



PUNJAB EXAMINATION COMMISSION
EXAM ANALYSIS REPORT

2016

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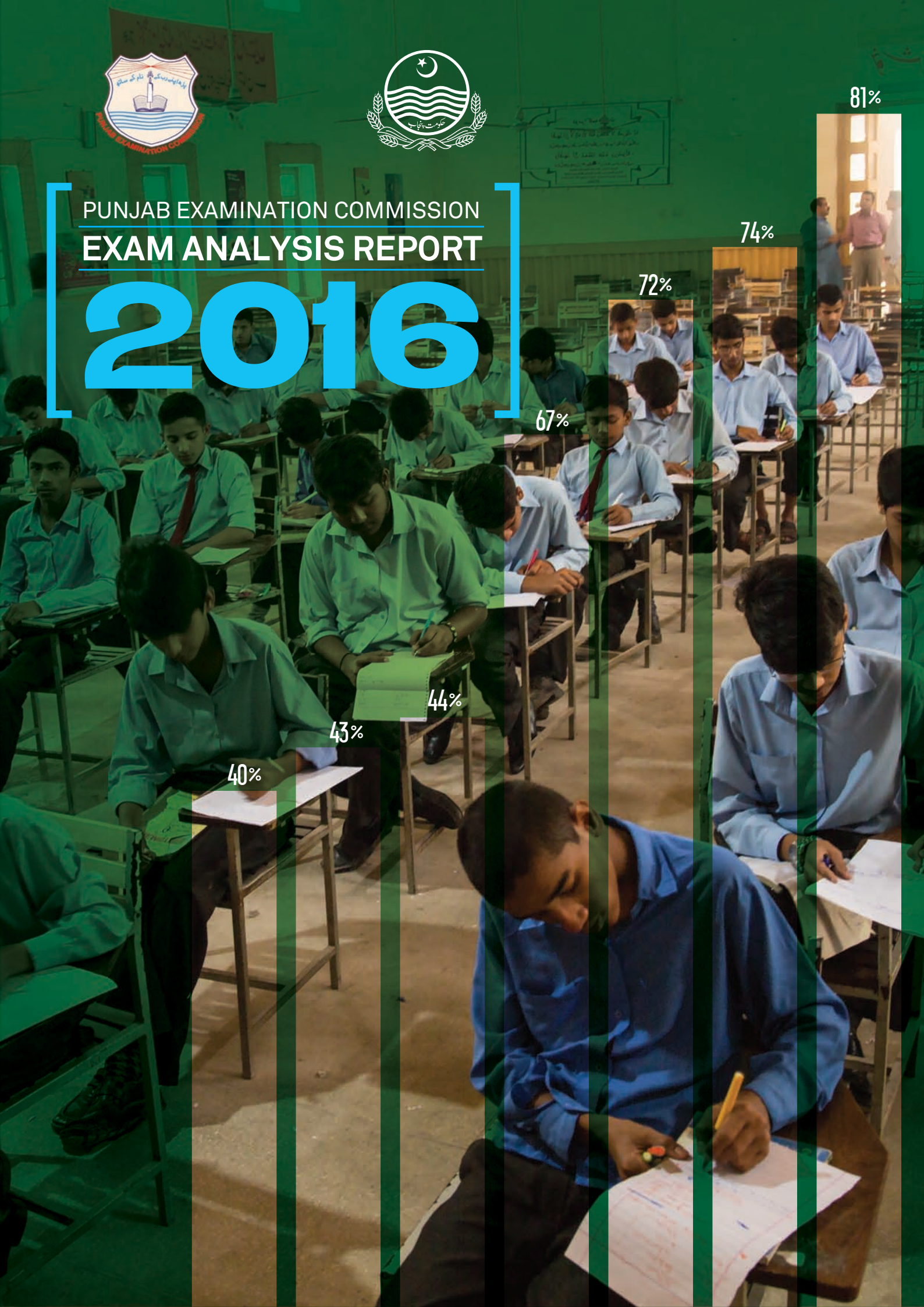
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LIST OF ABBREVIATIONS & ACRONYMS

AEO	Assistant Education Officer
CRQ	Constructed Response Question
CTSC	Cluster Training & Support Center
DDEO	Deputy District Education Officer
DEO	District Education Officer
DTE	District Teacher Educator
EDO	Executive District Officer
DSD	Directorate of Staff Development
MCQ	Multiple Choice Question
PCTB	Punjab Curriculum and Textbook Board
PEC	Punjab Examination Commission
SED	School Education Department
SLO	Student Learning Outcome

TAXONOMICAL COGNITIVE LEVELS

Knowledge:	This is the lowest level of questions and requires students to recall information. Knowledge questions usually require students to identify information in basically the same form it was presented.
Example Question:	Identify the proper noun among the following a) Table b) Pen c) Chair d) Hamza Ali
Understanding:	These questions go beyond simple recall and require students to combine information to understand the situation.
Example Question:	Identify the group of proper nouns among the following a) Table, Book b) Pen, Pencil c) Chair, Lamp d) Hamza, Ali
Application and Higher Order Thinking:	At this level, students apply their knowledge and understanding in a new situation. Analyzing and synthesizing the information to evaluate situation.
Example Question:	Identify the group of all proper nouns among the following a) Table, Yasir b) Pen, Pencil c) Chair, Pakistan d) Hamza, Ali

MESSAGE FROM CEO

Punjab Examination Commission has enhanced operational and procedural protocols for the 2016 exams to seamlessly conduct examinations for over 2 million students across Punjab. A series of policy initiatives strengthened the organization and led us to synchronize our efforts with the demands of our stakeholders.

With coherent efforts and inviolable commitment to become leaders in examination and assessment, we focus to improve the quality of our services with existing resources. Our robust growth over the past few years comes with a greater responsibility and challenge for quality enhancement. The digitalization of several stages of our examination cycle was another milestone which has enabled us to standardize our workflow.

We aim to expand our footprint to emerge as the key examination and assessment body at the provincial level. Over the past few years, we have improved our overall resource efficiency by restructuring our organization in order to meet quality enhancement goals. It is a proud moment to report another credible dataset to assess the performance of students across Punjab.

The improvement of primary education is a core agenda of Honorable Chief Minister Muhammad Shahbaz Sharif's vision for education reforms in Punjab. An accurate assessment of student achievement is one important measure of the performance of our school education system. Therefore, PEC's test based accountability can be employed to reinforce education policies in Punjab.

Through the PEC Exam Analysis Report 2016, Punjab Examination Commission continues to provide data required to understand trends in student achievement at the elementary level in Punjab. The report contains information and in-depth analysis on student achievement and performance on the 2016 PEC exams across all 36 districts of the province. The data and insights gleaned from the analyses will help guide public discourse and shape the future of education reforms in Punjab.

I express my profound gratitude to Mr. Abdul Jabbar Shaheen, Secretary, School Education Department, Govt. of the Punjab for his continuous support and guidance to further PEC's mission. I am grateful to Prof. Dr. Khalid Hamid Sheikh, Chairperson PEC, and members of the Punjab Examination Commission for their dedication and untiring efforts. I would also like to acknowledge UNICEF for their abiding and generous technical and financial support to facilitate our work. In the end, I would like to thank the PEC team for their commitment and devotion and to the staff who contributed in development of this report.

Nasir Iqbal Malik
Chief Executive Officer
Punjab Examination Commission

30th August, 2016

EXECUTIVE SUMMARY

Punjab Examination Commission's Exam Analysis Report for 2016 highlights the trends in performance of Grade 5 and Grade 8 students. The exam was conducted across Punjab for students of public schools, private schools, as well as private registered candidates. The successful conduct of exam was followed by marking, compilation and communication of results. A uniform and structured monitoring system in all districts ensured the quality and reliability of the exam.

In Grade 5, the performance of students was better in Islamiyat and Urdu than that in the subjects of Science, Mathematics, English and Ethics. Islamiyat was the only subject in which students achieved a mean score above 60%, whereas in Urdu, Mathematics, Ethics and English they scored 58%, 53%, 53% and 51% respectively. The mean score in the subject of Science was 48%, showing the weakest performance. There was a minor difference in mean scores between girls and boys in Multiple Choice Questions (MCQs). However, this difference was significant in the Constructed Response Questions (CRQs). Overall, girls performed better than boys in all subjects except Mathematics. Students from private schools performed better than those from public schools, while private registered candidates scored the lowest. The language of exam affected the performance of students in the subjects of Science and Islamiyat. A comparison of district-wise performance reveals that Layyah, Vehari, Bahawalnagar and Sargodha were among the top performing districts. Lahore, Gujranwala, Hafizabad and Gujrat were among the lowest performing districts in the Grade 5

exam.

In Grade 8, the students performed best in subjects of Islamiyat and Urdu scoring 73% and 68% respectively, whereas their average scores were below 60% in the remaining subjects. Science and Mathematics were the lowest performing subjects. Students performed better on MCQs, scoring above 60% for all subjects as compared to their respective CRQ scores. A gender based analysis showed that girls performed better than boys in all subjects except Mathematics. There was a slight difference in performance between public school students and private school students and both performed significantly better than private registered candidates. Layyah was the top performing district followed by Vehari, Bahawalnagar and Sargodha, whereas Lahore, Muzaffargarh, Rawalpindi and Faisalabad were the lowest performing districts.

On average, Grade 8 students performed better than Grade 5 students. An SLO-based analysis showed that students in both grades performed well on questions involving reading skills and struggled on those involving writing skills. In Science, students performed better on topics of biological sciences as compared to those of chemical sciences. In Mathematics, topics requiring computation skills were better attempted as compared to those requiring application of concepts. Across cognitive levels, students performed best on questions that tested Knowledge and Understanding and were challenged by questions based on Application, Analysis, Synthesis and Evaluation.

Punjab Examination Commission (PEC) is an autonomous body set up by the Government of the Punjab in 2005 to conduct exams annually for Grade 5 and Grade 8 students in the province of Punjab. These grades are selected because they are crucial for students' progression to secondary and higher secondary levels. PEC exams serve two key purposes: they promote students for secondary education and also provide rich data to identify strengths and weaknesses in students' performance.

SECTION 1: INTRODUCTION

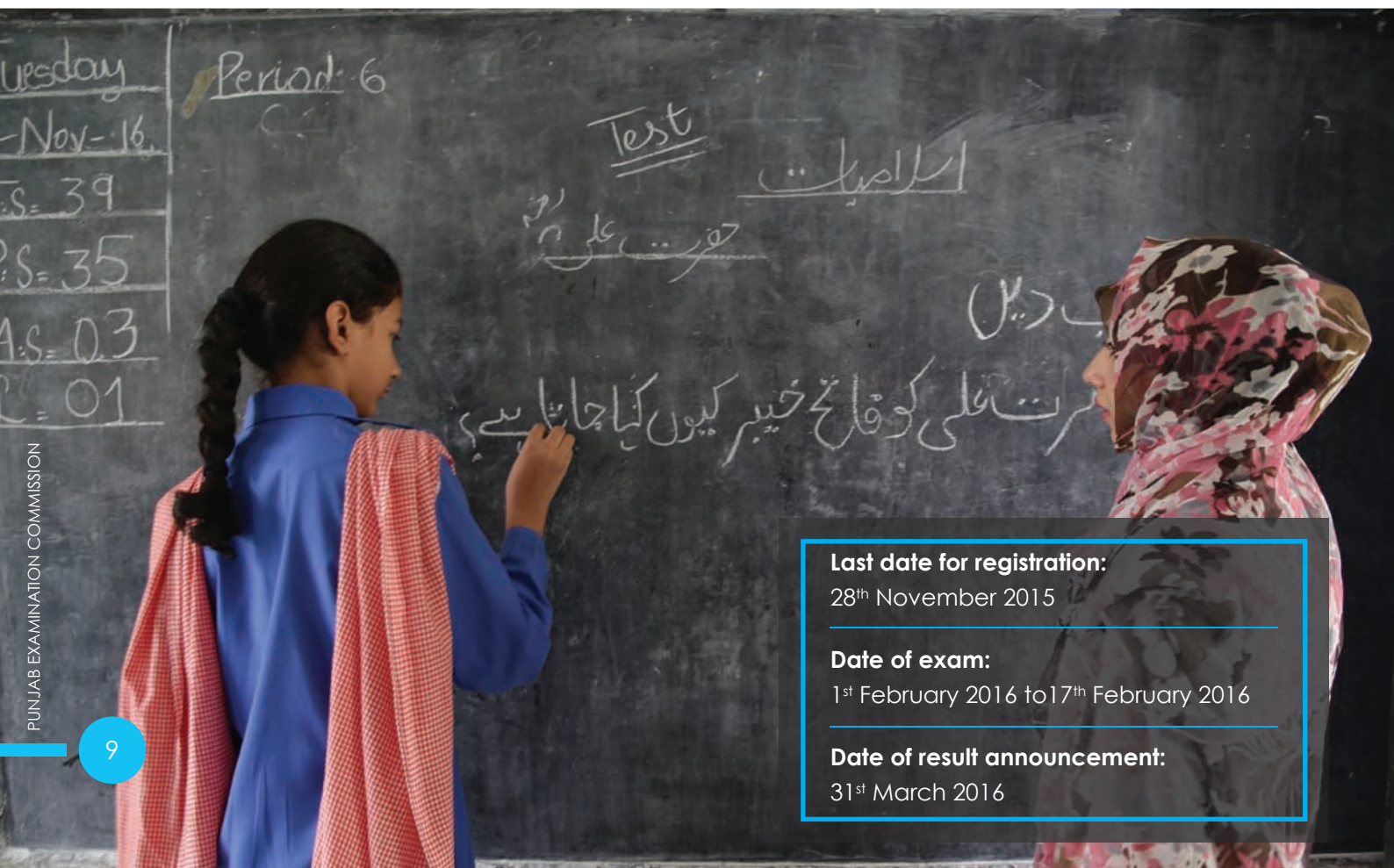
SCALE OF THE EXAMS

PEC has been administering exams to the entire population of Grade 5 and Grade 8 students in public schools as well as a significant number of private school students and private registered candidates in Punjab.

Table 1: Exam Centers and Staff deputed to conduct the Exam of Grade 5 and Grade 8 (2016)

Exam Centers and Staff	Grade 5	Grade 8	Total
EXAM CENTERS	6,600	5,910	12,510
CTSC HEADS	1,948	1,948	3,896
SUPERINTENDENTS	6,320	5,849	12,169
DEPUTY SUPERINTENDENTS	6,287	5,746	12,033
RESIDENTS INSPECTORS	6,531	5,855	12,386
INVIGILATORS	38,664	33,255	71,919
CLASS IV STAFF	5,961	5,482	11,443

In addition to measuring levels of student achievement, the results of PEC exams also address teaching and learning issues and recognize high performing students through merit-based scholarships. These exams were conducted on an extensive scale, as revealed in Tables 1, 2 and 3.



Last date for registration:

28th November 2015

Date of exam:

1st February 2016 to 17th February 2016

Date of result announcement:

31st March 2016

Table 2: Summary of Students and Results of Grade 5 (2016)

GRADE 5					
Type	Gender	Registered	Appeared	Pass	*Pass%
PUBLIC SCHOOLS	MALE	400,904	390,560	280,402	71.79
	FEMALE	377,801	370,902	292,586	78.88
PRIVATE SCHOOLS	MALE	237,752	226,065	166,979	73.86
	FEMALE	198,621	189,752	151,657	79.92
PRIVATE REGISTERED CANDIDATES	MALE	18,505	15,828	9,004	56.89
	FEMALE	12,924	11,232	7,364	65.56
TOTAL		1,246,507	1,204,339	907,992	75.39

*Candidates who obtained 33% marks were considered pass.

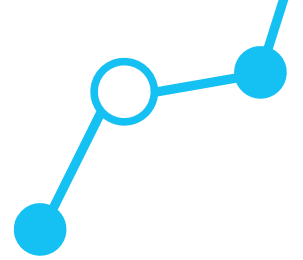
Table 3: Summary of Students and Results of Grade 8 (2016)

GRADE 8					
Type	Gender	Registered	Appeared	Pass	*Pass%
PUBLIC SCHOOLS	MALE	373,838	367,175	281,044	76.54
	FEMALE	325,835	322,006	247,295	76.80
PRIVATE SCHOOLS	MALE	142,828	134,205	101,083	75.32
	FEMALE	137,749	130,654	101,086	77.37
PRIVATE REGISTERED CANDIDATES	MALE	25,599	23,191	13,657	58.89
	FEMALE	17,057	15,968	9,647	60.41
TOTAL		1,022,906	993,199	753,812	75.90

*Candidates who obtained 33% marks were considered pass.

Table 1 shows that a total of 6,600 exam centers were set up for Grade 5 students and 5,910 exam centers were established for Grade 8 students across Punjab. Thousands of staff members were engaged to oversee the conduct of the exams and to perform invigilation duties. For the Grade 5 exam, the staff deployed by PEC comprised of 1,948 CTSC Heads, 6,320 Superintendents, 6,287 Dy. Superintendents, 6,531 Resident Inspectors, 38,664 Invigilators and 5,961 Class IV Staff. For the Grade 8 exam, 1,948 CTSC Heads, 5,849 Superintendents, 5,746 Dy. Superintendents, 5,855 Resident Inspectors, 33,255 Invigilators and 5,482 Class IV Staff were deputed. PEC subsequently established 700 marking centers for checking the exam papers. Administrative field staff including EDOs, DEOs, DDEOs and AEOs as well as CTSC

Heads of all districts were employed in the conduct of exams. Significant human and material resources were committed to ensure the smooth running of the exam cycle. Substantial investment was made in just in time printing, packing, securing and distributing the exam papers to EDO Offices in all 36 districts of Punjab. These properly packed exam papers were then sent to respective exam centers. Compared to previous years, there was a remarkable improvement in the 2016 exam cycle, especially in exam administration, monitoring, conduct and marking. Secrecy of exam was the utmost priority but not at the expense of efficient delivery of exam material in the field. The depth and credibility of the 2016 exam data can be attributed to the following key improvements in the exam cycle:



- An improved online registration system with uninterrupted service and bandwidth was provided for accurate registration of students.
- A curriculum-based assessment system was established to provide optimal coverage of the curriculum and content.
- Exam questions were standardized through extensive piloting.
- Four different versions of question papers for each subject of Grades 5 and 8 were developed and deployed in each exam room of all centres to minimize cheating incidents.
- Timely printing and efficient delivery of papers to examination centers and vigilant monitoring and inspections were carried out to minimize cheating in exams.
- A comprehensive training program was chalked out for master trainers and field markers.
- Detailed marking rubrics were developed to ensure consistency in marking.
- A system of syndicated marking was followed to minimize human error during the marking process.

This year PEC tested both Grades 5 and 8 as per previous practice in the subjects of Urdu, English, Mathematics, Science and Islamiat. Papers for Science, Mathematics and Islamiat were prepared in both English and Urdu languages to facilitate students from both English-medium and Urdu-medium schools. Each subject paper comprised of two sections, i.e. MCQs and CRQs (short answers, calculations and essays) to assess students' performance across cognitive levels. Each section was given equal weightage with equal mark distribution. Higher level cognitive skills were assessed in constructed response questions.

In 2016, a total of 1,204,339 students participated in Grade 5 exams, while a total of 993,199 students participated in Grade 8 exams. This report provides an analysis of students' performance in terms of school type, gender, language of exam, and geographic location. Overall, subject-wise and SLO-wise performance as well as differences in cognitive skills are also presented.

Footnote 1. In syndicated marking each CRQ is marked by a different examiner. This evens out the effect of lenient and severe markers. A CRQ mark which is out of line with the others is remarked by a senior marker to ensure that it is fair.



SECTION 2: STUDENT PERFORMANCE

This section comprises of two parts: the first part represents the performance of students in Grade 5 while the second part represents the performance of students in Grade 8.



GRADE 5

Key Findings

- Overall, the performance of students was better in the subjects of Islamiat and Urdu as compared to that in Mathematics, English and Science.
- The performance of students in MCQs was far better than that in CRQs in all subjects.
- Girls performed slightly better than boys in all subjects except Mathematics.
- There was a minor difference between the performance of students from public schools and private schools. However, the performance of private candidates was the lowest.
- There was no significant effect of language of exam on students' performance in the subject of Mathematics. However, language had a relatively small effect on students' performance in the subjects of Science and Islamiat.

Performance by Subject

Mean scores by subject are shown in Figure 1:

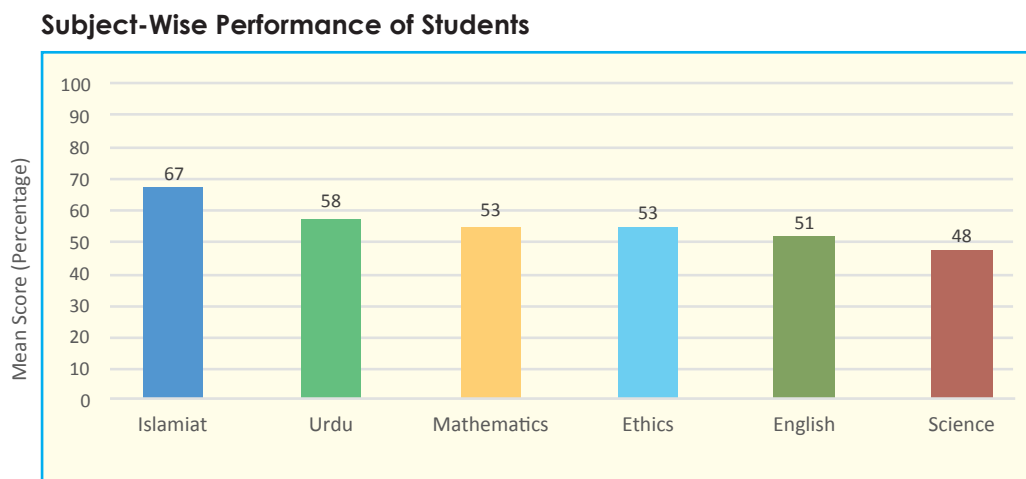
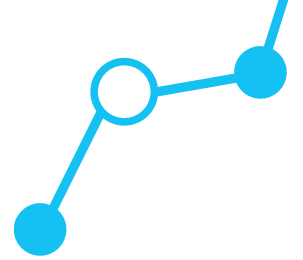


Figure 1: Subject-wise performance of students in Grade 5

Figure 1 shows that the performance of students in the subject of Islamiat* was the highest, whereas in the subject of Science it was lowest. Mean scores exceeded 50% for all subjects except Science.

* Mean percentage score of Islamiat also includes marks from "Nazra section".



Figures 2 and 3 indicate that overall, students performed better on MCQs as compared to CRQs in all subjects. For each subject, the mean score for MCQs ranged from 57% to 77% while that for CRQs ranged from 38% to 48%.

Subject-wise Performance of Students on MCQs

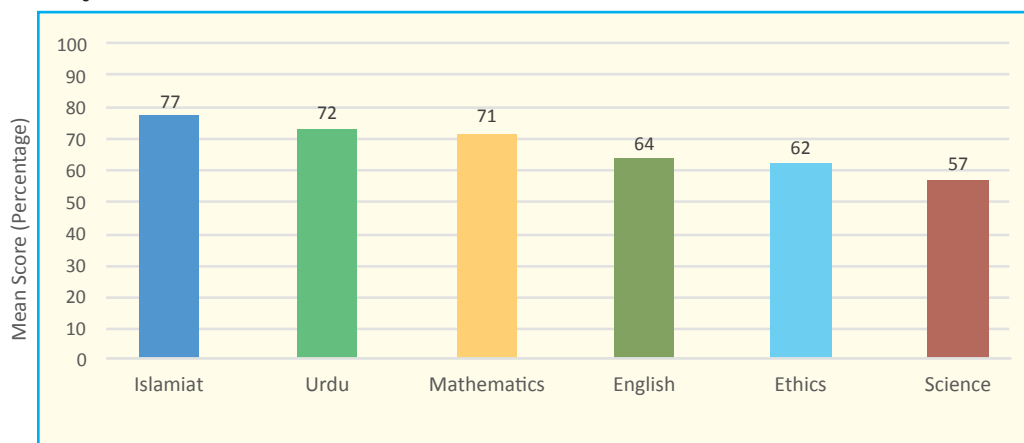


Figure 2: Performance of students on MCQs in Grade 5

Subject-wise Performance of Students on CRQs

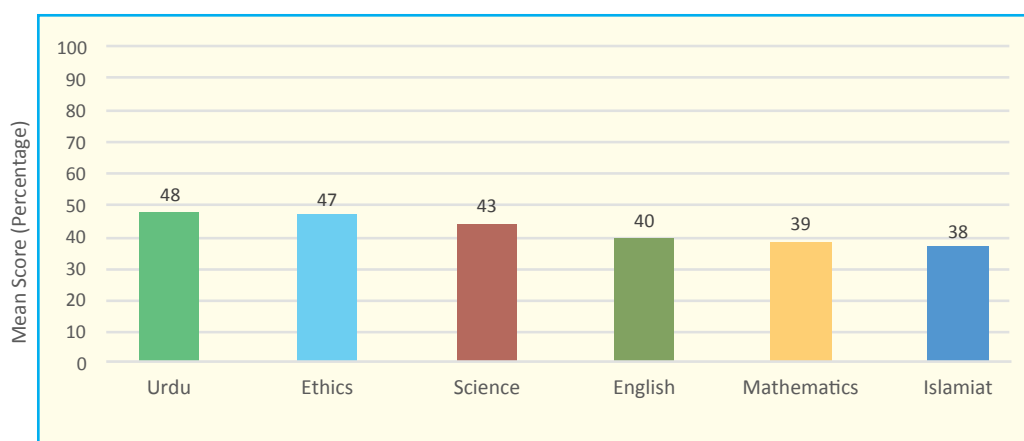


Figure 3: Performance of students on CRQs in Grade 5

PERFORMANCE BY PAPER VERSION

Student performance across different paper versions was similar as shown in Figure 4. This data suggests that exam difficulty was consistent across different versions ensuring that exam performance was not affected by the version of the paper received by students.

Performance of Students by Version of Paper

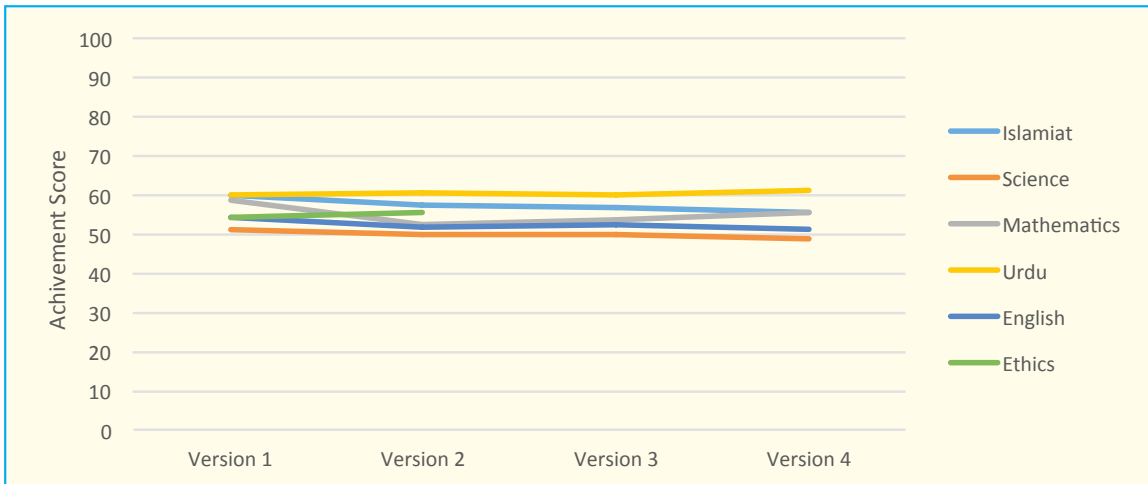


Figure 4: Performance of students by version of paper in Grade 5

Performance by Gender

Students' Mean Achievement Score on MCQs and CRQs

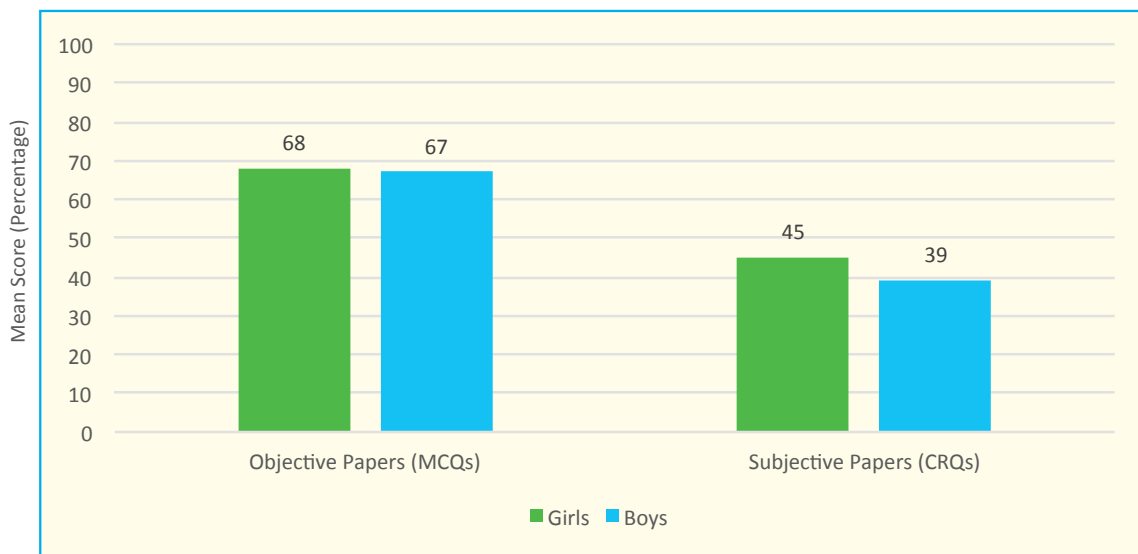


Figure 5: Performance of students by gender on MCQs and CRQs in Grade 5



Figure 5 shows that girls performed better on CRQs as compared to boys while there was a slight difference in their performance on MCQs.

Subject-Wise Comparison of Boys and Girls Scores on MCQs

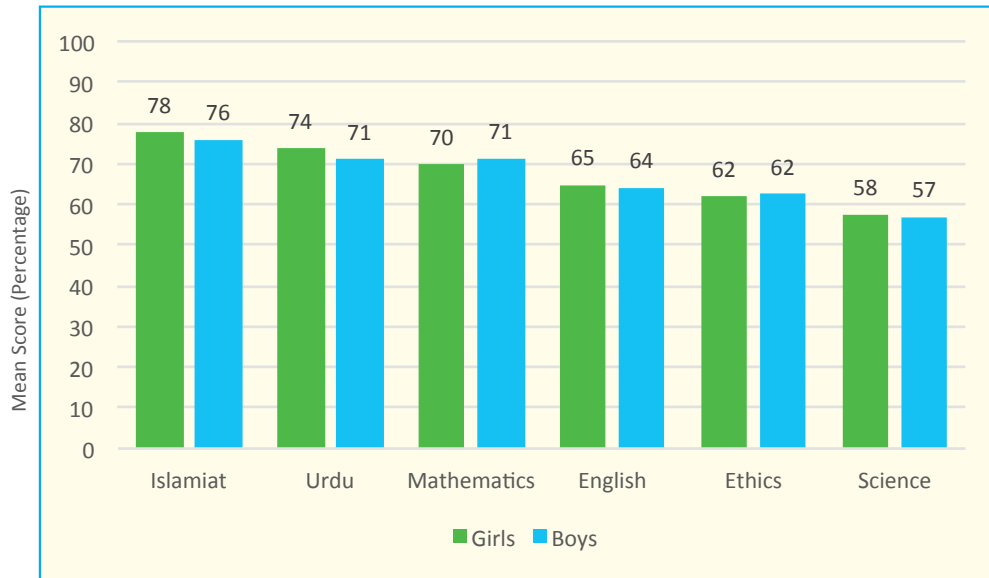


Figure 6: Subject-wise performance by gender on MCQs in Grade 5

Subject-Wise Comparison of Boys and Girls Scores on CRQs

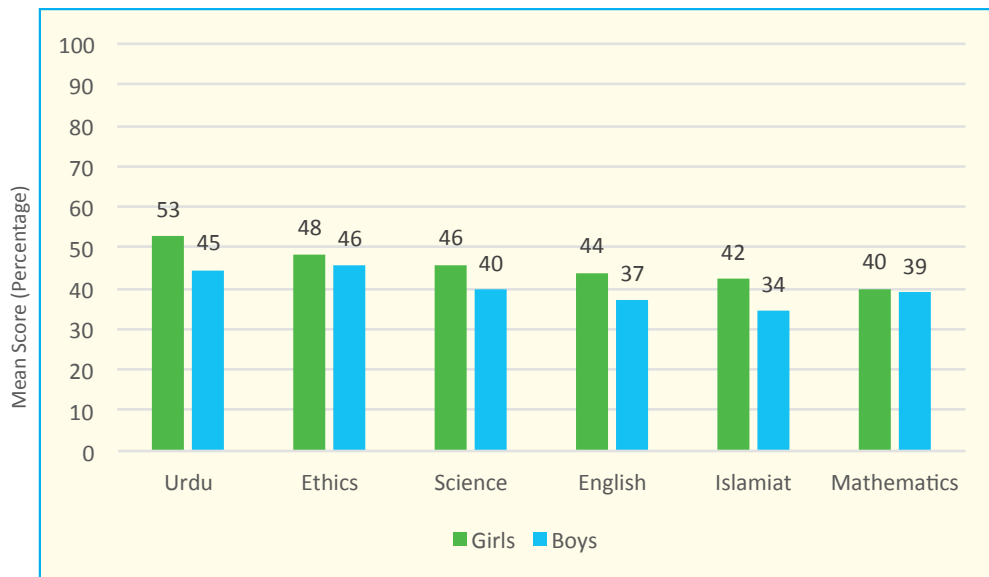


Figure 7: Subject-wise performance of students by gender on CRQs in Grade 5

On average, girls and boys performed almost similar on MCQs in each subject. However, girls performed better than boys on CRQs especially in the subjects of Urdu, English, Islamiat and Science.

Overall Subject-Wise Comparison of Mean Achievement Scores of Boys and Girls

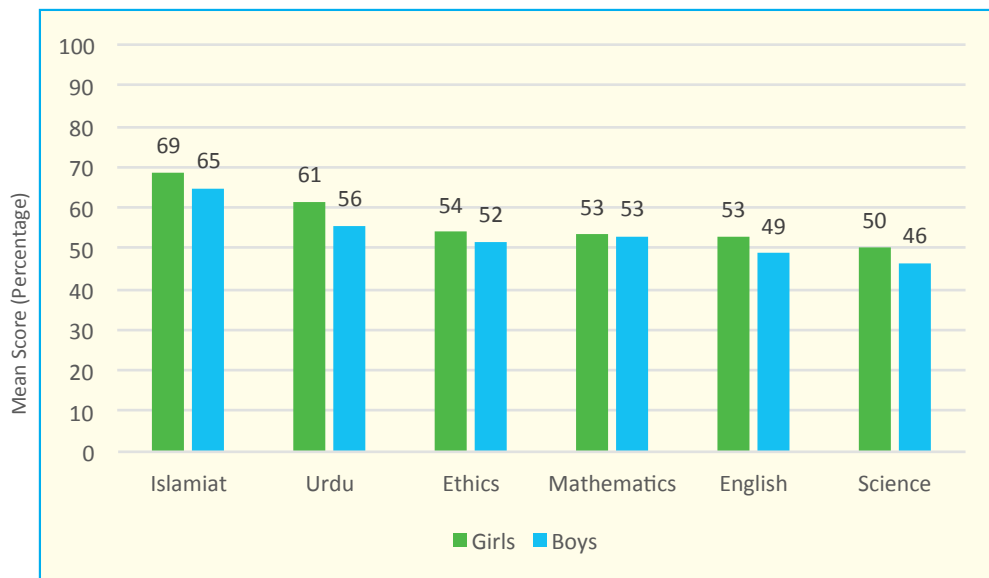


Figure 8: Overall subject-wise performance of students by gender in Grade 5

In terms of overall exam score, girls and boys performed similarly in Mathematics. However, girls outperformed boys in all remaining subjects as shown in Figure 8.

Performance by School Type

Subject-Wise Comparison of Achievement of Public School, Private School and Private Registered Candidates

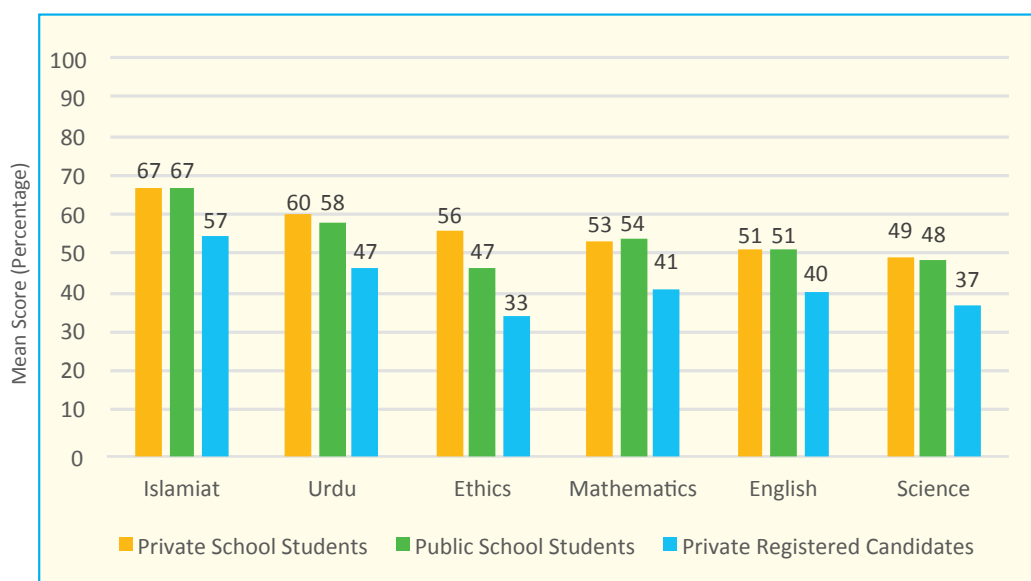


Figure 9: Performance of students by type of candidate in Grade 5

For each subject except Ethics, there was a relatively small difference in mean achievement score between public school and private school students. However, the mean achievement score of private candidates was the lowest in all subjects as shown in Figure 9.

Gender-wise Comparison of Performance of Public School, Private School and Private Registered Candidates

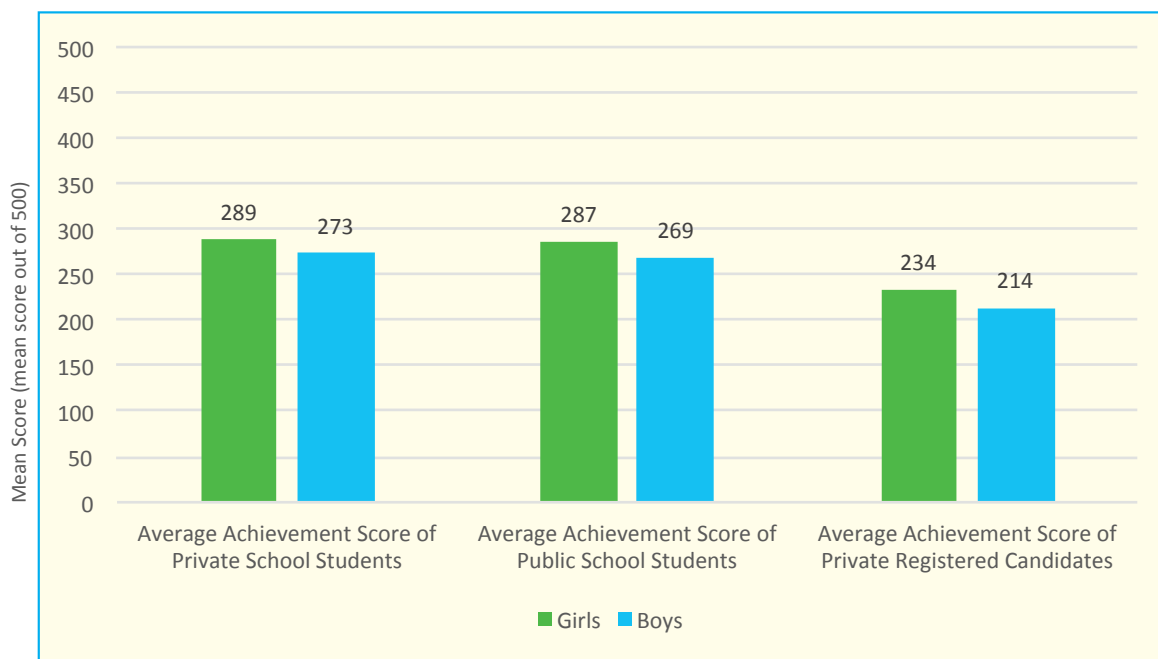


Figure 10: Performance of students by gender and type of candidate

Figure 10 shows that girls performed better than boys regardless of school type i.e. public or private. A similar trend was observed in the case of private registered candidates.

Overall Performance of Public School, Private School and Private Registered Candidates

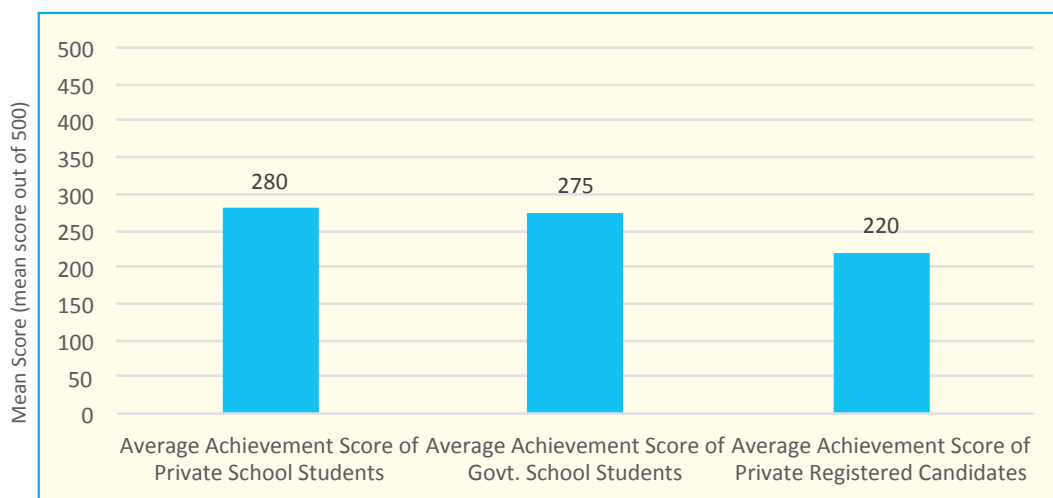


Figure 11: Overall performance of students by school/candidate type

Students from private schools performed better than those from public schools, while private registered candidates scored the lowest as shown in Figure 11.

PERFORMANCE BY LANGUAGE OF EXAM

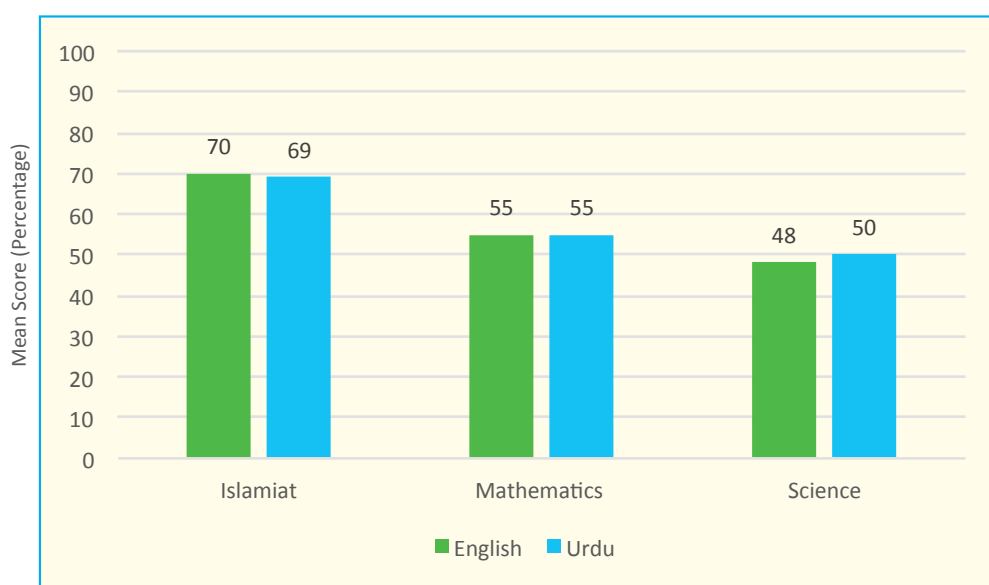


Figure 12: Performance of students by language of exam in Grade 5

Figure 12 shows that language of exam did not have a significant effect on students' performance in any of the subjects except Science and Islamiyat.



DISTRIBUTION CURVES

The frequency distribution curves for all subjects show approximately normal distributions. For Islamiat and Urdu, the peaks around 70% represent that a large number of students performed better in these subjects.

Distribution Curves - Grade 5

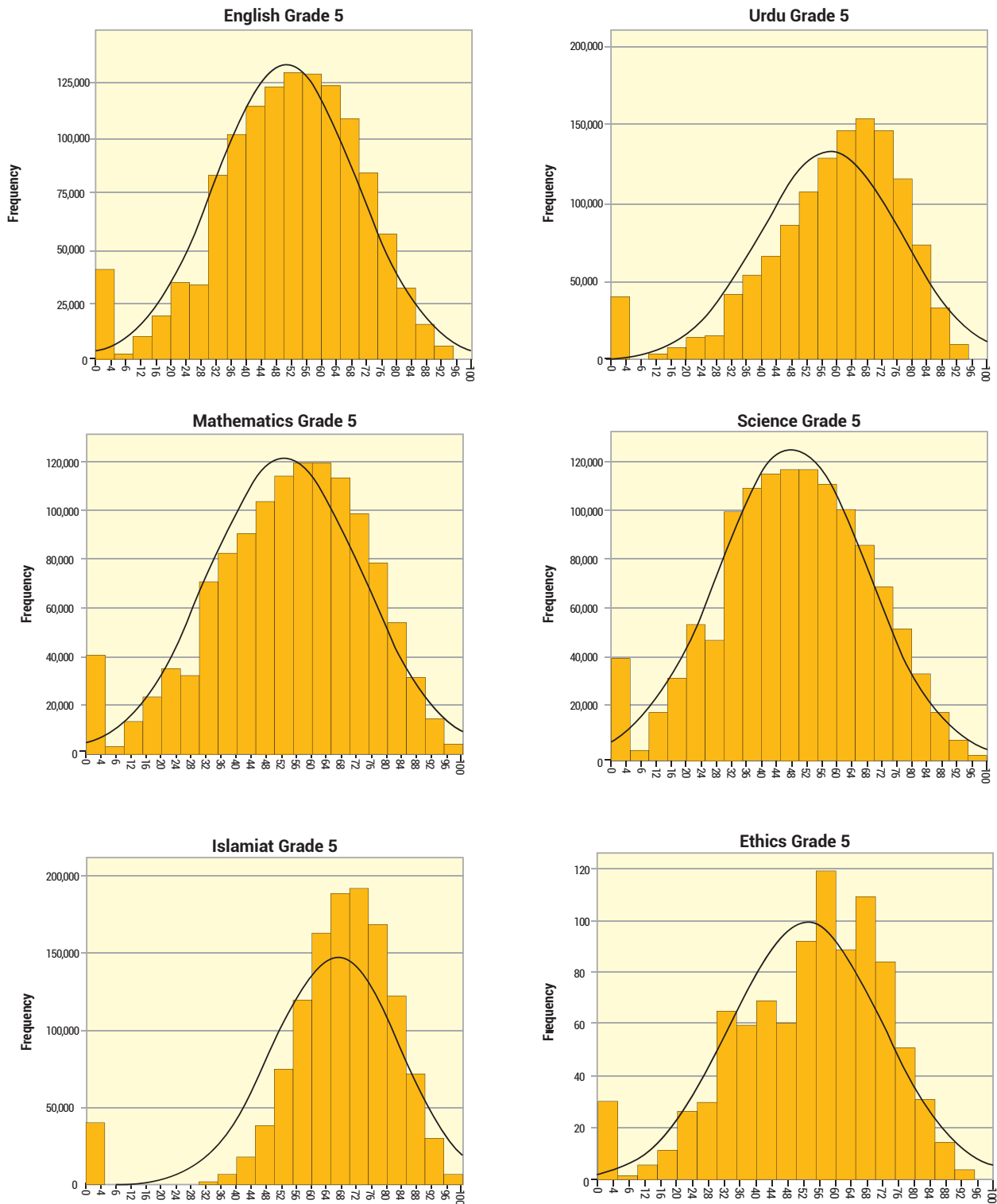
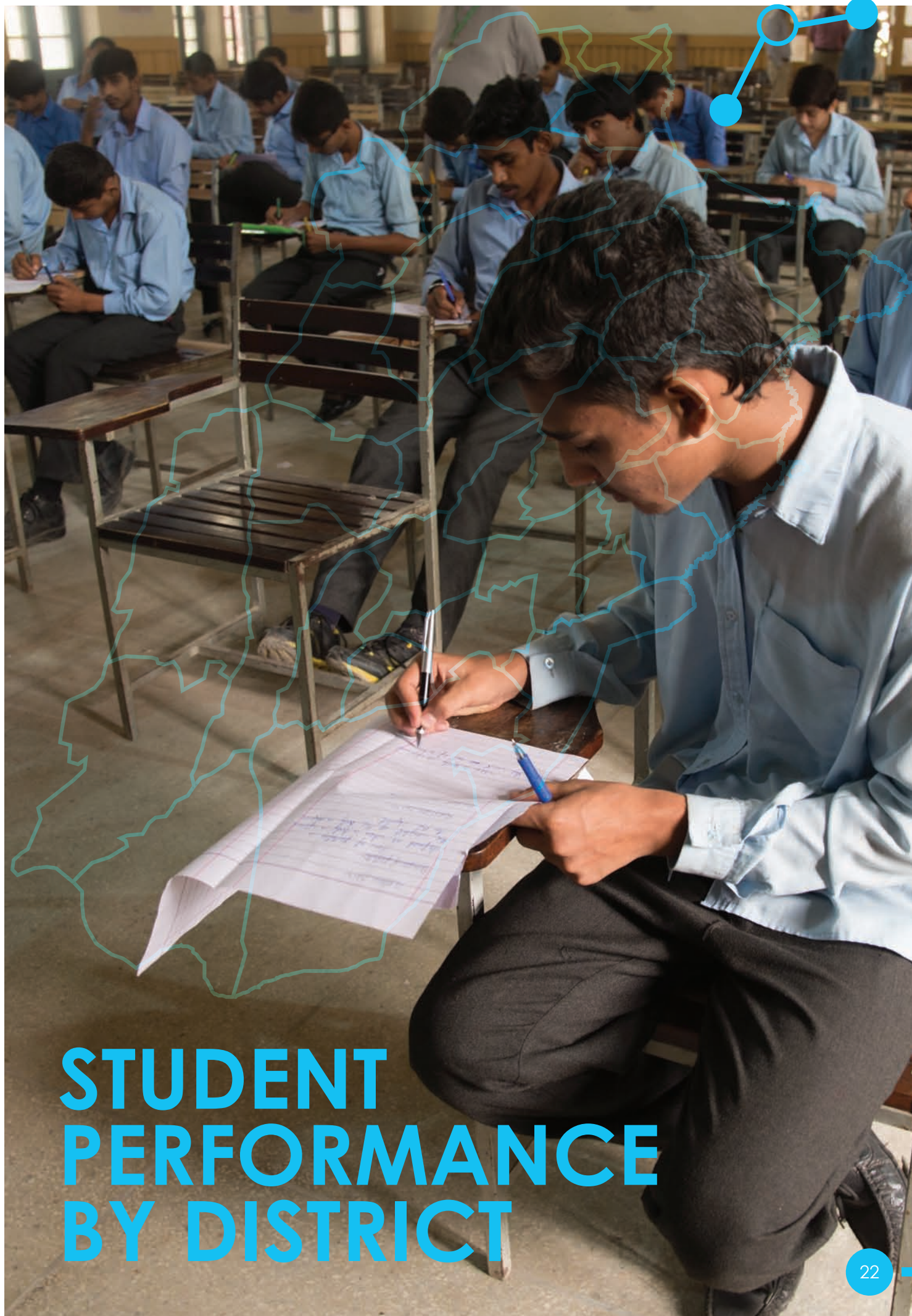


Figure 13: Distribution curves for all subjects of Grade 5



STUDENT PERFORMANCE BY DISTRICT

Overall Performance of Districts

Overall, student performance was highest in Layyah and lowest in Lahore. Layyah ranked first in all subjects except Islamiat and English where it stood second and third, respectively. Lahore, Gujranwala, Faisalabad, Hafizabad and Sheikhupura ranked in the bottom quartile for most subjects.

District - Wise Comparison of Student Overall Achievement (Grade 5)

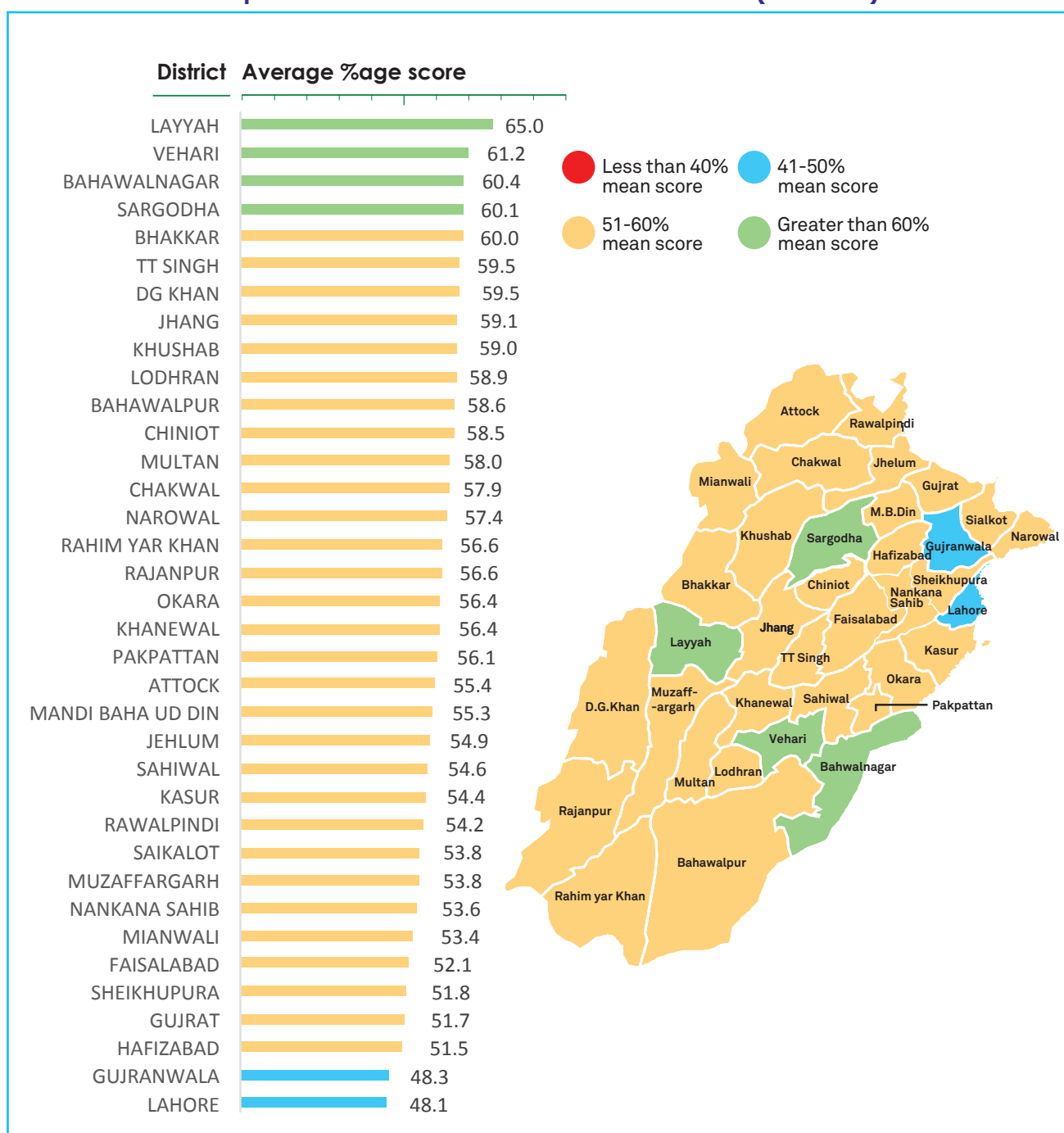


Figure 14: Overall district-wise performance of students

Performance of Districts in English

In English, average percentage scores ranged from 59.2% in Chakwal to 43.2% in Muzaffargarh and exceeded 50% in 23 districts while 13 districts scored below 50%.

District - Wise Comparison of Student Achievement in English (Grade 5)

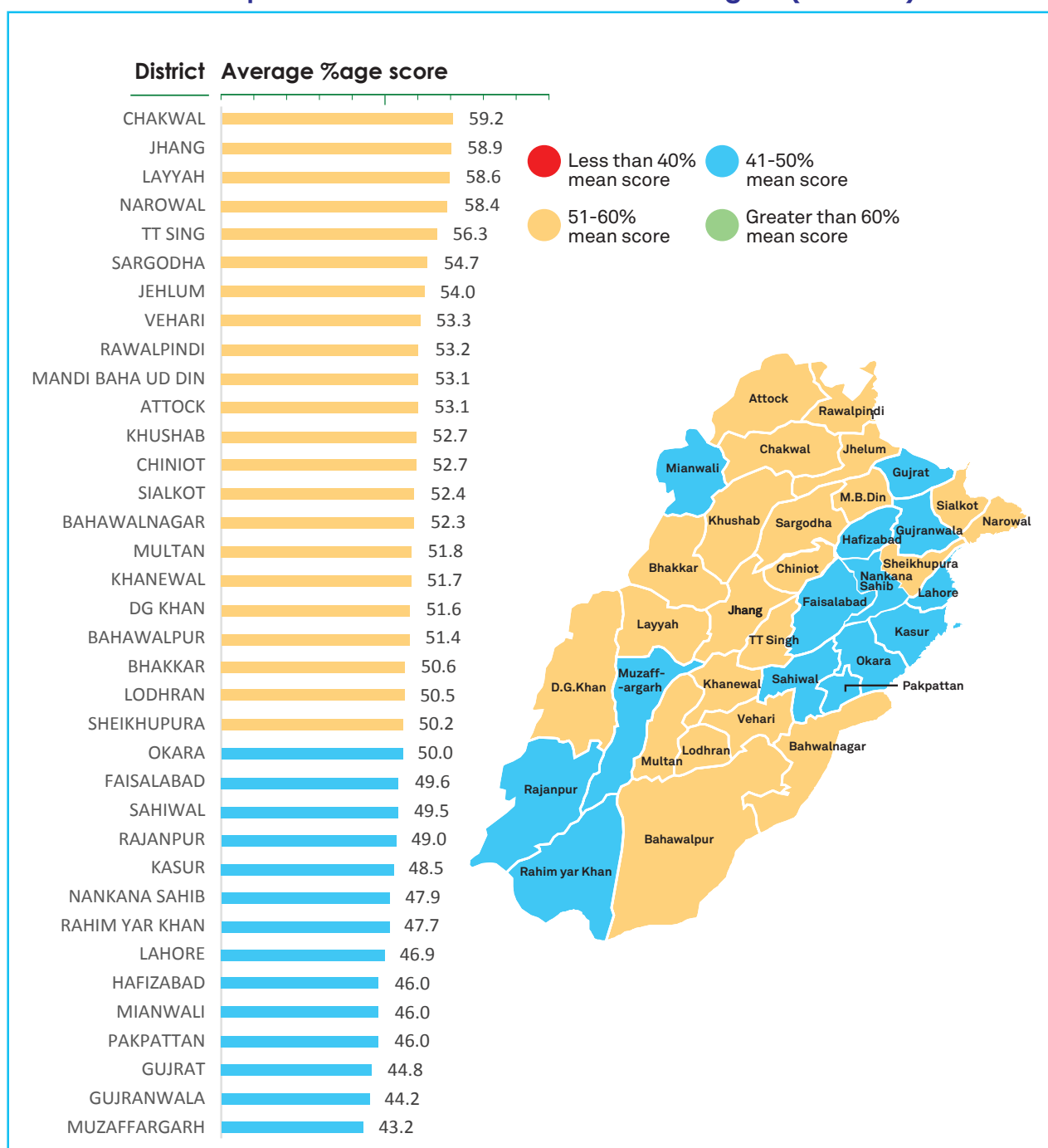


Figure 15: District-wise performance of students in English

Performance of Districts in Urdu

Average score for Urdu in all districts exceeded 50% and ranged from 69.1% in Layyah to 50.7% in Gujranwala.

District - Wise Comparison of Student Achievement in Urdu (Grade 5)

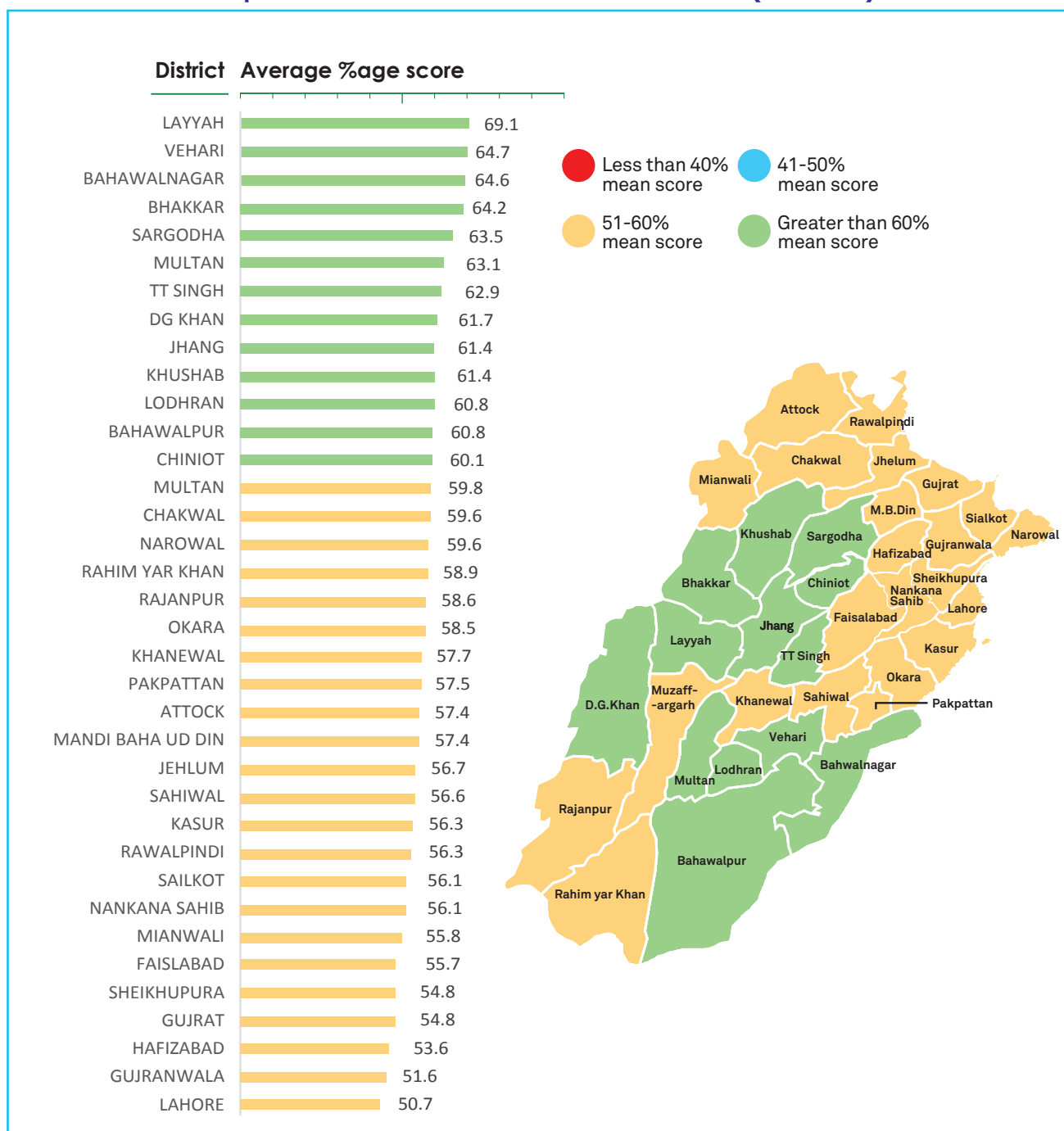


Figure 16: District-wise performance of students in Urdu

Performance of Districts in Mathematics

Average achievement score for Mathematics was above 50% in 29 districts. These scores ranged from 64.7% in Layyah to 42.7% in Lahore.

District - Wise Comparison of Student Achievement in Mathematics (Grade 5)

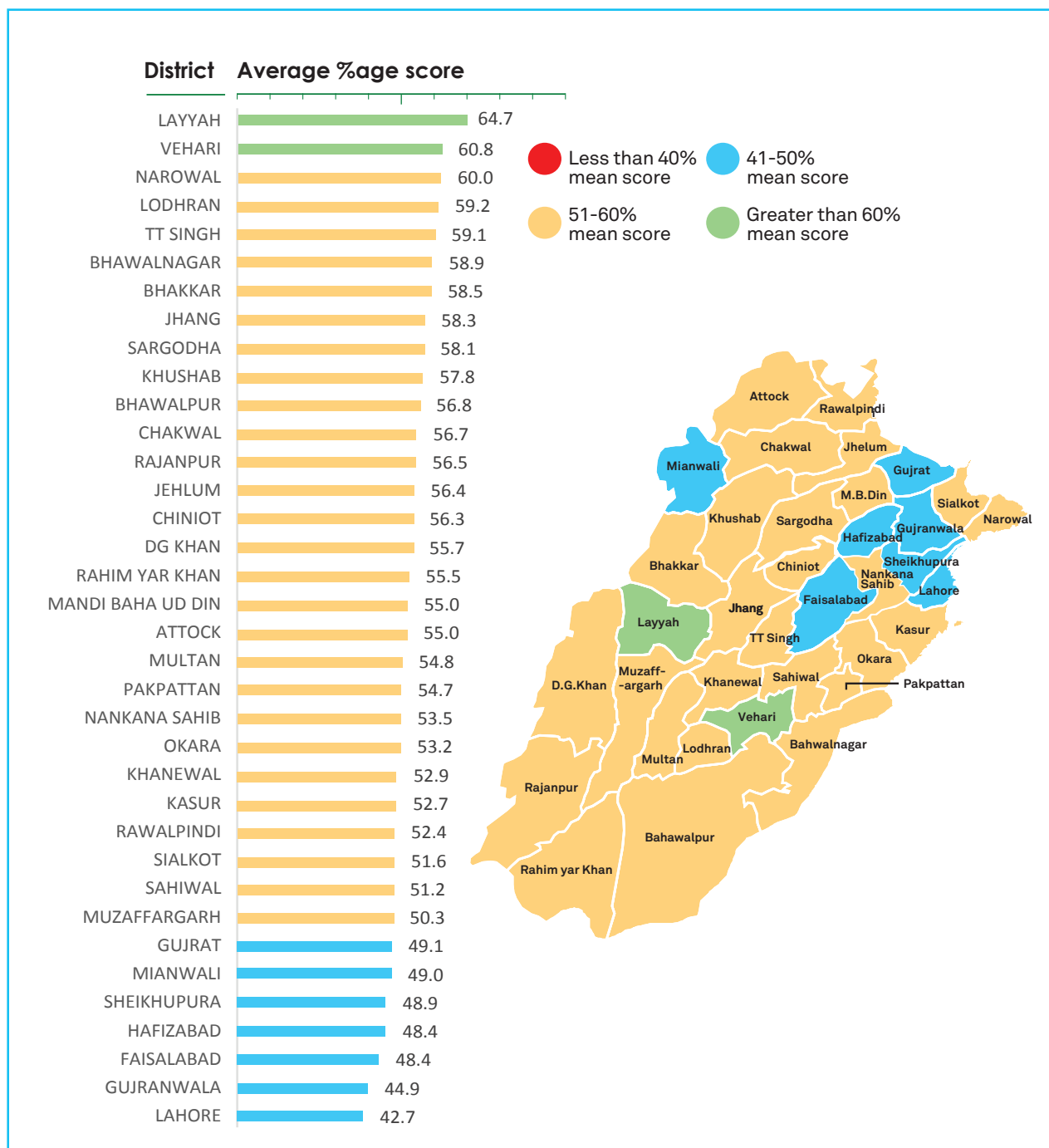


Figure 17: District-wise performance of students in Mathematics

Performance of Districts in Science

In Science, the average achievement score ranged from 58.1% in Layyah to 39.6% in Gujranwala and exceeded 50% in a total of 17 districts.

District - Wise Comparison of Student Achievement in Science (Grade 5)

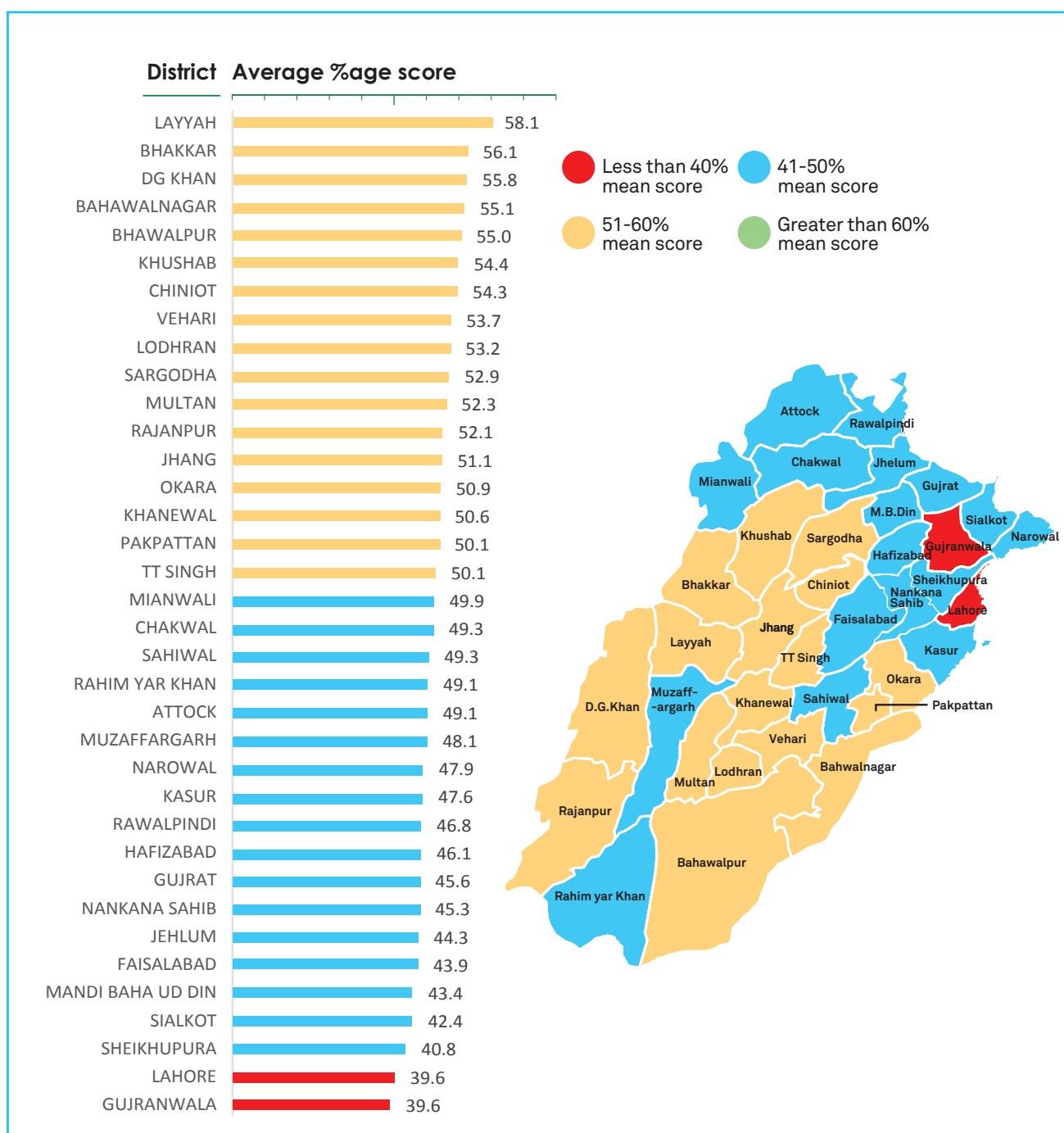


Figure 18: District-wise performance of students in Science

Performance of Districts in Islamiyat

Average percentage score for Islamiyat in all districts exceeded 50% and ranged from 74.8% in DG Khan to 58.0% in Lahore. The average percentage score in 9 districts exceeded 70%.

District - Wise Comparison of Student Achievement in Islamiyat (Grade 5)

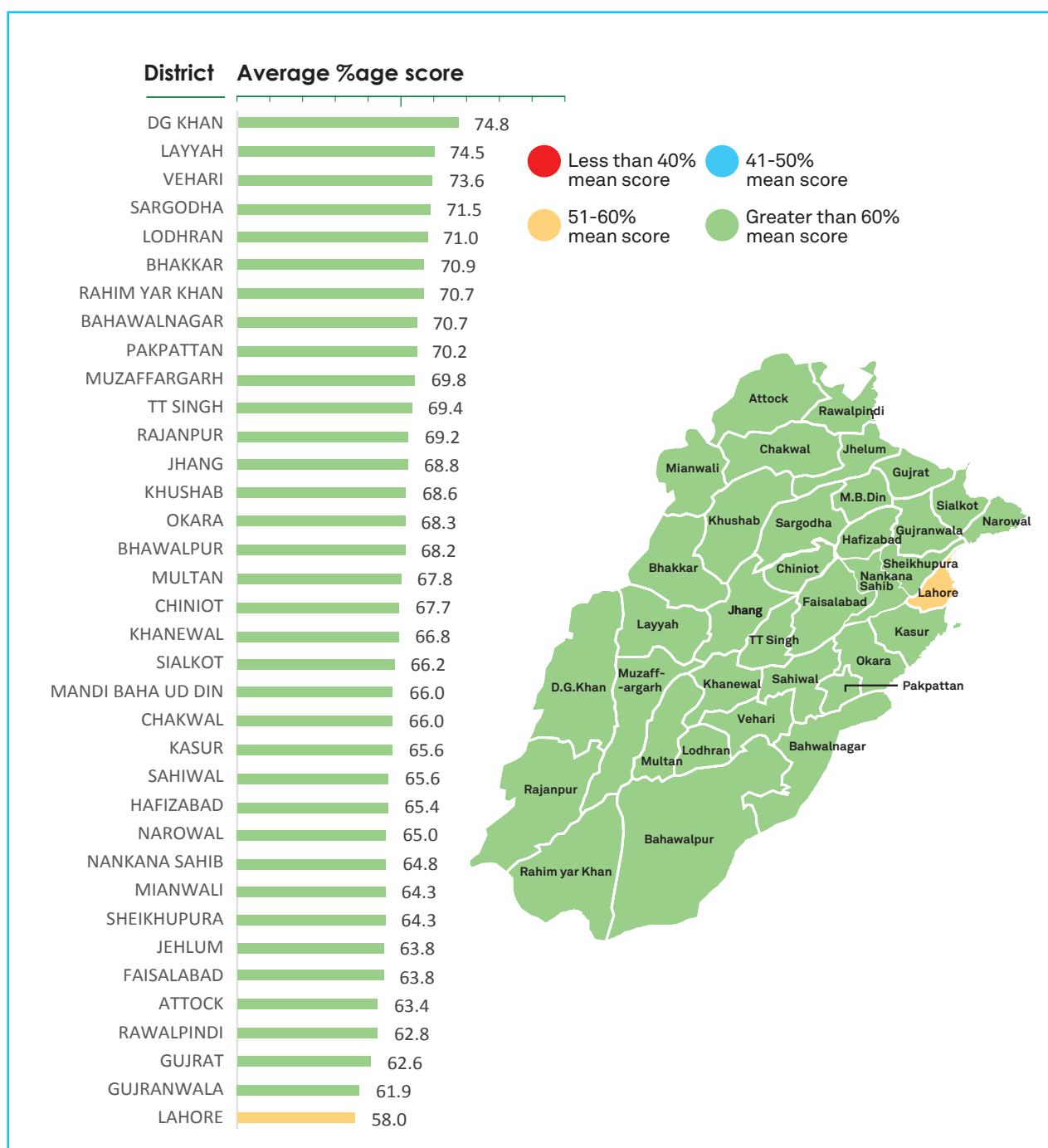


Figure 19: District-wise performance of students in Islamiyat

GRADE 8

Key Findings

- Overall, the performance of students was significantly better in the subjects of Islamiyat and Urdu as compared to that in Ethics, English, Science and Mathematics. Science and Mathematics were the lowest performing subjects in which the mean scores were below 50%.
- The performance of students was far better on MCQs than that on CRQs for all subjects.
- Girls performed slightly better than boys in all subjects except Mathematics.
- There was a minor difference between the performance of students from public schools and private schools. However, the performance of private candidates was the lowest.
- Language of exam had a relatively small effect on students' performance in the subjects of Islamiyat, Science and Mathematics.

PERFORMANCE BY SUBJECT

Mean scores by subject are shown in Figure 20.

Subject-Wise Performance of Students

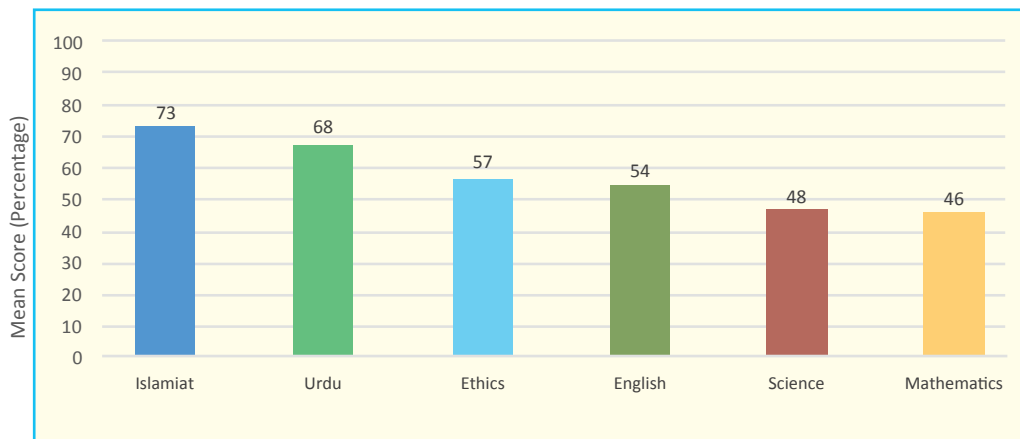
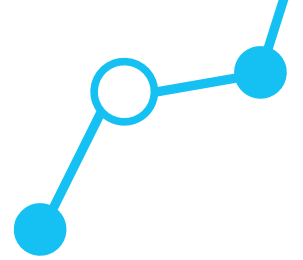


Figure 20: Subject-wise performance of students in Grade 8

The performance of students in the subjects of Islamiyat and Urdu was the highest whereas in the subject of Mathematics it was the lowest. Mean scores exceeded 50% for all subjects except Science and Mathematics as shown in Figure 20.



Subject-Wise Performance of Students

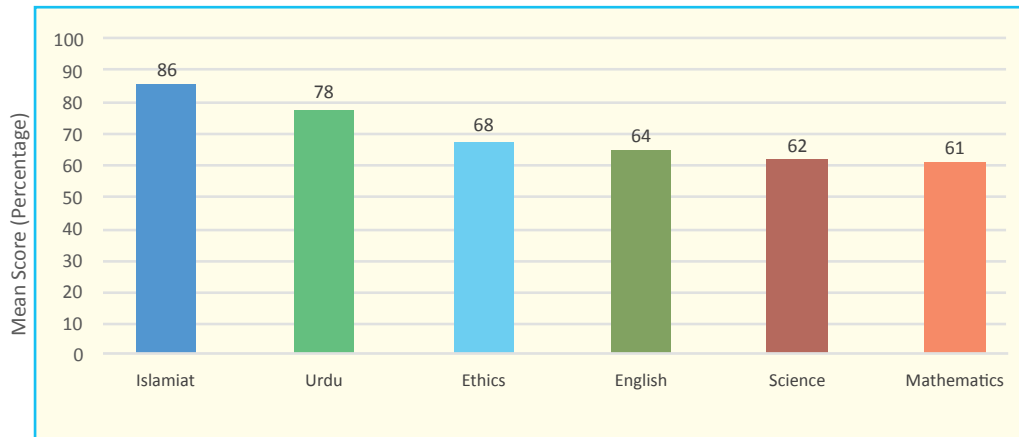


Figure 21: Performance of students on MCQs in Grade 8

Subject-wise Performance of Students on CRQs

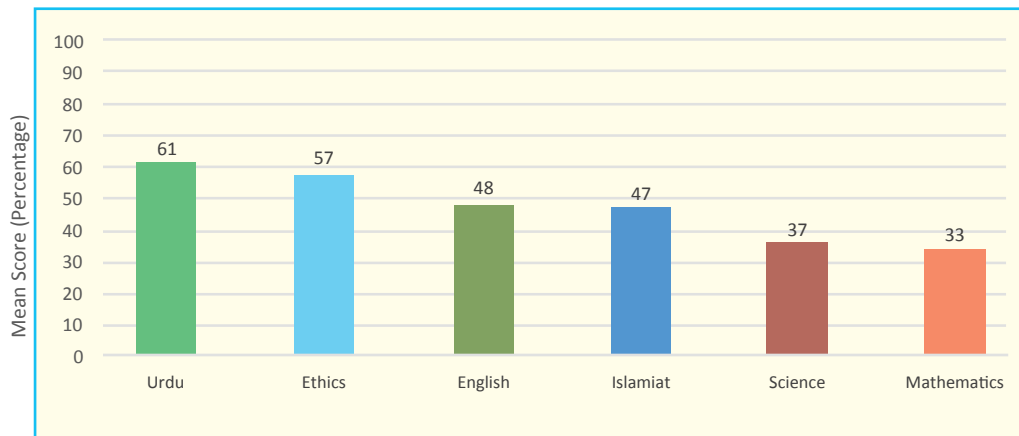


Figure 22: Performance of students on CRQs in Grade 8

Figures 21 and 22 represent significant differences in students' achievement on both exam sections i.e. MCQs and CRQs respectively. Students performed better on MCQs, scoring above 60% in all subjects as compared to their respective CRQ scores. Performance on MCQ section in both Islamiat and Urdu averaged above 75%, while that in Ethics, English, Science and Mathematics averaged above 60%. The performance on CRQ section, on average, was significantly lower in Science and Mathematics as compared to other subjects.

Performance by Paper Version

Performance of students across different paper versions was similar as shown in Figure 23. This data suggests that exam difficulty was consistent across different versions ensuring that exam performance was not affected by the version of paper received by students.

Performance of Students by Version of Paper

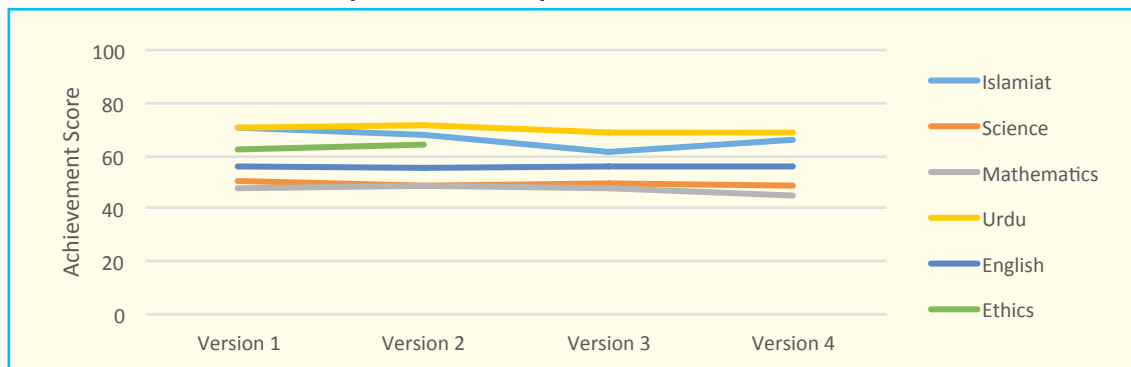


Figure 23: Performance of students by version of paper in Grade 8

PERFORMANCE BY GENDER

Students Mean Achievement Score on MCQs and CRQs

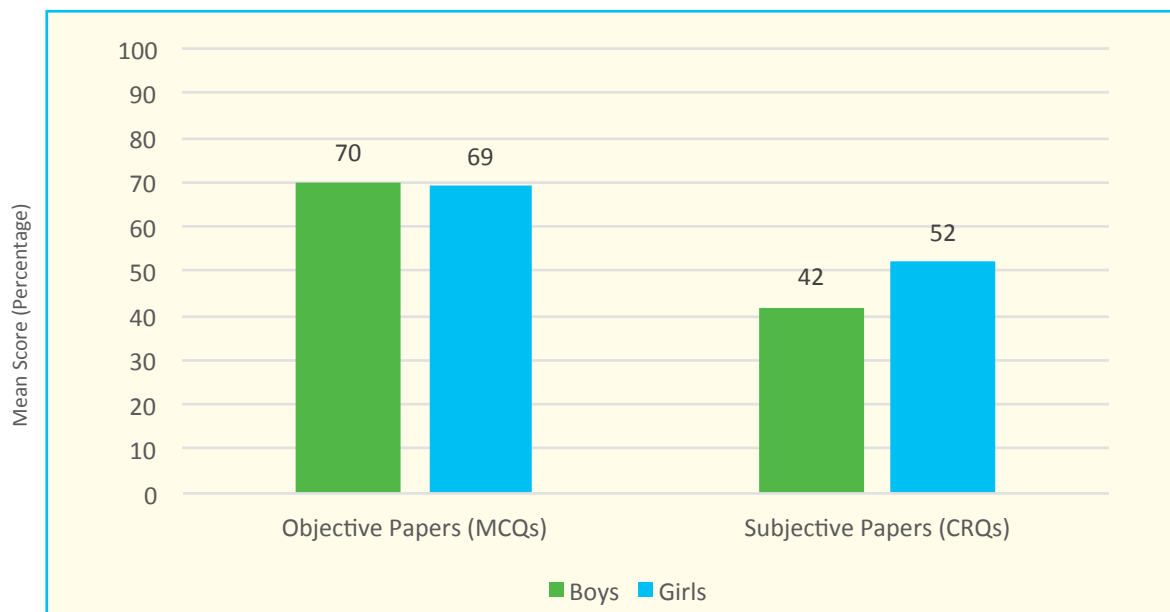


Figure 24: Performance of students by gender on MCQs and CRQs in Grade 8

Figure 24 shows that girls performed better on CRQs as compared to boys while there was a slight difference in their performance on MCQs.



Subject-wise Comparison of Boys and Girls Scores on MCQs

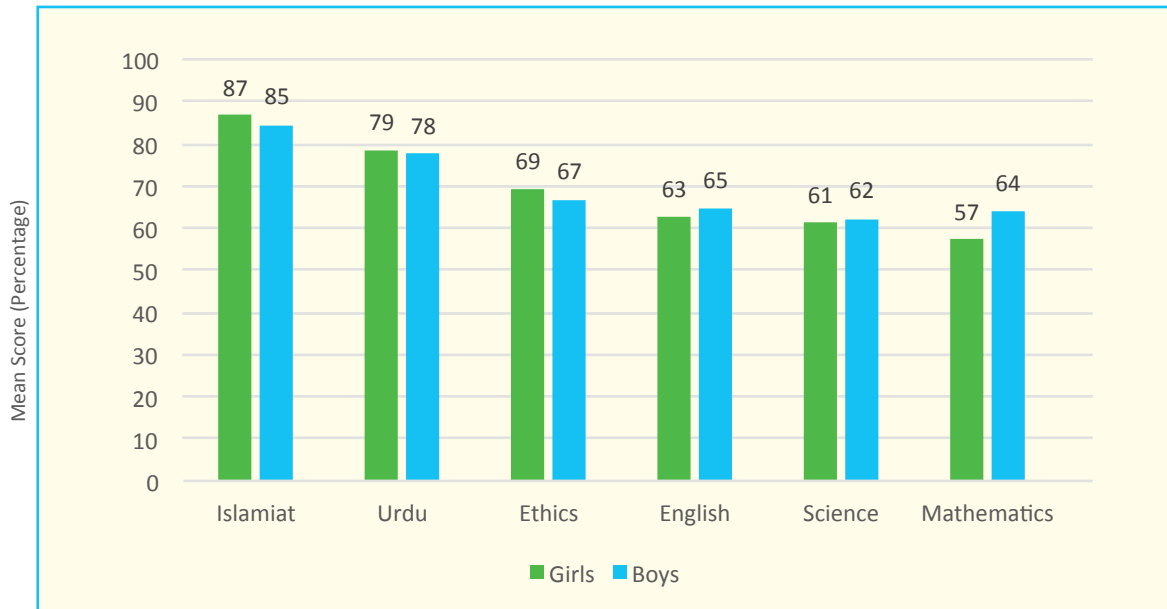


Figure 25: Subject-wise performance by gender on MCQs in Grade 8

On MCQs, girls performed slightly better than boys in all subjects except English and Science. However, boys outperformed girls in Mathematics.

Subject-wise Comparison of Boys and Girls Scores on CRQs

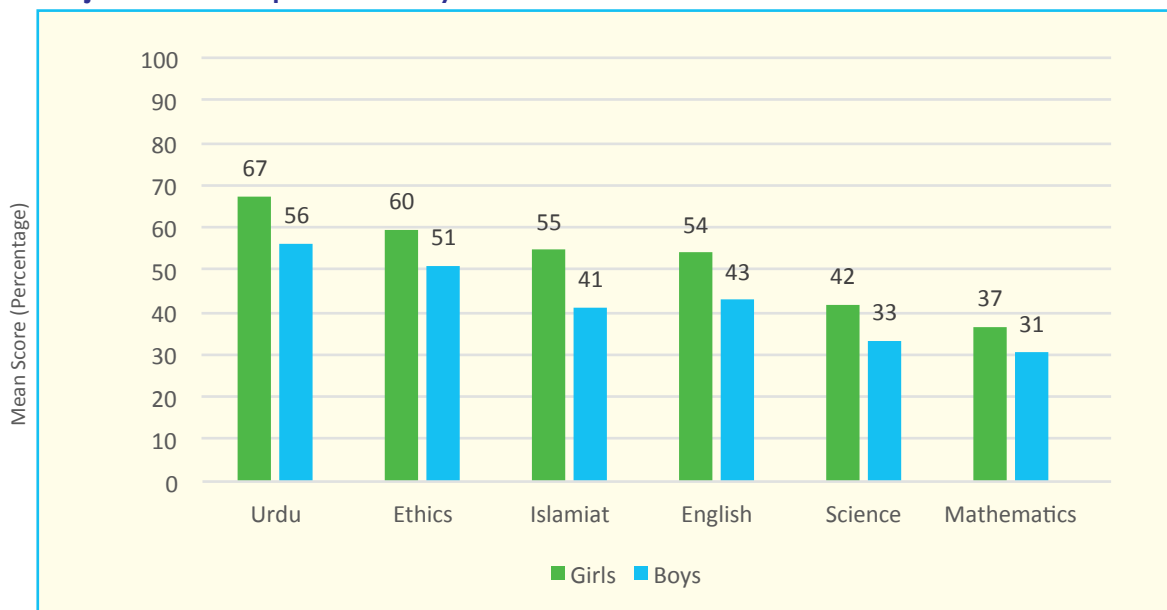


Figure 26: Subject-wise performance of students by gender on CRQs in Grade 8

Figure 26 shows that girls performed significantly better than boys on CRQs in all subjects.

Overall Subject-Wise Comparison of Mean Achievement Scores of Boys and Girls

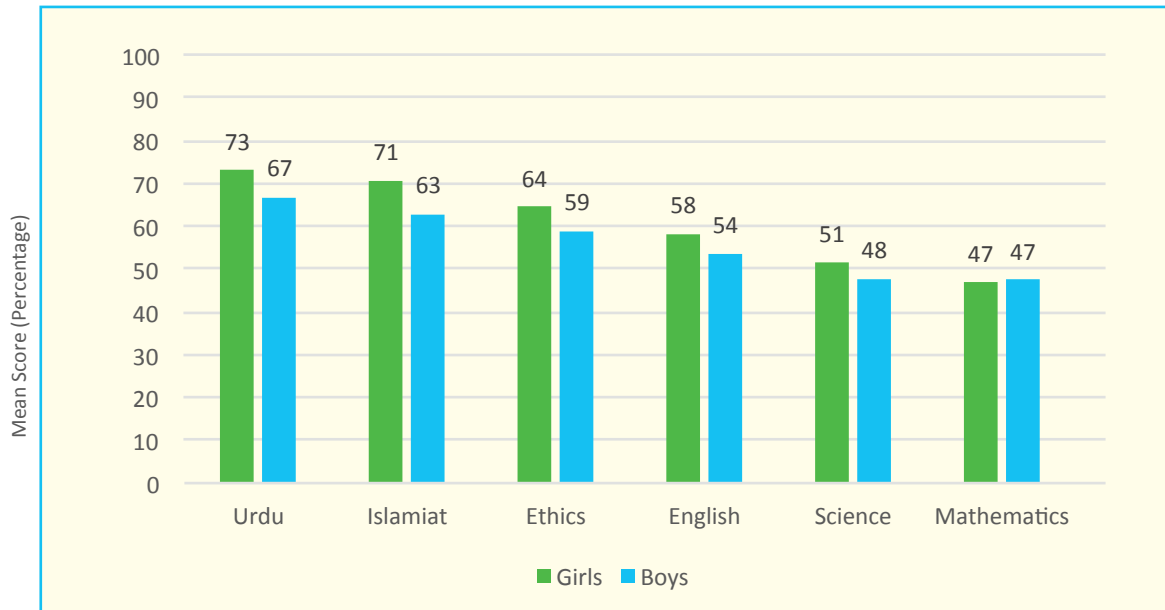


Figure 27: Overall subject-wise performance of students by gender in Grade 8

In terms of overall exam score, girls and boys performed similarly in Mathematics. However, girls outperformed boys in all remaining subjects as shown in Figure 27.

PERFORMANCE BY SCHOOL TYPE

Subject-Wise Comparison of Achievement of Public School, Private School and Private Registered Students

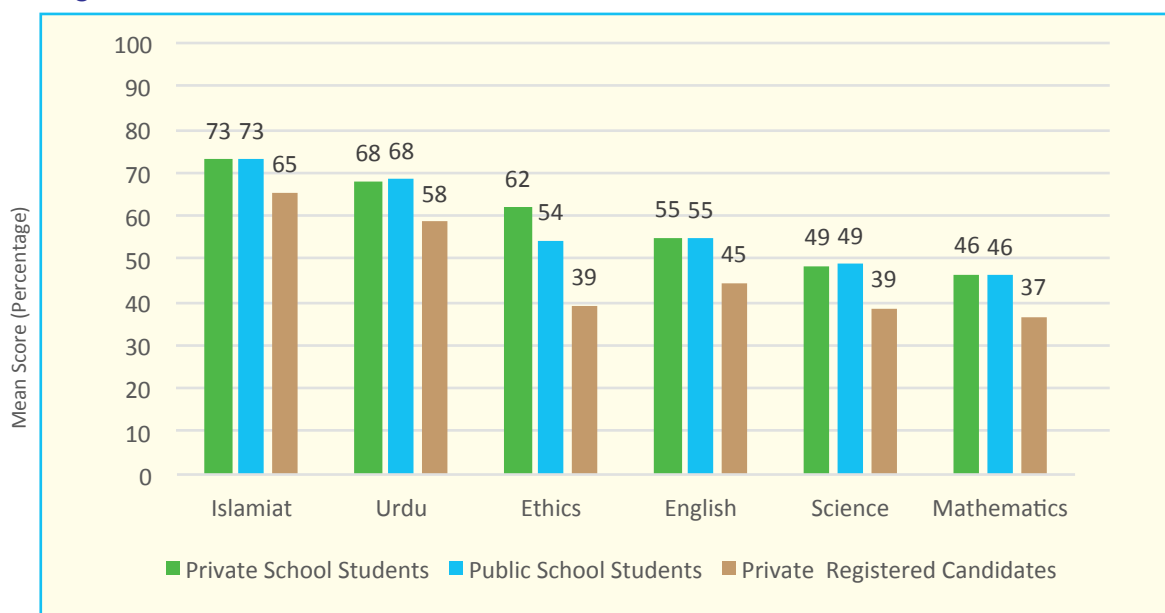


Figure 28: Performance of students by type of candidate in Grade 8

Figure 28 shows that there was no significant difference in the mean achievement score between public school and private school students. However, the mean achievement score of private candidates was the lowest in all subjects.

Gender-wise Comparison of Mean Achievement Score of Public School, Private School and Private Registered Students

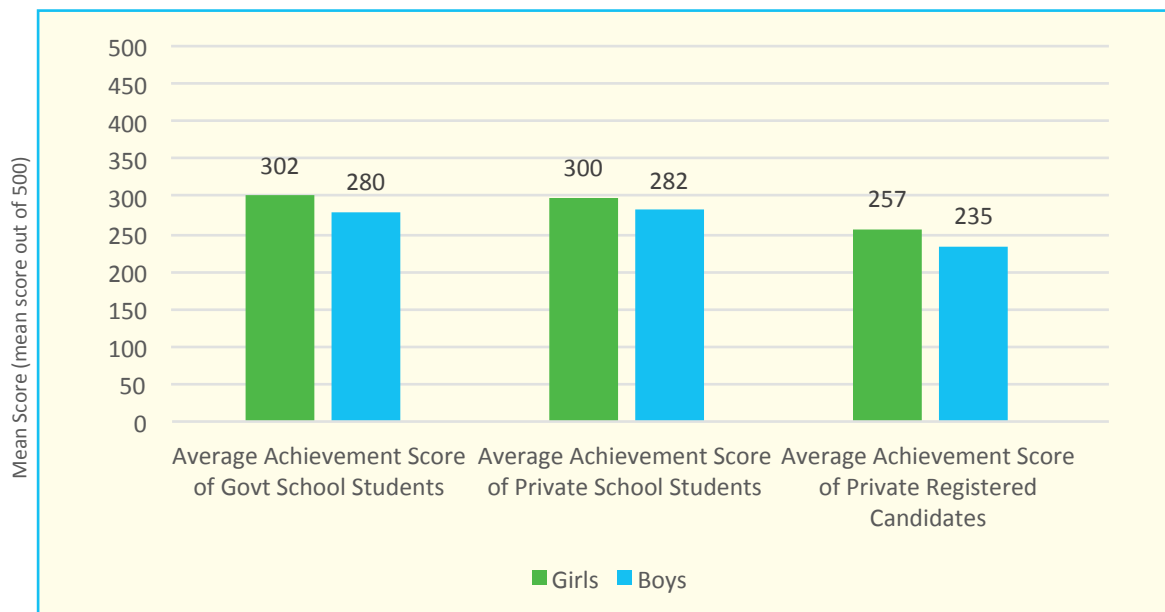


Figure 29: Performance of students by gender and type of candidate

Figure 29 shows that girls performed better than boys irrespective of school/candidate type. The type of school (public or private) did not significantly affect the performance of boys and girls on the Grade 8 exam.

Overall Performance of Public School, Private School and Private Registered Candidates

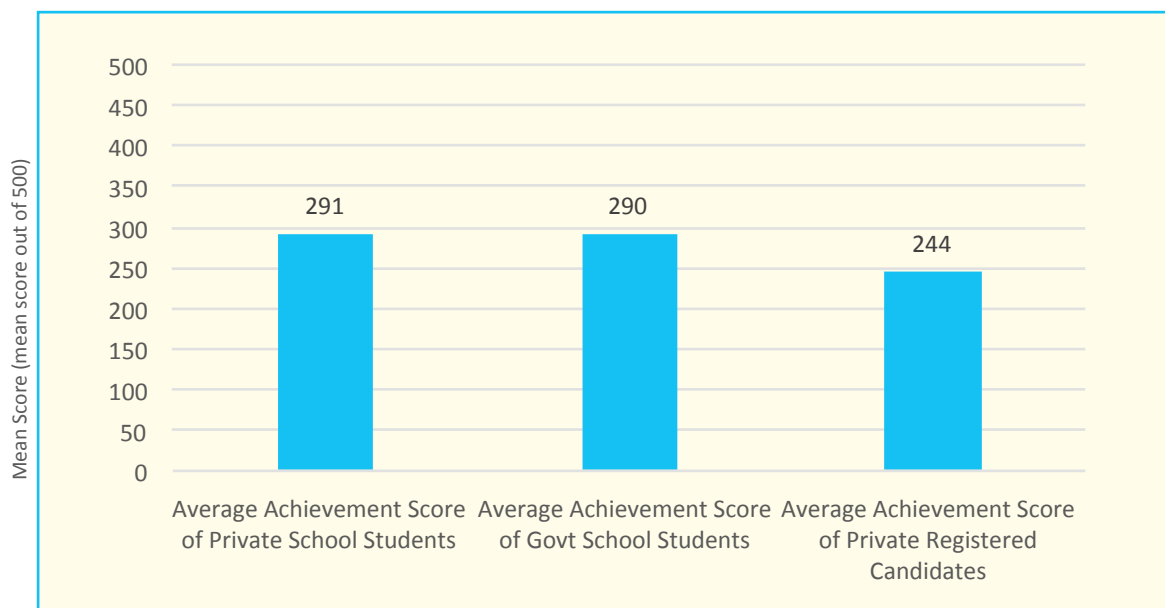


Figure 30: Overall performance of students by school/candidate type



Figure 30 represents the average achievement scores on PEC exams by school/candidate type. The figure shows that there was a relatively small difference in the average scores between private school students and public school students. However, the performance of private registered students was the lowest.

Performance by Language of Exam

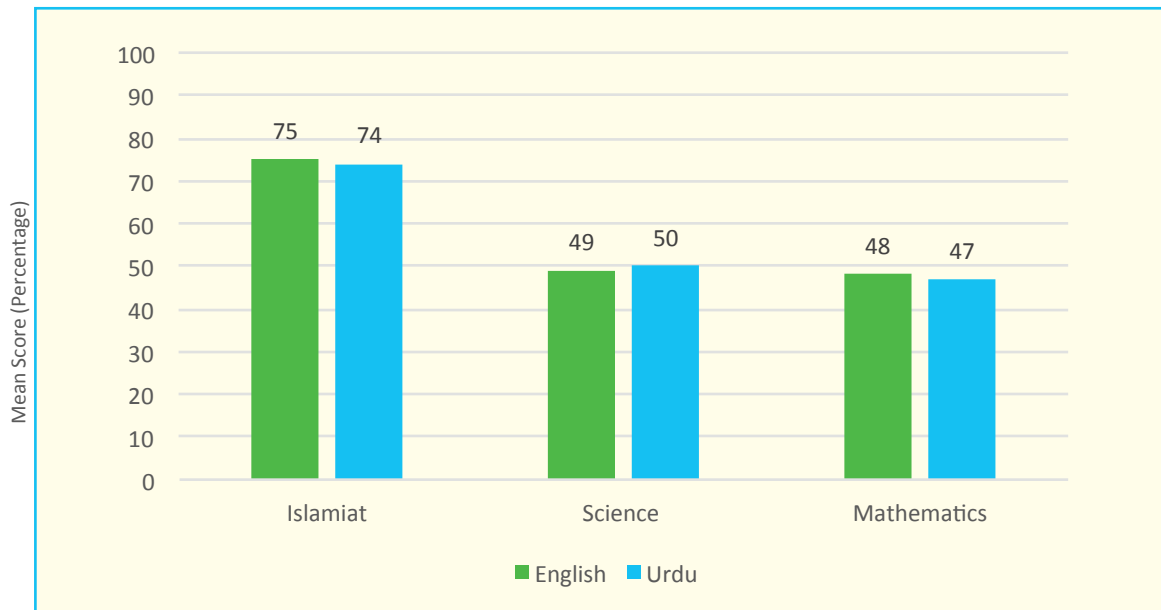


Figure 31: Performance of students by language of exam in Grade 8

Figure 31 shows that language of exam had a minor effect on students' performance in the subjects of Islamiyat, Science and Mathematics.



DISTRIBUTION CURVES

The distribution curves present the population based analysis for student performance in all subjects of Grade 8. These curves show approximately normal distributions. In Islamiat and Urdu, a majority of students scored between 60% and 90%.

Distribution Curves - Grade 8

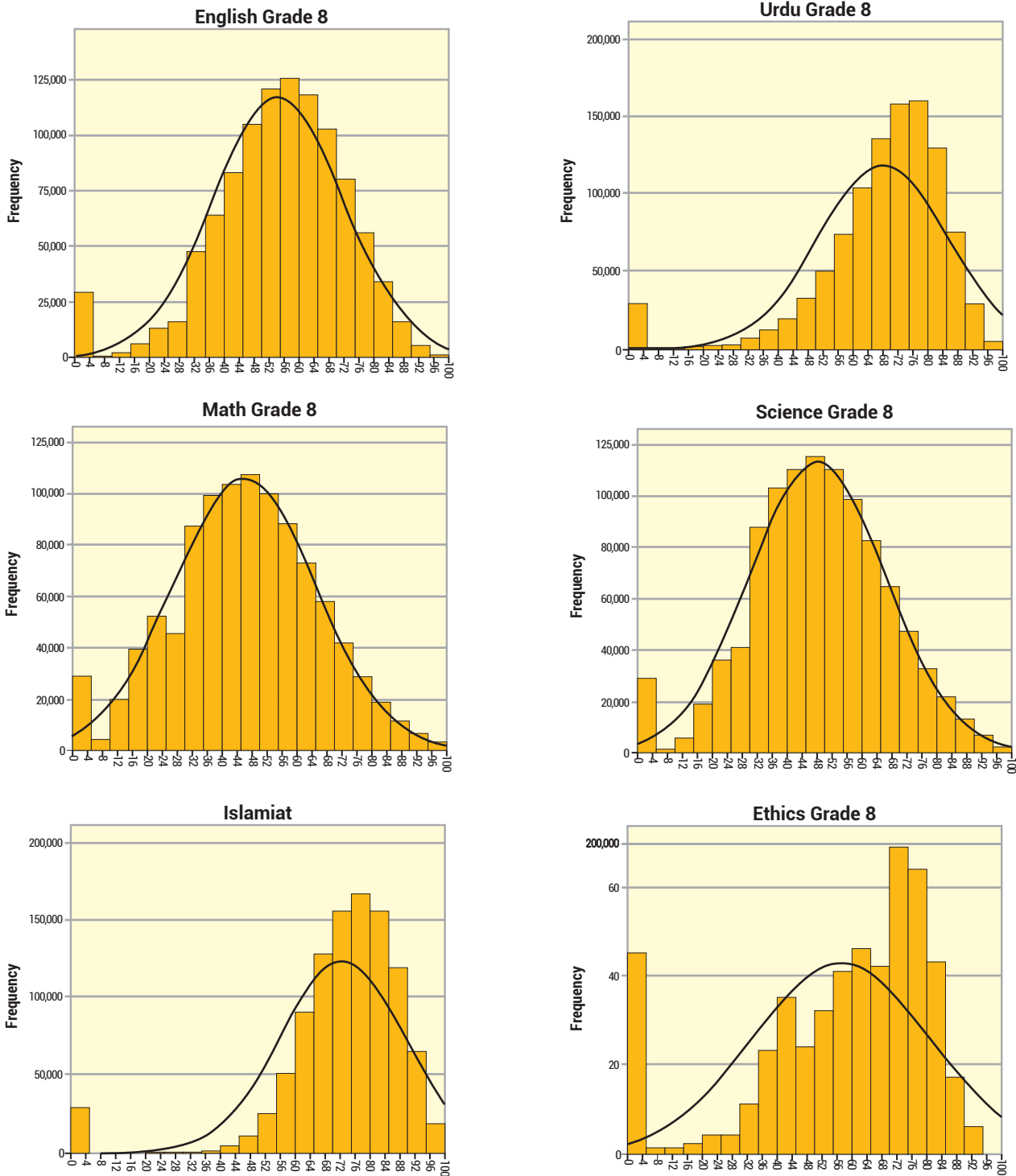


Figure 32: Distribution curves for all subjects of Grade 8

STUDENT PERFORMANCE BY DISTRICT

Overall Performance of Districts

Overall, Layyah ranked first in all subjects except English. Muzaffargarh, Lahore, Rawalpindi, Gujranwala, Kasur and Sheikhupura ranked in the bottom quartile for most subjects.

District - Wise Comparison of Student Overall Achievement (Grade 8)

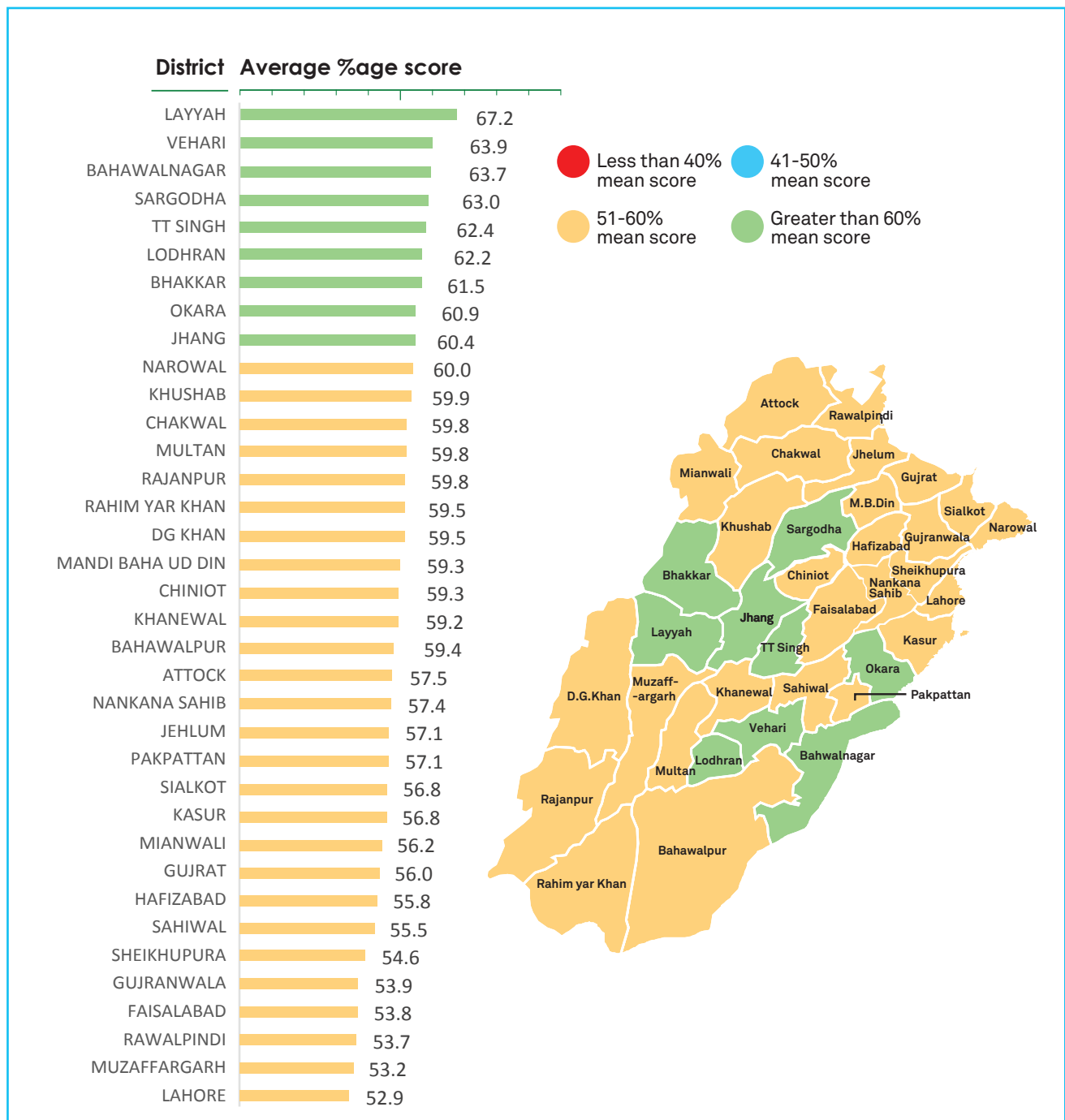


Figure 33: Overall district-wise performance of students

Performance of Districts in English

In English, mean scores for all districts remained above 50% with the exception of Gujrat and Muzaffargarh where the average scores were 49.2% and 45.1% respectively

District - Wise Comparison of Student Achievement in English (Grade 8)

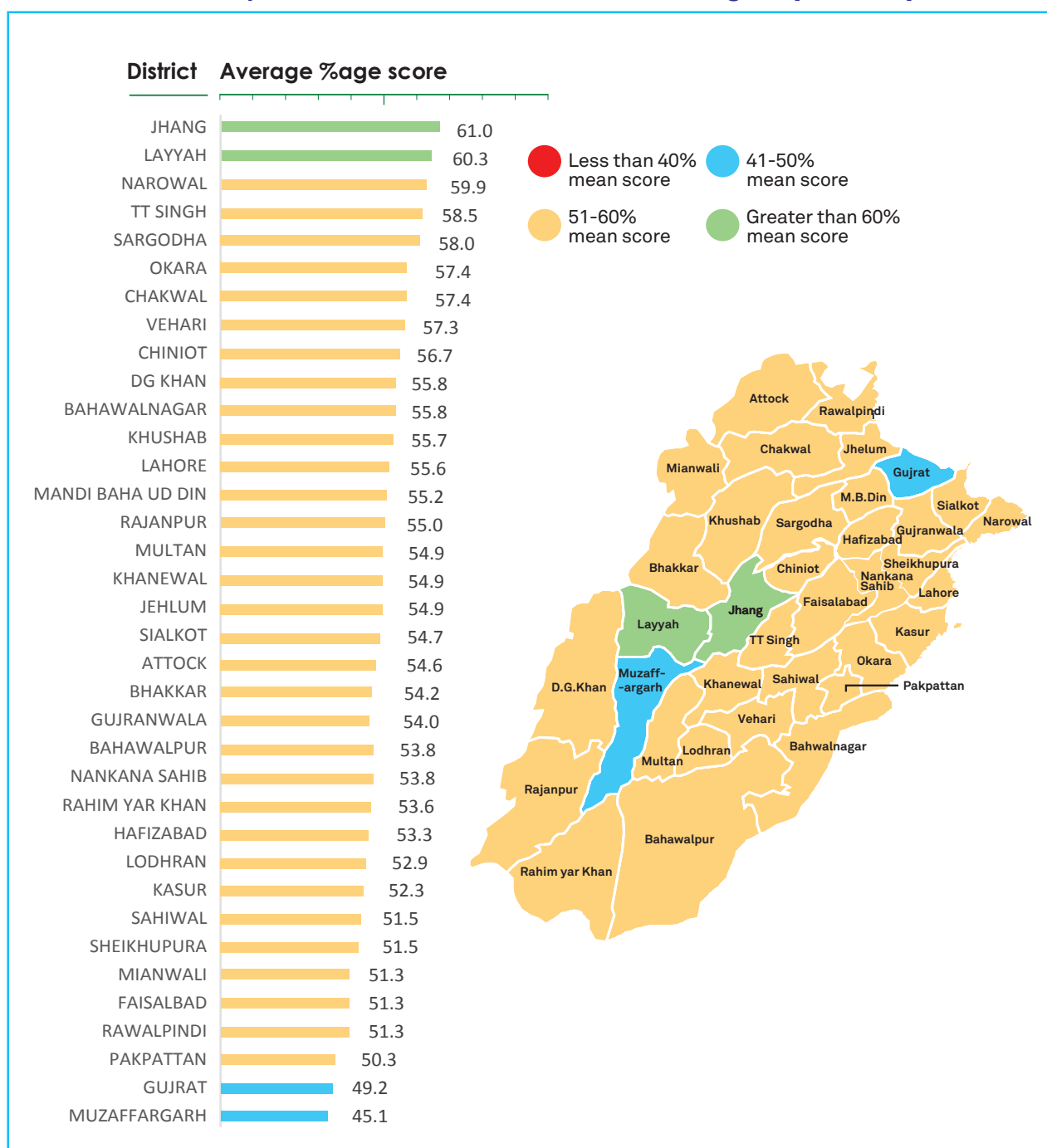


Figure 34: District-wise performance of students in English

Performance of Districts in Urdu

On average, the performance in the subject of Urdu was well above 60% with 10 districts averaging higher than 70%.

District - Wise Comparison of Student Achievement in Urdu (Grade 8)

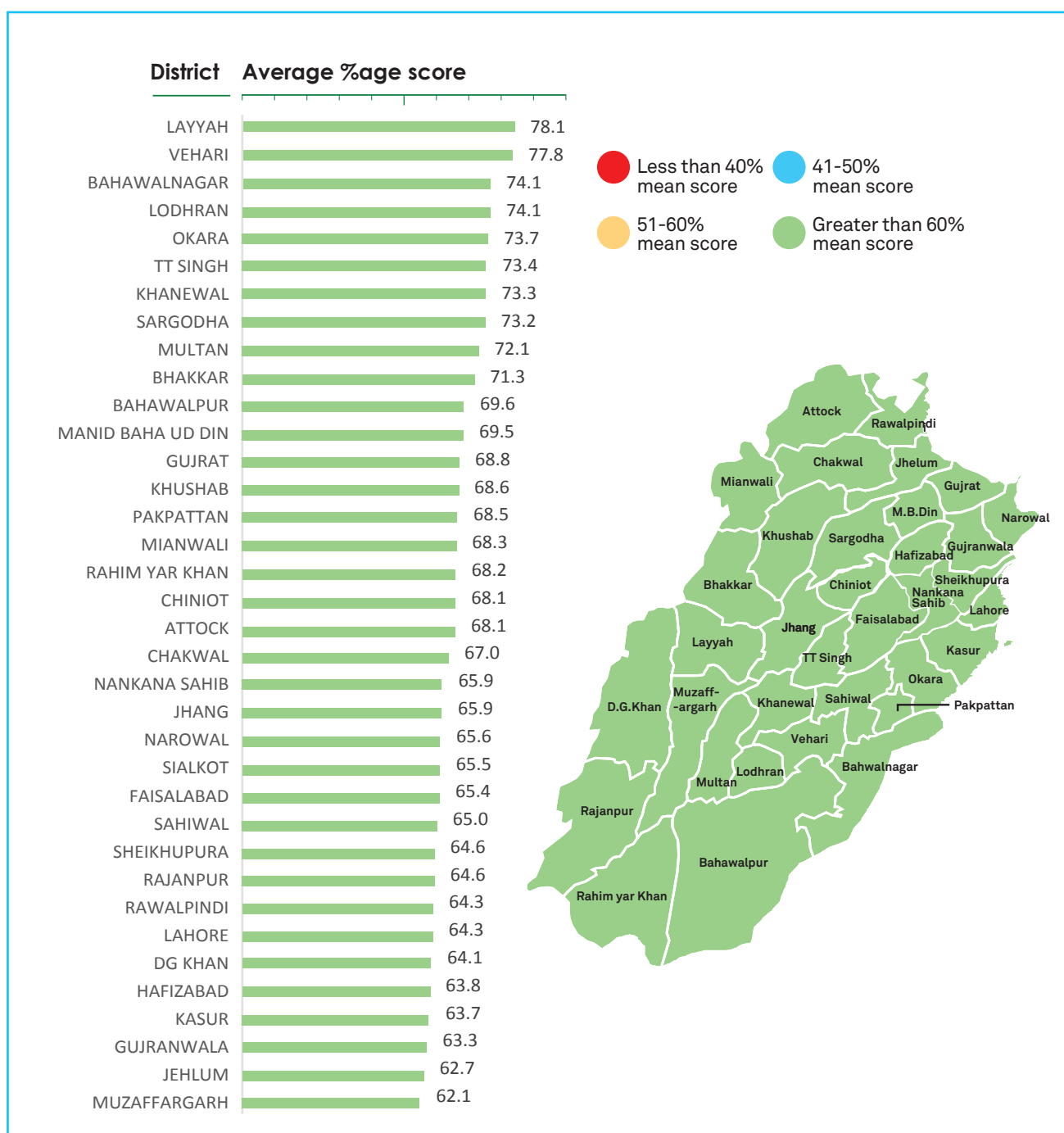


Figure 35: District-wise performance of students in Urdu

Performance of Districts in Mathematics

In Mathematics, Layyah was the top performing district with an average score of 57.8% while the two lowest performing districts, Faisalabad and Lahore, scored less than 40%. The overall average score for all districts ranged from 37.7% to 57.8%, with 10 districts scoring above 50%.

District – Wise Comparison of Student Achievement in Mathematics (Grade 8)

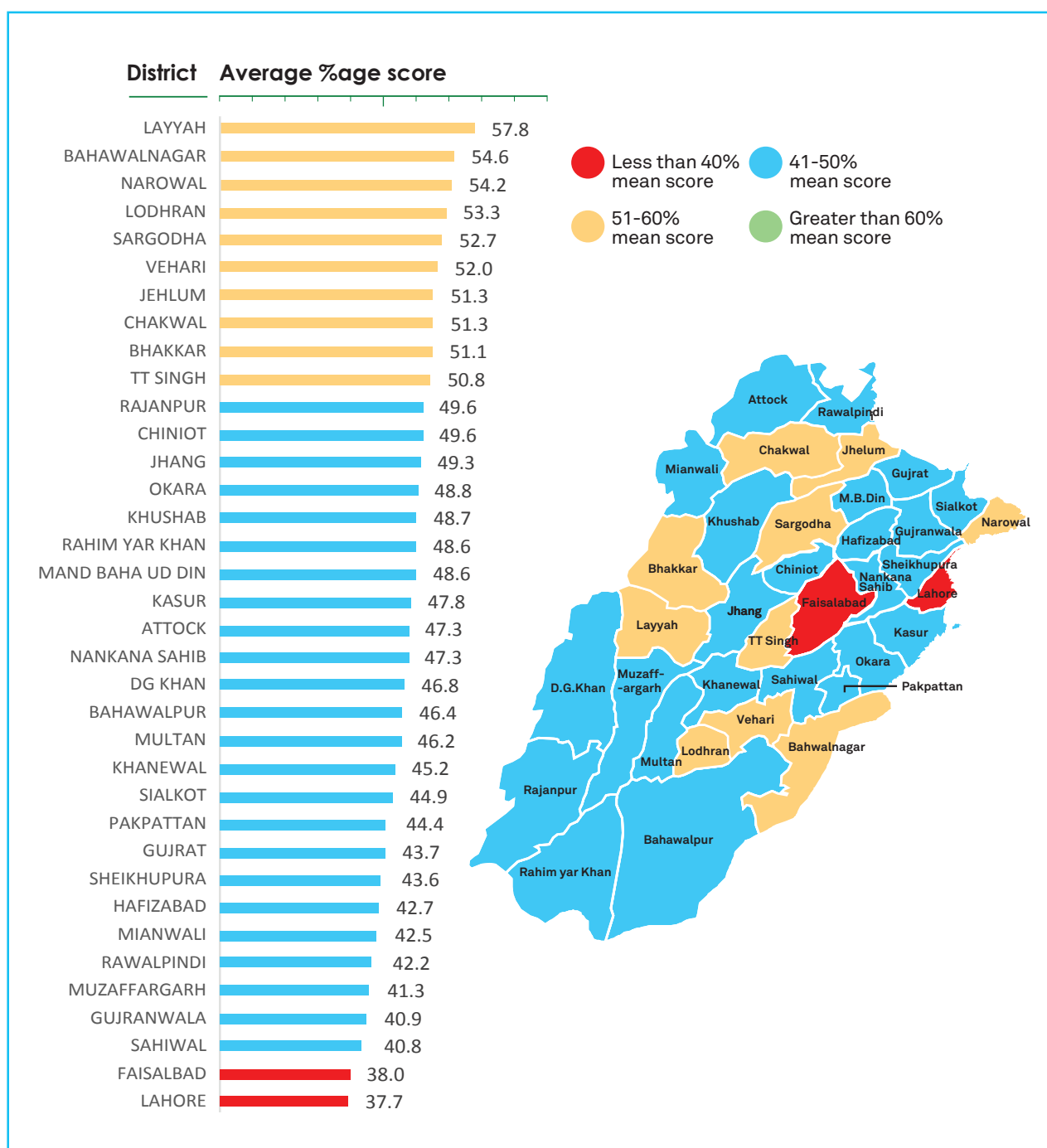


Figure 36: District-wise performance of students in Mathematics

Performance of Districts in Science

In Science, 17 districts scored above 50% while the remaining districts scored between 40% and 50%. Layyah, Bahawalnagar and Bhakkar showed the highest performance whereas Lahore and Gujranwala were the lowest performing districts.

District - Wise Comparison of Student Achievement in Science (Grade 8)

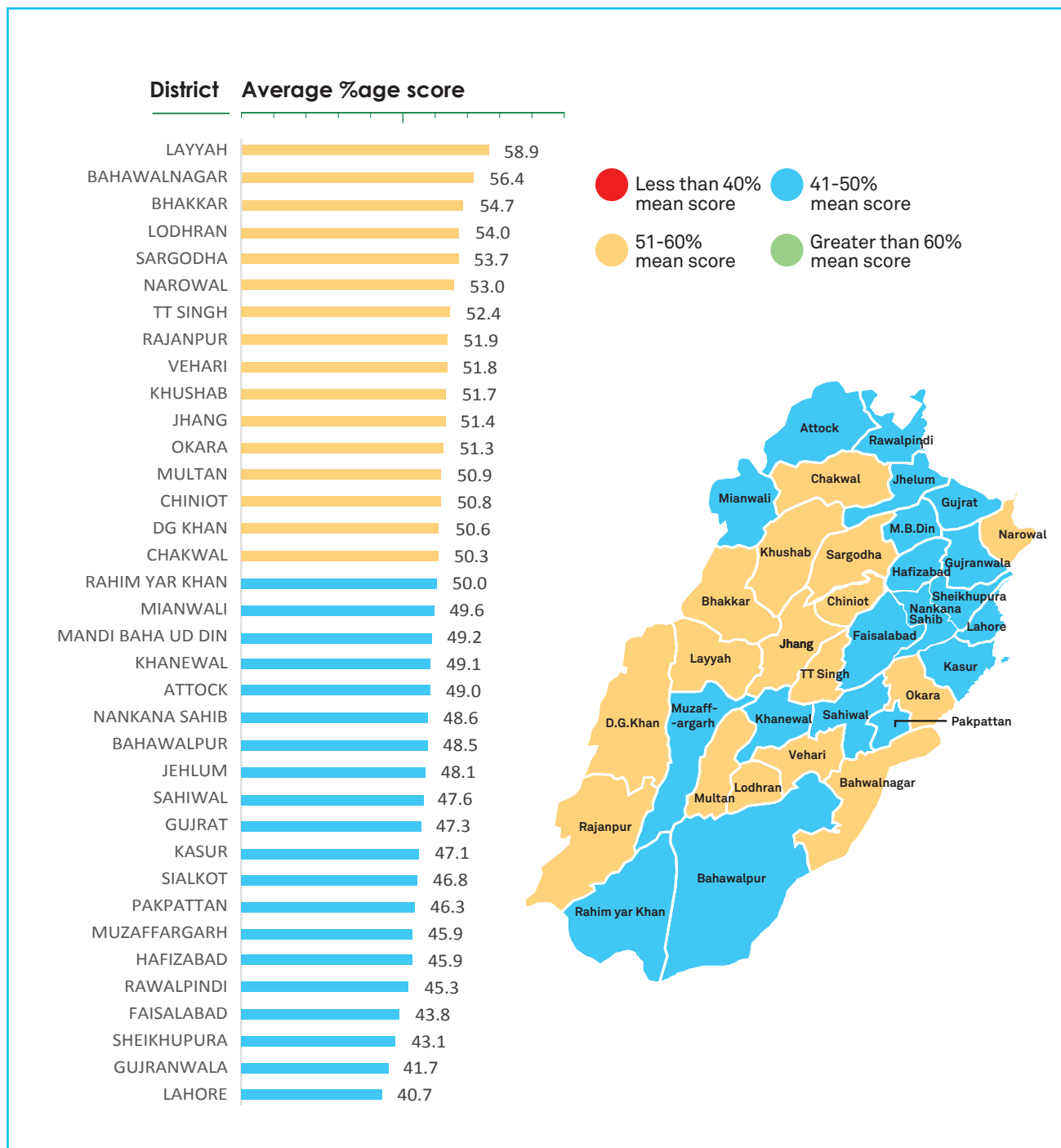


Figure 37: District-wise performance of students in Science

Performance of Districts in Islamiat

In Islamiat, the performance of students in all districts was considerably better than that in other subjects. The average scores ranged from 80.6% in Layyah to 65.2% in Rawalpindi. A total of 29 districts scored above 70%.

District - Wise Comparison of Student Achievement in Islamiat (Grade 8)

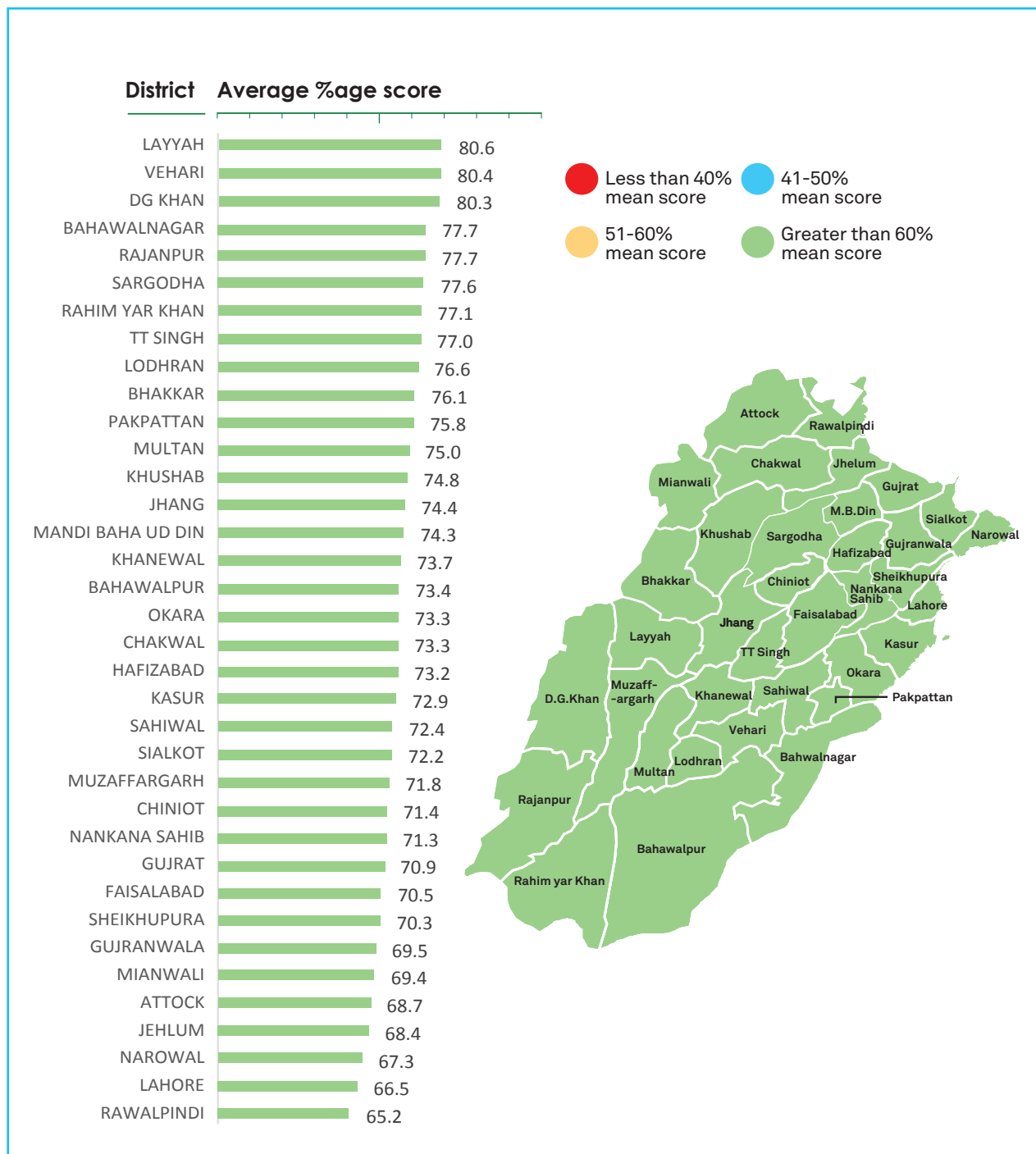
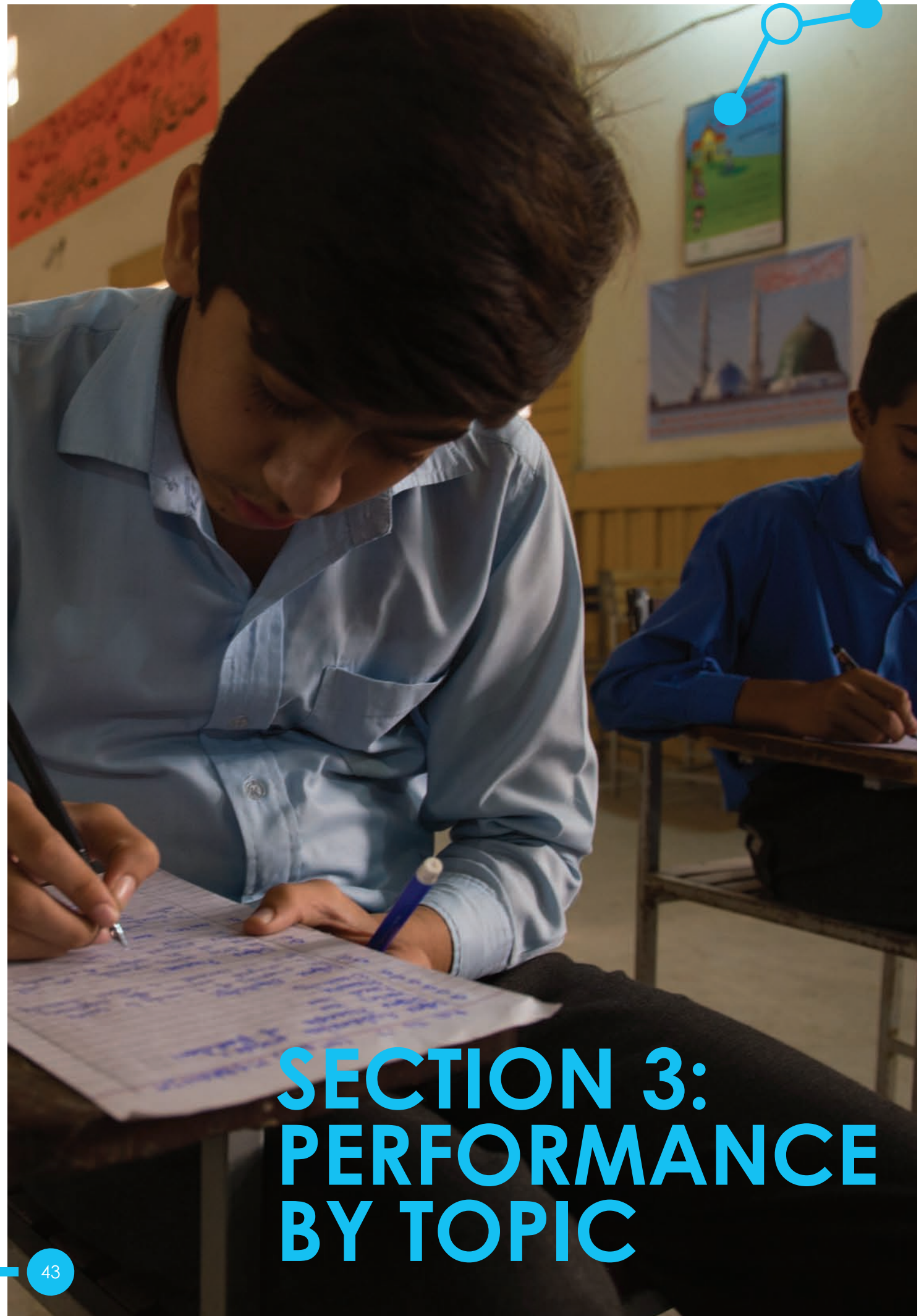


Figure 38: District-wise performance of students in Islamiat



SECTION 3: PERFORMANCE BY TOPIC



GRADE 5

Mathematics Grade 5

Students performed well on topics involving computation (Numbers & Arithmetic, Decimals & Percentages, Highest Common Factor and Least Common Multiple) as well as the presentation and understanding of data (Information Handling). In comparison, topics involving application (Unitary Method, Perimeter & Area, Distance, Time & Temperature) were poorly attempted.

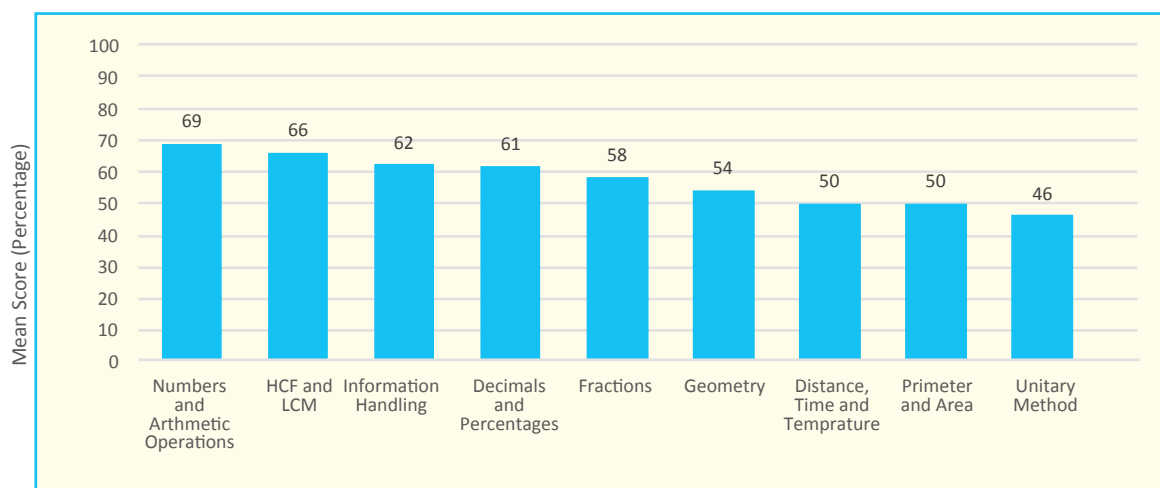
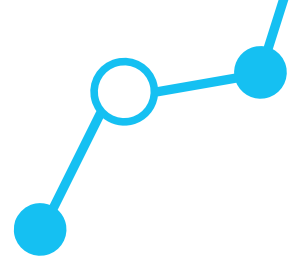


Figure 39: Topic-wise student performance in Mathematics (Grade 5)



English Grade 5

Figure 40 shows that students performed far better in areas of lexical aspects of language and oral communication as compared to writing skills.

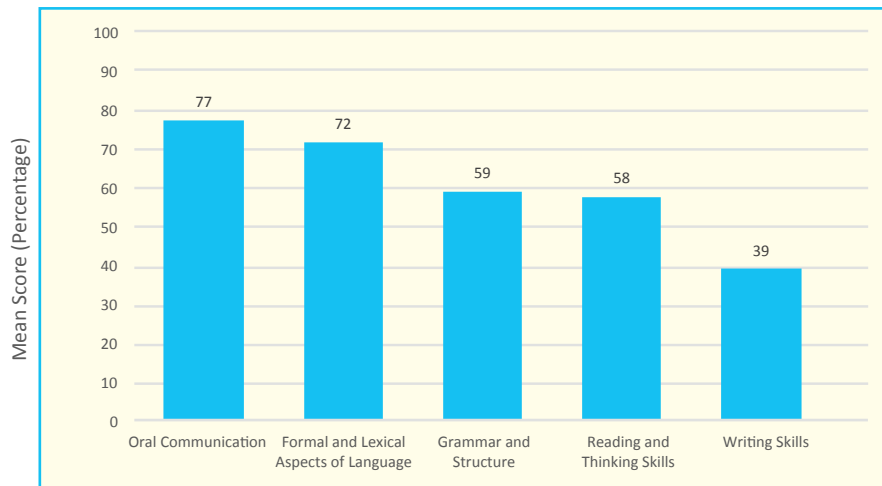


Figure 40: Topic-wise student performance in English (Grade 5)



Science Grade 5

In general, topics from the life sciences (Dengue, Microorganisms) and physical sciences (Light, Forces & Machines, Electricity & Magnetism) were attempted better than those from chemical sciences (Matter & Changes in States, Soils).

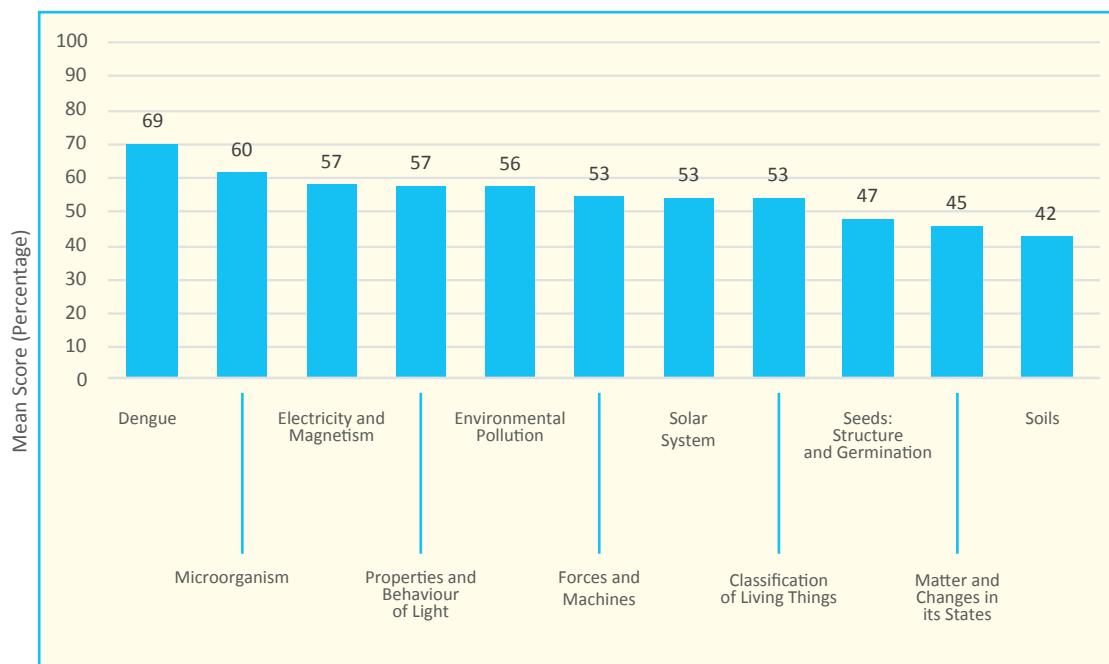


Figure 41: Topic-wise student performance in Science (Grade 5)

Islamiat Grade 5

Students showed a solid understanding of topics pertaining to aspects of faith commonly observed in daily practice. Questions on Heroes of Islam, on the other hand, proved challenging as indicated by an average score of below 50% for this topic.

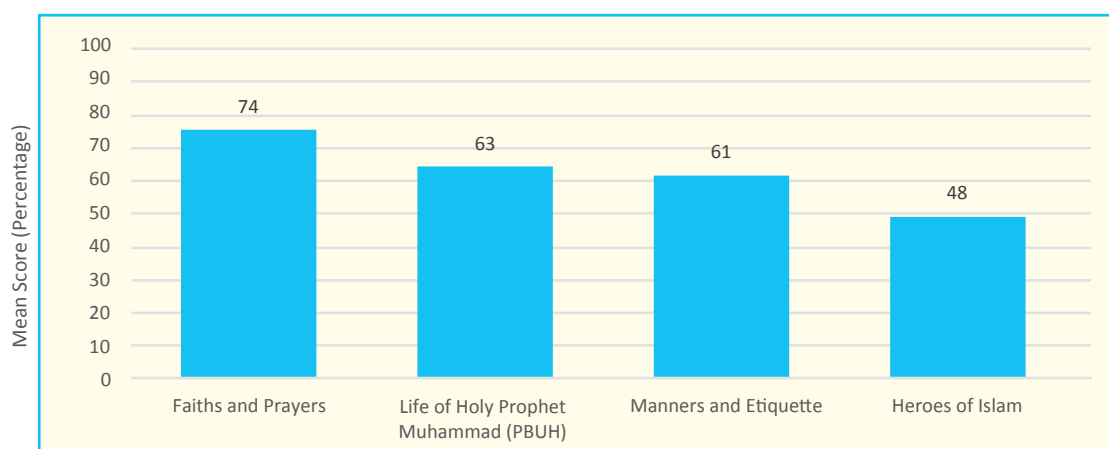


Figure 42: Topic-wise student performance in Islamiat (Grade 5)



Urdu Grade 5

In Urdu, students performed better on questions involving reading skills as compared to those requiring writing skills. The low average score of below 40% in creative writing shows the difficulty students encountered in this area.

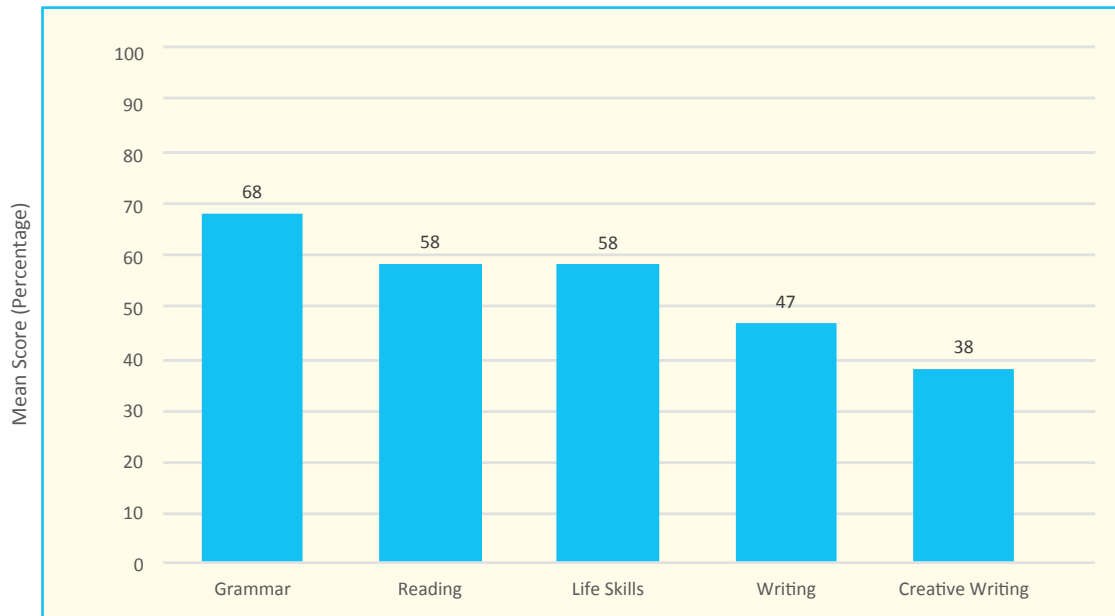


Figure 43: Topic-wise student performance in Urdu (Grade 5)



GRADE 8

Mathematics Grade 8

Students performed well on topics involving Number Systems, Real Numbers, Sets and Polynomials scoring above 60%. In comparison, the performance of students on topics such as Geometry and Information Handling was the lowest.

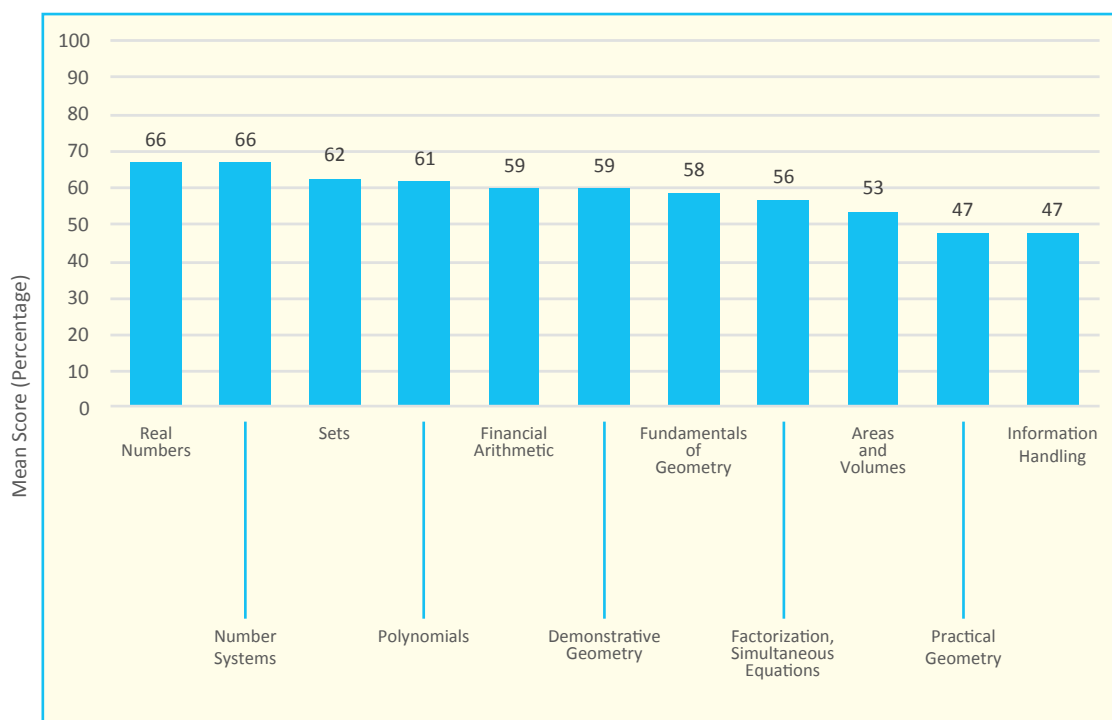


Figure 44: Topic-wise student performance in Mathematics (Grade 8)



English Grade 8

In English, students performed far better in areas of formal and lexical aspects of language as compared to writing skills. Students also showed a solid understanding of topics involving grammar and reading skills.

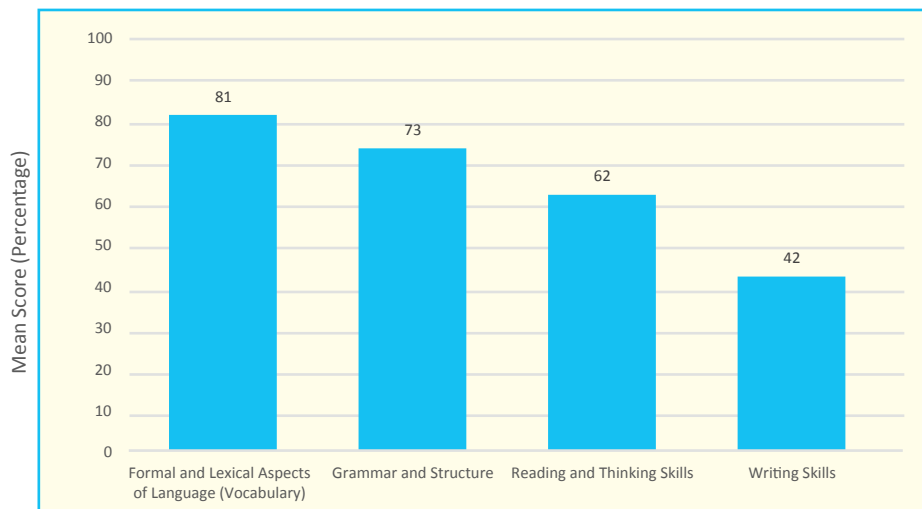


Figure 45: Topic wise performance in English (Grade 8)



Science Grade 8

Figure 46 identifies the performance trends in all the topics of Science in Grade 8 exam. The performance of students on certain topics of biological sciences like Dengue and Heredity in Organisms was better as compared to their performance on Biotechnology and Human Organ System. In physical sciences, questions on Space Science and Sources and Effects of Heat Energy were better answered than those on Electricity, Forces and Pressure, Measurement of Physical Quantities and Optics. Student performance on topics related to chemical sciences (Chemical Reactions, Acids and Salts) was on the lower side.

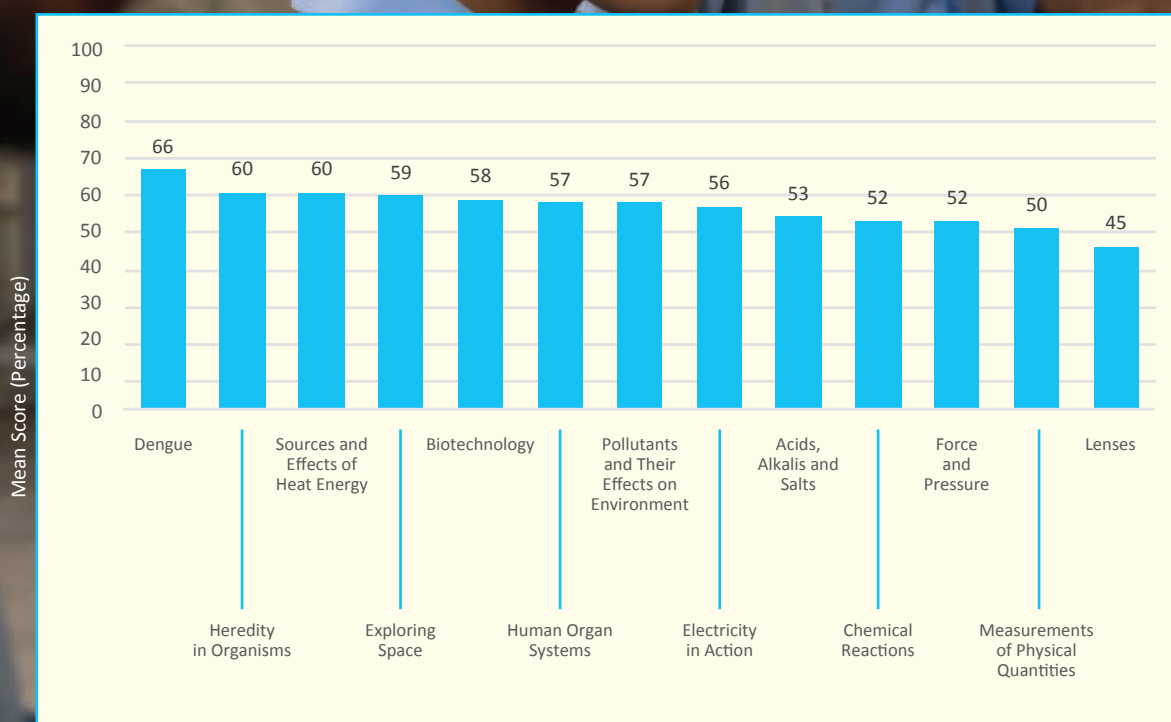
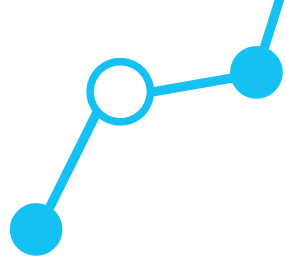


Figure 46: Topic-wise student performance in Science (Grade 8)



Islamiat Grade 8

In Islamiat, students showed solid understanding of topics such as Ethics and Manners, Faiths and Prayers and Life of Prophet Muhammad (PBUH). On the contrary, students encountered difficulty in questions on Heroes of Islam, the only topic with an average score of less than 70%.

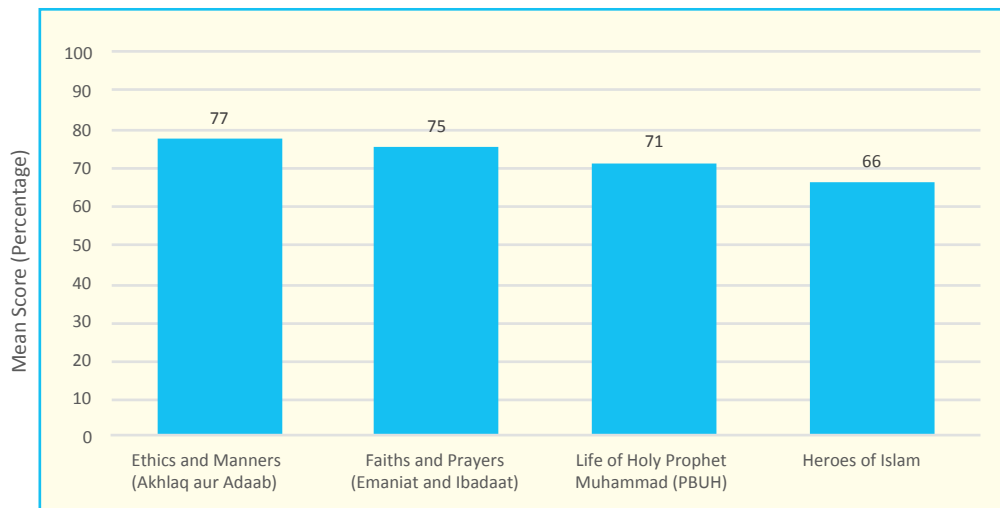


Figure 47: Topic-wise performance in Islamiat (Grade 8)

Urdu Grade 8

In Urdu, students performed far better on topics related to reading skills as compared to those requiring writing skills.

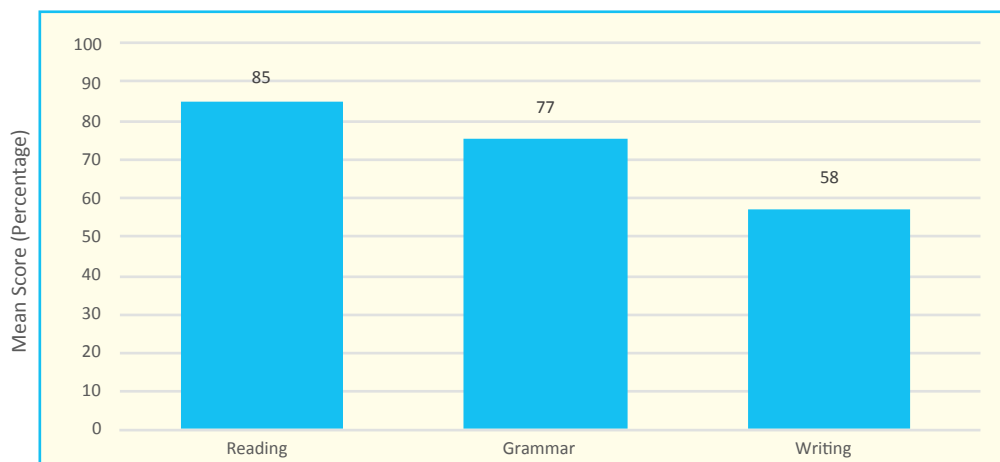


Figure 48: Topic-wise student performance in Urdu (Grade 8)

Performance of students across the Cognitive Levels

Figure 49 shows that students in both Grades 5 and 8 performed better on questions testing Knowledge and Understanding compared to questions based on Application, Analysis and Synthesis. Overall, Grade 8 students outperformed Grade 5 students across all cognitive levels.

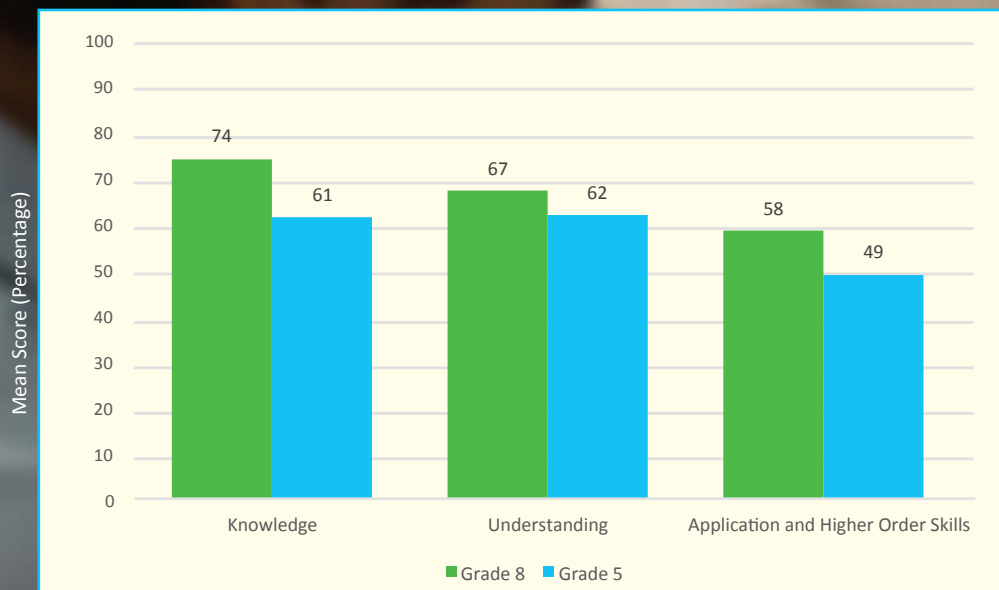


Figure 49: Performance of students across Cognitive Levels

KEY FINDINGS AND RECOMMENDATIONS



Sr. #	Finding	Recommendation
1.	Students of Grade 5 performed best in Islamiat and their performance was lowest in the subjects of Science and English.	Resources such as teacher guides, science kits, audio visual aids need to be provided and effectively utilized in classrooms, since learning in science benefits from activity-based instruction. Teachers should be trained in SLO-based and activity-based teaching techniques.
2.	Students of Grade 8 performed best in Islamiat and Urdu and their performance was lowest in the subjects of Science and Mathematics.	
3.	For grade 5, average achievement score of private school students was 280 while that of public school students was 277.	Curricular and co-curricular activities such as science fairs, spellathons, essay competitions, creative writing and mental math tests should be arranged regularly at the classroom level in public schools. Private schools regularly organize these activities to improve learning. Collaborative sessions should be organized to promote the exchange of best practices between public and private schools.
4.	For grade 8, average achievement score of private school students was 291 while that of public school students was 290.	
5.	The girls of public schools outperformed the boys and girls of private schools.	As the differentiating factor between the performance of girls and that of boys was their respective CRQ scores, special emphasis should be placed on improving written communication in boys schools.
6.	Student performance was far better on MCQs as compared to CRQs in both Grade 5 and Grade 8. The students struggled in areas requiring writing skills in English and Urdu.	Conceptual teaching should be employed in classrooms, focusing on learning with understanding and improving students' ability to apply their knowledge while crafting longer responses. Internal assessments should focus on CRQs.
7.	In Grade 5, language of exam* affected the students' performance in the subject of Science, whereas the language of exam showed no significant effect on students' performance in the subject of Mathematics.	Teachers should be trained to teach Science and Mathematics by using an inquiry-based approach.
8.	In Grade 8, language of exam had a minor effect on students' performance in the subjects of Science and Mathematics.	
9.	High-performing districts of Grade 5 were Layyah, Vehari, Bahawalnagar, Sargodha, Bhakkar, and Toba Tek Singh while low-performing districts were Lahore, Gujranwala, Hafizabad, Gujrat, Sheikhpura, and Faisalabad.	District education officers should follow-up on classroom teaching practices to ensure the implementation of National Professional Standards for Teachers. DTEs should focus on classroom



10.	High-performing districts of Grade 8 were Layyah, Vehari, Bahawalnagar, Sargodha, Toba Tek Singh, and Lodhran while low performing districts were Lahore, Muzafargarh, Rawalpindi, Faisalabad, Gujranwala, and Sheikhpura.	mentoring.
11.	The SLOs of both Grades 5 and 8 in which students' performance was less than passing marks (mean score < 33%) are given in Annex III.	Teachers should adequately prepare students on SLOs in which students performed the weakest. DTEs should particularly guide teachers in weak SLOs.
12.	Students of Grade 8 outperformed those of Grade 5 across all cognitive levels.	The quality of education at primary level needs the special attention of all stakeholders since primary schools set the foundation for higher learning.

*Footnote 2. Language of exam means the language of paper i.e. English or Urdu.

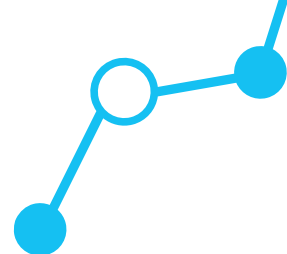


ANNEX I:

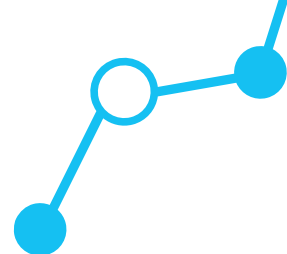
STUDENT PERFORMANCE AGAINST SLOs - **GRADE 5**

- Greater than or equal to 60% mean score
- 41-60% mean score
- Less than or equal to 40% mean score

SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
E N G L I S H				
The main idea in a paragraph is carried in a sentence, called a topic sentence.	80.0	76.0		78.0
Recognize specific parts of words including common inflectional endings and compound words.		62.0		62.0
Predict the content of a text from topic/ picture, title/headings, by using prior knowledge.		62.0		62.0
*Guess the meaning of difficult words through context.		60.4		60.4
Apply critical thinking to interact with text using intensive reading strategies (while-reading) to* locate specific information to answer short questions. *Make simple inference using contexts of the text and prior knowledge.	90.0	63.8		76.9
*Guess the meaning of difficult words from context.*Use context to infer missing words.	68.0			
*Distinguish Fact from Opinion.			60.0	60.0
*Use critical thinking to respond to the text (post-reading): Apply world knowledge and own opinion to the text read. Relate what is read to their own feelings and experiences		65.4	63.0	64.2
Apply strategies to comprehend questions for appropriate response by marking key words, verbs and tenses in a variety of the following question types. Factual		37.8		37.8



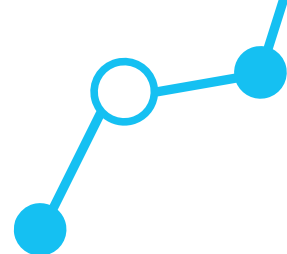
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
E N G L I S H				
Apply strategies to comprehend questions for appropriate response by marking key words, verbs and tenses in a variety of the following question types. Interpretive		19.8		19.8
Apply strategies to comprehend questions for appropriate response by marking key words, verbs and tenses in a variety of the following question types. Inferential		23.4	69.0	46.2
Apply strategies to comprehend questions for appropriate response by marking key words, verbs and tenses in a variety of the following question types. Personal response			36.6	36.6
*Recognize and describe briefly story elements.		70.7		70.7
*Tell when and where the story is set.		61.0		61.0
Use critical thinking, apply world knowledge and own opinion to the text read.		60.0		60.0
*Write sentences of their own using correct capitalization, punctuation and spellings.			48.7	48.7
*Write a guided paragraph using ideas gathered and organized through various strategies.			26.6	26.6
*Complete a simple paragraph using the given words, phrases, and sentences.		63.2		63.2
Write a guided story using the elements of story writing.			20.8	20.8
Demonstrate the use of conventions of informal letter writing.			35.1	35.1
Identify and use previously learnt and more formulaic expressions for greetings and routine social courtesies according to the age, gender and status of addressee.	67.0	84.0	80.5	77.2
*Recognize, find out, create and use more rhyming words.		70.0		70.0
*Locate identify, and differentiate between and use some simple pair of words including homophones, homonyms.	82.0			82.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
E N G L I S H				
*Understand and locate some common compound words from text.		57.0		57.0
*Apply spelling change in plural form of regular and irregular nouns and regular and irregular verb forms.	77.5			77.5
*Recall and demonstrate use of more common, countable and uncountable collective nouns from immediate and extended environment.	59.0	76.0		67.5
Classify more nouns as common and proper nouns (names of people, pets, places, mountains, lakes, rivers, etc.).		60.0		60.0
Illustrate use of pronouns learnt earlier. Use the personal pronouns myself, yourself/ves, himself, herself, ourselves, themselves and itself.	30.5			30.5
*Recognize that pronouns agree with their nouns in gender and number.		58.5		58.5
Identify and illustrate extended use of words that point to something.	53.0			53.0
*Recall and apply the rules for the use of a and an. Choose between a or an before words that start with mute consonant letters. Identify and use the definite article the. Differentiate between use of definite and indefinite articles.		62.8		62.8
*Recognize and use more action verbs from extended environment including other subjects in speech and writing.		55.0		55.0
*Demonstrate the use of be, do and have as main or helping verbs in sentences.		69.5		69.5
*Articulate and use forms of some simple regular verbs including be, do and have.	41.0			41.0
* Illustrate the use of tenses (simple present and continuous, simple past and continuous, and simple future tense) previously learnt in their speech and writing.	57.3	74.0		65.7



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ENGLISH				
*Demonstrate use of words showing position, time, movement and direction.	77.0	59.3		68.2
*Use capitalization according to rules learnt earlier.	57.3			57.3
*Recall the rules of punctuation learnt earlier.	60.8			60.8
* Demonstrate use of joining words learnt earlier. *Recognize function of more joining words such as for example, for instance, to introduce an example etc.		67.0		67.0
Recognize and use simple SVO (Subject-Verb-Object) pattern sentences with direct and indirect objects.		65.0		65.0
Demonstrate use of subject-verb agreement according to person and number.		59.0		59.0
Identify and make sentences to show instructions, commands and strong feelings.		67.0		67.0
Recognize function of wh forms used in questions.		65.0		65.0
Respond to and ask wh questions.		29.5		29.5
Classify adjectives of quantity, quality, size, shape, color and origin. * Articulate, identify and use degrees of regular and irregular adjectives.	65.0			65.0
Recognize and use absolute adjectives.		68.5		68.5
MATHEMATICS				
Read numbers up to 1,000,000,000 (one billion) in numerals and in words.	74.0			74.0
Add numbers of complexity and of arbitrary size.		82.0		82.0
Subtract numbers of complexity and of arbitrary size.		85.0		85.0
Multiply numbers, up to 6 digits, by 2 digit and 3 digit numbers.		65.2		65.2
Divide numbers, up to 6 digits, by 2 digit and 3 digit numbers.		68.8		68.8



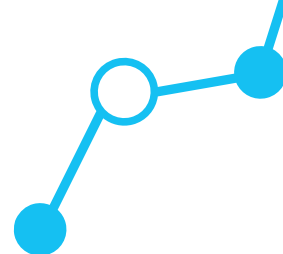
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
M A T H E M A T I C S				
Solve real life problems involving Highest Common Factor (HCF) and Least Common Multiple (LCM).		65.0	30.4	47.7
Carryout combined operations using BODMAS rule.		73.8	40.8	57.3
Find HCF of three numbers, up to 2 digits, using prime factorization method.		63.8		63.8
Find LCM of four numbers, up to 2 digits, using prime factorization method.		67.8		67.8
Add and subtract two and more fractions with different denominators.		67.8		67.8
Multiply a fraction by another fraction.		75.0		75.0
Multiply two or more fractions involving brackets (proper, improper and mixed fractions).		64.0		64.0
Solve real life problems involving multiplication of fractions.			31.8	31.8
Divide a fraction by a number.		64.0		64.0
Solve real life problems involving division of fractions.			45.5	45.5
Add and subtract decimals.		70.3		70.3
Recognize like and unlike decimals.	61.3			61.3
Multiply decimals by 10, 100 and 1000.		50.0		50.0
Divide decimals by 10, 100 and 1000.		58.0		58.0
Multiply a decimal with a whole number.		80.0		80.0
Multiply a decimal by tenths and hundredths only.		63.0		63.0
Multiply a decimal by a decimal (in the same way as for whole numbers and then put in the decimal point accordingly).		75.0		75.0
Divide a decimal by a decimal (by converting decimals to fractions).		69.0		69.0
Divide a decimal by a decimal using direct division by moving decimal positions.		48.0		48.0
Use division to change fractions into decimals.		53.3		53.3



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
M A T H E M A T I C S				
Simplify decimal expressions involving brackets (applying one or more basic operations).		51.2		51.2
Round off decimals up to specified number of decimal place.			57.0	57.0
Solve real life problems involving decimals.			68.0	68.0
Convert percentage to fraction and to decimal and vice versa.	55.5			55.5
Convert measures given in: i) kilometers into meters ii) meters into centimeters iii) centimeters to millimeters and vice versa.	74.0			74.0
Solve real life problems involving, addition and subtraction of distances.			37.6	37.6
Convert hours to minutes, minutes to seconds and vice versa.	74.0			74.0
Convert years to months, months to days, weeks to days and vice versa.	71.5			71.5
Solve real life problems involving conversion, addition and subtraction of units of time.			71.5	71.5
Solve real life problems involving conversion, addition and subtraction of units of temperature.			21.3	21.3
Calculate the value of many objects of the same kind when the value of one of these objects is given.			59.2	59.2
Calculate the value of a number of same type of objects when the value of another of the same type is given (unitary method).	70.0		34.3	52.1
Define and identify direct and inverse proportion.			22.8	22.8
Solve real life problems involving direct and inverse proportion (by unitary method).		61.0	36.0	48.5
Recall an angle and recognize acute, right, obtuse, straight and reflex angle.	58.2			58.2
Describe adjacent, complementary and supplementary angles.	58.0	52.0		55.0



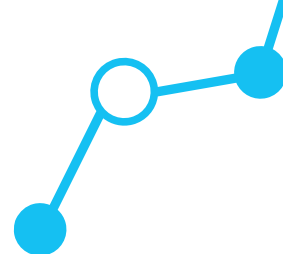
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
M A T H E M A T I C S				
Describe adjacent, complementary and supplementary angles.	45.7			45.7
Define triangles with respect to their angles (i.e., acute angled, obtuse angled and right angled triangle).	57.2			57.2
Use compasses and straightedge/ruler to construct equilateral, isosceles and scalene triangles when three sides are given.			55.0	55.0
Use protractor and straightedge/ruler to construct equilateral, isosceles and scalene triangles when two angles and included side are given. Measure the lengths of the remaining two sides and one angle of the triangle.			53.5	53.5
Recognize the kinds of quadrilateral (square, rectangle, rhombus, parallelogram, trapezium and kite).	44.3	56.0	56.0	53.1
Apply formulas to find perimeter and area of a square and rectangular region.			56.4	56.4
Solve appropriate problems of perimeter and area.			43.0	43.0
Find an average of given numbers.		65.5		65.5
Solve real life problems involving average.			59.0	59.0
Read a simple bar graph given in horizontal and vertical form.	45.1		77.3	61.2
S C I E N C E				
Compare the structure of a monocot and a dicot leaf in terms of its shape and venation.	46.0			46.0
Differentiate between the structure of monocot and dicot flower in terms of number of floral leaves.			44.0	44.0
Differentiate between vertebrates and invertebrates according to key characteristics.	67.0	52.0	56.8	58.6
Identify vertebrates and invertebrates from their surroundings.		51.9		51.9



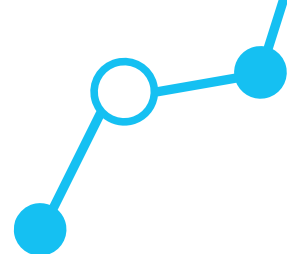
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
SCIENCE				
Classify vertebrates into mammals, reptiles, fish, birds and amphibians on the basis of their characteristics	74.0	46.5	50.7	57.1
Identify key characteristics of worms and insects.		61.0	45.5	53.3
Compare flowering and non-flowering plants.		67.0		67.0
Compare the structure of a monocot and a dicot seed.		60.0	32.8	46.4
Identify the main groups of microorganisms and give examples for each.			46.5	46.5
Describe the advantages and disadvantages of microorganisms in daily life.	73.7			73.7
Identify ways by which microorganisms can enter the human body.		74.0	48.0	61.0
Compare the structure and function of French bean and maize seed.	54.5	46.0		50.3
Identify the conditions necessary for germination.	43.0	44.0		43.5
Define pollution.	73.0			73.0
Describe different kinds of pollution.	42.3	43.0		42.7
Explain main causes of water, air and land pollution.	56.5	31.8		44.2
Explain the effects of water, air and land pollution on environment and suggest ways to reduce them.		58.0	42.8	50.4
Differentiate between biodegradable and non-biodegradable materials.		66.0	50.0	58.0
Explain the impact of non-biodegradable materials on the environment.		63.0		63.0
Suggest ways to reduce the impact of non-biodegradable materials.			62.0	62.0
Describe the properties of the three states of matter on the basis of arrangement of particles.	41.6	43.5	21.6	35.6



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
SCIENCE				
Demonstrate the arrangement of particles in the three states of matter through models.		62.5		62.5
Demonstrate and explain the processes that are involved in the change of states.	46.5	46.5		45.5
Identify and describe forms of moisture in the environment (e.g. dew, snow, fog, frost, rain).	36.0			36.0
Describe friction and its causes.	55.0	34.0		44.5
Demonstrate how wedge and inclined plane are used to move the objects.			66.0	66.0
Compare the three kinds of levers using examples.	41.0	57.5		49.3
Suggest methods to reduce friction.		39.0	59.0	49.0
Identify what cyclists, swimmers and parachutists do to reduce friction.			34.1	34.1
Explain the gravitational force using different examples.		68.0		68.0
Distinguish between mass and weight.	57.5		46.0	51.8
Differentiate between balanced and unbalanced forces.			64.0	64.0
Describe the effects of balanced and unbalanced forces on the motion of an object.			53.0	53.0
Describe the term inertia.	55.0			55.0
Differentiate between luminous and non-luminous objects.	52.5	67.0		59.8
Identify and differentiate between transparent, opaque and translucent objects in their surroundings.	62.0	58.8	38.5	53.1
Investigate that light travels in a straight line.		69.0		69.0
Explain the formation of shadows and eclipses.		57.0		57.0
Identify different phases of moon.		38.0	51.0	44.5



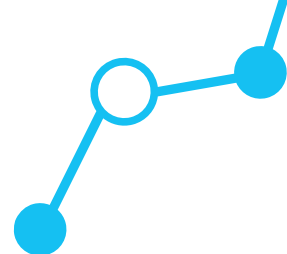
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
SCIENCE				
Describe flow of electric current in an electrical circuit.	49.1	53.5		51.3
Make a magnetic compass and show its working.		67.0		67.0
Describe fuse and its importance in any electric circuit.	54.0			54.0
Explain the production of static electrical charges in some common materials.	51.0			51.0
Make an electromagnet with the help of a cell, iron nail and wire and show its working.		71.0		71.0
Explore different electromagnetic devices used in their daily life.		41.0		41.0
Describe the relationship between electricity and magnetism in an electromagnetic device.		63.0		63.0
Explain the earth's magnetic field and relate it with the use of a magnetic compass.		56.0		63.0
Describe the characteristics of soil.	38.4	39.0		38.7
Identify similarities and differences among the different types of soil.	65.0	47.0	28.9	47.0
Investigate and describe soil components.	33.0	56.0		44.5
Compare the absorption of water by different soils.		53.0		53.0
Investigate and describe how living things affect and are affected by soils.	27.3	21.8		24.5
Differentiate between a star and a planet.		60.8	45.0	52.9
Explain that the Sun is a star.	61.0			61.0
Describe the solar system and its planetary arrangement showing position of Earth in our solar system.	49.0			49.0
Compare the sizes of Earth, Sun and Moon.	48.0			48.0
Investigate the moons of different planets of the solar system.	54.3			54.3
Dengue		69.0		69.0



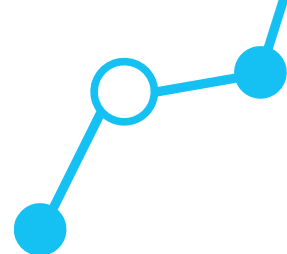
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
U R D U				
Besides curriculum, making children able to read essays and stories given in newspaper pages for children, magazines and periodicals, having the very purpose of the writer and reach to conclusion.	40.7	38.9	43.3	41.0
Be able to read with fluency the news, features, editorials, reports, advertisements and letters to the editors, published in newspapers, magazines and periodicals.	75.0	76.6		75.8
After reading the poetic verses and poems, make students able to write the meaning of these, in one to two lines.		41.3		41.3
Be able to complete the story with the help of pictures and hints.			47.8	47.8
Be able to write letters of a few lines to friends and relatives, considering the parts of letters.			52.9	52.9
Be able to write the parts of application, considering the rules to be followed for application writing. Be able to write a text passage of a few lines by viewing any incident or the surrounding.			45.1	45.1
Have the efficiency of writing one's own observation and views in an integrated, fluent and in a proper way.			37.9	37.9
Be able to fill in the blank given in a simple sentence.	74.5			74.5
Be able to trace tense or period in a written text passage, and write it in other tense (past to be in present and future in past etc.).		69.5		69.5
Be able to find the word meaning with the help of the dictionary.		71.0		71.0
Be able to correct wrong sentences.		75.0		75.0
Making all types of sentences with regard to the tense. And be able to learn changing from one tense to the other.		72.5		72.5



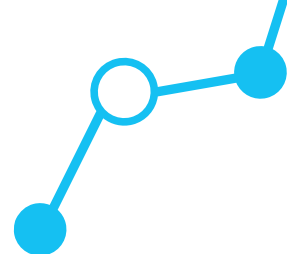
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
U R D U				
Be able to make subject from the verb and make adjustment of the verb to its subject and object.		78.0	43.3	41.0
Make use of the exclamation words, used for calling someone, showing wonder and sorrow etc.		78.5		78.5
Be able to identify the changes because of changing the marks on words (just marks are changed, changing not the word).		59.8		59.8
Be able to identify the different types of the proper noun, used or employed in sentences.		60.0	36.5	48.3
Be able to read the children magazines and newspapers	74.9	66.9	33.3	58.3
I S L A M I A T				
Be able to tell the meaning of life hereafter.		84.0		84.0
Be able to know about Hazrat Israfeel (A.S).		79.6		79.6
Be able to clarify the importance of life hereafter.	68.5	95.0		81.8
Be acquainted with the meaning of List of Deeds (Nama-e- Amaal).		90.0	63.5	76.8
Be able to clarify the meaning of the obedience of the Holy Prophet (PBUH).		63.3		63.3
Describe the obedience of the Holy Prophet (PBUH) in the light of the Holy Quran.		60.9		60.9
Be able to tell about the action of the companions of the Holy Prophet (PBUH) in, with regard to the obedience of the Holy Prophet (PBUH).			61.8	61.8
Be able to know about the pillars of Islam.		88.0		88.0
Make clear the meaning of the Sunnah of the Holy Prophet (PBUH).		83.5		83.5
Be able to make clear the importance of Juma' prayer, in the light of the Holy Quran.		86.0		86.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to make clear the meaning of Eidain/ Eids.	80.0			80.0
Describe the meaning of fasts (keeping fasts).		50.5		50.5
Make clear the concept of fasts and give interpretation.		67.3		67.3
Make clear the importance of fasts, also the rewards to be attained by keeping fasts, that too in the light of the sayings of the Holy Prophet (PBUH).		89.0	57.3	73.1
Make clear the social importance of fasts.	74.0			74.0
Describe the meaning and interpretation of Brotherhood (Muakhaat).		65.5		65.5
Tell about the incident of Brotherhood of Madina (Muakhaat e Madina).	45.5			45.5
Acquaint with those who migrated (Muhajjerians), with regard to the incident of 'Brotherhood of Madina'.		54.8		54.8
Acquaint with the passion of the natives of Madina (Ansars) to sacrifice for the migrated people.		66.5		66.5
Be aware to the need of the construction of Masjid e Nabvi.	83.5			83.5
Be acquainted with the blessings of the Masjid e Nabvi.		82.0		82.0
May reach to the conclusion with regard to the effects of the Charter of Madina.		97.0	79.0	88.0
Be able to know about the Battle of Badr (Ghazwa e Badr).	19.5			19.5
Be able to narrate the reasons of the Battle of Badr.	56.5		20.0	38.2
Be able to describe the reasons of the Battle of Uhud.	86.0		25.0	55.5
Be able to describe the reasons of the Battle of Uhud.			72.0	72.0
Be able to narrate the happenings of the Battle of Uhud.	84.0			84.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to describe the services of Hazrat Aisha (R.A) and Hazrat Umme Sulaim (R.A), in the battle of Uhud. Be able to analyze the results of the Battle of Uhud.			78.0	78.0
Be able to describe the reasons of the Battle of Trench.	48.0			48.0
Make able to clear the meaning of fulfilling promise (Efa-e-Ehad).		91.0		91.0
Be able to describe the meaning of 'Afwo Darguzar' (Forgiveness) with interpretation.		68.8		68.8
Be able to make clear 'Afwo Darguzar' (Forgiveness) in the light of the live actions from the life of our Holy Prophet (PBUH).		18.0		18.0
Be able to describe the social benefits and rewards of 'Afwo Darguzar' (Forgiveness).		24.8		24.8
Be able to know about the meaning of Placidness (Burdbari).			64.0	64.0
Be able to clarify the importance of Placidness, in the light of the teachings of the Holy Prophet (PBUH).	70.0			70.0
Be able to describe the benefits and rewards of Placidness.		75.0		75.0
Be able to know the meaning of tolerance along with interpretation.		47.5		47.5
Be able to make clear the importance of tolerance that too in the light of the life examples of the Holy Prophet (PBUH).		14.8		14.8
Be able to make clear the importance of tolerance in the light of the examples of the companions of the Holy Prophet Hazrat Muhammad (PBUH).		21.8		21.8
Be able to discuss the social benefits of Placidness.		68.0		68.0
Be able to analyze the need and importance of tolerance in the perspective of prevailing circumstances of Pakistan.			57.0	57.0
Be able to describe the social benefits of kindness.			85.0	85.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to describe the meaning of frugality with its interpretation.		76.7		76.7
Be able to make clear the importance of frugality in the light of the life of the Holy Prophet (PBUH).		24.3		24.3
Be able to evaluate that by adopting frugality, society can make rapid progress.		72.0	41.8	56.9
Be able to know the meaning of Brotherhood along with its interpretation.		94.0		94.0
Be able to make clear the importance of 'Brotherhood' in the light of the Holy Quran.		96.0		96.0
Be able to describe the need and importance of reciting the Holy Quran.	97.5			97.5
Be aware to the birth and childhood of Hazrat Isa (A.S).	83.0	60.0		71.5
Be able to know about the biography of Hazrat Isa (A.S).		45.3		45.3
Be able to describe the miracles given to Hazrat Isa (A.S).	22.5	75.0		48.8
Be aware to the duty of preaching and invitation of that of Hazrat Isa (A.S), and the wisdom by which he used to preach.	37.5			37.5
Be able to know about the biography of Hazrat Usman (R.A).	27.0			27.0
Be able to describe, being influenced of which Hazrat Usman (R.A) embraced Islam.		75.0		75.0
Be able to tell as to why Hazrat Usman (R.A) is called Zunnurain (possessor of two lights).	72.5	21.7		47.1
Be able to give reason of Hazrat Usman's (R.A) migration towards Abyssinia.		7.5		7.5
Be able to tell about the biography (life happenings) of Hazrat Khalid bin Walid (R.A).	57.0			57.0
Be able to tell about the incident of embracing Islam of that of Hazrat Khalid bin Waleed (R.A).	79.0	33.5		56.3
Be able to tell about the services of Hazrat Khalid bin Waleed (R.A) rendered for Islam.		57.8		57.8

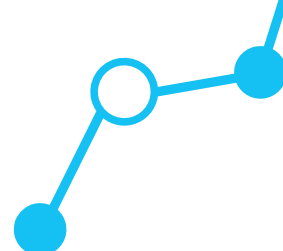
* indicates various elements of the main SLOs

ANNEX II:

STUDENT PERFORMANCE AGAINST SLOs - GRADE 8

- Greater than or equal to 60% mean score
- 41-60% mean score
- Less than or equal to 40% mean score

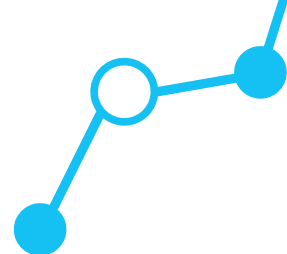
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
E N G L I S H				
Identify a topic sentence and its features such as * specific words *vivid verb and modifiers.		51.0		51.0
Have a general idea of the text.		73.0	87.0	80.0
Infer theme/main idea.		52.0	52.0	52.0
Scan to answer short questions.	76.0	55.0		66.0
Make simple inferences using context of the text and prior knowledge.		68.0		68.0
Distinguish between what is clearly stated and what is implied.		73.0	73.0	73.0
Deduce meaning of difficult words from context.		60.0	64.0	62.0
Read silently with comprehension and extract main idea and supporting detail.		46.0		46.0
Locate an opinion. Distinguish fact from opinion. Locate examples to support an opinion.		69.0		69.0
Apply world knowledge and own feelings/ opinion to the text read.		62.0		62.0
Explore causes and consequences of a problem or an issue and propose various solutions.		71.0		71.0
Apply strategies to comprehend questions by marking key words, verbs and tenses in a variety of question types; Literal/ textual/ factual.	82.0	43.0		63.0
Apply strategies to comprehend questions by marking key words, verbs and tenses in a variety of question types. Interpretive		65.0		65.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
E N G L I S H				
Apply strategies to comprehend questions by marking key words, verbs and tenses in a variety of question types. Evaluative		71.0	64.0	67.0
Read a story to analyze story elements: characters, events, setting, plot, theme, tone.		80.0		80.0
Read a story to analyze, summarize and tell it sequentially.		61.0		61.0
Read a story to analyze text to analyze characters, their motives, actions and emotional responses.		23.0		23.0
Write a guided paragraph on a given topic.			40.2	40.2
Write a clear topic sentence using specific words, vivid verbs, modifiers, etc.		48.3		48.0
Write a narrative in the first or third person which describes events/ incidents.			35.4	35.0
Write applications to people in immediate and extended environment.			50.4	50.0
Analyze questions to write effective and focused answers of required length by marking key words. • Identifying verbs and tenses • Recognizing question types such as i. Literal/ textual/ factual ii. Interpretive iii. Inferential iv. Evaluative v. Personal response vi. Open ended		48.4		48.0
Write and revise short formal dialogues.			29.1	29.0
Demonstrate and understanding of ways to show gratitude, apologize express anger or impatience.		82.9		83.0
Express dissatisfaction, disapproval, and disagreement politely.	85.0	90.0		88.0
Build and use appropriate vocabulary and correct spelling for effective communication.	86.0	85.7		86.0



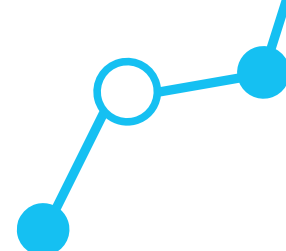
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
E N G L I S H				
Recognize syllable division of words in written text.	84.0	70.0		77.0
Demonstrate use of more common and proper collective nouns.		63.0		63.0
Differentiate between, and demonstrate use of material/ concrete and abstract nouns.	69.0	67.0		68.0
Apply the rules of change of number of nouns learnt earlier.	79.0	85.0	71.0	78.0
Recognize and demonstrate use of certain nouns whose plural form has two meanings in some cases e.g. arm-arms.		50.0		50.0
Some nouns change their meaning in the plural form e.g. air- atmosphere, airs.	75.0			75.0
1- Demonstrate use of pronouns as subject and object. 2- Recognize function of, and use possessive, reflexive and emphatic pronouns.	90.0	87.5		89.0
1- Identify relative pronouns. 2- Demonstrate functions of relative pronouns. 3- Make use of relative pronouns which, who, and that.		77.0		77.0
Demonstrate use of pronoun-antecedent agreement recognizing their relationship.		59.0		59.0
Use more indefinite pronouns.		76.7		77.0
Demonstrate use of pronouns - antecedent agreement recognizing their relationship.		81.0		81.0
Apply rules of a, an, and the wherever applicable in speech and writing.		82.7		83.0
Illustrate use of helping verbs in writing.		60.0		60.0
Illustrate use of linking verbs.		75.0		75.0
Recognize and demonstrate function and use of modal verbs learnt earlier.	77.0			77.0
Illustrate use of transitive and intransitive verbs.		78.0		78.0
Recognize infinitives.		75.0		75.0



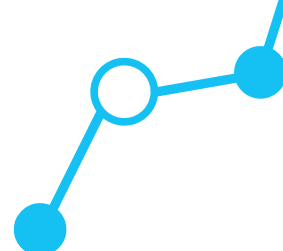
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
E N G L I S H				
Demonstrate function and use of infinitives.		81.0		81.0
Illustrate use of tenses learnt earlier (present indefinite, past indefinite, future indefinite).		74.0		74.0
Recognize the form and various functions; and illustrate use of past perfect tense.		71.0		71.0
Classify adjectives into different types change and use degrees of adjectives with reference to than and the.		79.0		79.0
Form adjectives from nouns and verbs.		76.5		77.0
1. Recognize varying positions of adverbs in sentences according to their kinds and importance. 2. Classify and use different kinds of adverbs learnt earlier. 3. Identify and use degrees of comparison of adverbs. 4. Use some adverbial phrases.		72.3		72.0
Illustrate use of "since" and "for".		65.3		65.0
Use some prepositional phrases.		78.0		78.0
Apply rules of capitalization wherever applicable.	40.0	79.8		60.0
Illustrate use of punctuation (comma, colon, semi colon, quotation marks, hyphen, dash, parenthesis, ellipses marks learnt earlier.		76.0		76.0
Recognize punctuation in given passages.		77.5		78.0
Identify active and passive voice in sentences.		63.5		64.0
1. Recognize the rules of, and change the narration of statements, requests/ orders and questions. 2. Identify function of direct and indirect speech.		56.7		57.0
Recognize and use the variant form of first conditional to express automatic or habitual results.		68.0	61.5	65.0



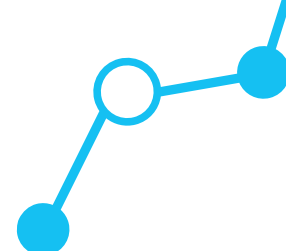
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
M A T H E M A T I C S				
Sets: Recognize set of natural numbers (N), whole numbers (W), integers (Z), rational numbers (Q), even numbers (E), odd numbers (O), prime numbers (P).	86.0			86.0
Sets: Find a subset of a set.	59.0			59.0
Sets: Define proper (C) and improper (C) subsets of a set.	58.0			58.0
Sets: Find power set P(A) of a set A.		58.0		58.0
Operations on Sets: Verify commutative and associative laws with respect to union and intersection.		50.0		50.0
Operations on Sets: Verify the distributive laws.		59.0		59.0
Irrational Numbers: Recognize rational and irrational numbers.	73.0			73.0
Squares : Find perfect square of a number.	74.0			74.0
Square Roots: Find square root of a natural number (e.g. 16, 625, 1600), a common fraction, a decimal (e.g. 0.01, 1.21, 0.64), given in perfect square form, by prime factorization and division method.	85.0	67.0		76.0
Square Roots: Find square root of a number which is not a perfect square (e.g., the numbers 2, 3).			42.0	42.0
Square Roots: Use the following rule to determine the number of digits in the square root of a perfect square. Rule: Let n be the number of digits in the perfect square then its square root contains digits if n is even, digits if n is odd.	61.0	71.0		66.0
Cubes and Cube Roots: Find cube roots of a number which are perfect cubes.		68.0		68.0
Cubes and Cube Roots: Recognize properties of cubes of numbers.		66.0		66.0
Conversions: Convert a number from decimal system to a system with base 2, 5 and 8, and vice versa.		72.0		72.0
Conversions: Add, subtract and multiply numbers with base 2, 5 and 8.		70.0		70.0



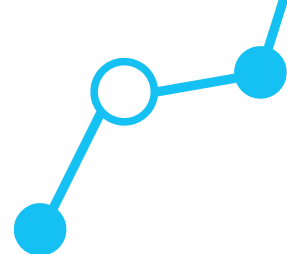
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
M A T H E M A T I C S				
Conversions: Add, subtract and multiply numbers with different bases.		56.0		56.0
Solve real life problems involving compound proportion, partnership and inheritance.			53.0	53.0
Banking: Convert Pakistani currency to well-known international currencies.			72.0	72.0
Calculate the profit/ markup, the principal amount, the profit/ markup rate, the period.			41.0	41.0
Percentage: Find percentage profit and percentage loss.			64.0	64.0
Percentage: Find percentage discount.			59.0	59.0
Income Tax: Solve simple real life problems related to individual income tax assessee.			68.0	68.0
Polynomials: Define polynomial, degree of a polynomial, coefficients of a polynomial.	68.0			64.0
Operations on Polynomials: Add, subtract and multiply polynomials.		61.0		61.0
Operations on Polynomials: Divide a polynomial by a linear polynomial.		58.0		58.0
Basic Algebraic Formulas.		48.0	55.0	51.0
Factorization: Factorize expressions.	52.0	63.0	69.0	61.0
Simultaneous Linear Equations: Recognize simultaneous linear equations in one and two variables.	65.0		67.0	66.0
Simultaneous Linear Equations: Give the concept of formation of linear equation in two variables.		74.0		74.0
Solution of Simultaneous Linear Equations: Solve simultaneous linear equations using method of equating the coefficients, method of elimination by substitution, method of cross multiplication.			66.0	66.0
Solution of Simultaneous Linear Equations: Solve real life problems involving two simultaneous linear equations in two variables.			19.0	19.0
Elimination: Eliminate a variable from two equations by substitution, application of formulae.		57.0	58.0	58.0



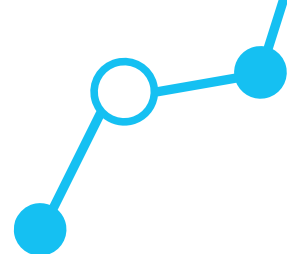
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
M A T H E M A T I C S				
Parallel Lines: Draw a transversal to intersect two parallel lines and demonstrate corresponding angles, alternate interior angles, vertically opposite angles and interior angles on the same side of transversal.	57.0			57.0
Parallel Lines: Describe the following relations between the pairs of angles when a transversal intersects two parallel lines. Pairs of corresponding angles are equal. Pairs of alternate interior angles are equal. Pair of interior angles on the same side of transversal is supplementary, and demonstrate them through figures.	48.0	60.0		54.0
Polygons: Demonstrate the following properties of a parallelogram. Opposite sides of a parallelogram are equal. Opposite angles of a parallelogram are equal. Diagonals of a parallelogram bisect each other.	46.0	64.0		55.0
Polygons: Define regular pentagon, hexagon and octagon.	68.0	68.0		68.0
Circle: Describe the terms; sector, secant and chord of a circle, noncyclic points, tangent to a circle and concentric circles.	57.0			57.0
Construction of Quadrilaterals: Define and depict two converging (non-parallel) lines and find the angle between them without producing the lines.	74.0			74.0
Construction of Quadrilaterals: Construct a kite when two unequal sides and a diagonal are given.		33.0		33.0
Construction of Quadrilaterals: Construct a regular hexagon when a side is given.			33.0	33.0
Pythagoras Theorem: Solve right angled triangles using Pythagoras Theorem.			61.0	61.0
Pythagoras Theorem: Solve right angled triangles using Pythagoras theorem.			58.0	58.0
Hero's Formula: State and apply Hero's formula to find the areas of triangular and quadrilateral regions.		44.0		44.0



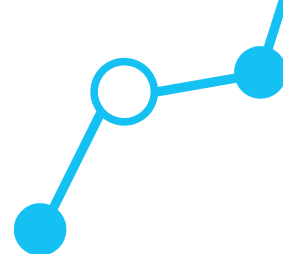
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
M A T H E M A T I C S				
Surface Area and Volume: Find the surface area and volume of a sphere.			48.0	48.0
Surface Area and Volume: Find the surface area and volume of a cone.			55.0	55.0
Pythagoras Theorem: Solve right angled triangles using Pythagoras theorem.	56.0		62.0	59.0
Frequency Distribution: Construct frequency table.			27.0	27.0
Measures of Central Tendency: Calculate mean (average), weighted mean, median and mode for ungrouped data.		67.0		67.0
S C I E N C E				
Measures of Central Tendency: Calculate mean (average), weighted mean, median and mode for ungrouped data.	75.0	73.0		74.0
Describe the working of the nervous system through a model.	33.0			33.0
Differentiate between voluntary and involuntary actions they have experienced.	56.0	72.0	78.0	69.0
Draw and label human excretory system.	32.0	78.0		55.0
Describe the role of kidney in excretion of waste.	48.0	35.0		42.0
Investigate the possible causes of malfunctioning of kidneys.		73.0		73.0
Suggest techniques to cure problems of kidneys.	76.0	70.0	49.0	65.0
Differentiate between mitoses and meiosis.	50.0	73.0	30.0	51.0
Identify DNA (Deoxyribonucleic Acid) and chromosomes in the cell diagram.	52.0			52.0
Define heredity and recognize its importance in transferring of characteristics from parents to off springs.		72.0		72.0
Identify the characteristics that can be transferred from parents to off springs.		62.0		62.0
Define biotechnology.	62.0			62.0
Explain how DNA is copied and made.		43.0		43.0
Explain how genes are introduced into a bacterium.	73.0	28.0		50.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
SCIENCE				
List some biotechnological products used in daily life.	73.0	59.0		66.0
List general applications of biotechnology in various fields.	63.0			63.0
Explain the sources, properties and harmful effects of air pollution.		58.0		58.0
List problems in human organ systems caused by air pollution.	62.0	63.0		62.0
Explain the Greenhouse Effect.	60.0	57.0		59.0
Describe the causes and effects of ozone depletion.	63.0	62.0	56.0	60.0
Explain the formation of acid rain and identify its consequences on living and nonliving things	86.0	61.0		74.0
Define deforestation.	53.0			53.0
State the effects of deforestation on the environment.		38.0		38.0
Identify human activities that have long-term adverse consequences on the environment.			45.0	45.0
Define chemical reactions and give examples.		58.0		58.0
Explain the rearrangement of atoms in a chemical reaction.		48.0		48.0
Explain the balancing of a chemical reaction.		62.0	58.0	60.0
Define the law of conservation of mass.	60.0			60.0
Explain the types of chemical reactions with example.	61.0	50.0	47.0	53.0
Describe the importance of exothermic reactions in daily life.			32.0	32.0
Define the terms acid, alkali and salt.	65.0			65.0
Describe the properties of acids, alkalis and salts.	68.0	41.0	31.0	47.0
Explain the uses of acid, alkali and salt in daily life.		42.0		42.0
Use indicators to identify acids, alkalis and neutral indicators	64.0	44.0		54.0



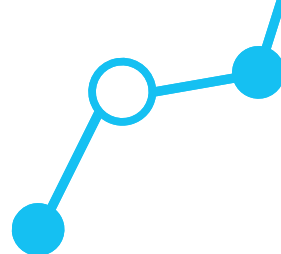
SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
SCIENCE				
Investigate the color changes in the extracts of various flowers and vegetables by adding acids and alkalis.	62.0			62.0
Define the term Pressure.	62.0		44.0	62.0
Identify the units of pressure.	73.0	62.0		68.0
Explain hydraulics and hydraulic system by giving examples.	73.0	48.0		44.0
Explain how gases behave under pressure.		51.0		51.0
Describe the causes of gas pressure in a container.		56.0		56.0
Identify the application of gas pressure.	40.0			40.0
Describe the term atmospheric pressure.	70.0	38.0	23.0	44.0
Define a physical quantity with examples.		38.0		38.0
Interconvert smaller units and bigger units.	52.0	50.0	57.0	53.0
Select and use measuring instruments.	64.0	41.0		52.0
Measure the volume of liquid by reading correct meniscus.		52.0	66.0	59.0
Describe the sources and effects of heat.	84.0	77.0		81.0
Explain thermal expansion of solids, liquids and gases.		54.0		54.0
Explore the effects and applications of expansion and contraction of solids.		66.0		66.0
Describe the uses of expansion and contraction of liquids.	55.0			55.0
Explain the peculiar behavior of water during contraction and expansion.		47.0		47.0
Describe the working of a thermometer.	69.0	55.0		62.0
Differentiate between the different types of lens.	45.0	41.0	59.0	48.0
Describe the image formation using a lens by ray diagram.		32.0		32.0
Compare and contrast the working of a human eye with the lens camera.		42.0	63.0	53.0
Investigate how eyes get used to darkness after sometime.	47.0	45.0		46.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
S C I E N C E				
Explain how lenses are used to correct short sightedness and long sightedness.		43.0		43.0
Identify the types of lenses used for various purposes in daily life.	49.0			49.0
Explain the working of the model generator.		79.0		79.0
List types of energy being used in power stations		46.0	60.0	53.0
Relate problems involved in generating electricity.			33.0	33.0
Describe basic component of an electronic system.	57.0			57.0
List components that would be needed to turn AC (Alternating Current) to DC (Direct Current).	50.0	73.0		62.0
State how output component in various devices could be used in their schools and surroundings.	51.0	57.0		54.0
Describe development of tools and technologies used in space exploration.	55.0	72.0		64.0
Analyze the benefits generated by the technology of the space exploration.	70.0	74.0		72.0
Suggest the ways to solve the problems that have resulted from space exploration.		32.0		32.0
Identify the technological tools used in space exploration.	72.0	75.0		74.0
Dengue.		66.0		66.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to make clear the concept of life hereafter.		95.0		95.0
Be able to make clear the reality of the world logically.		41.0		41.0
Be able to explain as how belief of life hereafter leads a person towards earning virtue.		68.0		68.0
Be able to make clear that the belief life hereafter develops boldness in a man.		64.0		64.0
Be able to narrate the literal and term meaning of fasting (Roza).				76.0
Be able to give detail of Quranic injunctions regarding fasts.	98.0			98.0
Make clear the importance of fasting in the light of the sayings of the Holy Prophet (PBUH).	99.0	62.0	98.0	86.0
Be able to give make one acquaint with the social benefits of fasting.			59.0	59.0
Be able to know the literal and term meaning of Pilgrimage (Hajj).	96.0	72.0		84.0
Be able to tell the importance of Hajj journey.	78.0	98.0		88.0
Be able to make clear the role of pilgrimage (Hajj) in developing national unity.		47.0	75.0	61.0
Be able to describe (give detail) the Rituals of Pilgrimage (Manasik e Hajj).		59.0		59.0
Be able to narrate the literal and term meaning of fasting (Roza).	96.0			96.0
Be able to give the meaning of patience along with detail.	97.0	83.0		90.0
Be able to give Quranic teachings regarding patience.		96.0		96.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to make clear the meaning of forbearance with some detail.	90.0			90.0
Be able to make clear the examples of forbearance in the life of Holy Prophet Hazrat Muhammad (PBUH).		67.0		67.0
Be able to give the meaning of fulfillment of promise (Efa e Ehad) with some detail.		96.0		96.0
Be able to describe the meaning of steadfastness, with some detail.		90.0		90.0
Be able to make clear the importance of steadfastness, in the life of the Holy Prophet (PBUH).	94.0			94.0
Be able to give examples from the lives of the companions of the Holy Prophet with regard to steadfastness.	85.0			85.0
Be able to describe the meaning of Good Social Dealing.		75.0		75.0
Be able to make clear the benefits of 'Good Social Dealing' to be attained in practical life.			40.0	40.0
Be able to make clear the importance of Good Social Dealing from the life of our Holy Prophet Hazrat Muhammad (PBUH).	94.0	23.0		59.0
Be able to tell the meaning of sincerity (Ikhlas).		62.0		62.0
Be able to describe the meaning of Piety (Taqwa).		87.0		87.0
Be able to make importance of piety cleared, with the help of Quranic teachings.		87.0		87.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to tell the meaning of Justice.	68.0			68.0
Be able to tell the meaning of Benevolence (Ihsan) along with some details.		74.0		74.0
Be able to make clear the social impacts of different forms of justice and benevolence.			83.0	83.0
Make clear the concept of Holy Prophet (PBUH) as a teacher.		11.0		11.0
With regard to preaching, be able to make characteristics cleared of the prudential style of preaching of the Holy Prophet (PBUH).	95.0	23.0		59.0
Be able to make rules of preaching cleared, to be adopted by a preacher.		48.0		48.0
Be able to describe the outcomes to be attained from preaching of Islam in practical life.			76.0	76.0
Be able to narrate the happenings of the occurrence of Doomsday.	88.0			88.0
Be able to make guidance clear, to be attained from teachings of the Holy Prophet (PBUH) regarding concern for life hereafter.		98.0		98.0
Be able to make the impacts of speaking style cleared exerted on human personality.			82.0	82.0
Be able to make the impacts of speaking style cleared exerted on human personality.			97.0	97.0
Be able to make responsibilities clear of that of husband and wife in the light of the Holy Quran.		53.0		53.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to tell the responsibilities of parents and children in the light of the Holy Quran and sayings of the Holy Prophet (PBUH).		71.0		71.0
Be able to narrate the etiquettes/ manners of domestic life.	54.0			54.0
Be able to know the meaning of Khashiat e Elahi (Fear of Allah).		83.0		83.0
Be able to narrate Quranic teachings regarding Khashiat e Elahi.		72.0		72.0
Be able to make clear the meaning of 'Amr Bil Ma'roof'.		73.0		73.0
Be able to describe Quranic injunctions, regarding 'Amr Bil Ma'roof Wa Nahi Anil Munkar'.		37.0		37.0
Be able to make clear the importance of 'Amr Bil Ma'roof Wa Nahi Anil Munkar' for establishment of a good society.		36.0		36.0
Be able to make clear the rights of the orphans.		95.0		95.0
Be able to describe the rights of the orphans in the light of Quranic teachings and the sayings of the Holy Prophet (PBUH).	92.0	94.0		93.0
Be able to make clear with examples the attitude of the companions of the Holy Prophet (PBUH) with orphans.		60.0		60.0
Be able to describe the rights of the widows.	50.0			50.0
Be able to describe the rights of the travelers.	79.0			79.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
ISLAM IAT				
Be able to make clear the concept of honesty in business.		94.0		94.0
Be able to describe the benefits of honesty in business.	86.0			86.0
Be able to make clear the good social behavior of social workers.		85.0		85.0
Be able to give the purposes of Jihad.		89.0		89.0
Be able to make clear the importance of different aspects of Jihad.			82.0	82.0
Be able to describe the meaning of national unity.		88.0		88.0
Be able to make clear the importance of unity with regard to beliefs and views.		99.0		99.0
Be able to make clear the importance of unity, with regard to worships.	68.0			68.0
Be able to describe the commandments of Allah Almighty regarding national unity.	93.0			93.0
Be able to describe the sayings of the Holy Prophet (PBUH), regarding national unity.	87.0			87.0
Be able to describe the meaning of Lawful Earning (Kasb e Halal), with some detail.	95.0	74.0		85.0
Be able to describe the importance of Lawful Earning.		59.0		59.0
Be able to make clear the losses/damages of unlawful earning.		51.0		51.0



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ISLAM IAT				
Be able to describe the meaning of discipline.			92.0	92.0
Be able to describe the importance of law.		91.0		91.0
Be able to give introduction to Hazrat Isa (A.S).		56.0		56.0
Be able to tell about the marriage (Nikah) of Hazrat Fatima (R.A).	40.0			40.0
Be able to make clear the practicable examples from the life of Hazrat Fatima (R.A).	36.0			36.0
Be able to describe the incidences of Holy Prophet's (PBUH) special love and affection with Hazrat Fatima (R.A).		77.0		77.0
Be able to describe the incident of Hazrat Salman Farsi's (R.A) embracing Islam.	43.0	45.0		44.0
Be able to make the lesson clear, we learn from life of Hazrat Salman Farsi (R.A).			65.0	65.0
Be able to tell about the life (biography) of Muhammad Bin Qasim.	93.0			93.0
Be able to narrate the incidences (happenings) of Muhammad Bin Qasim's conquering Sindh.	80.0			80.0
Be able to make clear the guidance we seek from the manners and habits of Muhammad Bin Qasim.			91.0	91.0
Be able to narrate life incidences (biography) of Bu Ali Sina.	80.0			80.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
U R D U				
Be able to read the text passage, considering its elements, results, relation of cause and effect and speed of reading (quiet and loud voice), central idea and its illustrative references.	95.0	71.0	49.0	72.0
Be able to read the central idea of any literary piece by comprehending it.	92.0	84.0	81.0	86.0
Be able to read by comprehending the technique of the writer, purpose and way of expression in any story, drama, essay etc.	95.0	84.0	72.0	84.0
Be able to write the prose piece or poem in one's own words.			59.0	59.0
Be able to employ and make part one's own observation, knowledge, affairs, thinking and care, in writing any essay, that too in a simple way and be able to write at least three paragraphs.			58.0	58.0
Be able to write the summary of the written material/text passage, to at least one third of its length.			55.0	55.0
Be able of writing and sending the report of any happening/incident to the newspaper /police station or responsible officer. Be able to write an application to higher authorities or district administration, with regard to some of the requirements of school.			69.0	69.0
Be able to write a dialogue on any general topic.			50.0	50.0
From two or more aspects occurring at the turning of any story, be able to select any one of them.			60.0	60.0



SLO	Mean % Performance on Knowledge based Questions	Mean % Performance on Understanding based Questions	Mean % Performance on Application based Questions	Overall Mean %
U R D U				
Be able to change passive voice sentences to active voice sentences.		84.0		84.0
Be able to differentiate in the term Alliteration in meaning.			75.5	75.0
Be able of making journey mentally from meaning to words (with the help of the Thesaurus).		82.0		82.0
Make learn the usage of the idiomatic expressions and of the proverbs.			82.0	82.0
Be able to correct the wrong sentences with regard to the usage of Rooz Marrah (the words language specialists use often) and the idiomatic way.		74.0		74.0
Be able to use properly the maxims and sayings in writing.		75.0		75.0
Be able of word forming with the help of the prefixes and suffixes.			76.0	76.0
Be able to arrange words with regard to the Alteration.		67.0		67.0

* indicates various elements of the main SLOs

ANNEX III: WEAK SLOs

Students Learning Outcomes that need top priority in teaching and teachers' training are listed below. The performance of students in these SLOs is less than passing marks i.e. mean score < 33%. Teachers should focus on these SLOs during lesson planning. More examples should be included in lesson plans to develop understanding and application skills in students. Education authorities especially AEOs and DTEs should mentor teachers to improve teaching practices.

Students Learning Outcomes	Subject	Cognition Level	Mean % Score
GRADE 5			
Use critical thinking to respond to the text (post-reading): Apply world knowledge and own opinion to the text read. Relate what is read to their own feelings and experiences. (Interpretive)	English	Understanding	19.8
Write a guided story using the elements of story writing.	English	Application	20.8
Use critical thinking to respond to the text (post-reading): Apply world knowledge and own opinion to the text read. Relate what is read to their own feelings and experiences. (Inferential)	English	Understanding	23.4
Write a guided paragraph using ideas gathered and organized through various strategies.	English	Application	26.6
Respond to and ask wh questions.	English	Application	29.5
Illustrate use of pronouns learnt earlier. Use the personal pronouns myself, yourself/ves, himself, herself, ourselves, themselves and itself.	English	Knowledge	30.5
Be able to give reason of Hazrat Usman's (R.A) migration towards Abyssinia.	Islamiat	Understanding	7.5
Be able to make clear the importance of tolerance, that too in the light of the life examples of the Holy Prophet (PBUH).	Islamiat	Understanding	14.8
Be able to make clear 'Afwo Darguzar' (Forgiveness) in the light of the live actions from the life of our Holy Prophet (PBUH).	Islamiat	Understanding	18.0
Be able to know about the Battle of Badr (Ghazwa e Badr).	Islamiat	Knowledge	19.5
Be able to narrate the reasons of the Battle of Badr.	Islamiat	Application	20.0
Be able to tell as to why Hazrat Usman (R.A) is called Zunnurain (possessor of two lights).	Islamiat	Understanding	21.7
Be able to make clear the importance of tolerance, in the light of the examples of the companions of the Holy Prophet Hazrat Muhammad (PBUH).	Islamiat	Understanding	21.8



Students Learning Outcomes	Subject	Cognition Level	Mean % Score
GRADE 5			
Be able to describe the miracles given to Hazrat Isa (A.S).	Islamiat	Knowledge	22.5
Be able to make clear the importance of frugality, in the light of the life of the Holy Prophet (PBUH).	Islamiat	Understanding	24.3
Be able to describe the social benefits and rewards of 'Afwo Darguzar' (Forgiveness).	Islamiat	Understanding	24.8
Tell about preparation of the Non-Muslims with regard to the Battle of Badr.	Islamiat	Application	25.0
Be able to know about the biography of Hazrat Usman (R.A).	Islamiat	Knowledge	27.0
Solve real life problems involving conversion, addition and subtraction of units of time.	Math	Application	20.3
Solve real life problems involving conversion, addition and subtraction of units of temperature.	Math	Application	21.3
Define and identify direct and inverse proportion.	Math	Application	22.8
Solve real life problems involving mixed operations of addition, subtraction, multiplication and division.	Math	Application	30.4
Solve real life problems involving multiplication of fractions.	Math	Application	31.8
Describe the properties of the three states of matter on the basis of arrangement of particles.	Science	Understanding	21.6
Investigate and describe how living things affect and are affected by soils.	Science	Understanding	21.8
Investigate and describe how living things affect and are affected by soils.	Science	Knowledge	27.3
Identify similarities and differences among the different types of soil.	Science	Application	28.9
Explain main causes of water, air and land pollution.	Science	Understanding	31.8
Compare the structure of a monocot and a dicot seed.	Science	Application	32.8



Students Learning Outcomes	Subject	Cognition Level	Mean % Score
GRADE 8			
Read a story to analyze text to analyze characters, their motives, actions and emotional responses.	English	Understanding	23.0
Write and revise short formal dialogues.	English	Application	29.1
Make clear the concept of Holy Prophet (PBUH) as a teacher.	Islamiat	Understanding	11.0
Be able to make clear the importance of Good Social Dealing, from the life of our Holy Prophet Hazrat Muhammad (PBUH).	Islamiat	Understanding	23.0
With regard to preaching, be able to make characteristics cleared of the prudential style of preaching of the Holy Prophet.	Islamiat	Understanding	23.0
Solution of Simultaneous Linear Equations: Solve real life problems involving two simultaneous linear equations in two variables.	Math	Application	19.0
Frequency Distribution: Construct frequency table.	Math	Application	27.0
Describe the term atmospheric pressure.	Science	Application	23.0
Explain how genes are introduced into a bacterium.	Science	Understanding	28.0
Differentiate between mitoses and meiosis.	Science	Application	30.0
Describe the properties of acids, alkalis and salts.	Science	Application	31.0
Describe the importance of exothermic reactions in daily life.	Science	Application	32.0
Draw and label human excretory system.	Science	Knowledge	32.0
Describe the image formation using a lens by ray diagram.	Science	Understanding	32.0
Suggest the ways to solve the problems that have resulted from space exploration.	Science	Understanding	32.0