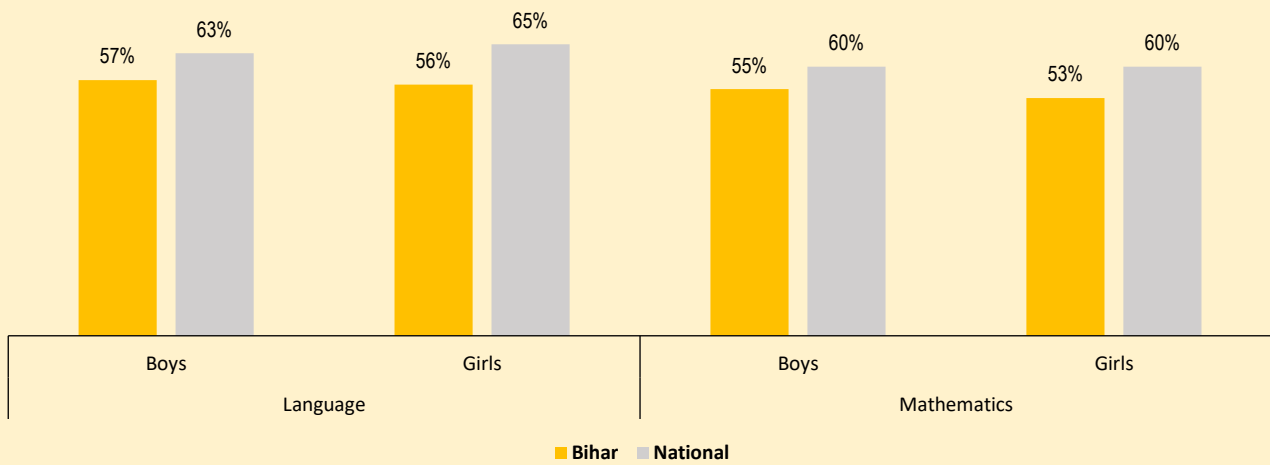


In both **Language** and **Mathematics**, the average performance of students in **Bihar** is below the national average.

The difference is **8%** in Language and **6%** in Mathematics.



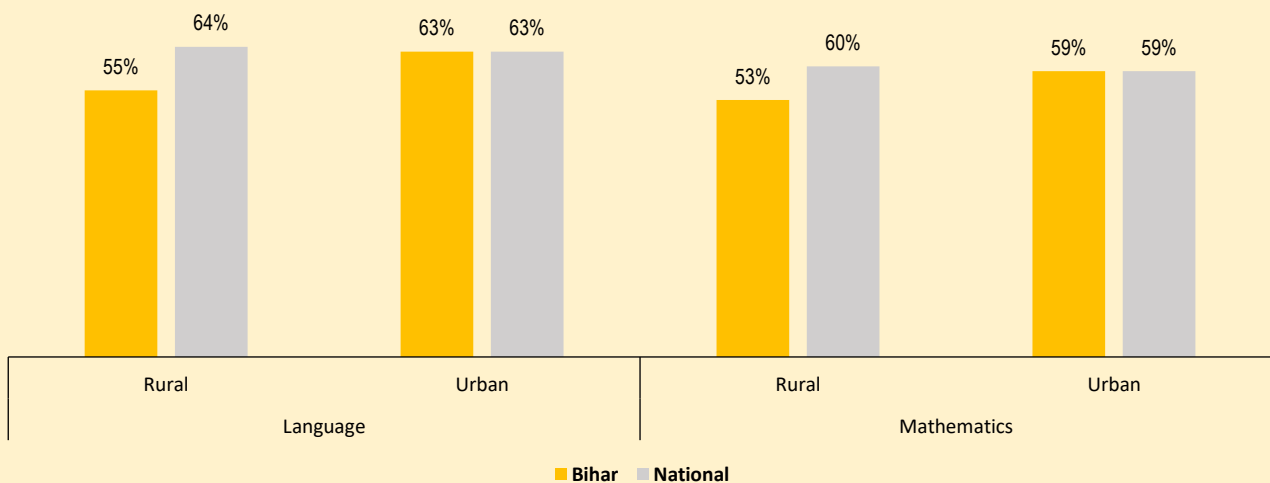
## Performance by Gender



### Key highlights

- In Language, boys' performance was 6% lower than the national average, and girls' performance was 9% lower than the national average.
- In Mathematics, boys' performance was 5% lower than the national average and girls scored 7% lower than the national average.

## Performance by Location

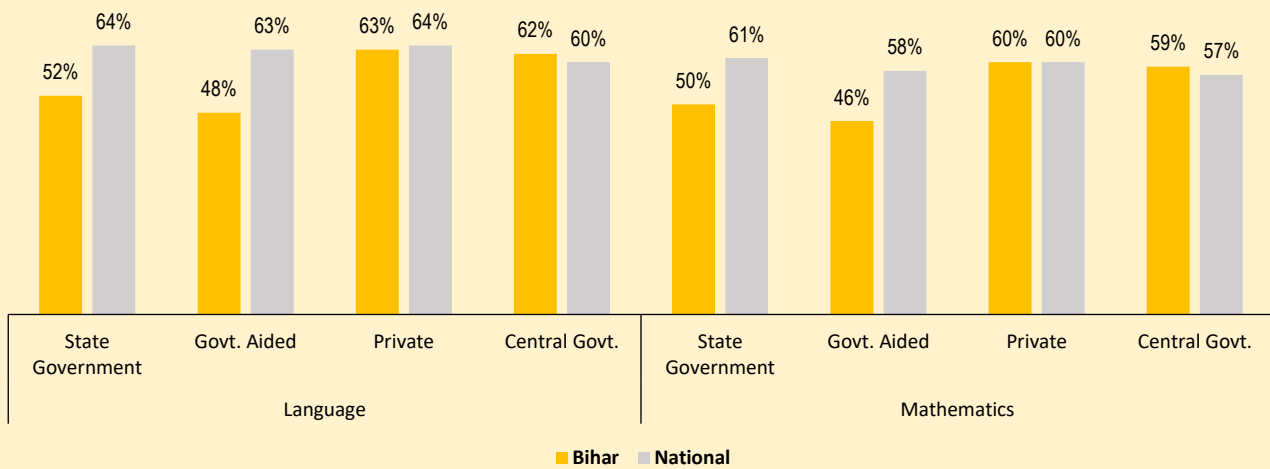


### Key highlights

- Students from rural schools performed lower than the national average, with 9% lower score in Language and 7% lower score in Mathematics.
- Performance of students from urban schools were at par with the national average in Language as well as in Mathematics.

\*The mean difference has not been represented statistically

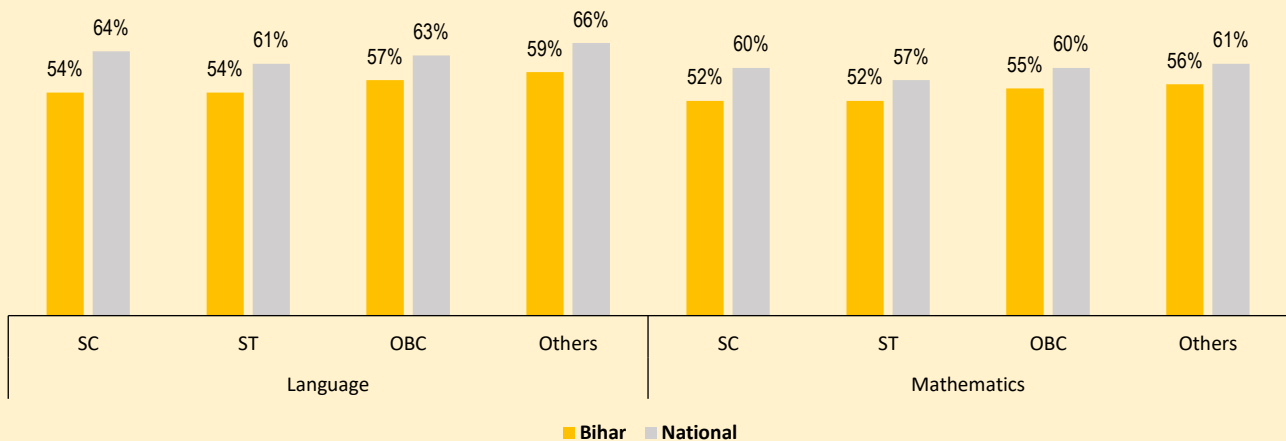
## Performance by School Management Type



### Key highlights

- State Government schools performed below the national average, with students scoring 12% lower in Language and 11% lower in Mathematics.
- Government-aided schools performed 15% lower in Language and 12% lower in Mathematics than the national average.
- Private schools performed 1% below the national average in Language. The performance was at par with the national average in Mathematics.
- Central Government schools performed 2% higher than the national average in both Language and Mathematics.

## Performance by Social Group



### Key highlights

- Among SC students, scores were 10% lower in Language and 8% lower in Mathematics than the national average.
- Among ST students, scores were 7% lower in Language and 5% lower in Mathematics than the national average.
- Among OBC students, scores were 6% lower in Language and 5% lower in Mathematics.
- Among students from other social groups, scores were 7% lower in Language and 5% lower in Mathematics than the national average.

\*The mean difference has not been represented statistically



## Competency-wise Performance (Grade 3)

The tables below show the average percentage of correctly answered questions related to each competency in the state, compared to the national average. For example, in competency C-10.7 (Language, Grade 3) in Bihar, the state average of 54% represents the proportion of correctly answered questions, while the national average for same competency was 61%.

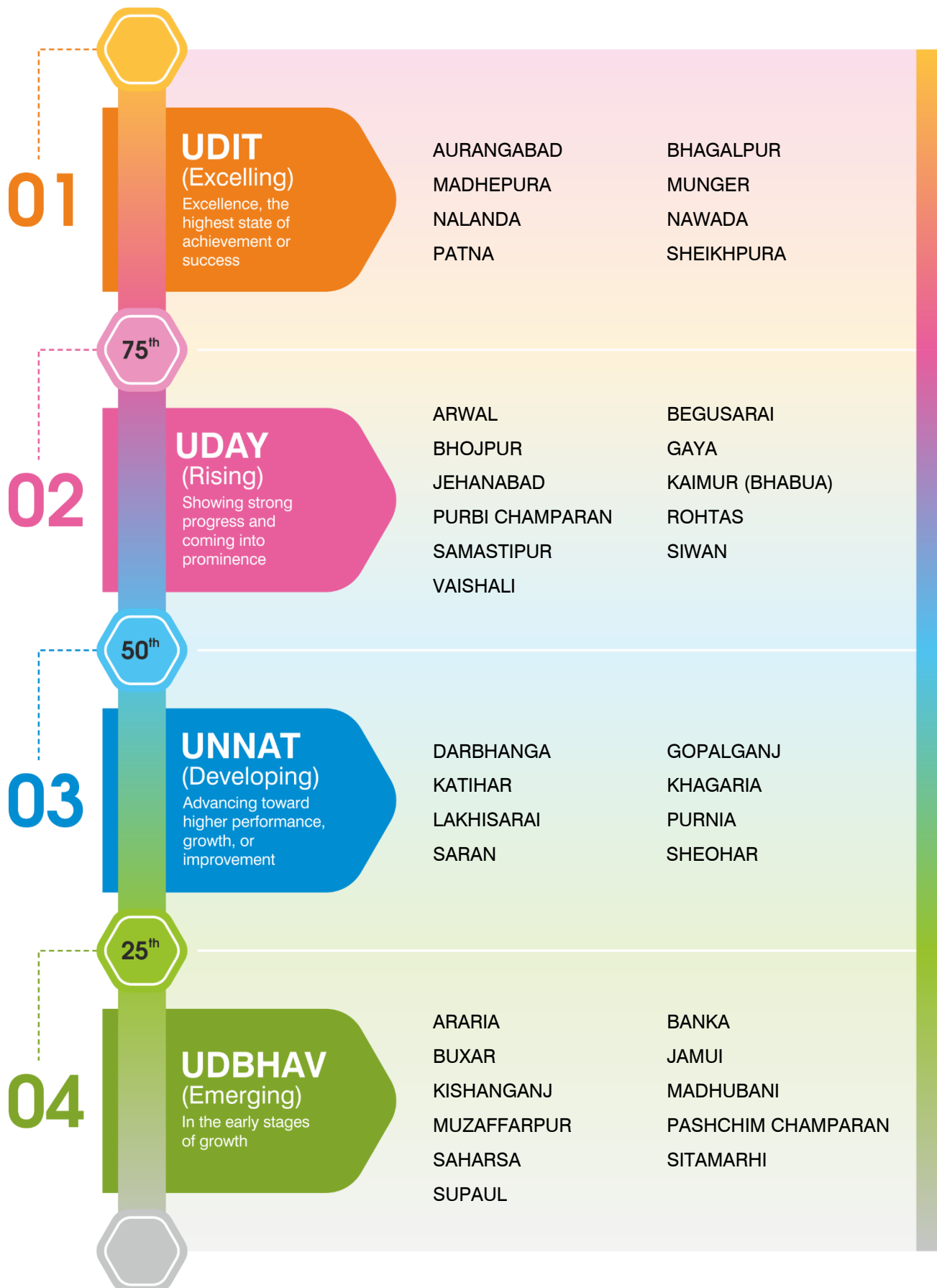
### Language

Competency Code	Competency Description	State	National
C-9.7	Knows and uses enough words to carry out day-to-day interactions effectively and can guess the meaning of new words by using existing Vocabulary	60%	67%
C-10.5	Reads short stories and comprehends their meaning - by identifying characters, storyline and what the author wants to say - on their own	52%	60%
C-10.7	Reads and comprehends the meaning of short news items, instructions and recipes, and publicity material	54%	61%

### Mathematics

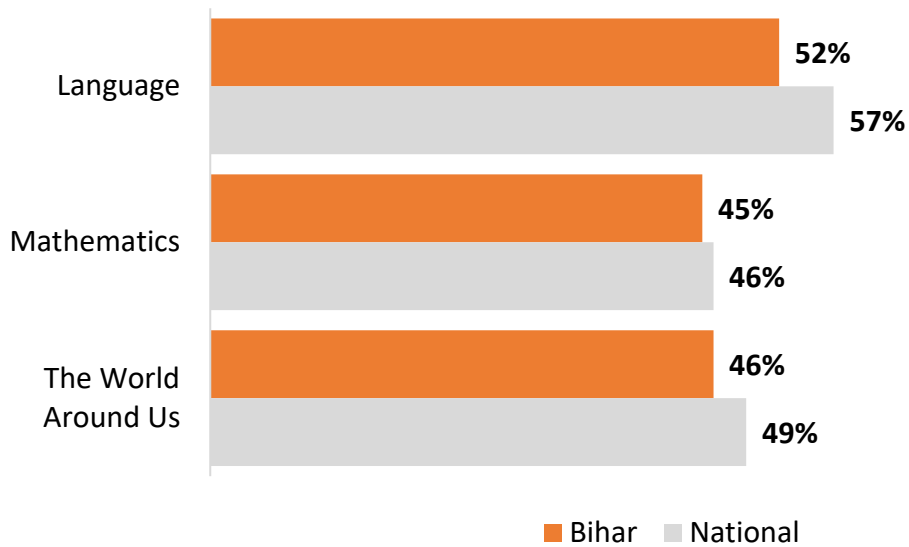
Competency Code	Competency Description	State	National
C-8.1	Sorts objects into groups and sub-groups based on more than one property	62%	68%
C-8.2	Identifies and extends simple patterns in their surroundings, shapes, and numbers	59%	69%
C-8.4	Arranges numbers up to 99 in ascending and descending order	50%	55%
C-8.5	Recognises and uses numerals to represent quantities up to 99 with the understanding of decimal place value system	54%	61%
C-8.6	Performs addition and subtraction of 2-digit numbers fluently using flexible strategies of composition and decomposition of both numerical and word problems	55%	58%
C-8.7	Recognises multiplication as repeated addition and division as equal sharing	51%	54%
C-8.8	Recognises, makes, and classifies basic geometric shapes and their observable properties, and understands and explains the relative relation of objects in space	41%	50%
C-8.9	Selects appropriate tools and units to perform simple measurements of length, weight, and volume of objects in their immediate environment	55%	62%
C-8.10	Performs simple measurements of time in minutes, hours, day, weeks, and months	55%	61%
C-8.11	Performs simple transactions using money up to INR 100	47%	50%
C-8.12	Develops adequate and appropriate vocabulary for comprehending and expressing concepts and procedures related to quantities, shapes, space, and measurements	47%	55%
C-8.13	Formulates and solves simple mathematical problems related to quantities, shapes, space, and measurements	50%	55%

## Performance of Districts (in percentile scale) Grade 3



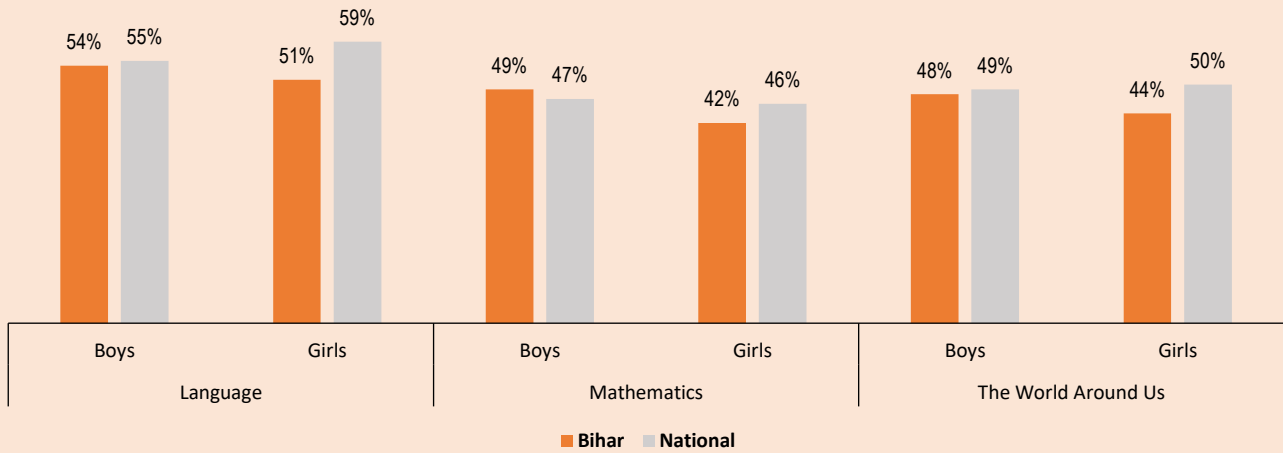
## Assessing Preparatory Stage Competencies (Grade 6)

Comparison of State Average with National Average Across Subjects



In **Language**, **Mathematics**, and **The World Around Us**, the average performance of students in Bihar is lower than the national average. The performance gap is **5%** in Language, **1%** in Mathematics, and **3%** in The World Around Us.

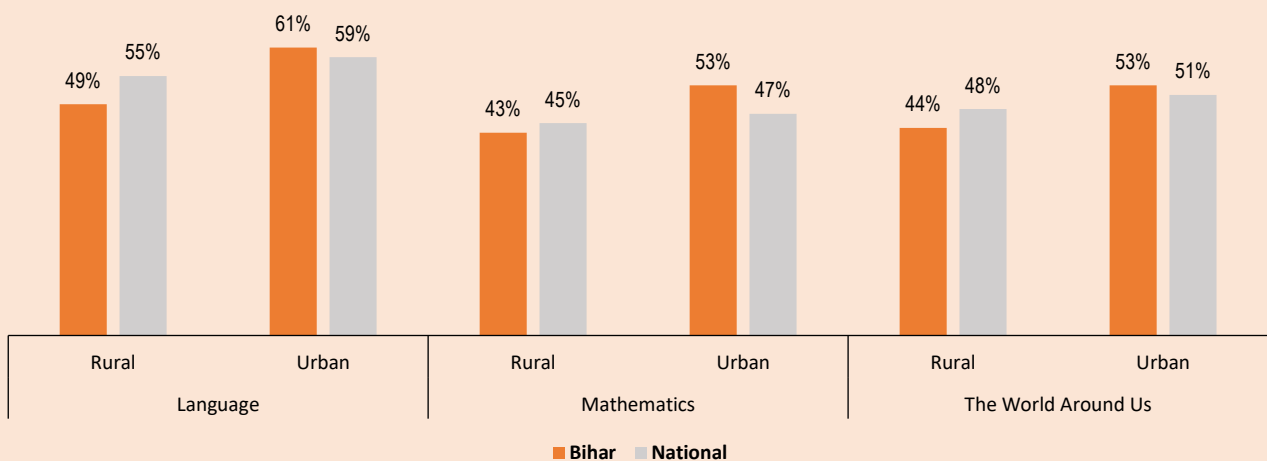
## Performance by Gender



### Key highlights

- In Language, boys scored 1% lower and girls scored 8% lower than the national average
- In Mathematics, boys scored 2% higher than the national average. Girls scored 4% lower than the national average.
- In The World Around Us, boys scored 1% lower, while girls scored 6% lower as compared to the national average.

## Performance by Location

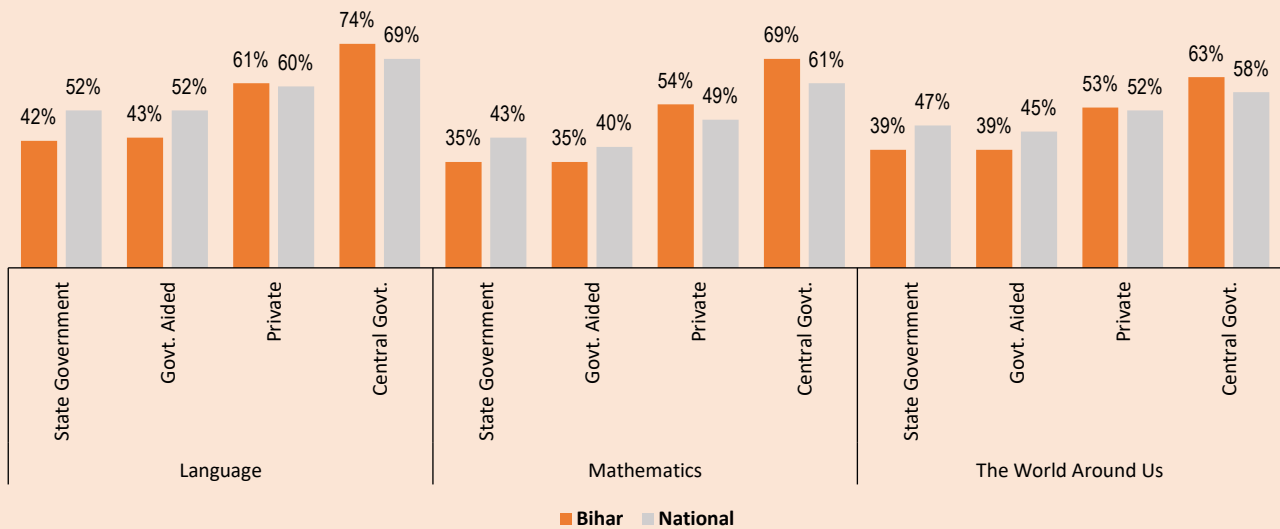


### Key highlights

- Rural schools performed 6% lower in Language, 2% lower in Mathematics and 4% lower in The World Around Us than the national average.
- Urban schools scored 2% higher in Language, 6% higher in Mathematics and 2% higher in The World Around Us as compared to the national average.

\*The mean difference has not been represented statistically

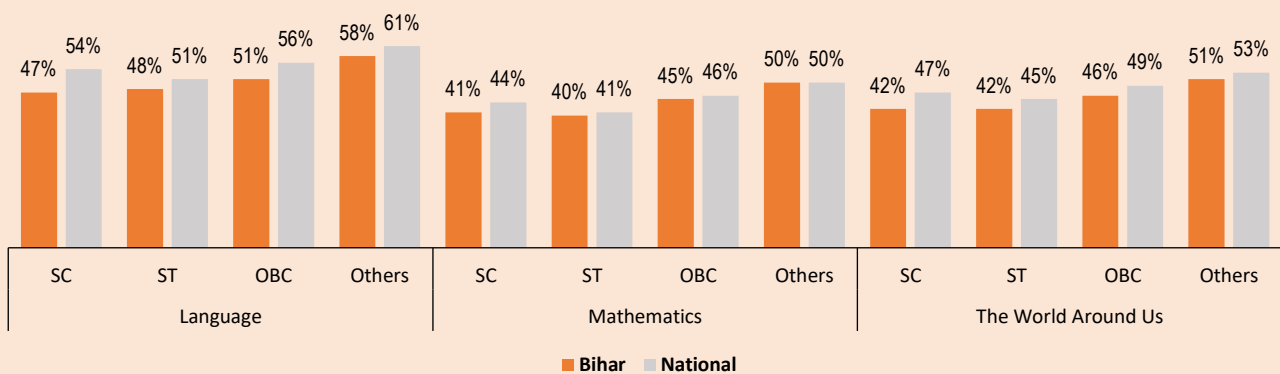
## Performance by School Management Type



### Key highlights

- In State Government schools, students scored 10% lower in Language, and 8% lower in Mathematics as well as in The World Around Us than the national average.
- In Government-aided schools, students scored 9% lower in Language, 5% lower in Mathematics, and 6% lower in The World Around Us as compared to the national average.
- In Private schools, students scored 1% higher in Language, 5% higher in Mathematics, and 1% higher in The World Around Us, compared to the national average.
- In Central Government schools, students scored 5% higher in Language, 8% higher in Mathematics, and 5% higher in The World Around Us than the national average.

## Performance by Social Group



### Key highlights

- Among SC students, scores were 7% lower in Language, 3% lower in Mathematics and 5% lower in The World Around Us as compared to the national average.
- Amongst ST students, scores were 3% lower in Language, 1% lower in Mathematics and 3% lower in The World Around Us than the national average.
- Among OBC students, scores were 5% lower in Language, 1% lower in Mathematics, and 3% lower in The World Around Us than the national average.
- Among students from other social groups, scores were 3% lower in Language and 2% lower in The World Around Us than the national average. For Mathematics, scores were at par with the national average.

\*The mean difference has not been represented statistically

## Competency-wise Performance (Grade 6)

The tables below show the average percentage of correctly answered questions related to each competency in the state, compared to the national average. For example, in competency C-2.1 (Language, Grade 6) in Bihar, the state average of 51% represents the proportion of correctly answered questions, while the national average for same competency was 56%.

### Language

Competency Code	Competency Description	State	National
C-2.1	Applies varied comprehension strategies (inference, prediction, visualisation) to understand different texts	51%	56%
C-2.2	Understands main ideas and draws essential conclusions from the material read	53%	58%

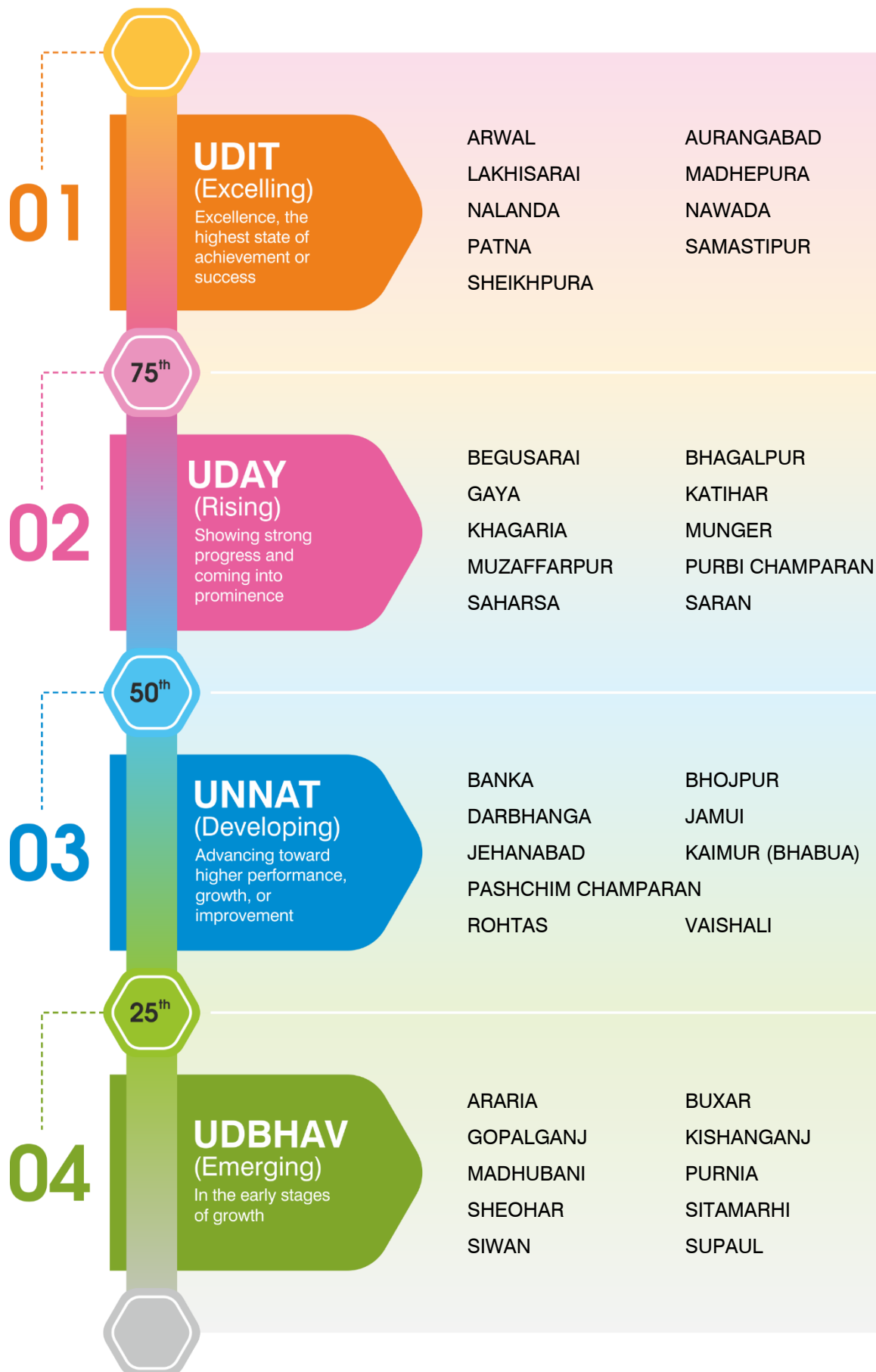
### Mathematics

Competency Code	Competency Description	State	National
C-1.1	Represents numbers using the place value structure of the Indian number system, compares whole numbers, and knows and can read the names of very large numbers	53%	54%
C-1.2	Represents and compares commonly used fractions in daily life (such as $\frac{1}{2}$ , $\frac{1}{4}$ ) as parts of unit wholes, as locations on number lines and as divisions of whole numbers	27%	29%
C-1.3	Understands and visualises arithmetic operations and the relationships among them, knows addition and multiplication tables at least up to $10 \times 10$ (Pahade) and applies the four basic operations on whole numbers to solve daily life problems	55%	53%
C-1.4	Recognises, describes, and extends simple number patterns such as odd numbers, even numbers, square numbers, cubes, powers of 2, powers of 10, and Virahanka–Fibonacci numbers.	47%	49%
C-2.2	Describes location and movement using both common language and mathematical vocabulary; understands the notion of map (Najri Naksha)	39%	41%
C-2.4	Discovers, recognises, describes, and extends patterns in 2D and 3D shapes	43%	48%
C-3.3	Carries out simple unit conversions, such as from centimetres to metres, within a system of measurement	38%	38%
C-3.5	Devises strategies for estimating the distance, length, time, perimeter (for regular and irregular shapes), area (for regular and irregular shapes), weight, and volume and verifies the same using standard units	43%	42%
C-4.1	Solves puzzles and daily-life problems involving one or more operations on whole numbers (including word puzzles and puzzles from 'recreational' areas, such as the construction of magic squares)	38%	38%
C-4.3	Selects appropriate methods and tools for computing with whole numbers, such as mental computation, estimation, or paper pencil calculation, in accordance with the context	51%	49%

### The World Around Us

Competency Code	Competency Description	State	National
C-1.1	Observes and identifies the natural (insects, plants, birds, animals, geographical features, sun and moon, stars, planets, natural resources) and social (houses, relationships) components in their immediate environment	42%	44%
C-1.3	Asks questions and makes predictions about simple patterns (season change, food chain, phases of the moon, movement of stars and planets, shapes of trees, plants, leaves, and flowers, rituals, celebrations) observed in the immediate environment	36%	38%
C-1.4	Explains the functioning of local institutions (family, school, bank/post office, market, and panchayat) in different forms (story, drawing, tabulating data, reports), and analyses their roles	54%	56%
C-2.1	Identifies natural and human-made systems that support their lives (water supply, water cycle, river flow systems, seasons, life cycle of plants and animals, food, household items, transport, communication, electricity in the home)	48%	51%
C-2.2	Describes the relationship between the natural environment and cultural practices in their immediate environment (nature of work, food, festivals, traditions)	33%	38%
C-3.1	Describes the basic safety needs and protection (health and hygiene, food, water, shelter, precautions, awareness of emergency situations, abuse, and unsafe situations) of humans, birds, and animals	54%	57%
C-3.2	Discusses how to prepare for emergency situations (smoke, fire, small injuries, burns, electrical safety, unseasonal rains, fallen trees) based on discussions with family and community, or personal experiences	42%	45%
C-4.1	Observes and describes diversity among plants, and birds and animals in their immediate environment (shape, sounds, food habits, growth, habitat)	51%	54%
C-4.3	Describes usage of natural resources in their immediate environment	47%	50%
C-4.7	Learns about basic social and behavioural norms, values, and dispositions that benefit our social and natural environments and that help our society function smoothly (using dustbins, standing in queues, conserving water, using public transportation, keeping one's environment clean, always helping others in need regardless of background)	47%	51%
C-5.3	Reads simple maps of city, state, and country to identify natural and human-made features (well, lake, post office, school, hospital) with reference to symbols and directions	43%	46%

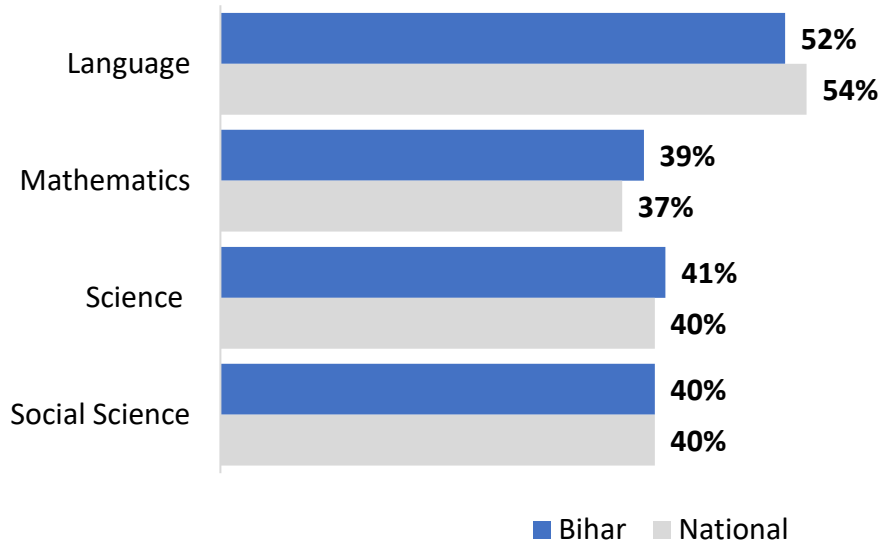
## Performance of Districts (in percentile scale) Grade 6





## Assessing Middle Stage Competencies (Grade 9)

Comparison of State Average with National Average Across Subjects

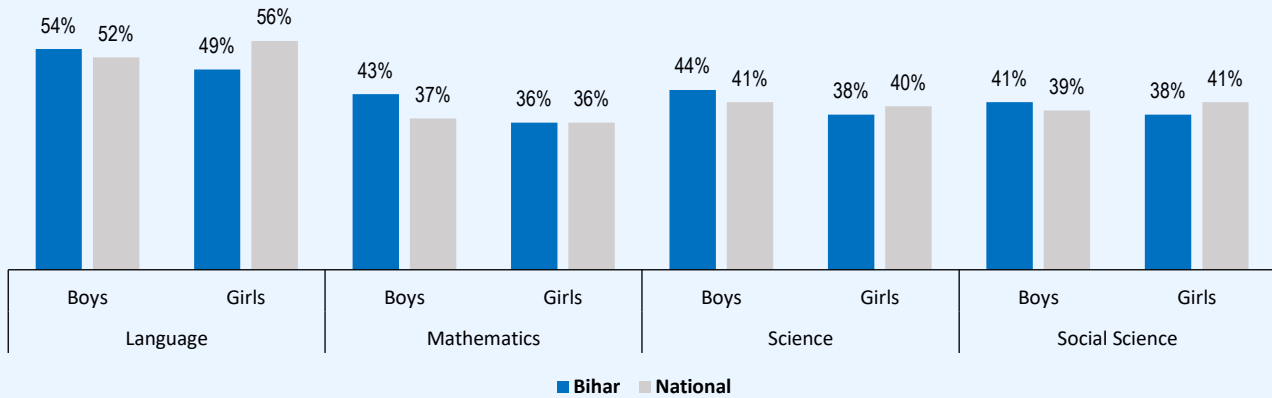


In **Language**, the average performance of students in **Bihar** is below the national average. For **Mathematics and Science**, the average performance score of students is above the national average. In **Social Science**, the average performance of students is at par with the national average. The performance gap is 2% in Language, 2% in Mathematics, and 1% in Science.





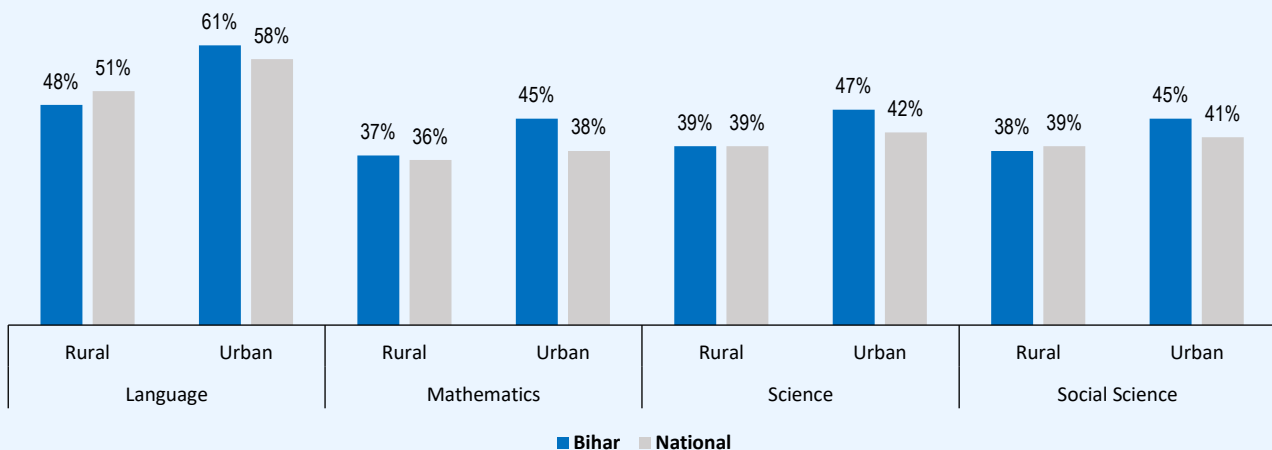
## Performance by Gender



### Key highlights

- In Language, boys scored 2% higher and girls scored 7% lower than the national average.
- In Mathematics, boys scored 6% higher than the national average. The girls' performance was at par with the national average.
- In Science, boys scored 3% higher and girls scored 2% lower than the national average.
- In Social Science, boys scored 2% higher and girls scored 3% lower than the national average.

## Performance by Location

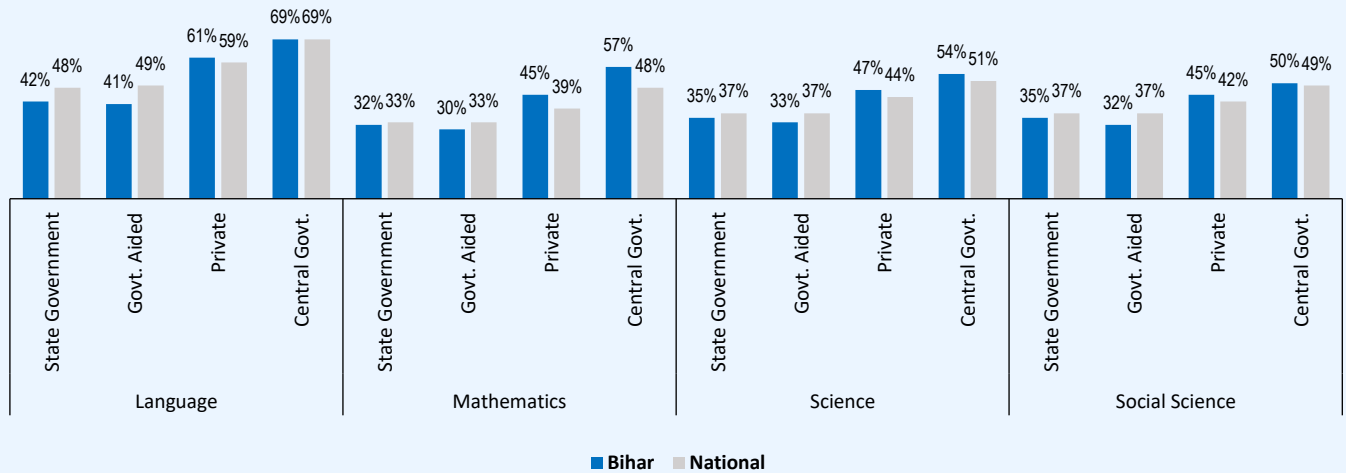


### Key highlights

- In rural schools, students scored 3% lower in Language, 1% higher in Mathematics, and 1% lower in Social Science than the national average. For Science, the performance was at par with the national average.
- In urban schools, students scored 3% higher in Language, 7% higher in Mathematics, 5% higher in Science, and 4% higher in Social Science than the national average.

\*The mean difference has not been represented statistically

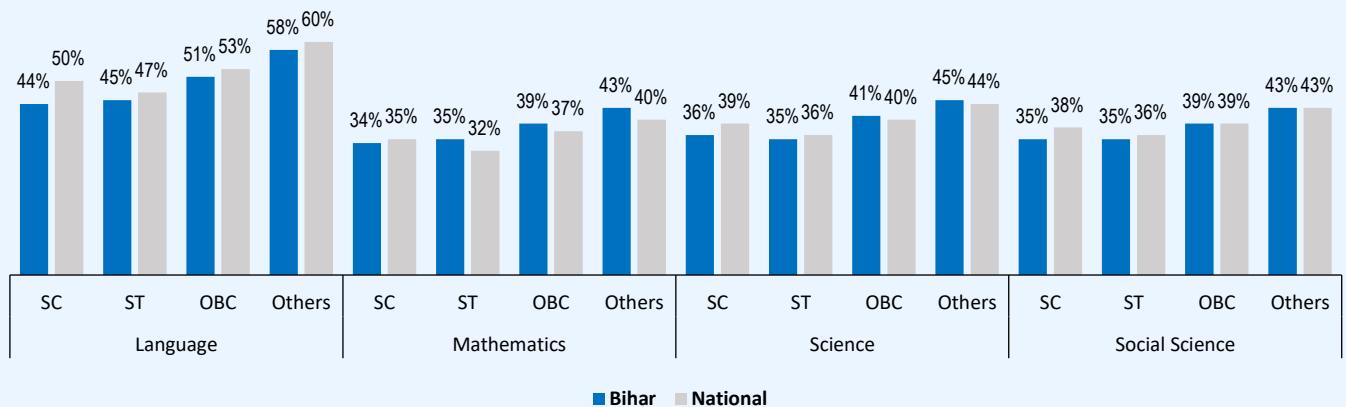
## Performance by School Management Type



### Key highlights

- In State Government schools, students scored 6% lower in Language, 1% lower in Mathematics, and 2% lower in Science as well as in Social Science, than the national average.
- In Government-aided schools, students scored 8% lower in Language, 3% lower in Mathematics, 4% lower in Science, and 5% lower in Social Science than the national average.
- In Private schools, students scored 2% higher in Language, 6% higher in Mathematics, and 3% higher in both Science and Social Science than the national average.
- In Central Government schools, students scored 9% higher in Mathematics, 3% higher in Science and 1% higher in Social Science than the national average. Students' performance for Language was at par with the national average.

## Performance by Social Group



### Key highlights

- Among SC students, scores were 6% lower in Language, 1% lower in Mathematics, and 3% lower in Science as well as Social Science than the national average.
- Among ST students, scores were 2% lower in Language, 3% higher in Mathematics, and 1% lower in both Science and Social Science as compared to the national average.
- Among OBC students, scores were 2% lower in Language, 2% higher in Mathematics, and 1% higher in Science as compared to the national average. For Social Science, performance of the students was at par with the national average.
- Among students from other social groups, scores were 2% lower in Language, 3% higher in Mathematics and 1% higher in Science. The scores for Social Science were at par with the national average.

\*The mean difference has not been represented statistically

## Competency-wise Performance (Grade 9)

The tables below show the average percentage of correctly answered questions related to each competency in the state, compared to the national average. For example, in competency C-1.1 (Language, Grade 9) in Bihar, the state average of 52% represents the proportion of correctly answered questions, while the national average for same competency was 54%.

### Language

Competency Code	Competency Description	State	National
C-1.1	Identifies main points and summarises from careful listening or reading of the text (news articles, reports, editorials)	52%	54%

### Mathematics

Competency Code	Competency Description	State	National
C-1.2	Discovers, identifies, and explores patterns in numbers and describes rules for their formation (e.g., multiples of 7, powers of 3, prime numbers), and explains relations between different patterns	42%	39%
C-1.4	Explores and understands sets of numbers, such as whole numbers, fractions, integers, rational numbers, and real numbers, and their properties, and visualises them on the number line	34%	31%
C-1.5	Explores the idea of percentage and applies it to solve problems	30%	28%
C-1.6	Explores and applies fractions (both as ratios and in decimal form) in daily-life situations	35%	31%
C-2.2	Extends the representation of a number in the form of a variable or an algebraic expression using a variable	46%	44%
C-2.3	Forms algebraic expressions using variables, coefficients, and constants and manipulates them through basic operations	41%	38%
C-2.5	Develops own methods to solve puzzles and problems using algebraic thinking	41%	37%
C-3.2	Outlines the properties of lines, angles, triangles, quadrilaterals, and polygons and applies them to solve related problems	44%	37%
C-3.5	Understands congruence and similarity as it applies to geometric shapes and identifies similar and congruent triangles	40%	40%
C-4.1	Discovers, understands, and uses formulae to determine the area of a square, triangle, parallelogram, and trapezium and develops strategies to find the areas of composite 2D shapes	43%	39%
C-5.1	Collects, organises, and interprets the data using measures of central tendencies such as average/mean, mode, and median	43%	41%
C-6.1	Applies both inductive and deductive logic to formulate definitions and conjectures, evaluate and produce convincing arguments or proofs to turn these definitions and conjectures into theorems or correct statements, particularly in the areas of algebra, elementary number theory, and geometry	29%	29%

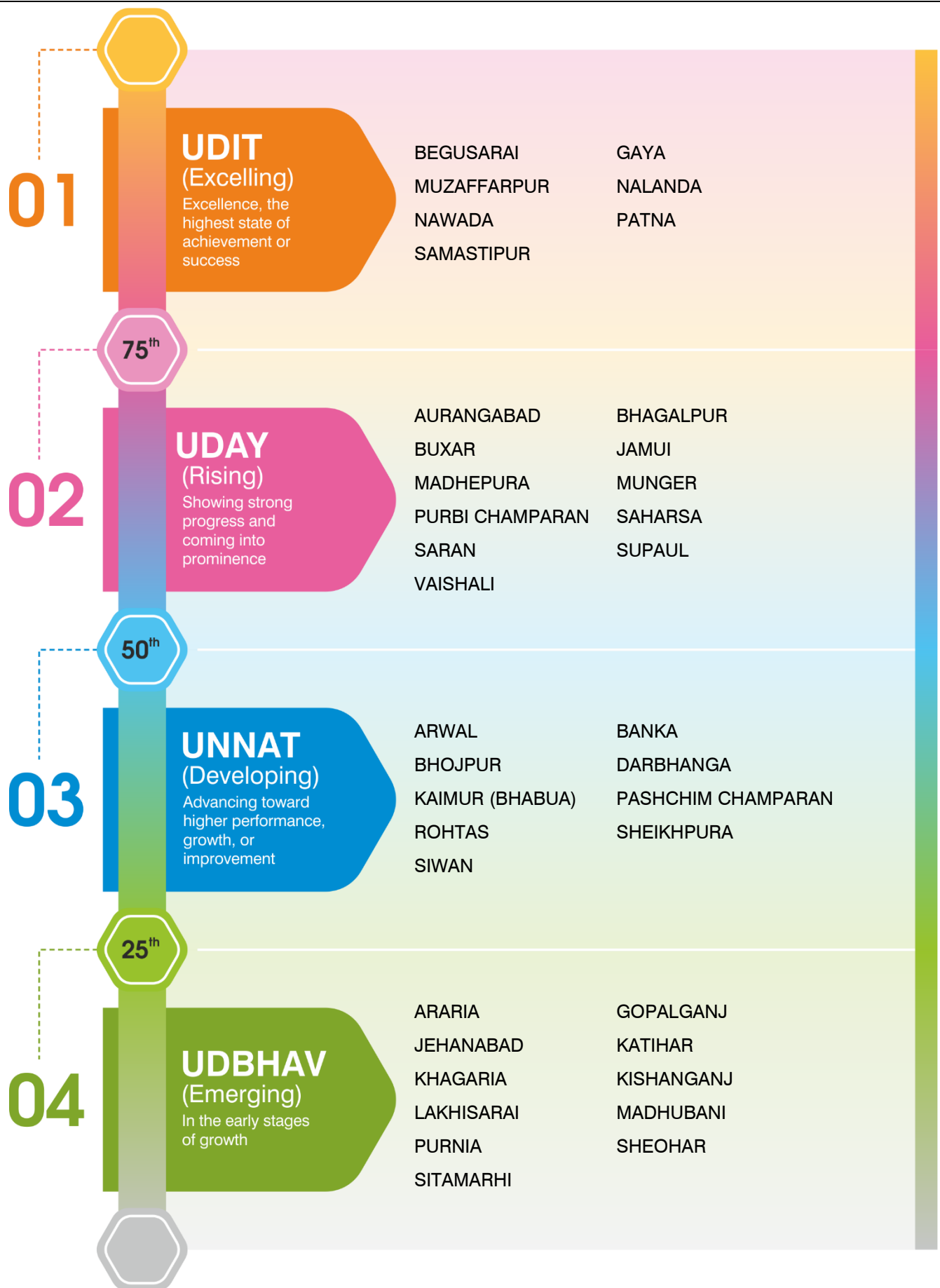
### Science

Competency Code	Competency Description	State	National
C-1.1	Classifies matter based on observable physical (solid, liquid, gas, shape, volume, density, transparent, opaque, translucent, magnetic, non-magnetic, conducting, non-conducting) and chemical (pure, impure; acid, base; metal, non-metal; element, compound) characteristics	40%	36%
C-1.2	Describes changes in matter (physical and chemical) and uses particulate nature to represent the properties of matter and the changes	39%	38%
C-1.4	Observes and explains the phenomena caused due to differences in pressure, temperature, and density (e.g., breathing, sinking-floating, water pumps in homes, cooling of things, formation of winds)	37%	37%
C-2.1	Describes one-dimensional motion (uniform, nonuniform, horizontal, vertical) using physical measurements (position, speed, and changes in speed) through mathematical and diagrammatic representations	42%	41%
C-2.2	Describes how electricity works through manipulating different elements in simple circuits and demonstrates the heating and magnetic effects of electricity	32%	33%
C-2.3	Describes the properties of a magnet (natural and artificial; Earth as a magnet)	39%	41%
C-2.4	Demonstrates rectilinear propagation of light from different sources (natural, artificial, reflecting surfaces), verifies the laws of reflection through manipulation of light sources and objects and the use of apparatus and artefacts (such as plane and curved mirrors, pinhole camera, kaleidoscope, periscope)	43%	45%
C-3.1	Describes the diversity of living things observed in the natural surroundings (insects, earthworms, snails, birds, mammals, reptiles, spiders, diverse plants, and fungi), including at a smaller scale (microscopic organisms)	43%	47%
C-3.2	Distinguishes the characteristics of living organisms (need for nutrition, growth and development, need for respiration, response to stimuli, reproduction, excretion, cellular organisation) from non-living things	32%	34%
C-4.1	Undertakes a nutrition-based analysis of food components with special reference to Indian culinary practices and modern understanding of nutrition, and explains the effect of nutrition on health	55%	53%
C-4.3	Describes biological changes (growth, hormonal) during adolescence, and measures to ensure overall well-being	38%	37%
C-7.3	Represents real world events and relationships through diagrams and simple mathematical representations	40%	38%

**Social Science**

Competency Code	Competency Description	State	National
C-1.1	Collects and interprets multiple sources of information (primary and secondary) to understand the historical, cultural, geographical, and socio-political aspects of human life	33%	32%
C-1.2	Represents and analyses data related to various aspects of human life given in the form of text, tables, charts, diagrams, and maps	52%	53%
C-2.1	Explains and analyses major changes in the past and their impact on society	39%	39%
C-2.2	Recognises elements of the continued prevalence of certain beliefs, relationships, practices, and activities in human society, notwithstanding major changes in society	37%	38%
C-3.1	Analyses the effect of various changes in early human society from nomadism to settled life and early civilisation (such as, the emergence of agriculture, changes in food habits, basic technologies like construction, transport, pottery, metallurgy), and changes in human habitation, family structures and relationships, the nature of work, people's socio-cultural beliefs and concepts over time (e.g., <i>Ahimsa</i> , and the fallout of major wars or invasions) that significantly impacted human societies	36%	36%
C-4.2	Assesses the influence of social, cultural, and political institutions on an individual or group or community or society in general	46%	46%
C-6.1	Explains key natural phenomena, such as, climate, weather, ocean cycles, soil formation, the flow of rivers, and how they are spatially distributed	31%	33%
C-6.2	Identifies the distribution of resources, such as, water, agriculture, raw materials, and services across geographies	37%	38%
C-6.3	Analyses Indian perspectives on and efforts towards conservation and sustainability in society, and advocates the importance of the same, and what more needs to be done in these directions including in the context of global climate change	45%	46%
C-6.4	Correlates the existence of different patterns of livelihoods with different types of landforms, availability of resources, and climatic conditions and changes (in local, regional, national, and global contexts)	42%	39%
C-7.1	Explains India's unity in diversity by recognising commonalities in its rich and diverse cultural elements, languages, art, philosophical ideas, values, clothing, cuisines, traditions, festivals, trade, commerce, and health practices including <i>Ayurveda</i> and yoga	34%	36%
C-7.2	Discovers the topographical diversity of the Indian landmass from the semi-arid zone in the west and the areas of heavy rains in the north-east to the long coastal areas in the south and the snow-clad mountains in the north, as well as the rich biodiversity of the country	36%	34%
C-8.2	Explains the process of formation of the Indian Constitution and understands the ideas and ideals of the Indian national movement enshrined in it as well as those drawn from India's civilisational heritage	48%	45%
C-8.3	Explains the working of the three tiers of local self-government and appreciates its significance in upholding democracy at the grassroot level	41%	39%
C-9.1	Explains the key elements of trade and commerce (commodity, production, consumption, and capital) and its impact on individual life and society	51%	50%

## Performance of Districts (in percentile scale) Grade 9



# Recommendations for Targeted Interventions

This subsection presents the gaps identified across three grades and different subjects using the achievement test, pupil questionnaire, teacher questionnaire, and school questionnaire.



## 1. Bridging the Gaps in Learning Levels

The percentages for competency-wise performance in each grade covered in preceding sections represent the proportion of students in Grades 3, 6, and 9 in Bihar who correctly answered questions for each competency in the subjects tested. The percentages offer valuable insights into the students' performance across different competencies, aiding identification of areas that may require targeted support.

Instances where less than 50% of students in the state were able to answer correctly indicate learning gaps. These learning gaps highlight the need for focused interventions to strengthen students' skills, refine instructional strategies, and provide additional learning support. Addressing these areas effectively will help improve overall student learning outcomes in the state.

## 2. Use of Innovative Assessment Strategies

The use of innovative assessment strategies like peer assessment, self-assessment, portfolio, and project work are key to effective learning. The following graph illustrates the percentage of teachers who reported using the aforementioned assessment strategies and reported their use as **regularly** or **sometimes**.

Please note, the survey originally included four response options: Never, Rarely, Sometimes, and Regularly. This analysis focuses on the combined percentage of the following categories, regularly and sometimes, to assess the adoption of these assessment strategies.

A **50% benchmark** is used to identify gaps in adoption. Any assessment strategy where less than **50%** of teachers reported using it at least 'Sometimes' is considered an area needing **targeted interventions**.



Schools have adopted a range of innovative assessment strategies, with self-assessment, peer assessment, and project work being widely practiced. While portfolio-based assessment is also in use, its adoption remains somewhat lower in comparison. Continued efforts to strengthen the use of diverse methods can contribute to a more comprehensive understanding of student learning.

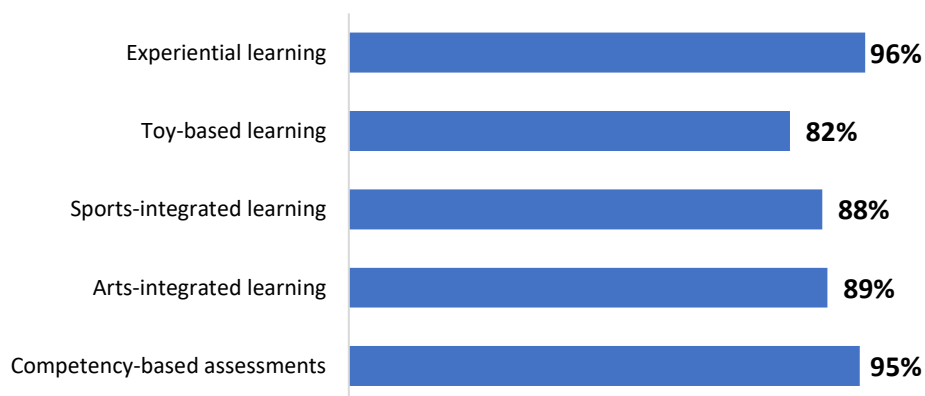


### 3. Integration of Diverse Pedagogical Approaches in Teaching

The integration of diverse pedagogical approaches contributes to the teaching-learning process. The following graph illustrates the percentage of teachers who reported incorporating the following pedagogical approaches: sports integration, arts integration, toy-based, and experiential learning, and reported their use as **regularly** or **sometimes**.

Please note, the survey originally included four response options: Never, Rarely, Sometimes, and Regularly. This analysis focuses on the combined percentage of the following categories, regularly and sometimes, to assess the adoption of these assessment strategies.

A **50% benchmark** is used to identify gaps in adoption. Any pedagogical approach where less than **50%** of teachers reported using it at least 'Sometimes' is considered an area needing **targeted interventions**.

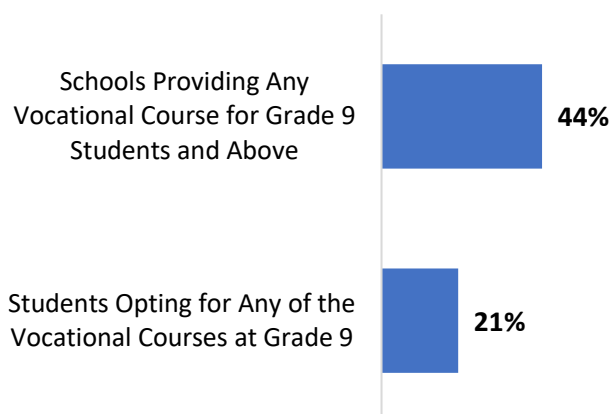


Experiential learning and competency-based assessments are widely incorporated into classroom practice. Arts-integrated and sports-integrated learning approaches also show strong presence. Toy-based learning, while adopted to a reasonable extent, may benefit from further support and promotion to deepen its classroom integration.



#### 4. Skill Education in Schools

In the 21st century, skill education equips learners to develop specific job-ready skills and competencies and adapt to the changing workforce requirements. The following table shows the percentage of schools that provide skill courses for students Grades 9 and above, and students who have opted for skill courses at Grade 9. The responses for both items were reported as **yes** or **no**.



A **50% benchmark** is used to identify gaps. Either criterion where less than **50%** of schools reported as 'Yes' is considered an area needing **targeted interventions**.

The findings highlight the need for greater integration of skill education in schools. Policymakers can use this data to **introduce diverse skill courses**, provide **funding and infrastructure support**, and **raise awareness among students** about career opportunities. Strengthening industry partnerships and aligning courses with job market needs can enhance **skill development and employability**.

Less than half of the schools offer skill courses for students in Grade 9 and above. However, student enrollment in these courses remains limited. There is a need to both expand awareness and enhance the relevance of skill options to encourage greater participation.

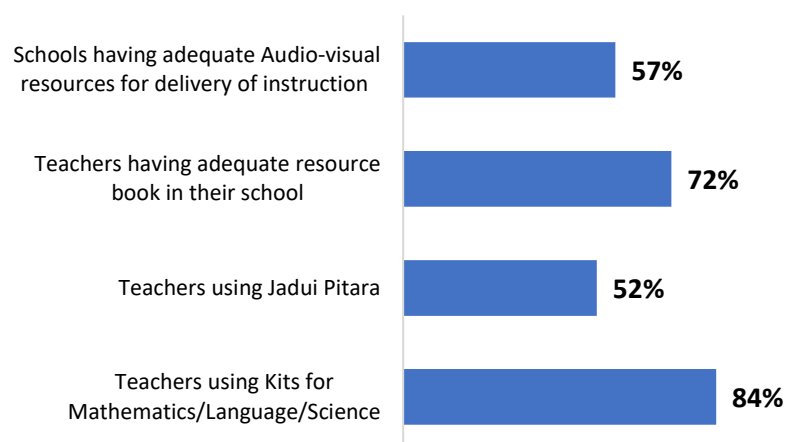


## 5. Learning Teaching Material at School

Access to diverse learning and teaching materials plays a crucial role in enhancing the quality of education. A variety of resources, such as audio-visual aids, teacher resource books, subject-specific kits, and interactive learning tools like Jadui Pitara, contribute to making classroom instruction more engaging and effective. These materials help facilitate better understanding, encourage active participation, and enhance the overall quality of education. Ensuring access to diverse and adequate learning resources is essential for fostering an interactive and well-rounded learning environment.

The following graph presents the percentage of schools that have access to essential teaching-learning resources, including textbooks, digital content, and other instructional materials.

A **50% benchmark** is used to identify gaps. Any category where less than 50% of schools reported availability of materials is considered an area requiring intervention.

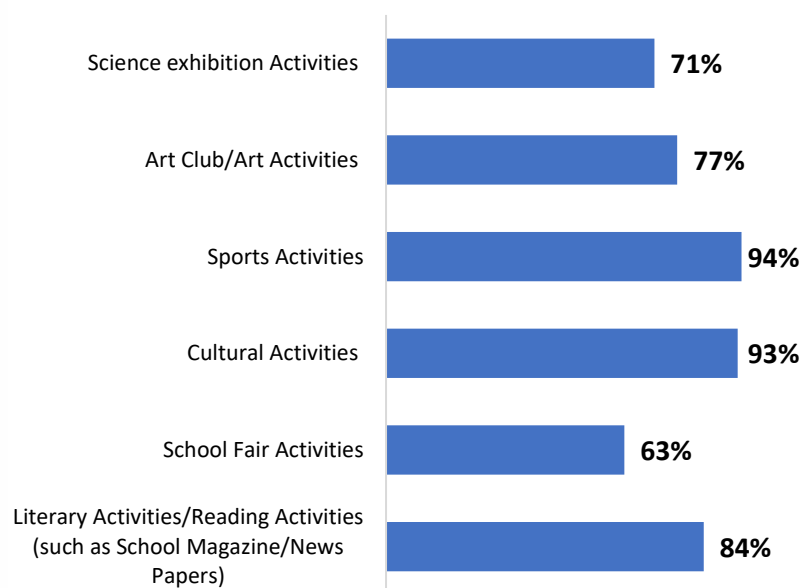


Most teachers report access to essential teaching resources such as subject-specific kits and resource books. While the use of audio-visual materials and initiatives like Jadui Pitara is present, there is scope to strengthen their integration into regular classroom instruction.

## 6. Experiential Learning Opportunities in School

Experiential Learning is a core aspect of teaching-learning practices and contributes to active learning. The following graph illustrates the percentage of teachers who reported availability of the following experiential learning opportunities in school: art activities, cultural activities, literary/reading activities, school fairs, science exhibitions, and sports activities, and reported their availability as yes or no.

A **50% benchmark** is used to identify gaps in availability. Any experiential learning opportunity where less than **50%** of schools reported its availability as 'Yes' is considered an area needing **targeted interventions**.

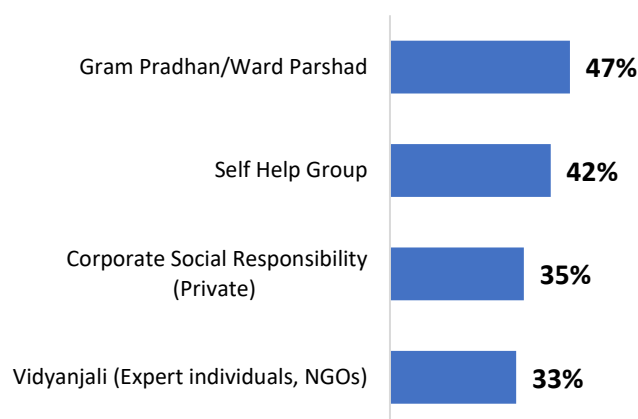


Schools are providing diverse opportunities for experiential learning through sports, cultural events, literary activities, and art-related engagements. While initiatives like science exhibitions and school fairs are present, further encouragement and logistical support may help strengthen their reach across all schools.



## 7. Community Participation

Active participation from the community plays a crucial role in enhancing the quality of education and overall school development. Support from local governance bodies, NGOs, self-help groups, and corporate social responsibility (CSR) initiatives can contribute significantly to a school's resources and learning environment. The chart below illustrates the current levels of community support in schools, highlighting areas where increased engagement can make a meaningful impact.



A **50% benchmark** is used to identify gaps in participation of the community.

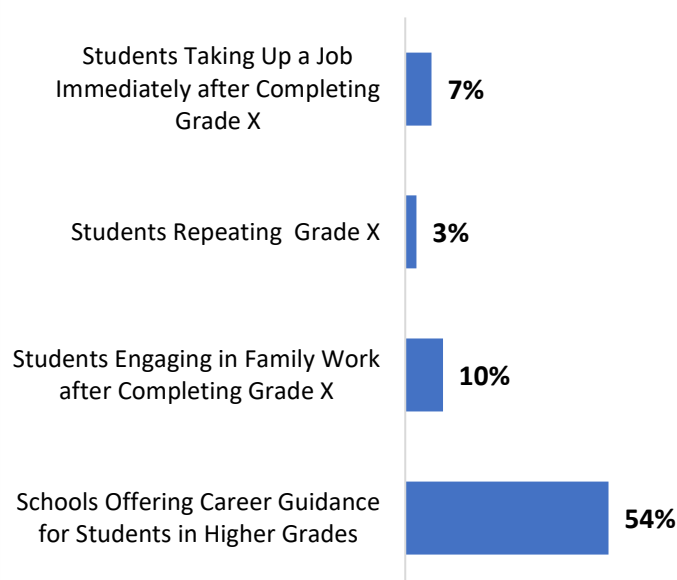
Engagement from community stakeholders is visible in various forms, including involvement from local leaders, self-help groups, private sector representatives, and NGOs. However, there is potential to further deepen collaboration across all these fronts to enhance school development and student learning outcomes.



## 8. Students Outside the Educational System

Students exit the education system after Grade 10 because of different reasons like taking up a job, doing a skill course, repeating the grade, and participating in family work. Schools reported the exit of students through percentages (0-25%, 26-50%, 51-75%, 76-100%). E.g., 26-50% of students took up a job.

A **50% benchmark** is used to identify gaps in the system. Aspects that schools reported as 51-75% or 76-100% are considered as areas needing **targeted interventions** to reduce the percentage of students exiting the education system.

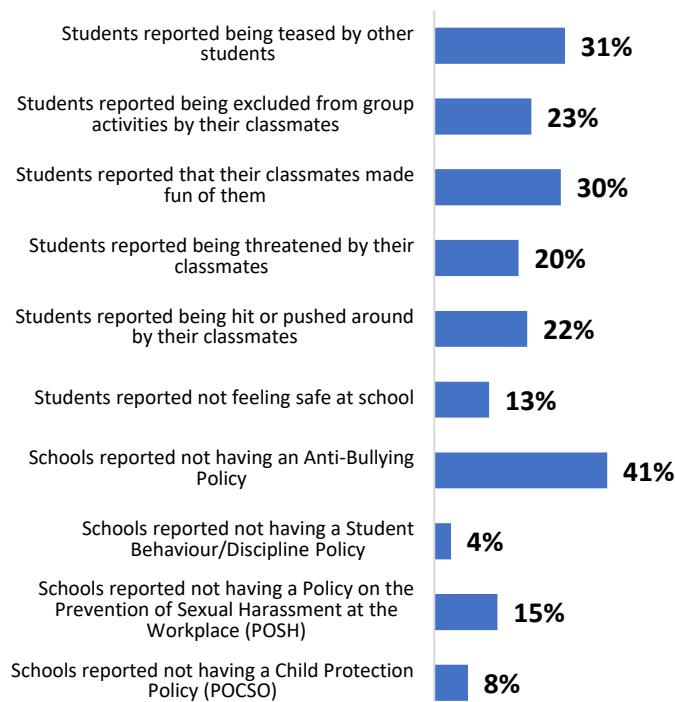


Some students leave the formal education system after completing Grade X, either by taking up jobs, repeating a grade, or engaging in family responsibilities. While career guidance is being provided in many schools, there is still a need to enhance these efforts to help students make informed decisions about their future pathways.

## 9. Safe and Friendly School Environment

A positive school environment is essential for students' well-being and academic success. The survey findings indicate areas where improvements are needed to promote safety, inclusivity, and emotional security in schools. Strengthening anti-bullying measures, fostering peer inclusivity, and implementing key protection policies can significantly enhance the overall learning experience. The graph below highlights critical areas requiring attention to create a safer and more student-friendly school environment.

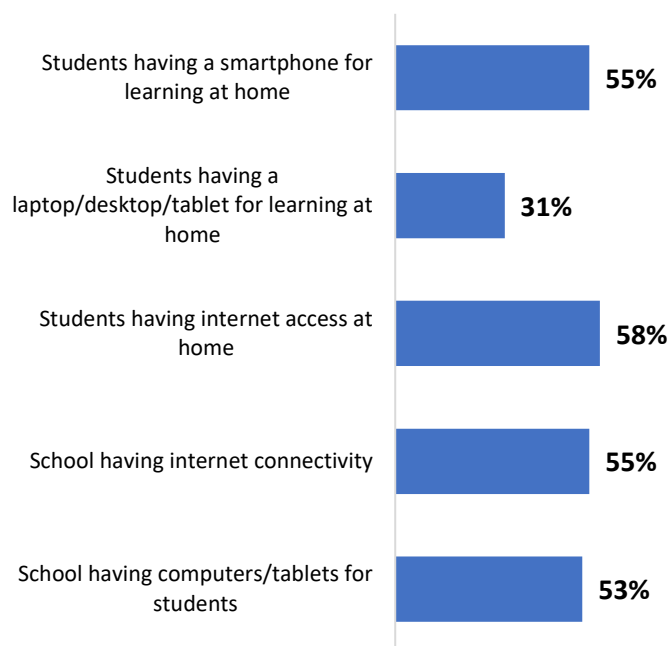
School leaders and/or policymakers must provide special attention to the situations/cases where the proportion reported in the graph is **higher than 50%**.



Some students report experiences that compromise the sense of safety and inclusion at school, such as being teased, excluded from activities, or subjected to threats and physical aggression. A few also mention not feeling safe within the school environment. Additionally, many schools have yet to adopt key policies on bullying, student conduct, sexual harassment, and child protection. Addressing these areas through clear guidelines and supportive practices is essential for fostering a more secure and respectful school climate.

## 10. Use/Availability of Technology for Better Learning

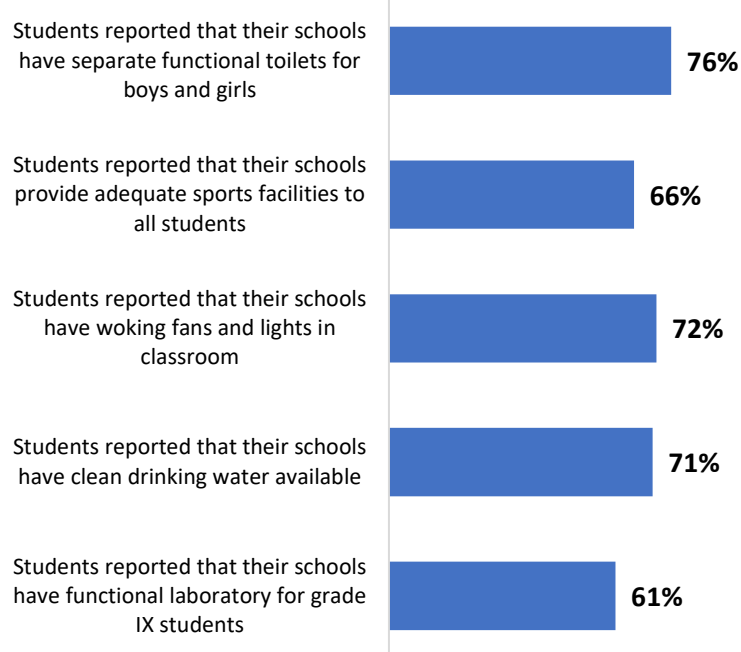
In the last few decades, access to technology has become imperative for effective learning. The graph below illustrates the access to technology and digital devices at school and home. Instances where access is below **50%** need targeted interventions.



Access to digital learning tools at home and school shows mixed levels of availability. While smartphones and internet connectivity are present for many students, access to laptops or tablets at home remains limited. On the school front, more than half report having internet connectivity and computing devices for students. These figures highlight the need to improve device accessibility, particularly for students learning from home, to ensure more equitable technology integration in education.

## 11. Essential School Facilities

School facilities play an important role in the teaching-learning process. The graph below illustrates the availability of essential school facilities like sports facilities, drinking water, functional fans and lights, science lab, and separate functional toilets. Instances where availability is below **50%** need targeted interventions.

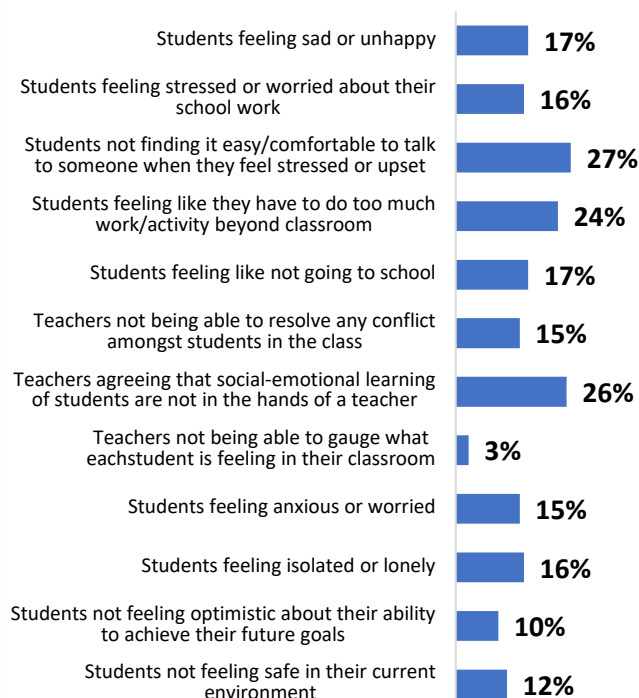


Basic infrastructure such as functional toilets, clean drinking water, adequate lighting and ventilation, and access to sports facilities is available in many schools. However, these are foundational requirements, and their absence in even a fraction of schools calls for urgent attention. Functional laboratories for Grade IX, while present in some schools, also need to be strengthened to ensure universal access.



## 12. Need to Focus on Social Emotional Learning

Social-Emotional Learning (SEL) plays a crucial role in students' well-being and academic success. The survey responses highlight areas where **greater attention is needed** to support students' emotional health and equip teachers with strategies to foster a positive learning environment. Schools where less than **50% of students and teachers** report positive SEL experiences should focus on **strengthening mental health support, conflict resolution training, and emotional awareness initiatives**.



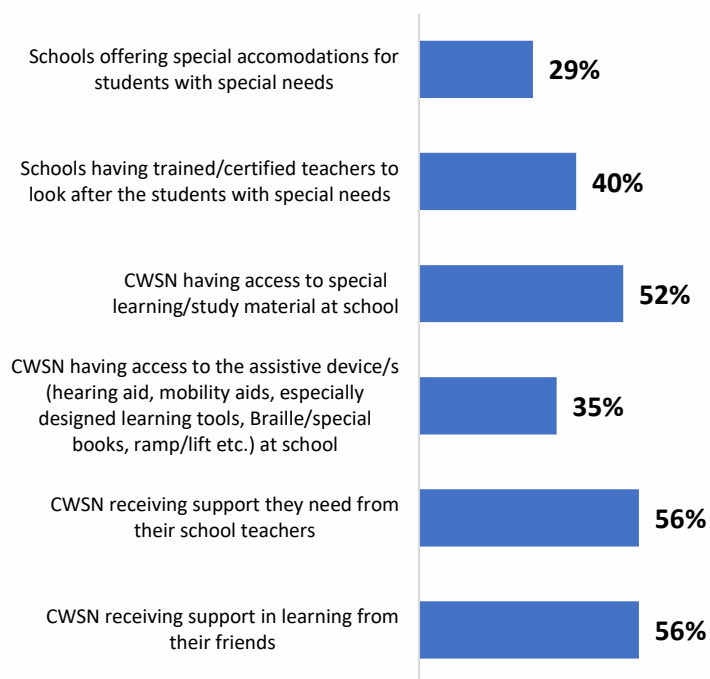
While many students are coping well, there are signs of emotional and psychological strain in a section of the student population. Difficulties in opening up when feeling distressed, a sense of academic burden beyond classroom hours, and feelings of sadness or anxiety highlight the need for focused efforts on students' emotional well-being. Additionally, the limited confidence among some teachers in addressing social-emotional aspects reinforces the importance of equipping school staff with the tools and training needed to foster supportive environments. Strengthening peer support, enhancing teacher capacity, and creating safe spaces for expression can collectively support students more effectively.



### 13. Inclusiveness at the School Level

Inclusive education is essential for fostering a supportive learning environment where Children with Special Needs (CWSN) receive the necessary accommodations, resources, and support. The table below highlights survey responses regarding inclusivity at the school level.

For areas where less than **50%** of schools currently implement inclusive measures, additional efforts are needed to ensure that all students, including those with special needs, have equal access to learning opportunities. Strengthening teacher training, providing assistive resources, and fostering peer support can significantly enhance inclusivity in schools.



Support for children with special needs in schools appears to be developing but remains uneven. While many schools report that students receive help from teachers and peers, fewer indicate the presence of trained staff or the availability of assistive devices. Access to learning materials tailored for diverse needs is reported more often than infrastructural accommodations. This brings attention to the need for strengthening both infrastructural and human resource support for inclusive education.

#### 14. Continuous Professional Development

Professional development is crucial for empowering teachers and school leaders with modern teaching strategies, leadership skills, and student support techniques. The table below highlights the details of teachers and school leaders participating in the various professional development programs. A **50% benchmark** is used to identify the gaps. The table highlights the key areas where improvements can be made to ensure effective training and skill-building opportunities for educators.

Description	%
Teachers Participating in Professional Development Programmes in the Last 12 months	31%
Teachers Participating in the 'Mentoring and/or Peer Observation and Coaching as part of a formal school management in BRCs/CRCs' activity in the last 12 months	36%
Teachers Participating in the ICT related training during the last 12 months	49%
School principals/head teachers undergone training on NEP2020/NCF-FS2022/NCF-SE2023/HPC	54%
School principals/head teachers undergone school leadership training programme organized by NIEPA or state government	43%
Schools organized teacher training session/workshop on Stress Management in the past two academic years	53%
Schools organized teacher training session/workshop on Managing emotions/Emotional Intelligence in the past two academic years	62%
Schools organized teacher training session/workshop on Mental Health awareness in the past two academic years	73%
Schools organized any teacher training session/workshop on Behavioural Management in a classroom in the past two academic years	81%
Schools organized teacher training session/workshop on Managing and understanding Adolescent behaviour in the past two academic years	77%
Schools organized teacher training session/workshop for parents around 'understanding their children better/managing their behaviour'	86%
Schools offering any regular Professional Development sessions for teaching staff in the past two academic years	55%

While a number of schools have conducted sessions on behavioural management, adolescent development, and mental health awareness, there is variation in the extent of engagement across different professional development areas. Participation of teachers in formal professional development and mentoring remains limited, especially in areas like peer observation and school-based support mechanisms. Training on NEP 2020, NCFs, and leadership programmes has reached partially to the school heads, and further outreach may be needed to ensure system-wide alignment. Sessions for parents around understanding and managing student behaviour have been conducted by a significant share of schools, suggesting a growing recognition of their role in supporting student well-being. Continued efforts to embed regular professional development opportunities for educators can further strengthen school capacity and student outcomes.





