STUDENT LEARNING ASSESSMENT

Baseline - 2023-24

ConveGenius™ INSIGHTS

TATA TRUSTS

CONTENTS

Background

The Tata Trusts have been instrumental in seeding and supporting a range of initiatives in education ranging from Early Childhood Education to Higher Education and adult literacy. Other than partner-led work, there is also direct implementation which is being done in a few geographies. These interventions are directed at improving the learning outcomes by striving for context relevant curricular and pedagogic interventions.

The Tata Trusts' focus has been in the thematic areas of livelihoods, education migration, health, and nutrition. The National level school education plan rolled out in 6 states – Uttar Pradesh, Uttarakhand, Rajasthan, Karnataka, Jharkhand and Odisha from 2022-2025. The study includes the common design of working on enhancing teacher capacity, school environment and community involvement for enhancing children's educational outcomes across 6 service providers in 6 states.

The study's objective is to investigate the impact of an intervention on the academic performance of students in grades 3 to 8 across six states in India, namely Jharkhand, Rajasthan, Uttar Pradesh, Uttarakhand, Karnataka, and Odisha. The study aims to compare the learning outcomes of students in intensive and extensive study groups with those in a comparison group within each state.

The study spans over three years, comprising three assessment cycles, namely Baseline (2023-2024), Midline (2024-2025), and Endline (2025-2026). It is designed to address the following evaluation objectives:

1.To track changes in the performance of grades 3-5 students on FLN competencies in math and language subjects related to the FLN program across states from baseline (BL) to endline (EL).

2.To compare the math and language competencies of grade 6-8 students to the grade 5 level competencies across states from baseline (BL) to endline (EL), to observe any changes in their performance.

As a part of the baseline of Learning Outcome Assessments, The Tata Trusts has partnered with ConveGenius Insights (CGI) to provide tool development support, sampling, master training support, and data analysis and report support for baseline assessment. The baseline assessment was conducted by Service Providers across 6 states from August 2023 to December 2023.

This report summarises the findings from the Baseline assessment 2023-24 and provides key insights on the current learning levels of treatment and comparison groups.

About ConveGenius Insights

ConveGenius Insights™ (CGI) is a leading educational and impact assessment organization in India and has assessed over 15 million students from 15 states, spanning diverse backgrounds. CGI believes in the power of data and assessments to unlock the potential of millions of children and make them future-ready. Over the last decade, we have adopted a highly nimble approach to understanding the education sector and developing contextualized, customized solutions that bridge the gaps in the Indian education space. CGI has pioneered models to leverage modern measurement techniques like IRT and Rasch model in education to generate insights that are actionable on the ground and contextualized to the diversity of India.

CGI team has experience and expertise in conducting large-scale assessments, impact evaluations, process evaluations, qualitative and quantitative research studies in multiple languages and in handling the challenges related to sampling; developing tests
across languages while ensuring contextual translation and adaptation of test instruments; executing large scale surveys across several states and countries, sophisticated analysis of data, test equating and scaling using IRT and multivariate analysis.

4 Countries | 20+ Indian States | 75+ Intervention Measured

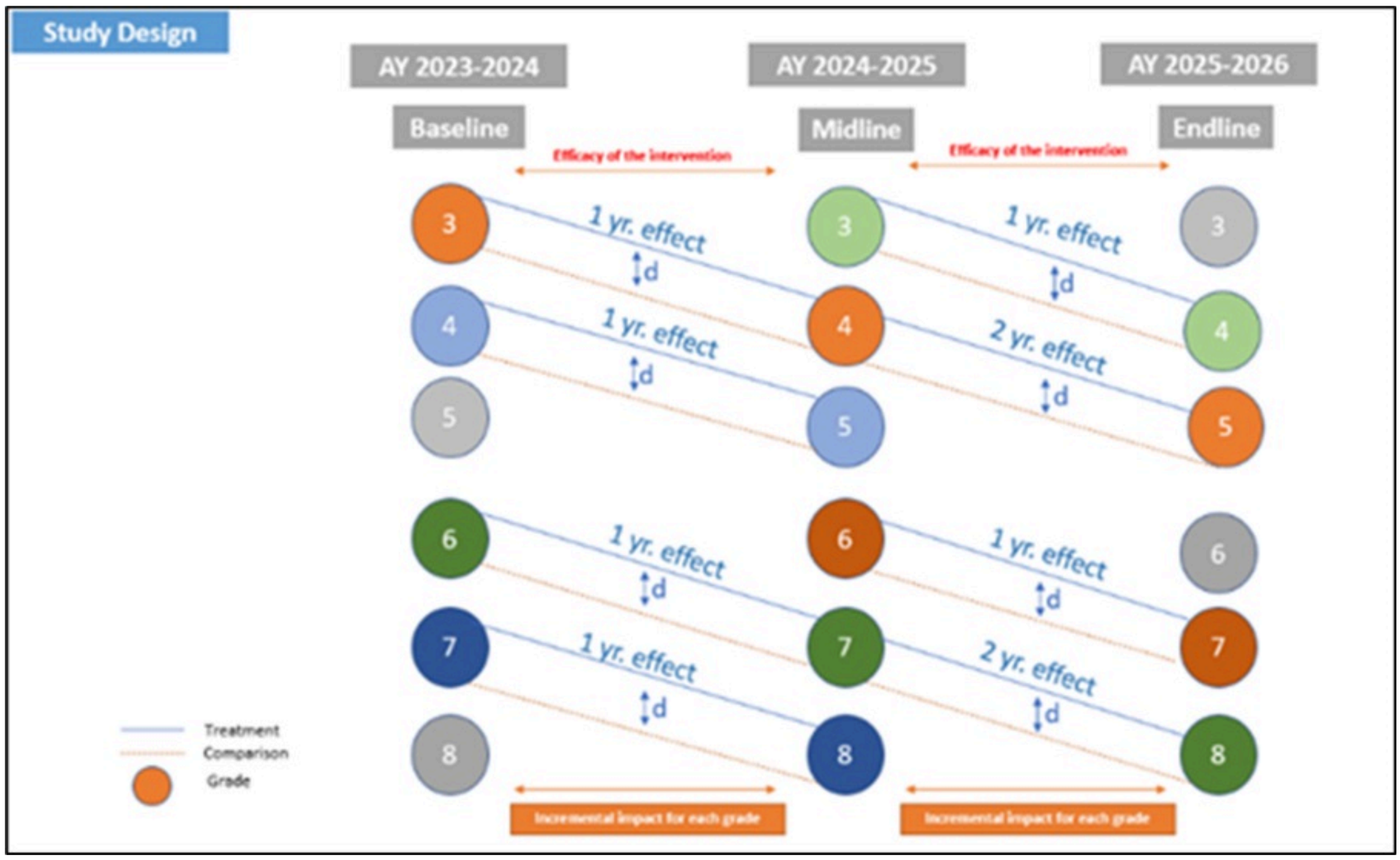
2,00,000+ Schools Reached | 1,30,00,000+ Tests Administered

Evaluation Design

Evaluation design has been proposed in line with the study's overarching objective i.e. to assess the change in learning outcomes of students from grade 3 to 8 across 6 states. The study aims to compare the learning outcomes of students in intensive and extensive study groups with those in a comparison group within each state to attribute the change along with measuring its magnitude.

Therefore, a **difference in difference-based quasi-experimental** cross-sectional study design has been employed for this evaluation.

The study allows to measure the change in Student learning growth at the system and design level, i.e. Learning gains across years, and learning gains across grades



The study has analyzed two distinct groups: a treatment group and a comparison group. The treatment group consists of two subgroups, classified as **intensive** and **extensive** schools, located across six different states. Intensive schools implement direct interventions, while extensive schools implement indirect interventions.

In contrast, the comparison group comprises individuals similar to the treatment group in all pertinent aspects, except they have not received the studied treatment. This group serves as a benchmark to gauge the effectiveness of the treatment. For this study, the comparison group is selected from the population of each state, matching the treatment group in socio-economic status and other relevant factors, except they have not received intensive or extensive interventions.

The study involves a cross-sectional design as its second element, wherein data has been collected from the sample at a single point in time. For each assessment cycle, resampling will be done and assessments will be conducted with incoming cohorts for grades 3-8. 50% sample of the previous cohort will be maintained.

Instruments

The assessment format included self-assessment in language and math (MCQ-based test), an oral reading fluency test, and a writing task. These assessments were conducted in a traditional pen-and-paper mode, ensuring a standardized and reliable method of evaluation across the states.

Self-Assessment Tool (Language and Math): The assessment tools created for this study were designed to meet the diverse needs of students across various grade levels. A common tool was developed for students in grades 3 to 5, focusing on Foundation Literacy and Numeracy (FLN) at the grade 3 level. Similarly, a common tool was developed for students in grades 5 to 8, focusing on FLN and grade 5 level competencies. The medium of instruction for these assessments was Hindi, Kannada, and Odia. The assessment for Grade 3 comprises 30 questions, whereas Grade 5 includes 35 questions. The key competencies in Foundational Literacy and Numeracy are-

Foundational Literacy

- Letter-sound association, Concept related to environment, identification of words based on given pictures
- Identification of features of language
- Language and creative thinking
- Reading comprehension
- Appropriate words/sentence construction
- Reading Fluency

Foundational Numeracy

- Pre-number concepts
- Operations on numbers
- Shapes
- Measurement
- Everyday Math and Data Handling

Oral Fluency Test: An oral fluency test assesses a student's ability to read aloud fluently and accurately, typically focusing on speed, accuracy, and expression. This involves reading aloud a passage of 80-100 words in 1 minute which provides insights into students' reading proficiency and comprehension skills.

Writing Task: A writing task assesses a student's ability to compose coherent and well-structured written text. A picture is given at the end of the Self-Assessment paper which requires students to write a story of 5 to 7 sentences in their words. The students are also required to provide an appropriate topic and an interesting and engaging conclusion to the story. The students' responses are scored using three matrices – Relevance and Creativity, Organisation of Ideas, and Conventions of Language. Further students are categorized into different proficiency bands – Beginner, Basic, Intermediate, and Advanced based on their scores.

Sampling Methodology (1/2)

During the baseline, a scientific sampling approach is adopted to propose a state-level representative statistically significant sample for both intensive and extensive study groups. In states with multiple intervention providers, proportional sampling was carried out at each partner level. The comparison districts or schools were selected using purposive sampling, as explained below. Key metrics for sample calculation are precision: +-5%, ICC: 0.07, and minimum detectable effect – 0.2. The proposed sample size for each state was as follows for all three groups.

State	Total Students (Intensive + Extensive + Comparison)	Total Schools (Intensive + Extensive + Comparison)	Sample Size per grade per school for Intensive, Extensive & Control	Overall sample for state	Intensive		Extensive		
					Total Sample Frame	% of Sample Size	Total Sample Frame	Overall sample for state	% of Sample Size
Uttar Pradesh	5,760	48	640	1,920	12,044	16%	45,756	1,920	4%
Uttarakhand	2,835	63	315	945	4,474	21%	3,968	945	24%
Rajasthan	6,750	45 Primary Schools 45 Secondary schools	375	2,250	18,203	12%	41,231	2,250	5%
Jharkhand	5,940	45 Primary Schools 45 Secondary schools	330	1,980	1,18,292	2%	30,336	1,980	7%
Karnatka	5,670	45 Primary Schools 45 Secondary Schools	315	1,890	50,413	4%	32,779	1,890	6%
Odisha	2,484	69	276	828	2,839	29%	5,266	828	16%

Note: In UP, due to the presence of multiple IPs proportional sampling was used to ensure that In the target sample size, the sample for each intervention provider is proportional to its outreach number in the sampling frame.

Comparison group sampling: The target sample for comparison school was also provided by CGI. Whereas, the comparison group identification is done independently by intervention providers. Sampling was done using the purposive sampling method. Control schools were chosen by SPs themselves from the same/different blocks as per their availability and feasibility.

Criteria for selecting comparison schools:

- **Geographic location:** Comparison schools should be in similar geographic locations to the target schools to ensure comparability of results.
- **Demographics:** Comparison schools should have similar demographic characteristics to the target schools, such as socio-economic status, and language background.
- **Contamination:** Selection of comparison schools that are similar to the target schools in terms of the parallel interventions or external factors. As long as similar other interventions are running in both treatment and comparison groups parallelly, it should not affect the comparability of treatment and comparison groups.

ORF Sampling: The ORF assessments were conducted using a convenient sampling method, where 2 students from each grade in a school were randomly selected and assessed. In total, 6 to 12 students from each school were evaluated for their ORF competencies.

Sampling Methodology (2/2)

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Writing Task Sampling

Approximately 100 students were selected from each state for writing task analysis. These students were selected randomly from 10 schools in most of the states except Rajasthan. 20 schools were randomly selected in Rajasthan due to wider range of grades (3 to 8). From each grade four students were randomly chosen with an additional four students selected as replacements. If a student in the sample has not taken the assessment, they were replaced by another student from the replacement list. Analysis for writing task sample from Hindi speaking states (Jharkhand, Rajasthan, Uttar Pradesh and Uttarakhand) was conducted by CGI, while the analysis of Karnataka and Odisha was carried out by the state teams for Karnataka and Odia were done by the state teams of service providers.

Data Collection

The assessment was carried out by the Service Providers (SPs) themselves through pen & paper mode in their respective states. The tablet-based assessment was also piloted in Uttar Pradesh. CGI provided training to the test administration team from TATA Trusts in the Master Training method (MT) to ensure standardized test administration across the six Service Providers (SPs) in the six states. CGI trained The Tata Trusts team to conduct the assessments in both modes. The Master Training encompasses training on the overall process of conducting various types of assessments, including Oral Reading Fluency (ORF), as well as coding student-level data and providing it to the CGI team in soft copy format.

The field invigilator team from the TATA Trusts SPs was responsible for all in-school operations and data collection activities. This team collected the data and handed over the relevant formats (for both tablets and pen-and-paper assessments) to the CGI team for further analysis, TATA Trusts SPs provided the tablets, printed the required number of papers, and managed on-field operations for conducting the assessments. Additionally, the TATA Trusts SPs team conducted field monitoring and audits to ensure the quality of test administration.

The assessment was conducted from August 2023 to December 2023 across different states. The data was provided to the CGI team from October 2023 to December 2023 for analysis. The CGI team conducted further data cleaning to analyze all the data. The final Sample for Self-Assessment, ORF and Writing Task is as follows:

State	Self-Assessment				ORF	Writing Task
	Intensive	Extensive	Control	Total		
Jharkhand	1851	1688	1238	2926	334	219
Karnataka	318	326	315	959	98	60
Odisha	751	744	822	1495	412	119
Rajasthan	2374	2192	2266	6832	722	232
Uttar Pradesh	1950	1957	1951	5858	479	151
Uttarakhand	888	794	903	2585	385	56
Total	**6281**	**7701**	**7495**	**21477**	**2430**	**837**

Note:
Karnataka – Only grade 3 has been considered for analysis, since only grade 3 has the FLN intervention
Jharkhand - – Only numeracy was assessed in Grades 6 to 8

Data Analysis

Data analysis is a crucial step in the evaluation cycle and is conducted as per the required indicators and metrics within the project scope. CGI has carried out different types of analyses on the collected data to extract meaningful information for action. This broadly covers basic and classical analysis, and item analysis, providing benchmarks for comparing performances. A post-analysis presentation has also been planned by CGI for The Tata Trusts central team and some key field programme personnel to disseminate insights from the study and to understand the reports.

In line with the objective of the study, data analysis has been conducted to answer the below questions at an overall and State-level:

Overall Performance in the Program

- Performance of students across grades & subjects at an overall and state-level
- Percentage of students achieving the benchmark decided for each grade at an overall and state-level

Data Insights & Insights on Competencies

- Distribution of students in different score bands/ different proficiency levels (beginner, basic, intermediate & advanced)
- Performance of students on competencies assessed in baseline across grades & subjects

Oral Reading Fluency Test

- Average correct word read per minute (CWPM)
- Distribution of students' Fluency across different reading proficiency (CWPM) ranges
- Percentage of students achieving the FLS benchmark decided for each language

Writing Task analysis

- Percentage of students in different proficiency levels (beginner, basic, intermediate & advanced)
- Qualitative insights from writing samples

KEY FINDINGS

Key Findings

A. Self Assessment - Language and Math

- The performance ranges from 36% to 54% average percentage correct score across different intervention types. Similar performances, with a +/- 5% difference, have been observed across three groups, which is expected at baseline and is credible from a study design point of view.

- An ANOVA test has also been performed to analyse the differences among different groups means. The findings has been reported in subsequent section of the report.

- Performance increases as expected from Grades 3 to 5 and then from Grades 6 to 8, as similar papers were given for Grades 3-5 and Grades 6-8.

- Uttarakhand and Odisha have performed considerably above the overall average, suggesting a higher need for remedial learning in other states.

- At an overall level, a similar percentage of students (30%) have achieved the benchmark cut-offs in intensive and extensive groups.

- Uttarakhand and Odisha have demonstrated the highest percentage of students meeting the benchmark cut-offs in Grades 3 to 5, while Jharkhand has demonstrated the highest percentage of students meeting the benchmark cut-offs in Grades 6 to 8 in Math.

- A large majority of students (60%-80%) performed at lower levels of proficiency in Grades 3, 4, 6, and 7, while 40% to 55% of students in grades 5 and 8 performed at intermediate and advanced levels.

B. Oral Reading Fluency

- It has been observed that average correct word per minute ranges from 22 to 44 words/minute in Grade 3, 33 to 52 words/minute in Grade 4, 50 to 53 per minute in Grade 5 across states. As grade levels increase, there is a corresponding increase in the average correct words read per minute.

- Additionally, students from Uttarakhand demonstrate a higher words-per-minute reading rate (44 to 63 CWPM) compared to their counterparts from other states (22 to 56 CWPM).

- State level trends show that in Uttarakhand, 50% of students across grades 3, 4, and 5 were able to clear the benchmark set by Foundational Learning Study (FLS) 2022. In contrast, 20% in Odisha, 25% in Jharkhand, 27% in Uttar Pradesh, were able to achieve the same benchmark.

C. Writing Task

- At an overall level, a large percentage of students (63% to 98%) in both Intensive and Extensive groups score in the lowest proficiency band across grades. A decrease in percentage of students at lower proficiency bands have been observed as students move to higher grades. 8% to 13% students in Grades 3 to 5 and 11% to 18% students in Grades 6 to 8 are in Advanced scoring band.

- Qualitative analysis of writing samples provides insights on identified common errors among students, revealing key challenges. These include difficulties in comprehension, understanding language and grammar, and expressing abstract ideas creatively in words

LEARNING LEVEL &

PERFORMANCE

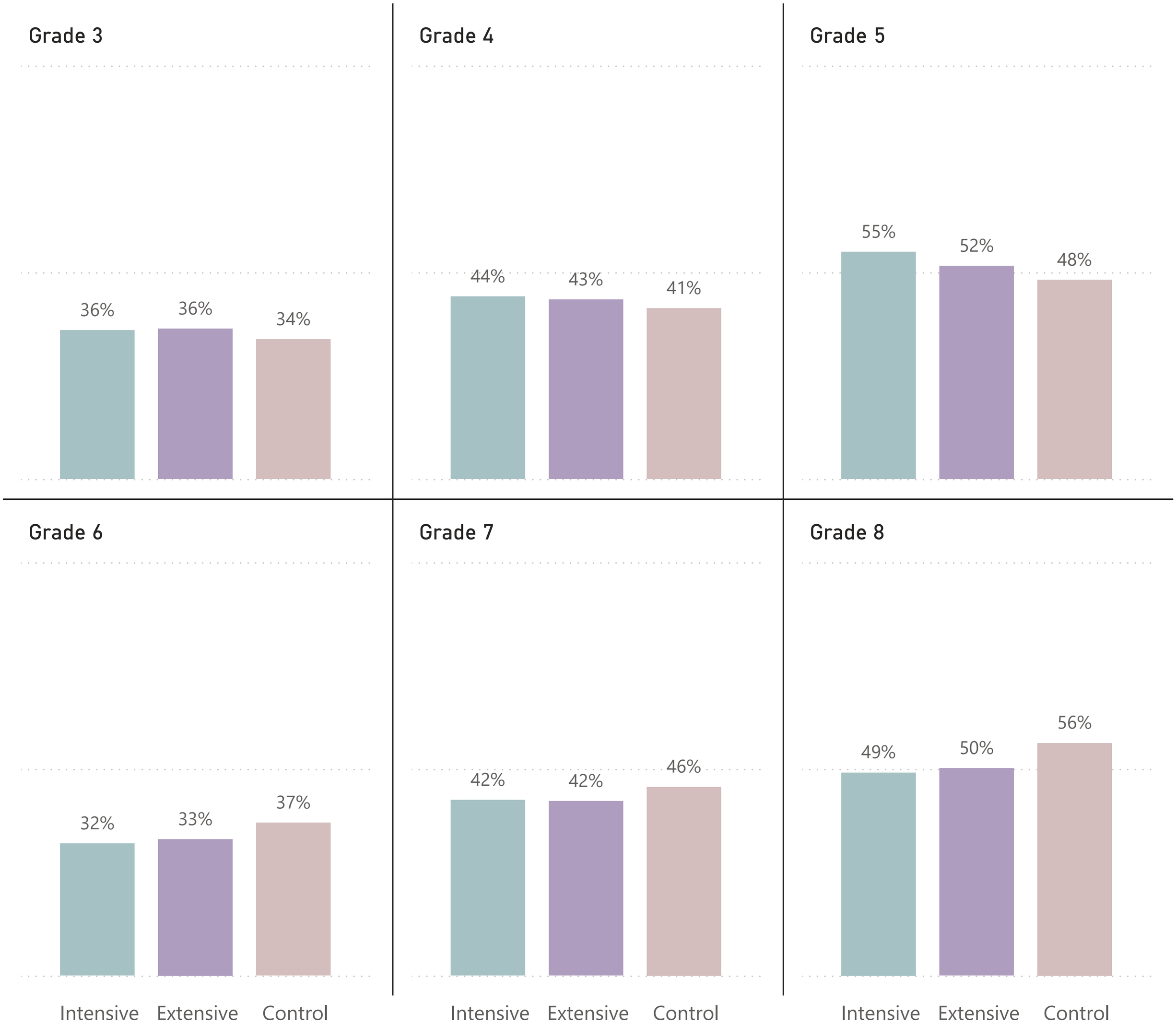
Percentage Correct - Language

Percentage correct is a measure of accuracy that indicates the proportion of questions or items answered correctly out of the total number of questions. The percent correct score is obtained by dividing the student's raw score by the total number of questions possible and multiplying the result by 100.

State: All

District: All

Percentage Correct (By Grade and Group)



Percentage Correct - Math

Percentage correct is a measure of accuracy that indicates the proportion of questions or items answered correctly out of the total number of questions. The percent correct score is obtained by dividing the student's raw score by the total number of questions possible and multiplying the result by 100.

State: All

District: All

Percentage Correct (By Grade and Group)

Significance Test (ANOVA) - Results

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The analysis of variance (ANOVA) test is a statistical method used to analyze the differences among group means in a sample. It tests the null hypothesis that there are no significant differences between the means of two or more groups. The significance level for this test was set at 0.05, corresponding to a 95% confidence level.

State: All

Grade: All

Subject: All

State	Subject	Count	Mean	Sd	Grade	Group	F value	P value	Significant different or not
Jharkhand	Language	213	0.31	0.20	3	Control	2.10	0.10	Not significantly different
Jharkhand	Language	206	0.30	0.20	3	Extensive	2.10	0.10	Not significantly different
Jharkhand	Language	301	0.27	0.20	3	Intensive	2.10	0.10	Not significantly different
Jharkhand	Math	213	0.32	0.20	3	Control	1.80	0.20	Not significantly different
Jharkhand	Math	206	0.29	0.10	3	Extensive	1.80	0.20	Not significantly different
Jharkhand	Math	301	0.29	0.20	3	Intensive	1.80	0.20	Not significantly different
Karnataka	Language	315	0.36	0.20	3	Control	16.60	0.00	Significantly different
Karnataka	Language	326	0.38	0.20	3	Extensive	16.60	0.00	Significantly different
Karnataka	Language	318	0.46	0.20	3	Intensive	16.60	0.00	Significantly different
Karnataka	Math	315	0.37	0.20	3	Control	10.60	0.00	Significantly different
Karnataka	Math	326	0.31	0.20	3	Extensive	10.60	0.00	Significantly different
Karnataka	Math	318	0.36	0.20	3	Intensive	10.60	0.00	Significantly different
Odisha	Language	284	0.45	0.30	3	Control	4.50	0.00	Significantly different
Odisha	Language	247	0.51	0.30	3	Extensive	4.50	0.00	Significantly different
Odisha	Language	232	0.45	0.20	3	Intensive	4.50	0.00	Significantly different
Odisha	Math	284	0.45	0.20	3	Control	3.10	0.00	Significantly different
Odisha	Math	248	0.48	0.20	3	Extensive	3.10	0.00	Significantly different
Odisha	Math	234	0.44	0.20	3	Intensive	3.10	0.00	Significantly different
Rajasthan	Language	343	0.31	0.30	3	Control	6.20	0.00	Significantly different
Rajasthan	Language	364	0.38	0.30	3	Extensive	6.20	0.00	Significantly different
Rajasthan	Language	375	0.35	0.20	3	Intensive	6.20	0.00	Significantly different
Rajasthan	Math	343	0.37	0.20	3	Control	0.70	0.50	Not significantly different
Rajasthan	Math	364	0.38	0.20	3	Extensive	0.70	0.50	Not significantly different
Rajasthan	Math	375	0.37	0.20	3	Intensive	0.70	0.50	Not significantly different
Uttar Pradesh	Language	686	0.24	0.20	3	Control	13.40	0.00	Significantly different
Uttar Pradesh	Language	692	0.29	0.20	3	Extensive	13.40	0.00	Significantly different
Uttar Pradesh	Language	669	0.29	0.20	3	Intensive	13.40	0.00	Significantly different
Uttar Pradesh	Math	686	0.24	0.20	3	Control	9.00	0.00	Significantly different
Uttar Pradesh	Math	692	0.28	0.20	3	Extensive	9.00	0.00	Significantly different
Uttar Pradesh	Math	669	0.28	0.20	3	Intensive	9.00	0.00	Significantly different
Uttarakhand	Language	276	0.48	0.20	3	Control	3.20	0.00	Significantly different
Uttarakhand	Language	265	0.43	0.30	3	Extensive	3.20	0.00	Significantly different
Uttarakhand	Language	302	0.43	0.30	3	Intensive	3.20	0.00	Significantly different
Uttarakhand	Math	274	0.47	0.20	3	Control	13.60	0.00	Significantly different
Uttarakhand	Math	266	0.42	0.20	3	Extensive	13.60	0.00	Significantly different

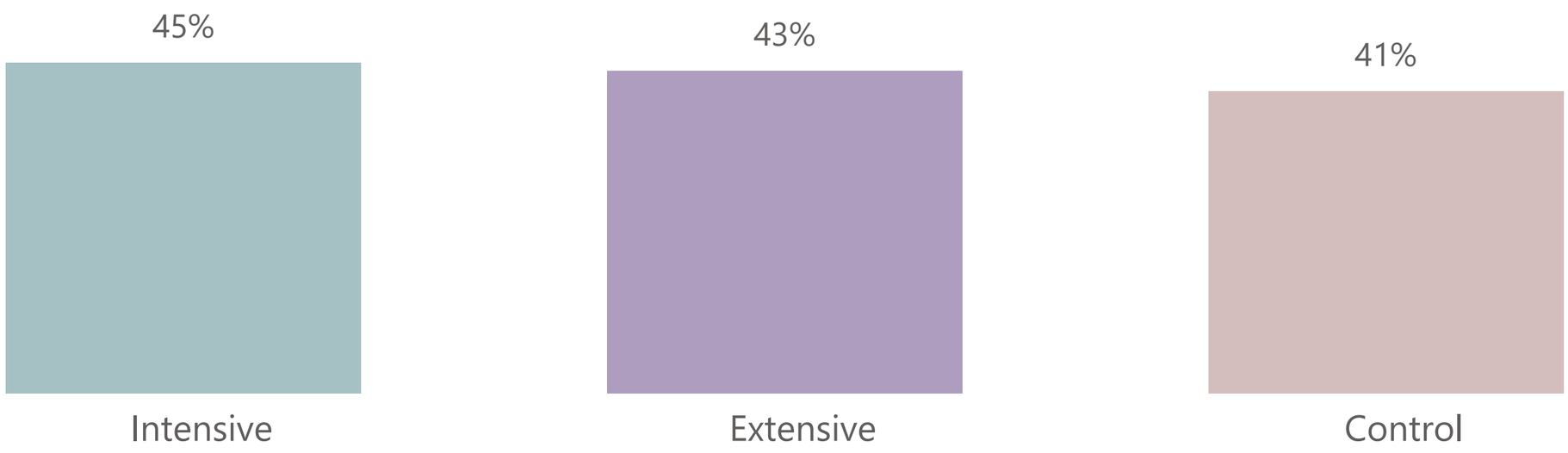
Percentage Correct - Language (Combined)

Percentage correct is a measure of accuracy that indicates the proportion of questions or items answered correctly out of the total number of questions. The percent correct score is obtained by dividing the student's raw score by the total number of questions possible and multiplying the result by 100. The graphs below present the combined percentage correct for Grades 3 to 5 and Grades 6 to 8.

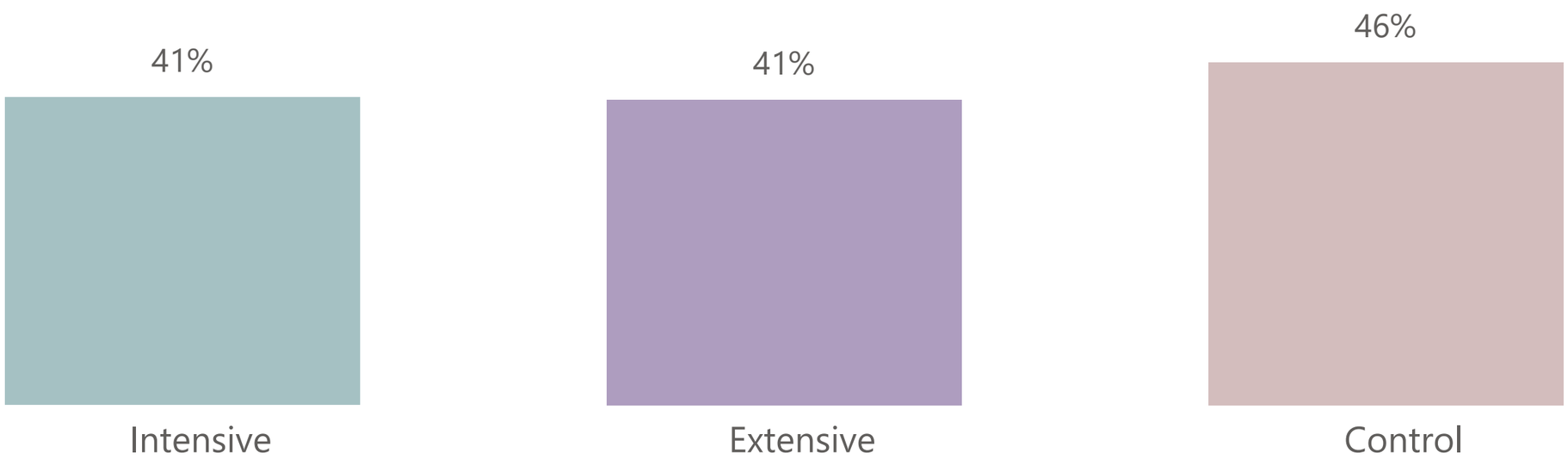
State: All

District: All

Grade 3 to 5 Average Score (Language)



Grade 6 to 8 Average Score (Language)



Percentage Correct - Math (Combined)

Percentage correct is a measure of accuracy that indicates the proportion of questions or items answered correctly out of the total number of questions. The percent correct score is obtained by dividing the student's raw score by the total number of questions possible and multiplying the result by 100. The graphs below present the combined percentage correct for Grades 3 to 5 and Grades 6 to 8.

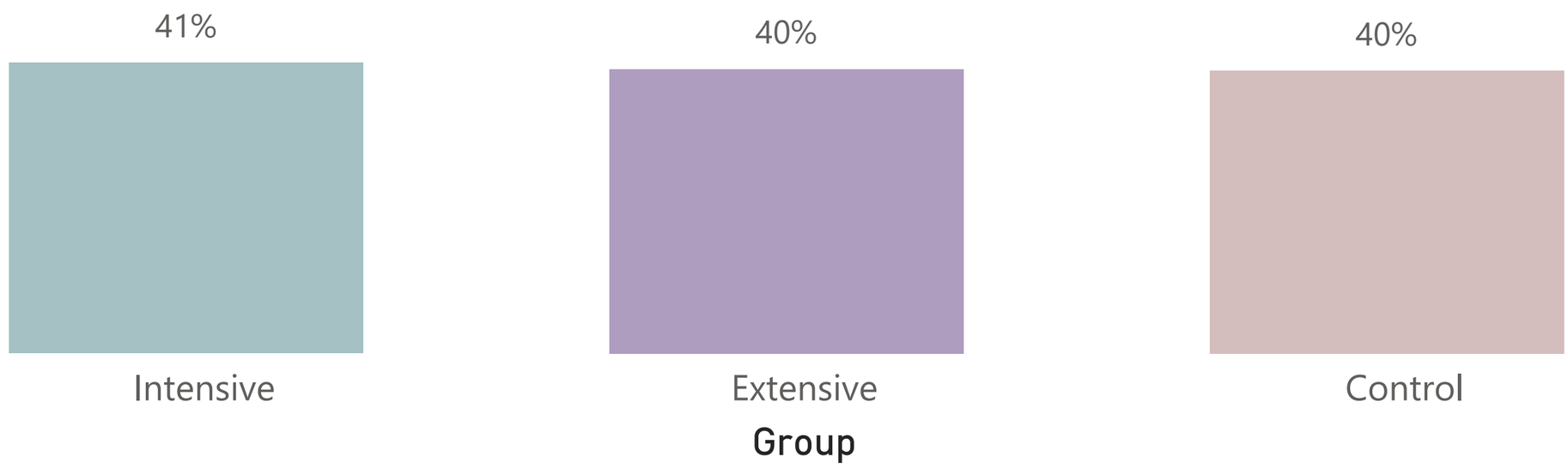
State

All

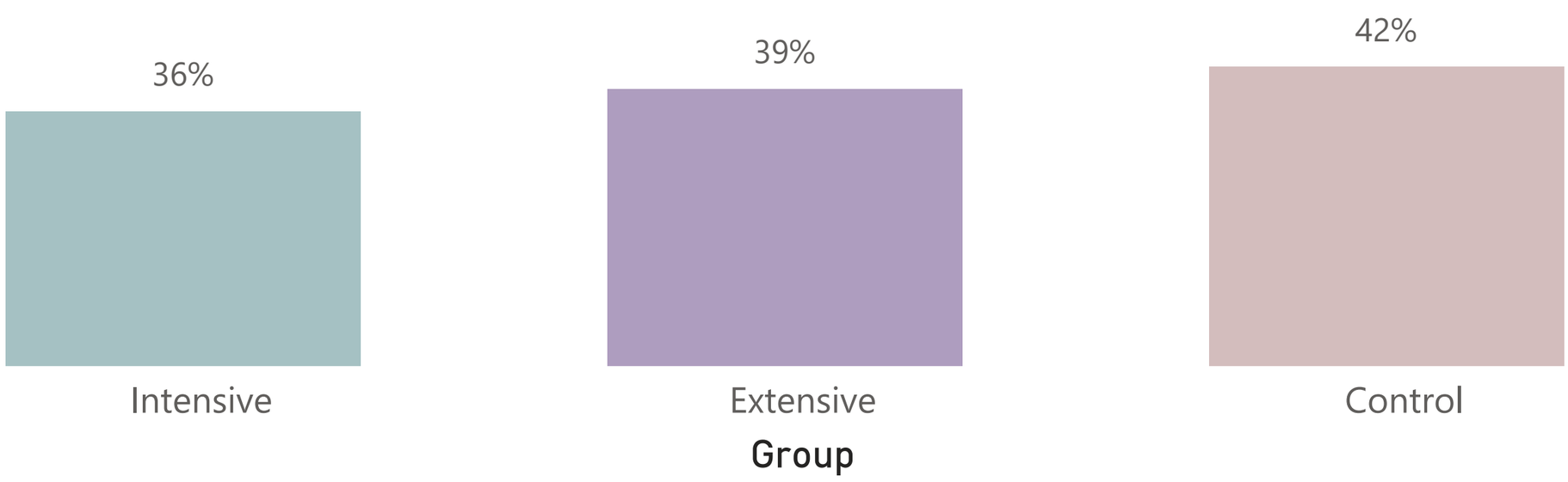
District

All

Grade 3 to 5 Average Score (Math)



Grade 6 to 8 Average Score (Math)



Benchmark Cut-off - Language

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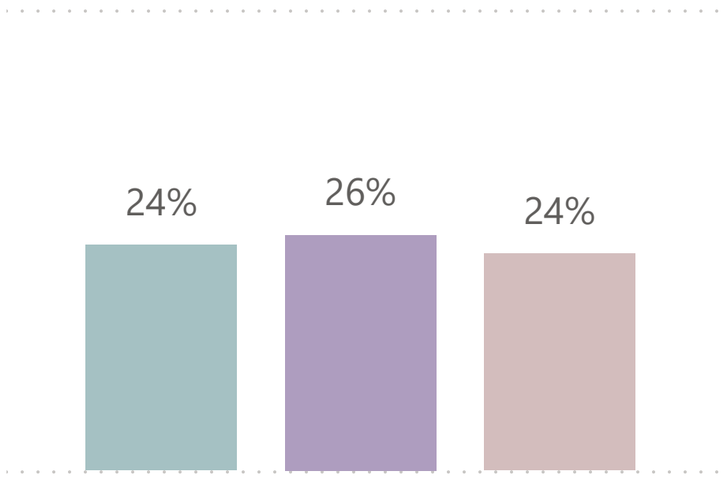
Benchmark cut-offs are determined by considering the baseline overall performance of Tata Trusts and the historical data from various projects conducted by CGI. The cut-off percentages for each grade are as follows:
Grade 3 - 50%, Grade 4 - 55%, Grade 5 - 60%, Grade 6 - 50%, Grade 7 - 55%, and Grade 8 - 60%

State: All

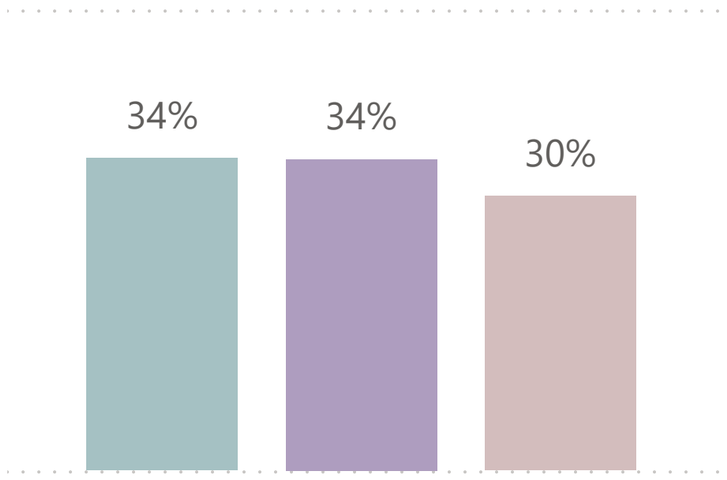
District: All

KPI Analysis - Language

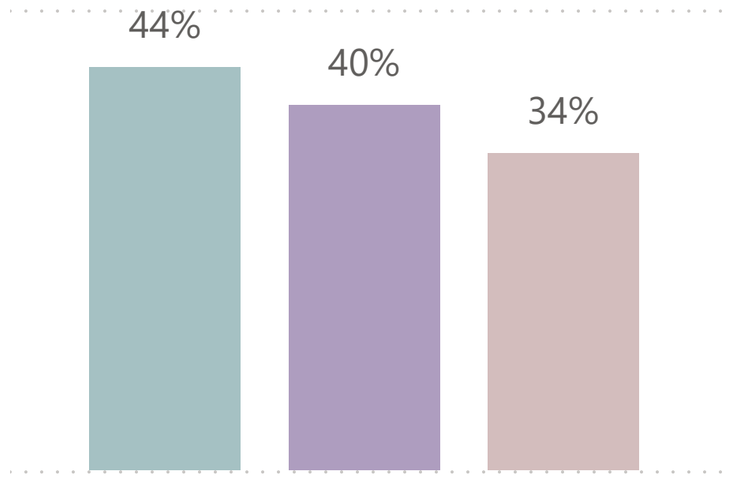
Grade 3



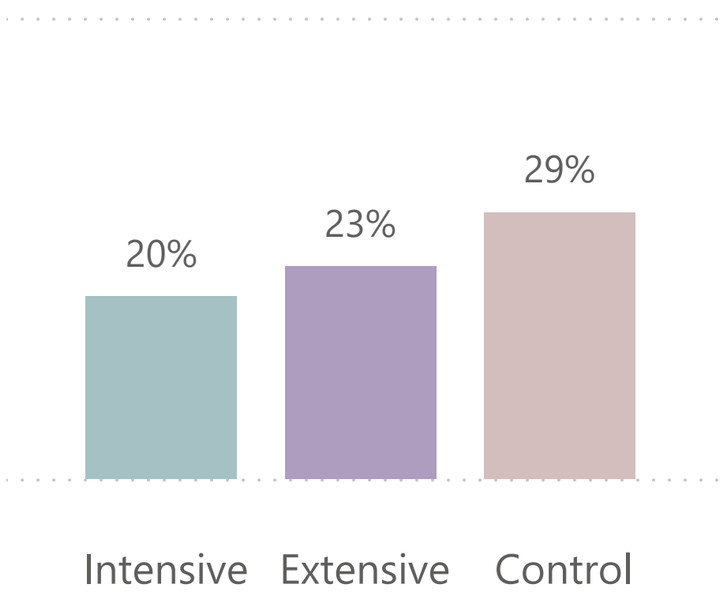
Grade 4



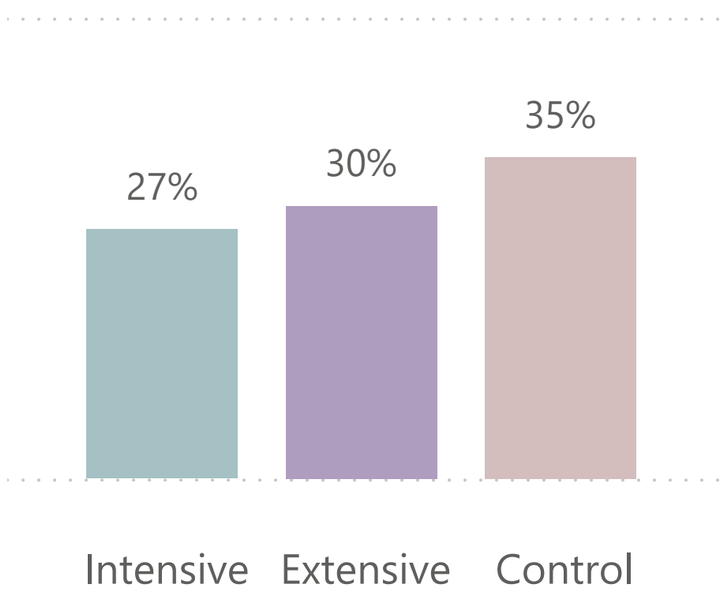
Grade 5



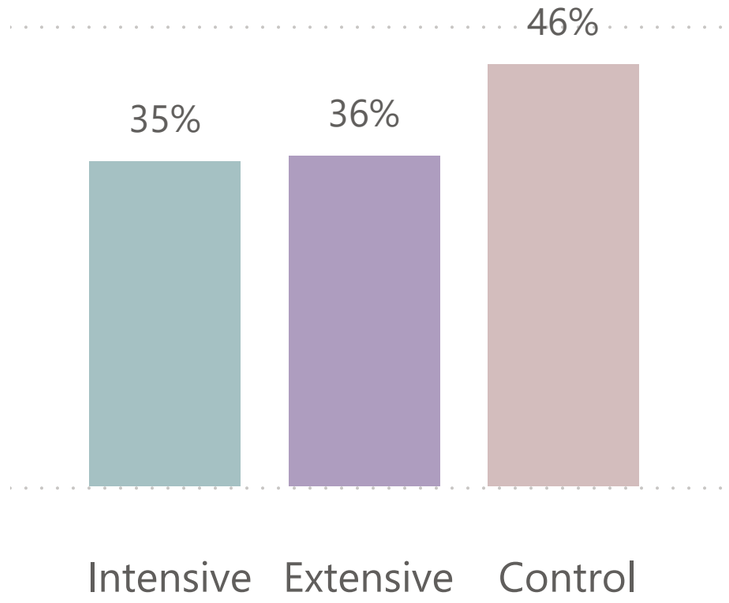
Grade 6



Grade 7



Grade 8



Benchmark Cut-off - Math

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Grade 3 - 50%, Grade 4 - 55%, Grade 5 - 60%, Grade 6 - 50%, Grade 7 - 55%, and Grade 8 - 60%

State: All

District: All

KPI Analysis - Math

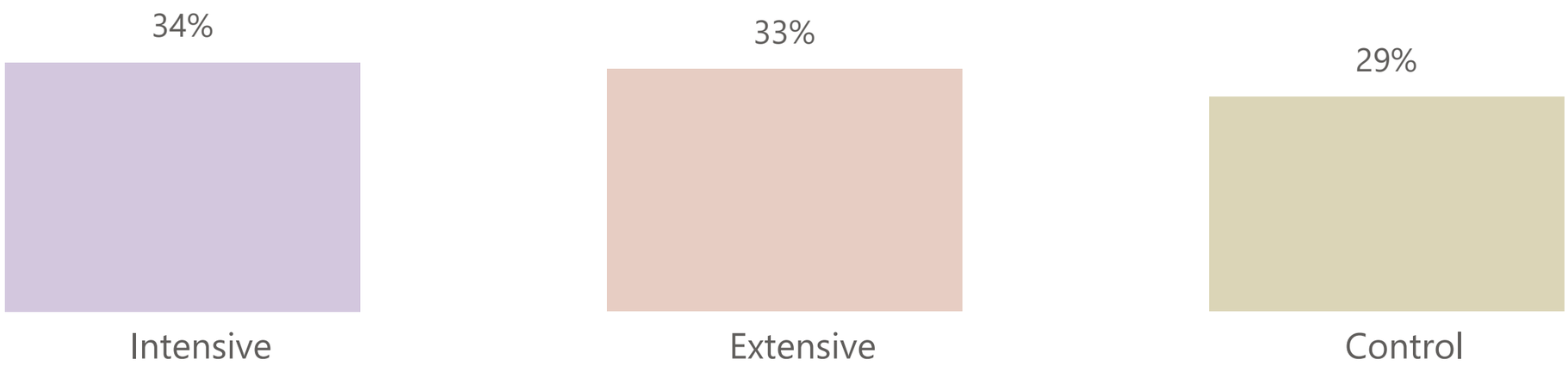
Benchmark Cut-off - Language (Combined)

Benchmark cut-offs are determined by considering the baseline overall performance of Tata Trusts and the historical data from various projects conducted by CGI. The cut-off percentages for each grade are as follows:
Grade 3 - 50%, Grade 4 - 55%, Grade 5 - 60%, Grade 6 - 50%, Grade 7 - 55%, and Grade 8 - 60%

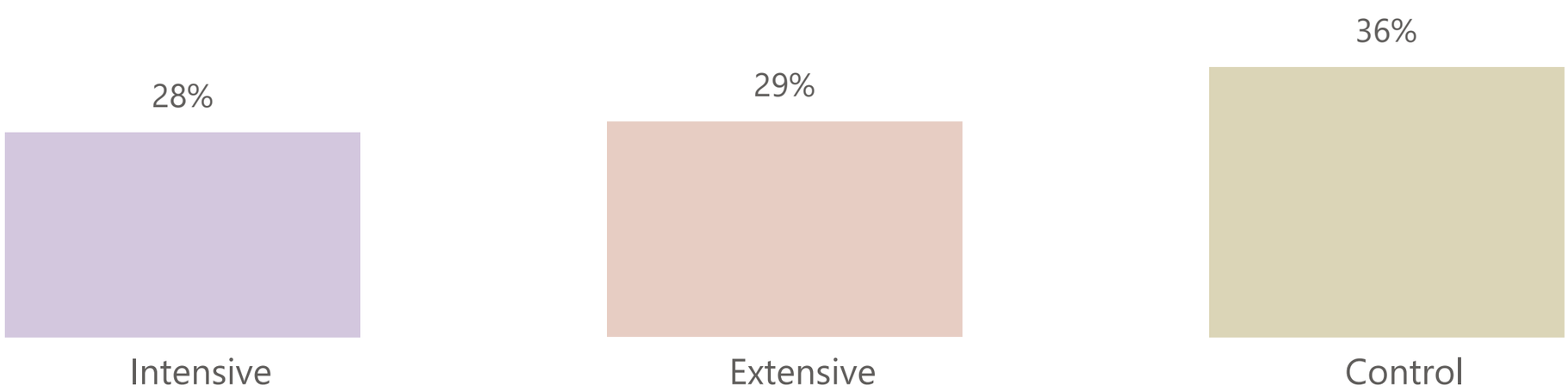
State: All

District: All

Grade 3 to 5 Average Score (Language)



Grade 6 to 8 Average Score (Language)



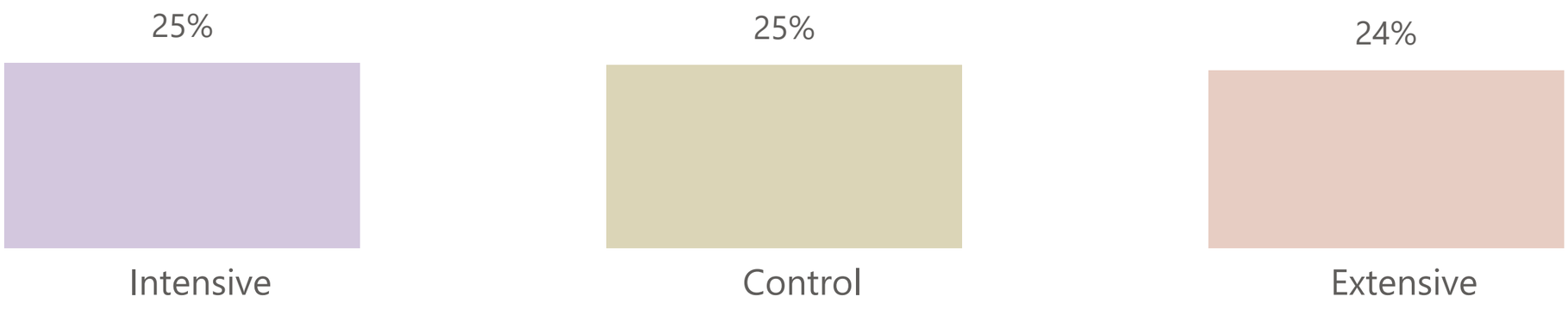
Benchmark Cut-off - Math (Combined)

Benchmark cut-offs are determined by considering the baseline overall performance of Tata Trusts and the historical data from various projects conducted by CGI. The cut-off percentages for each grade are as follows:
Grade 3 - 50%, Grade 4 - 55%, Grade 5 - 60%, Grade 6 - 50%, Grade 7 - 55%, and Grade 8 - 60%

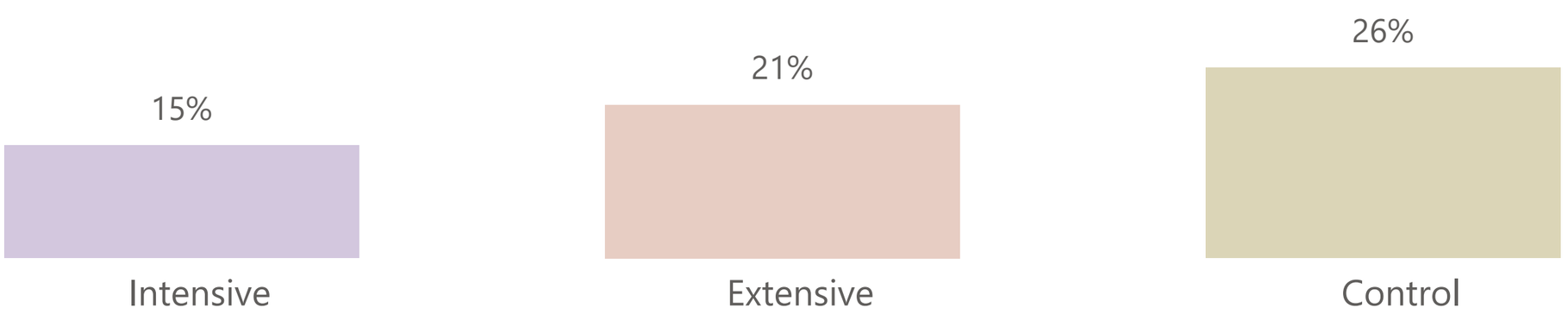
State: All

District: All

Grade 3 to 5 Average Score (Math)



Grade 6 to 8 Average Score (Math)



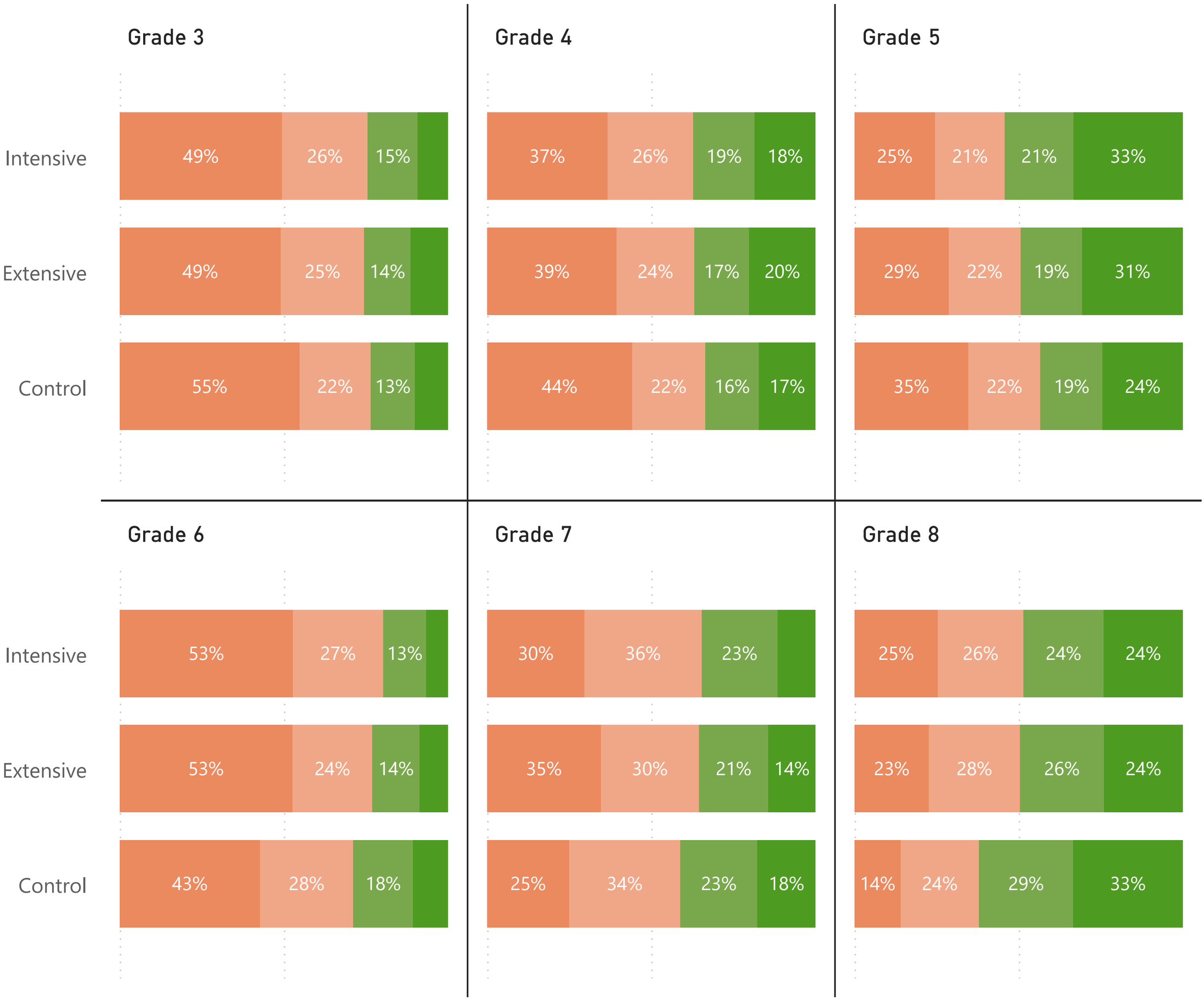
Performance Distribution of Students - Language

The graphs below provide the percentage of students scoring in different score bands. It allows us to classify students' learning into multiple proficiency bands ranging from Beginner to Advanced. The band and their associated scores are - 0-30% - Beginner, 30-50% Basic, 50-70% - Intermediate, 70-100% - Advanced.

State: All

District: All

Percentage of Student Scoring in Different Ranges



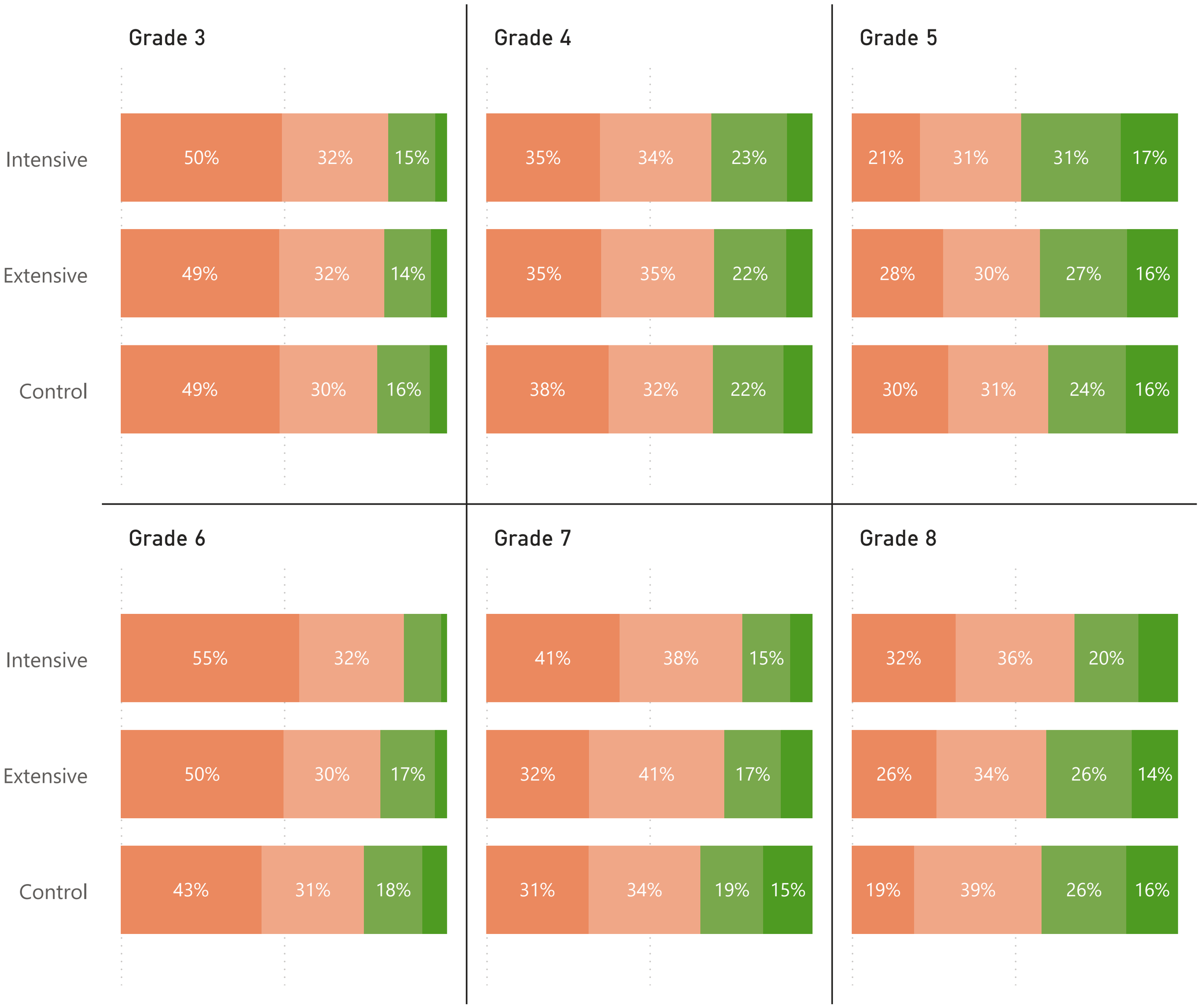
Performance Distribution of Students - Math

The graphs below provide the percentage of students scoring in different score bands. It allows us to classify students' learning into multiple proficiency bands ranging from Beginner to Advanced. The band and their associated scores are - 0-30% - Beginner, 30-50% Basic, 50-70% - Intermediate, 70-100% - Advanced.

State: All

District: All

Percentage of Student Scoring in Different Ranges



Question Level Performance

ConveGenius™ INSIGHTS

The percentage shows the proportion of students in the treatment and Comparison groups who have answered the questions correctly for the competencies given below -

State: All

District: All

Grade	Control	Extensive	Intensive
Grade 3			
Language			
Literal Reading			
Retrieves directly stated information from middle of 8-10 sentence narrative text	24%	27%	28%
Retrieves directly stated information from an 8-10 sentence narrative text	21%	27%	24%
Retrieve directly stated information from a short text (1-2 lines)	23%	28%	27%
Match the correct option with given short riddle	26%	32%	30%
Interprets the nature of a situation presented in a narrative text	19%	23%	20%
Infers the cause-effect of a situation presented in a short narrative text	21%	26%	24%
Identify the option with word pair describing the action in a picture	41%	45%	47%
Fill in the blank with the correct present tense verb	30%	31%	34%
Choose the correct sentence which describe the given picture	37%	44%	46%
Critical Reading	**25%**	**28%**	**26%**
Contextual Use of Language			
Recognises parts of body based on a given picture	52%	59%	61%
Recognises commonly used words based on a given picture	46%	52%	53%
Rearrange the words to form a meaningful structure sentence	24%	27%	26%
Identify the suffix to be added to get the given word	26%	29%	27%
Identify the odd word by differentiating between family relations and others	24%	30%	27%
Identify the first letter of given picture	61%	65%	65%
Identify the correct series by rearranging the letters	24%	27%	29%
Identify a feature of a profession based on given situation	42%	48%	49%
Identifies the action phrase (verb) to describe a given picture	46%	54%	56%
Fill the blank with the correct Word (colour)	37%	42%	44%
Fill in the blank with an appropriate word to suit the context	33%	35%	36%
Complete the given word by choosing ending letter	29%	33%	33%
Choose the correct Relationship between the given words	41%	45%	45%
Choose the correct option for the given underline word	27%	29%	28%
Choose the correct opposite word for the given word	28%	33%	28%
Choose the correct name for the given picture	51%	59%	63%
Math	**33%**	**34%**	**34%**
Grade 4			
Language	**39%**	**43%**	**44%**
Math			
Numbers and Operations	**38%**	**40%**	**41%**

Oral Reading Fluency (ORF)

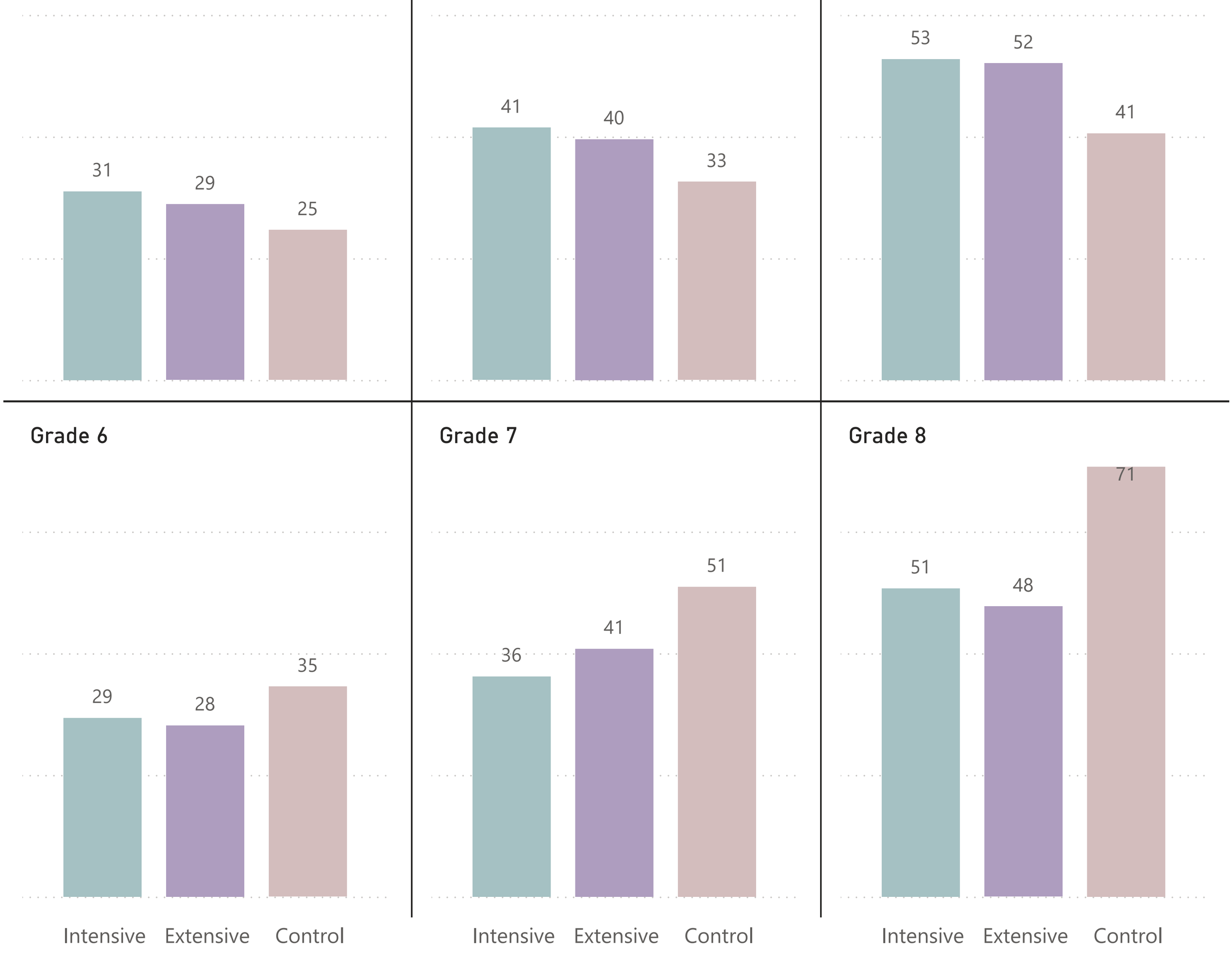
ConveGenius™ INSIGHTS

Fluency in reading refers to the ability to read quickly, accurately and with expression. it involves being able to recognize and decode words accurately and automatically as well as comprehending the meaning of the words as they are read. CGI has measured students levels on a grade 3 appropriate reading words in one minute and the results are presented below. The analysis presents the average correct words read per minute (CWPM) for different grades.

State: All

District: All

Gradewise Total Correct words per minute



Distribution of Students Oral Reading Fluency

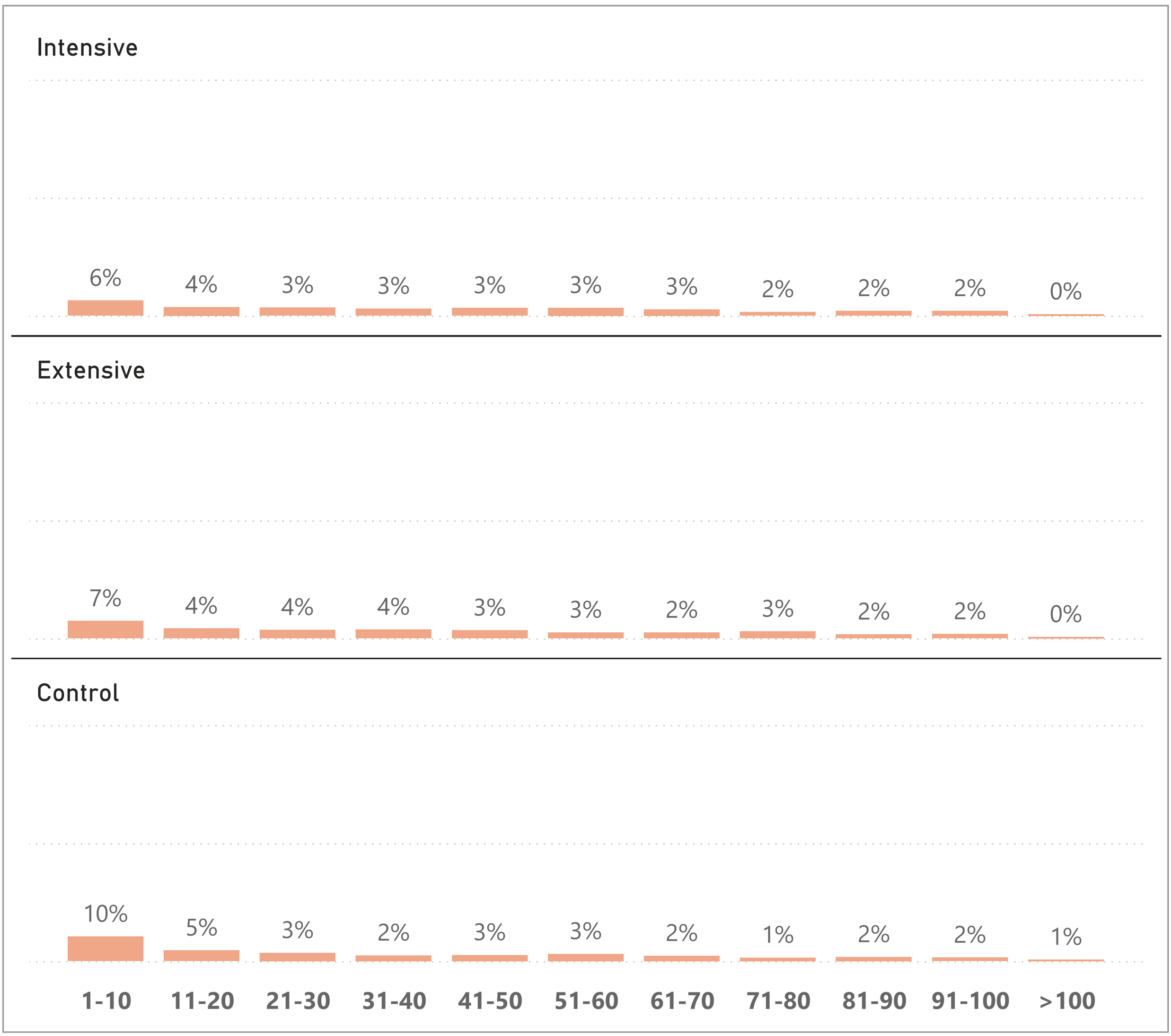
ConveGenius™ INSIGHTS

Fluency in reading refers to the ability to read quickly, accurately and with expression. it involves being able to recognisse and decode words accurately and automatically as well as comprehending the meaning of the words as they are read. The graphs below provide the percentage of students reading words correctly per minute in different fluency bands.

State: All

District: All

Grade: All



Oral Reading Fluency Benchmark - (Hindi)

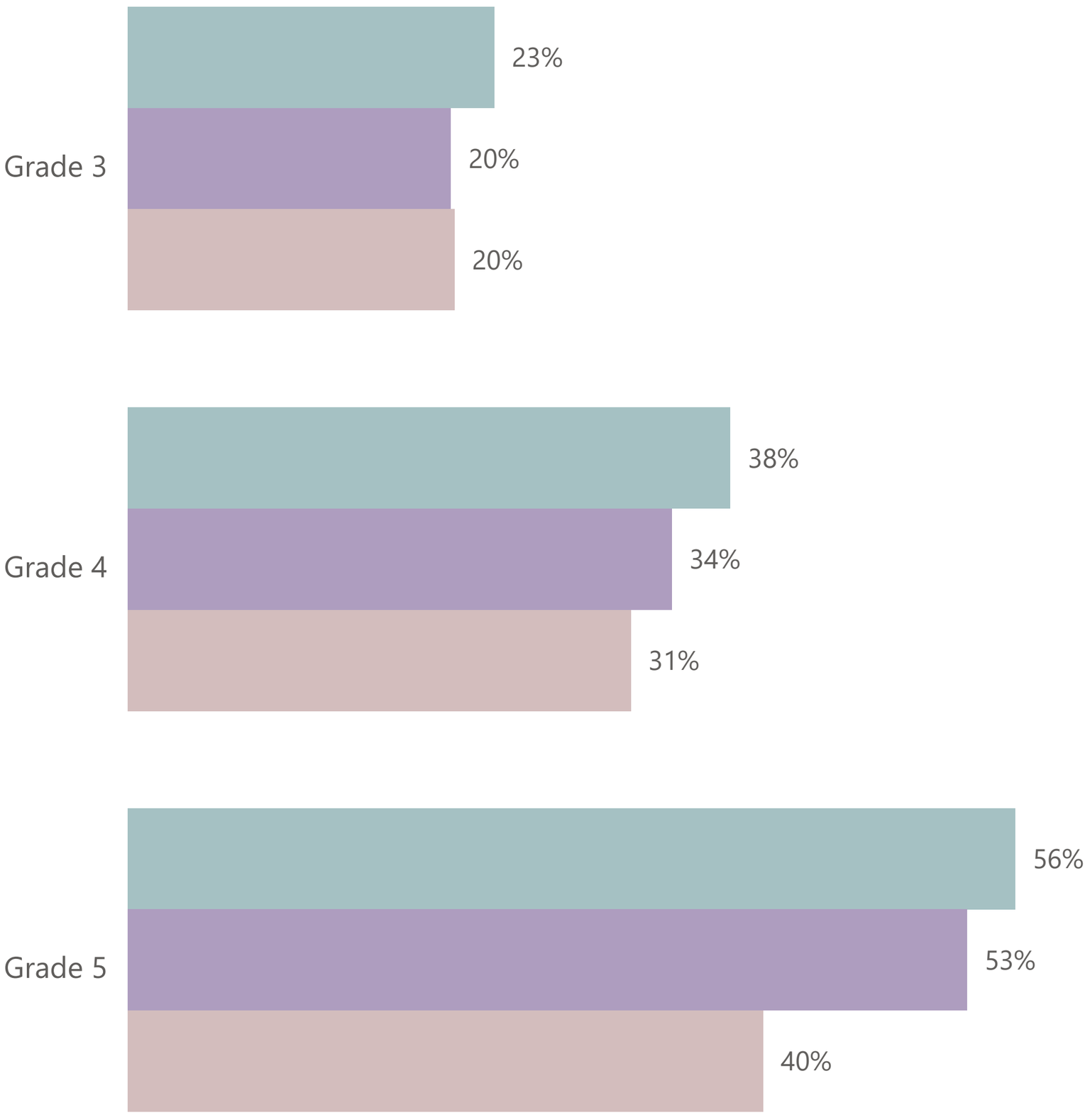
This section provides a comparative analysis of the performance of students from Tata Trusts with the Fluency Learning Study (FLS) benchmarks. The following graphs provide a visual representation depicting the percentage of students who have met the benchmark specific to each language. The benchmarks are - Hindi - 55 words/minute, Kannada - 49 words/minute and Odia - 58 words/minute.

State: All

District: All

ORF Benchmark Comparison (Hindi)

Group Intensive Extensive Control



Oral Reading Fluency Benchmark - (Kannad)

This section provides a comparative analysis of the performance of students from Tata Trusts with the Fluency Learning Study (FLS) benchmarks. The following graphs provide a visual representation depicting the percentage of students who have met the benchmark specific to each language. The benchmarks are - Hindi - 55 words/minute, Kannada - 49 words/minute and Odia - 58 words/minute.

State

All

District

All

ORF Benchmark Comparison (Kannad)

Group Intensive Extensive Control

Oral Reading Fluency Benchmark - (Odia)

This section provides a comparative analysis of the performance of students from Tata Trusts with the Fluency Learning Study (FLS) benchmarks. The following graphs provide a visual representation depicting the percentage of students who have met the benchmark specific to each language. The benchmarks are - Hindi - 55 words/minute, Kannada - 49 words/minute and Odia - 58 words/minute.

State

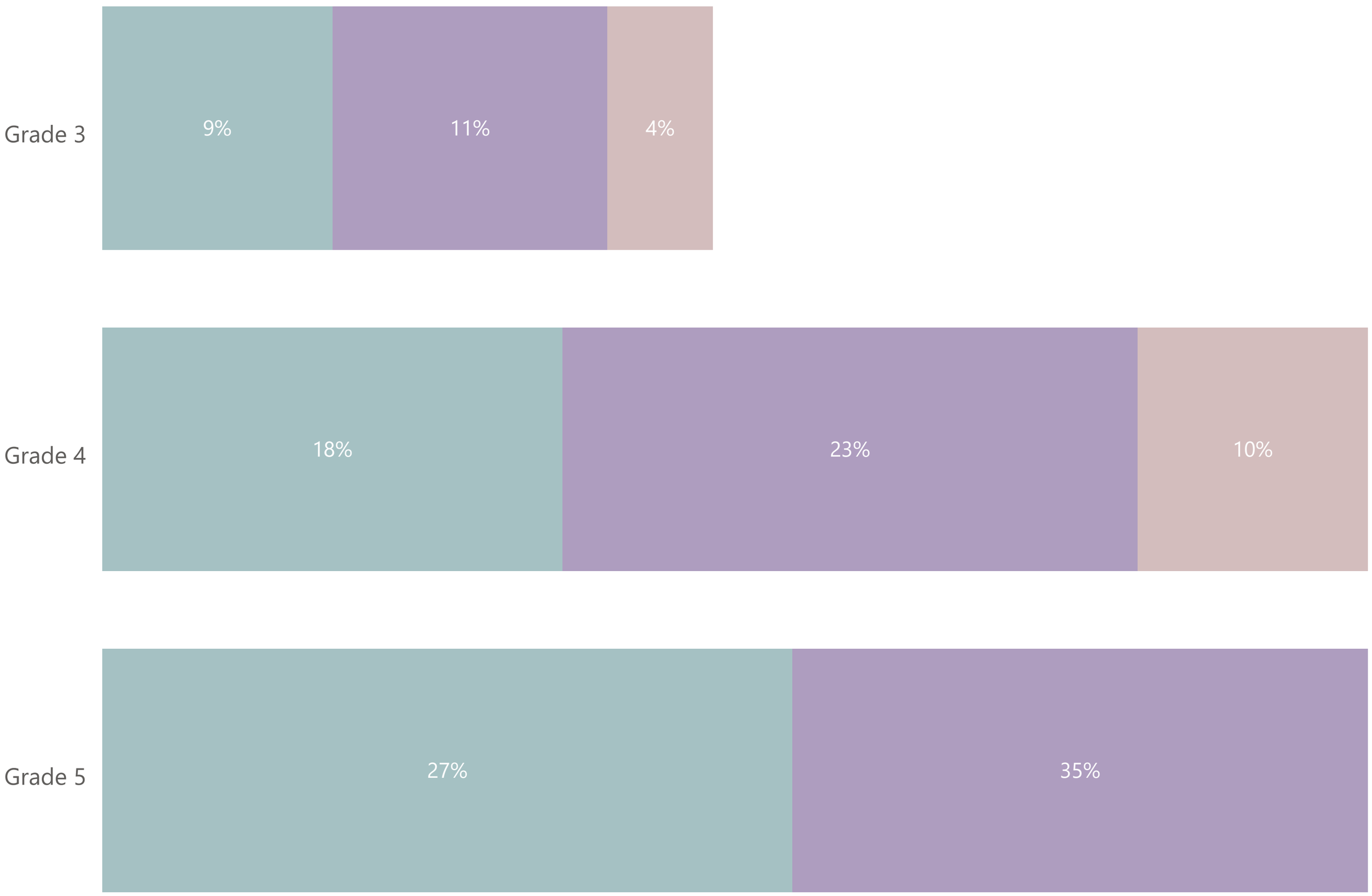
All

District

All

ORF Benchmark Comparison (Odia)

group Intensive Extensive Control



Writing Task - Question and Rubric

1. नीचे दिए गए चित्र को ध्यान से देखों और कम से कम 5 वाक्यों में अपनी कहानी लिखो।

1. कहानी को नाम दो।
2. कहानी में क्या हो रहा है अपने शब्दों में लिखो।
3. कहानी को एक मज़ेदार अंत दो।

Criterion	Scoring pointers
Relevance & Creativity	The text has a title that is appropriate to the given prompt/topic
	The text contains ideas/thoughts that are relevant to the prompts/topic.
	The text has a conclusion that demonstrates a good understanding of the prompt/topic.
	The text is engaging and demonstrates creativity.
Organization of Ideas	The text has a clear beginning, middle, and ending.
	The text contains ideas that are well-organized and follow a proper logical order.
	The text contains required number of sentences based on the given prompt/topic. (3,4,5 Grades - 5 sentences and 6,7,8 Grades - 6-10 sentences)
Conventions of Language	The text contains correct spelling
	The text contains a variety of sentences and is grammatically correct with the use of punctuations
	The text contains a variety of vocabulary relevant to the prompt/topic.

Writing Task - Proficiency Level Description

Proficiency Levels	Score Range	Description
Beginner	1 to 3	Demonstrates very basic and shows limited understanding of grammar and vocabulary. The writing contains numerous errors and lack coherence or structure.
Basic	4 to 6	Demonstrates a basic understanding of grammar and vocabulary, but still contains errors and may lack sophistication or complexity. The writing may be somewhat organized, but not consistently so.
Intermediate	7 to 8	Demonstrates a good understanding of grammar and vocabulary, with only occasional errors. The writing is well-organized and show some complexity and sophistication.
Advanced	9 to 10	Demonstrates a very good understanding of grammar and vocabulary, with few to no errors. The writing is highly organized, sophisticated, and nuanced

Writing Task - Proficiency Distribution of Students

ConveGenius™ INSIGHTS

Writing task data analysis has been benchmarked using the scores for each proficiency levels. The percentage of students in each proficiency band has been shown below. The proficiency level ranges from beginner to advanced level.

State: All

District: All

Grade Wise Proficiency level

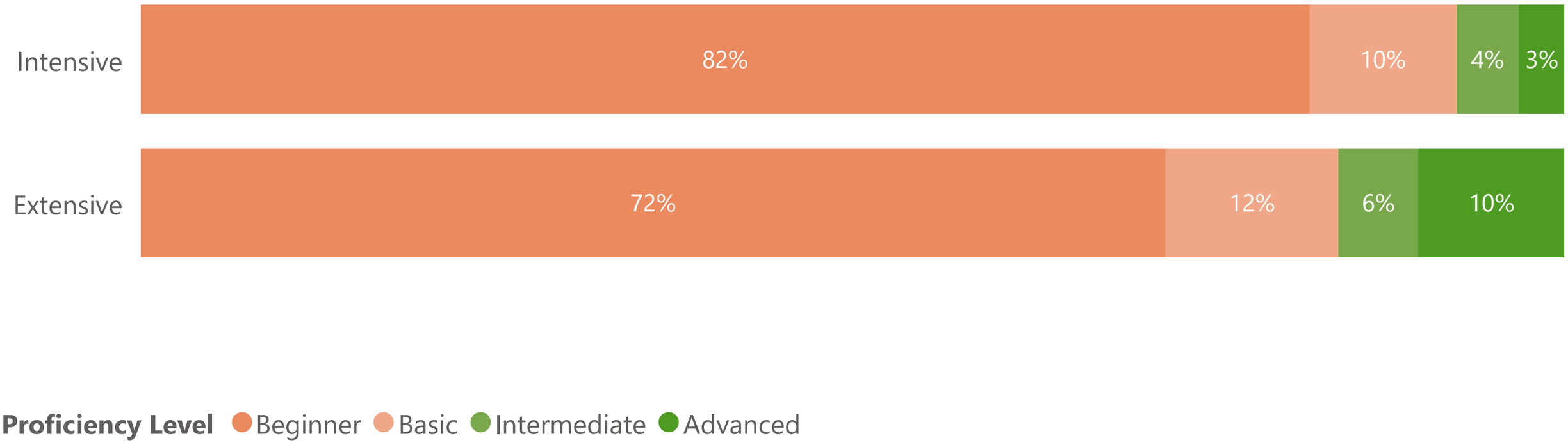
Writing Task - Proficiency Distribution of Students (Combined)

Writing task data analysis has been benchmarked using the scores for each proficiency level. The percentage of students in each proficiency band has been shown below. The proficiency level ranges from beginner to advanced level.

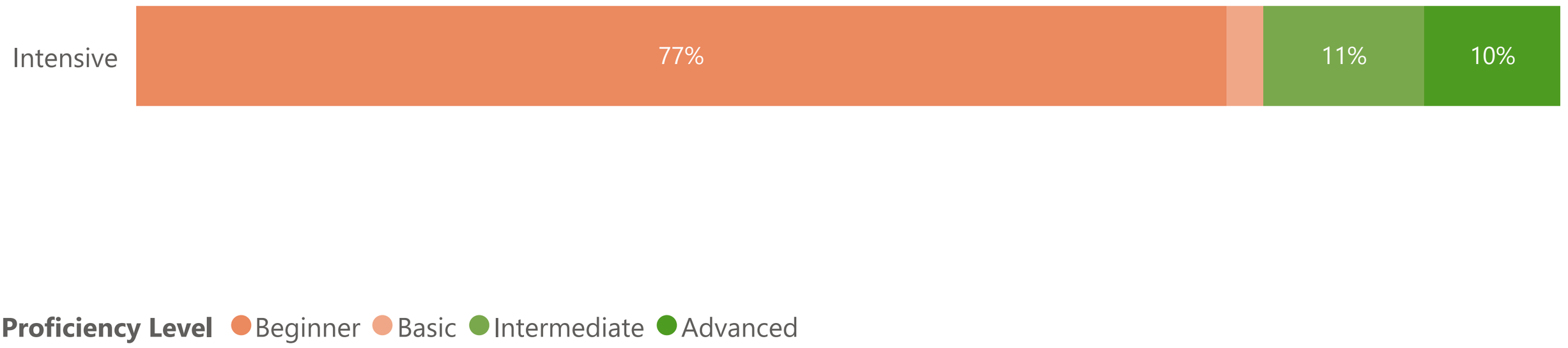
State

All

Grade 3 to 5 Combined Proficiency Level



Grade 6 to 8 Combined Proficiency Level

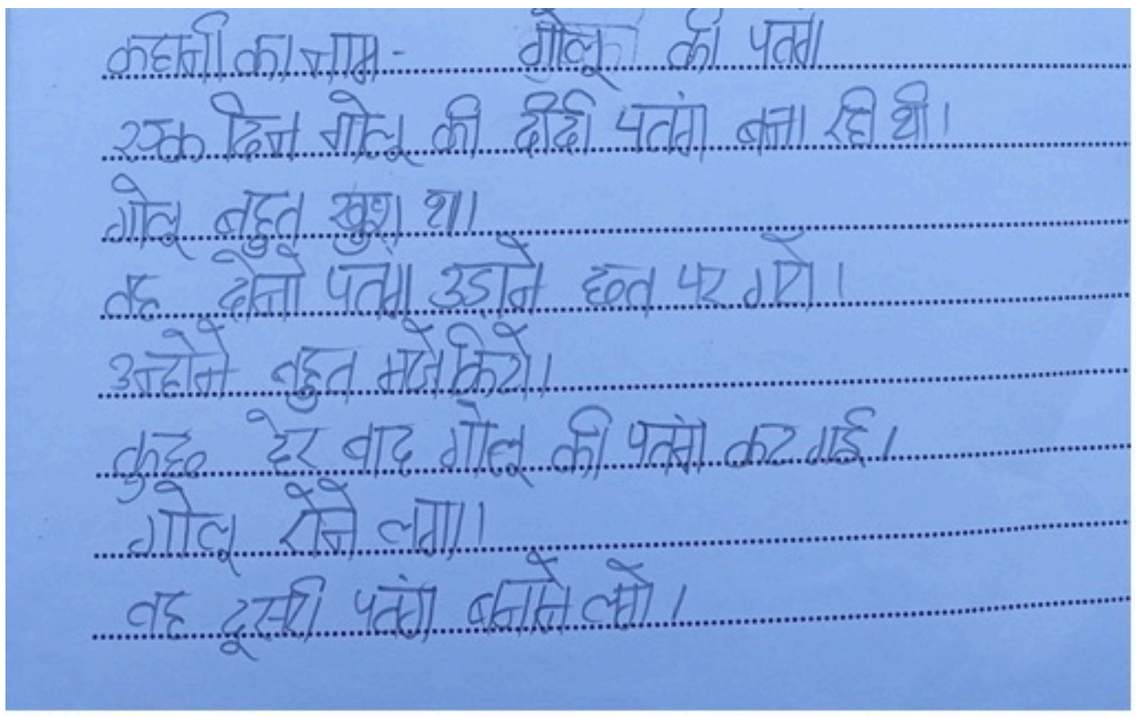


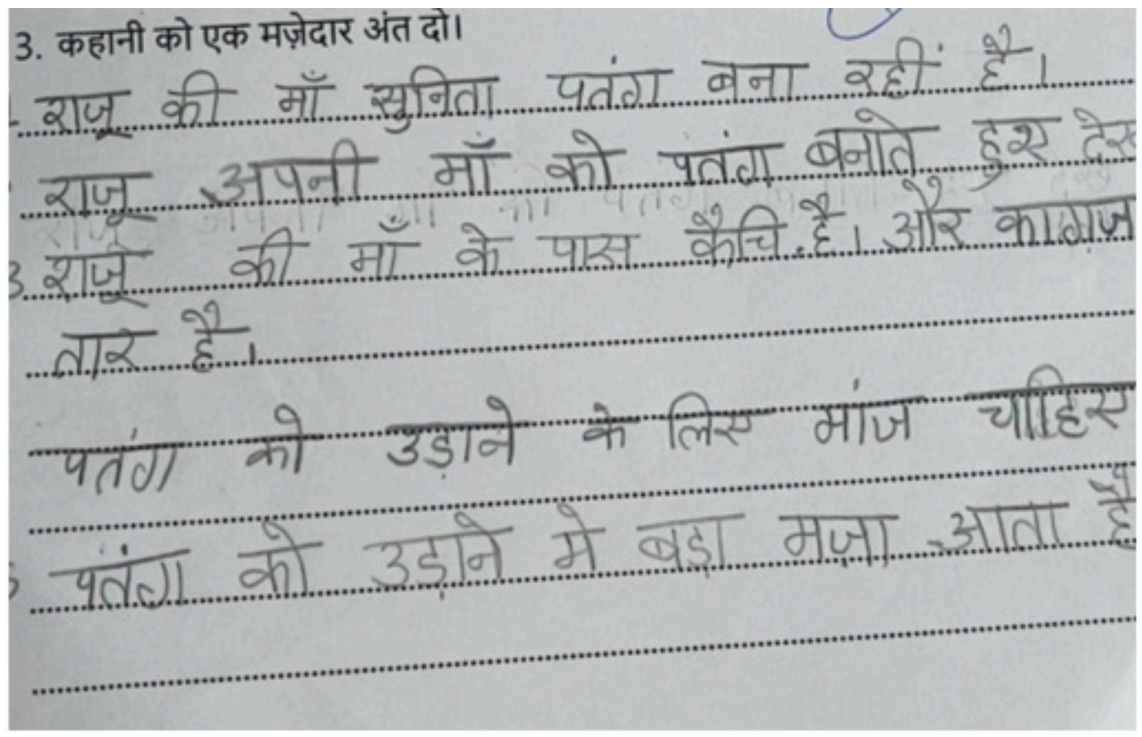
Writing Task - Qualitative Analysis (1/4)

The assessment of Hindi writing tasks was done according to a scoring rubric, and the detailed results have been shared. In the following sections, we will discuss specific examples to illustrate student performance. We will look at examples of strong performances that highlight what students have done well and examples that show areas needing improvement, helping us understand common mistakes made by students

Examples of Good Responses:

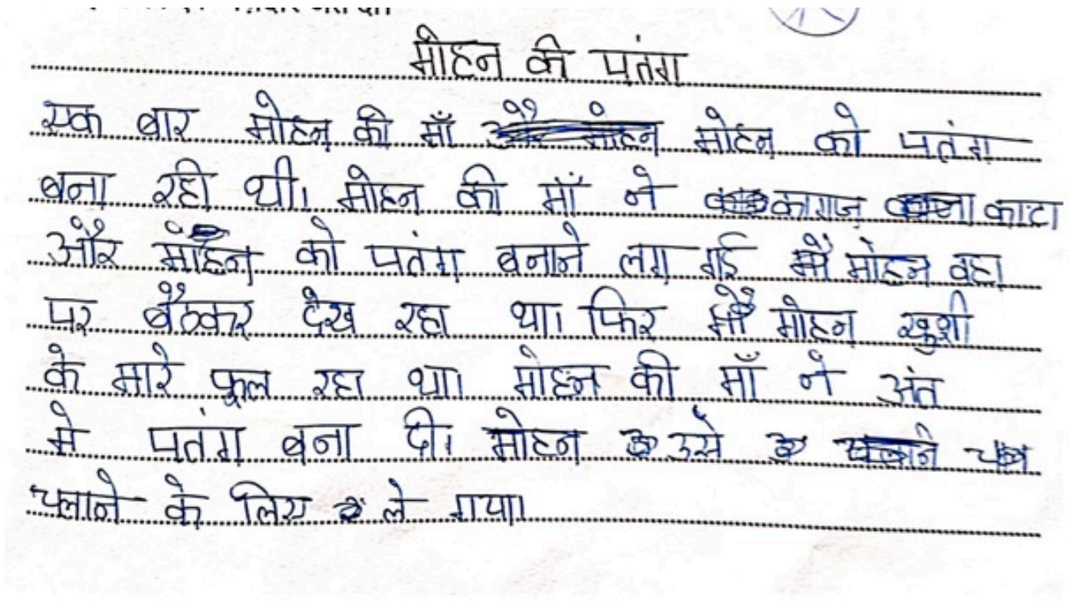
Grade 4

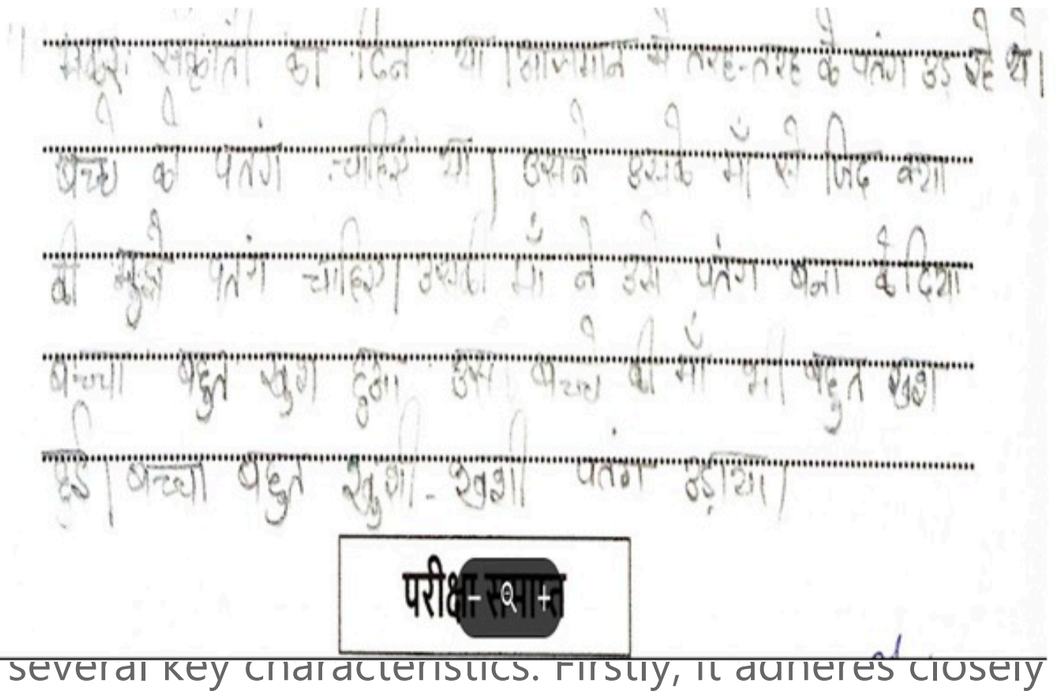

कहानी का नाम - गोलू की पतंग
एक दिन गोलू की दीदी पतंग बना रही थी।
गोलू बहुत खुश था।
तब दीदी पतंग उड़ाने छत पर गई।
उन्होंने बहुत मज़े किये।
कुछ देर बाद गोलू की पतंग कट गई।
गोलू रोने लगा।
वह दूसरी पतंग बनाने लगी।


3. कहानी को एक मज़ेदार अंत दो।
1. राजू की माँ सुनिता पतंग बना रही है।
2. राजू अपनी माँ को पतंग बनाते हुए देख
3. राजू की माँ के पास कैंची है। और कागज़
तार है।
पतंग को उड़ाने के लिए मांज चाहिए
पतंग को उड़ाने में बड़ा मज़ा आता है

Characteristics of a good response: an appropriate title, appropriate use of language, correctness of spellings, proper sentence formation, cohesiveness in sentences.

Grade 5 & 7:

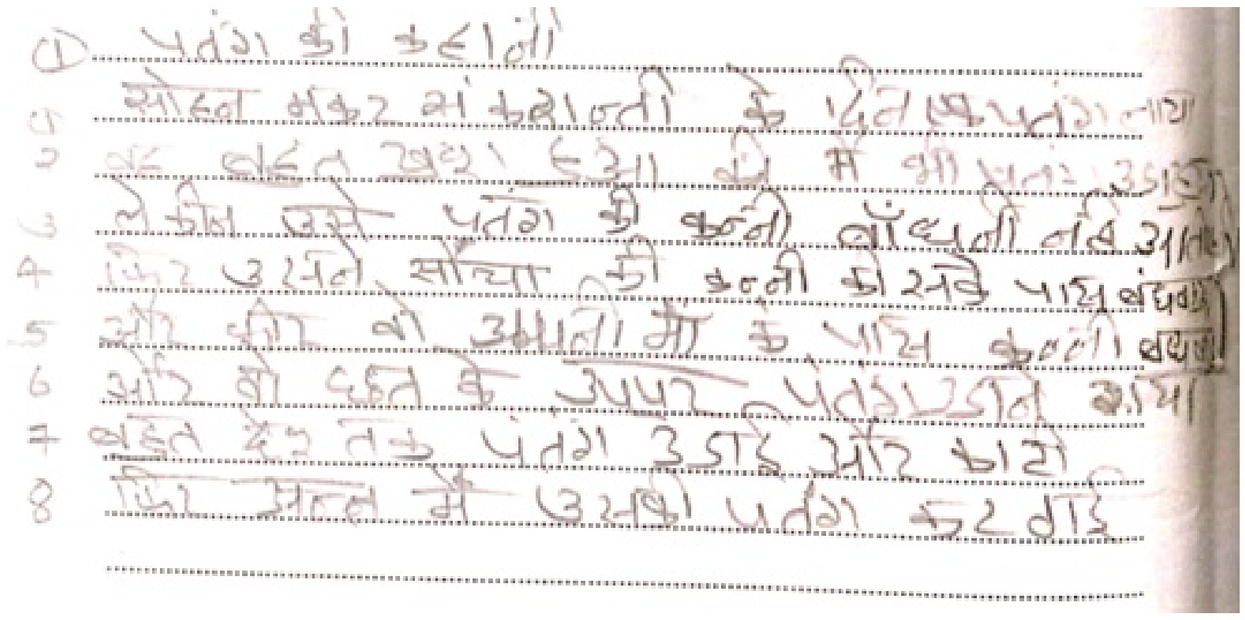

मोहन की पतंग
एक बार मोहन की माँ ~~मो~~ मोहन को पतंग
बना रही थी। मोहन की माँ ने ~~कागज़~~ कागज़ काटा
और मोहन को पतंग बनाने लगा। वहीं मोहन वहा
पर बैठकर देख रहा था। फिर मैं मोहन खुशी
के मारे फूल रहा था। मोहन की माँ ने अंत
मे पतंग बना दी। मोहन ~~को~~ उसे ~~को~~ ~~चलाने~~ चला
चलाने के लिए ~~से~~ ले गया।


परीक्षा

In higher grades, a good student response typically exhibits several key characteristics. Firstly, it adheres closely to the instructions provided in the prompt, demonstrating a clear understanding of the task at hand. Secondly, the response showcases proficient use of grammar with minimal spelling errors, indicating a strong grasp of language mechanics. Additionally, there is a discernible flow to the narrative, with ideas presented coherently and logically. Moreover, the student employs complex and longer sentences effectively, showcasing their ability to articulate ideas with depth and sophistication.

Writing Task - Qualitative Analysis (2/4)

Grade 8

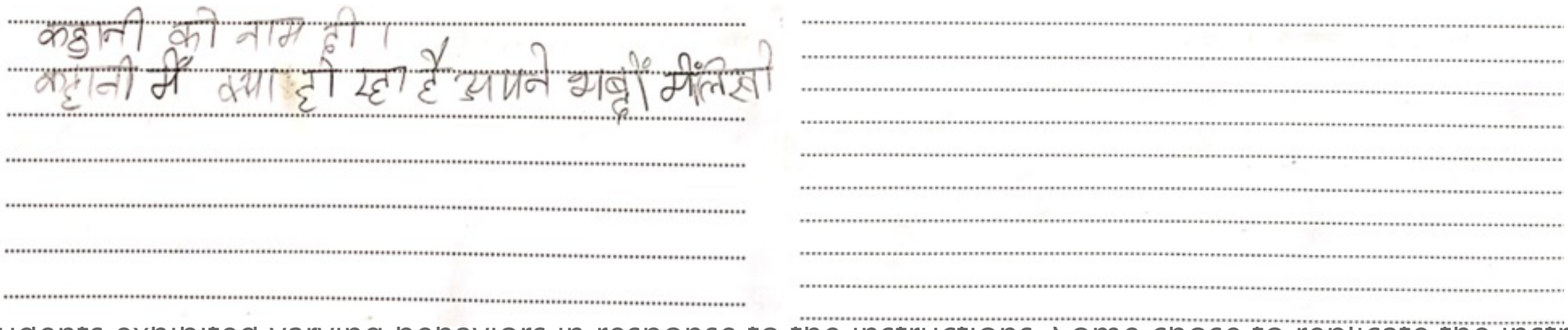


Another example of a good writing sample from grade 8 students. The response has an appropriate title, appropriate use of language, correctness of spellings, proper sentence formation, cohesiveness in sentences.

Examples of Responses requiring Improvement

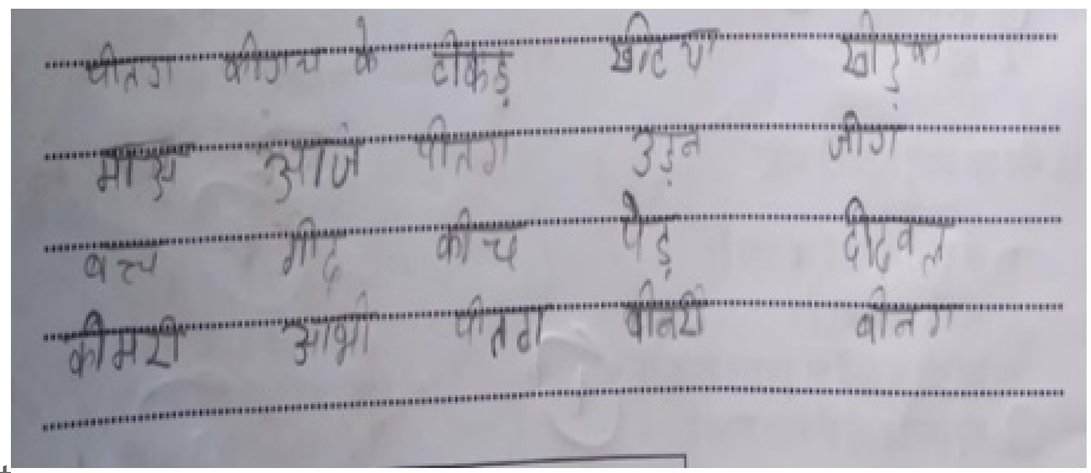
This section discusses some of the common errors made by the students.

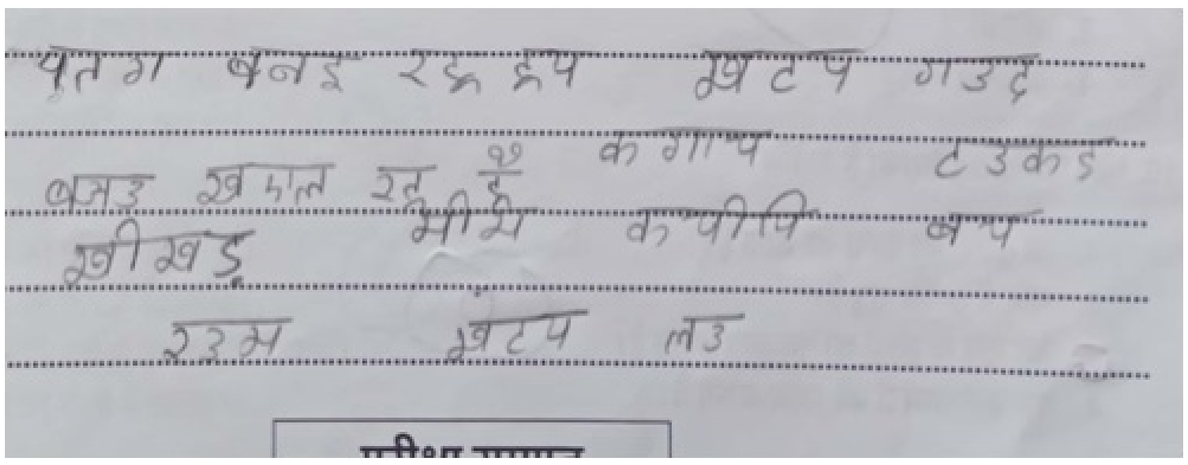
1. Copied instructions or not attempted the writing



Several students exhibited varying behaviors in response to the instructions. Some chose to replicate the instructions given to them word for word, rather than interpreting and implementing them as intended. On the other hand, a different group of students opted not to engage with the task at all, resulting in blank sheets devoid of any written content.

2. Wrote incomprehensible words and sentences/wrote in local dialect

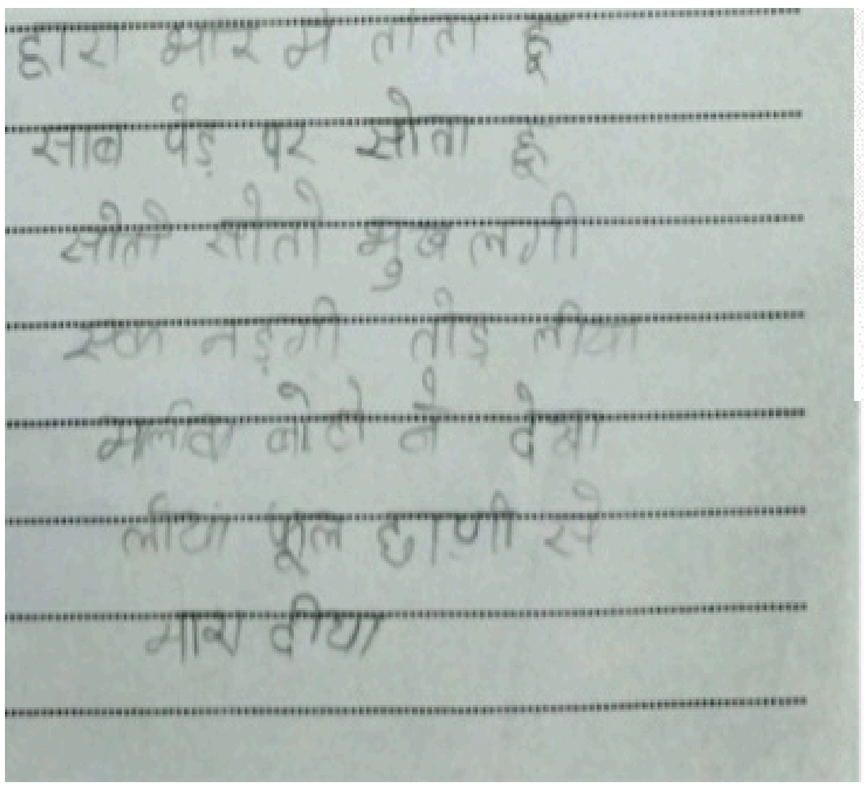


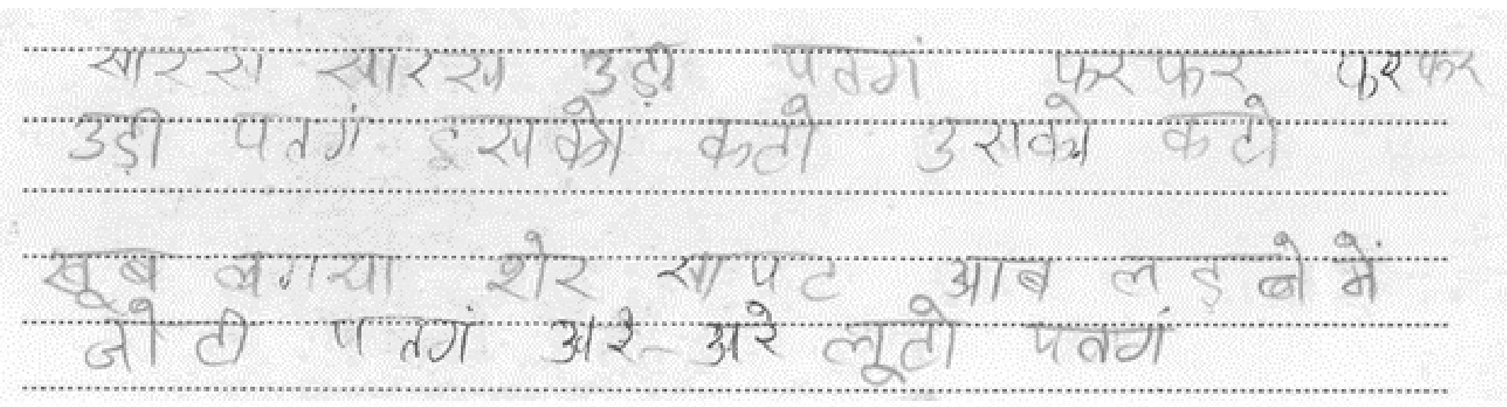


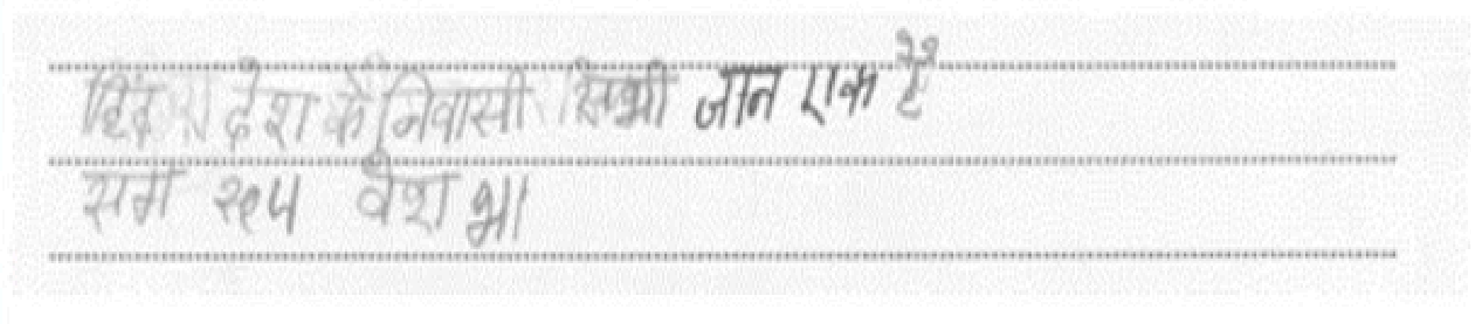
It has also been observed that many of the students have written words and sentences that do not align in standard Hindi and appear to be in a local dialect.

Writing Task - Qualitative Analysis (3/4)

3. Wrote poem/ something irrelevant

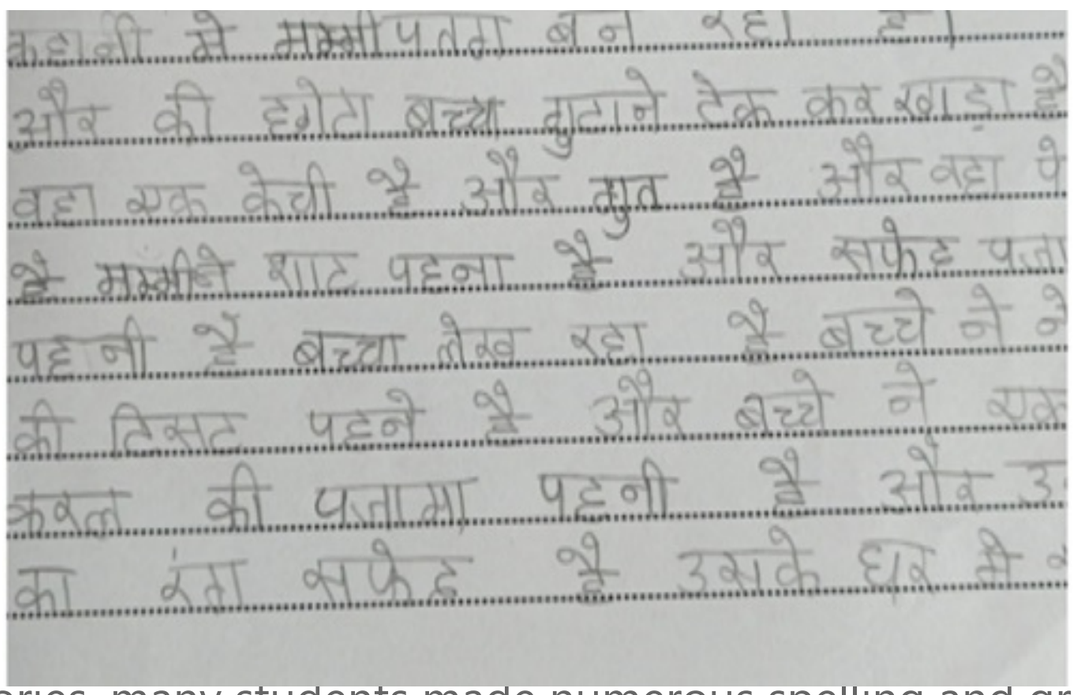






Some students have written completely irrelevant responses. Additionally, few students have written poems from recollection of what was taught in the classrooms. Even though some have written poems about kites (object in the prompt), it is evident that the children were unable to comprehend the instructions.

4. Spelling and Grammatical Errors

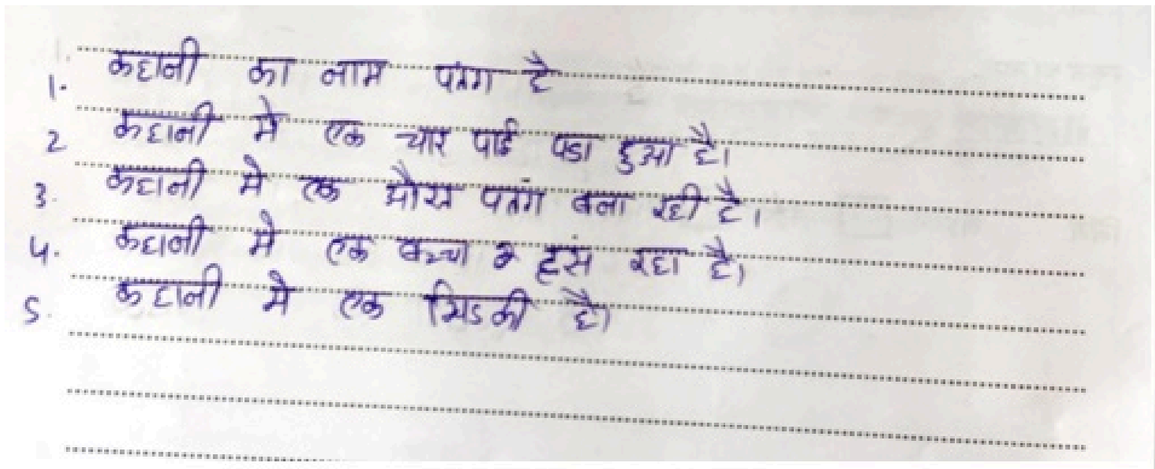


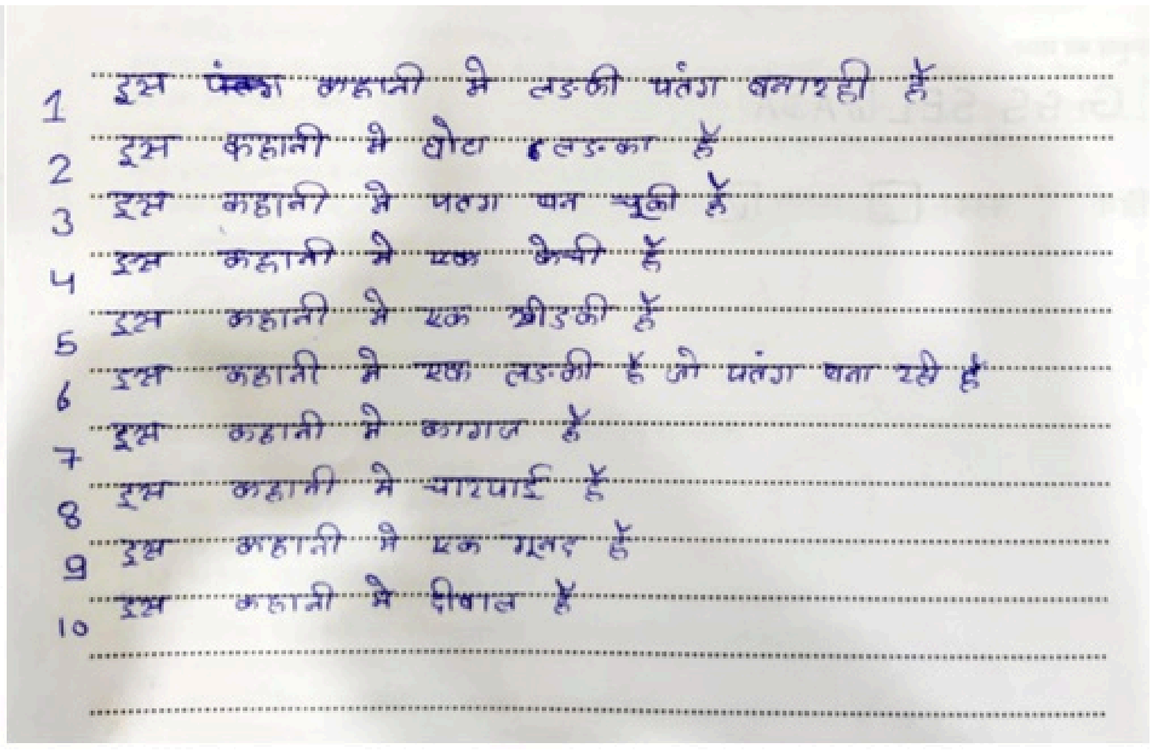
Despite their ability to create stories, many students made numerous spelling and grammatical errors. The sentences lacked punctuation, and there were incorrect gender associations with the words.

5. Difficulty in putting their ideas in story form. Identifying the objects in the picture given and writing in separate sentences

The sentences written by the students are not related to each other, they merely name/describe the objects seen in the image. Similar responses were received from students across grades.7th and 8th graders have also responded in similar manner. However, the good part is that, students have written the complete sentences without spelling errors.

Writing Task - Qualitative Analysis (4/4)





Conclusion:

The analysis helped us locate some of the common errors made by students across the states, as discussed above. A closer look at these errors gives us a sense of the key challenges faced by the students:

1. Comprehension: a number of students can read what is written, can write words and alphabets, but it is evident that they are not able to fully understand/comprehend the language.
2. Understanding of language and its grammar: grammatical and spelling errors were observed throughout all grades and all performance levels.
3. Creative thinking and translating abstract ideas to words.

A shift of focus from mere reading and writing towards processing of language, and stronger grammatical foundations is essential to help children grow in their linguistic abilities. Creative writing and thinking exercises are essential to encourage development of linguistic abilities in children, moreover, the same also translates to better understanding in other subjects.

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