



LARGE SCALE ASSESSMENT

LSA GRADE 4



LARGE SCALE ASSESSMENT 2023

LSA GRADE 4

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List of Abbreviations/ Acronyms

AEO	Assistant Education Officer
ALP	Accelerated Learning Programme
APF	Assessment Policy Framework
ASER	Annual Status of Education Report
AV	Audio-Visual
B.A.	Bachelor of Arts
B Sc	Bachelor of Sciences
CPD	Continuous Professional Development
CRQ	Constructed Response Question
CT	Certificate of Teaching
DEAs	District Education Authorities
DLI	Disbursement Linked Indicator
DPS	Division Public School
ECE	Early Childhood Education
ERQ	Extended Response Question
HED	Higher Education Department
HCF	Highest Common Factor
IT	Information Technology
ITSP	Innovative Teacher Support Package
LCM	Least Common Multiple
LSA	Large Scale Assessment
M.A.	Master of Arts
MCQ	Multiple Choice Question
MEA	Monitoring and Evaluation Assistant
MSc	Master of Sciences
NFBE	Non-Formal Basic Education
NSB	Non-Salary Budget
L&NFBE	Literacy & Non Formal Basic Education
PCTB	Punjab Curriculum and Textbook Board
PEC	Punjab Examination Commission
PEF	Punjab Education Foundation

PEIMA	Punjab Education Initiative Management Authority
PESP III	Punjab Education Sector Project III
PISA	Program for International Student Assessment
PMIU	Programme Monitoring and Implementation Unit
PPP	Public Private Partnership
PPS	Probability Proportional-to-Size
PRP	Pakistan Reading Project
PTC	Primary Teaching Certificate
PTM	Parent Teacher Meeting
PWWF	Punjab Workers Welfare Fund
RRQ	Restricted Response Question
QAED	Quaid-e-Azam Academy for Educational Development
SAFED	South Asian Forum for Education Development
SBA	School Based Assessment
SDGs	Sustainable Development Goals
SED	School Education Department
SPED	Special Education Department
SPED(SL)	Special Education Department (Slow Learners)
SPED(PH)	Special Education Department (Physical Handicap)
SIS	School Information System
SLO	Student Learning Outcome
SNC	Single National Curriculum
SOPs	Standard Operating Procedures
SRP	Sindh Reading Programme
STR	Student-Teacher Ratio
TA	Technical Assistance
TFM	Teacher Forum Meeting
ToS	Table of Specification
WB	World Bank
WPM	Words per Minute

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MESSAGE FROM CHIEF EXECUTIVE OFFICER, PEC

Under the Assessment Policy Framework (2019), a new assessment regime was launched in February 2020. Large Scale Assessment (LSA) is one of its fundamental components, having distinctive features for all stakeholders in the education sector. In the academic year 2023, with the adoption of the Single National Curriculum (SNC), the Large Scale Assessment (LSA) for Grade 4 was conducted. This initiative was undertaken to establish a benchmark for learning in the province.

I am delighted to report a significant milestone achieved by the Punjab Examination Commission (PEC) as it expanded the scope of LSA-2023 across all thirty-six districts of Punjab, through a robust sampling process, by including representation from Private Chain, Private General, Special Education Department (SPED), Punjab Workers Welfare Fund (PWWF), Division Public Schools (DPS), Literacy and Non-Formal Basic Education (L&NFBE), in addition to School Education Department (SED), Punjab Education Foundation (PEF), and Punjab Education Initiative and Management Authority (PEIMA) schools. I would like to express my most profound appreciation to my team at PEC for utilizing their expertise for the inclusion of skills addressing Bloom's psychomotor domain, in addition to assessing reading, listening and speaking and being able to give comprehensive feedback to the allied organizations and education system.

I would like to extend my gratitude to the School Education Department (SED), Quaid-e-Azam Academy for Educational Development (QAED), Punjab Curriculum and Textbook Board (PCTB), Programme Monitoring and Implementation Unit (PMIU), District Education Authorities (DEAs), Punjab Education Initiative Management Authority (PEIMA), Special Education Department (SPED), Literacy and Non-Formal Basic Education Department (L&NFBED), Division Public Schools (DPS), Punjab Worker Welfare Fund (PWWF), Private Chains, Private General Schools and Punjab Education Foundation (PEF) for their instrumental role in the development and execution of the LSA. Their expertise and cooperation were invaluable. I would also like to thank the teachers, students, and parents who participated in the LSA. Their cooperation made this project a success. The LSA will be a valuable tool for improving the quality of education in Punjab.

I am pleased to inform you that specific excerpts from this report accrediting to curriculum and textbooks, teachers' capacity building through training programs, quality of Public-Private Partnership (PPP) schools, districts performance, and other policy issues and requisite recommendations will be shared with all allied departments and stakeholders, i.e., SED, QAED, PCTB, PMIU, DEAs etc., for future policy considerations and actionable decisions for a holistic quality improvement in education in the province of Punjab. The role of PEC Commission members in the leadership of the Chairperson and their decisive role in its implementation is commendable. I am thankful for the support extended by the secretary school education department for implementing the assessment across the Punjab. The Punjab Examination Commission team is highly motivated for their future vision, intending to conduct assessment of Grade 4 again after 2-3 years, for which the results included in this report will be used as the benchmark, against which the academic performance of the students will be gauged in upcoming years. We also intend to align this and the upcoming LSA with the Global Proficiency Framework (GPF) to analyze and report students' proficiency on Sustainable Development Goals (SDG) Indicator 4.1.1, which is the proportion of students reaching global minimum proficiency in reading and mathematics to compare, aggregate, and track assessment results on a global basis.

Good luck to my team.

Tariq Iqbal
Chief Executive Officer, PEC

EXECUTIVE SUMMARY

In February 2020, the Government of Punjab replaced the examination system with the new assessment regime, the Assessment Policy Framework (APF) 2019. The APF introduced a set of three complimentary interlinked assessments (system-level, school-level and classroom-level) that cater to all tiers of the system; (i) for improved policy decisions, (ii) school-based changes and, (iii) teaching and learning practices. These assessments are of three types in nature: Large Scale Assessment (LSA), School Based Assessment (SBA), and Formative Assessment (FA).

LSA 2023 is the third assessment of this nature, following the LSA 2021 and LSA 2022. However, this is the first LSA conducted for Grade 4. The current LSA also includes results from Private Chain, Private General, SPED, PWWF, DPS, and L&NFBE schools, in addition to SED, PEF, and PEIMA schools.

This report provides an overview of the design, conduct and results of LSA 2023. The sampling methodology, design of the assessment instruments and background questionnaires along with the analysis techniques used have also been elaborated. The report provides a detailed account of the assessment results as: (i) overall performance of students (ii) a comparison of student scores with teachers (iii) between students of schools of different organizations (SED and non-SED) (iv) between different levels of schools (primary, middle, secondary, and higher secondary) and (v) between different districts. Linear regression has also been run to understand the (iv) relationship of students' scores with other key areas related to teachers, school, and parents using ordinary least squares estimation technique. Feedback data (v) of school-based actors such as teachers and school councils has also been collected. Based on the LSA findings, recommendations for different departments have also been given.

The LSA 2023 for Grade 4 is aligned with the Single National Curriculum (SNC), and hence LSA 2023 results can serve as a baseline for future LSAs of Grade 4.

The LSA 2023, has been designed taking into consideration, international best practices of assessment. A comprehensive development process was followed for assessment development including consultations with private and government school teachers, academics and relevant experts from all government education departments such as QAED, PCTB, PMIU, PEF and PEIMA. The key components and structure for LSA 2023 have been designed by PEC following a rigorous consultative process which includes: composition of the assessment, population coverage, curriculum coverage frequency and timings, output and reporting of the results.

Data collection under the assessment has been done using two instruments: (1) Assessments (Test papers) for evaluation of Literacy (Urdu and English), Numeracy and Science Skills (as presented in the Single National Curriculum including subject competencies, key learning areas and learning strands respectively) and (2) Background questionnaires for head-teachers, teachers, school council members, parents and students (to collect information about students, school and classroom pedagogies).

LSA was conducted in a representative stratified sample of 5000 schools in the province. The schools were sampled as per their administrative arrangement: SED, PEF, PEIMA, Private Chain, Private General, SPED Slow Learners, SPED Physical Handicap, PWWF, DPS, and L&NFBE schools. In the stratified sample the following was included: (i) both gender (boys and girls), and (ii) all types of schools (i.e., Higher Secondary, Secondary, Middle and Primary).

PEC steered implementation of the LSA 2023 with the help of its core team and staff of SED. For implementation, the test administrators from the public schools were nominated by the concerned

DEAs. The field staff was trained by the PEC experts; comprehensive SOPs detailing all steps of conduct were outlined. All papers were marked using on-screen marking system. RedMarker was contracted for on-screen marking. PEC team also monitored up to 20% marking to ensure validity and reliability of marking data.

Findings highlight that:

- **Overall mean scores** achieved by the students is 69%. Female students achieved 70% while male students achieved 67% overall mean scores.
- **Subject-wise scores** show that female students achieved 68%, 66%, 74% and 71% mean scores in the subjects of English, Mathematics, Science, and Urdu respectively. Whereas male students achieved 65%, 65%, 71% and 67% in the subjects of English, Mathematics, Science, and Urdu respectively.
- **Overall** students had higher percentage scores in **MCQ** type questions than **CRQ** type questions.
- In reading fluency assessment, students of Grade 4 can read on average 71 words in English and 90 words in Urdu.
- **In speaking assessment**, students of Grade 4 can speak continuously on a topic on average for 71 seconds in English and 76 seconds in Urdu.
- Overall mean scores achieved by **teachers** is 83%. Overall mean scores of teachers in the subjects is 84%, 79%, 87%, and 85% in English, Mathematics, Science, and Urdu respectively. The overall performance of male and female teachers is almost similar. However, male teachers scored 3% higher scores in the subject of Mathematics, while females scored 2% more than males in English.
- Overall scores of students are 69%, 64%, 61%, 66%, 66%, 67%, 64%, and 66% in SED, PEF, PEIMA, Private Chain, Private General, SPED Slow Learner, SPED Physical Handicap, and PWWF schools, respectively. Subject-wise breakdown of scores shows that:
 - i . In English, students of SED, PEF, PEIMA, Private Chain, Private General, SPED Slow Learner, SPED Physical Handicap, and PWWF schools scored 68%, 62%, 58%, 69%, 66%, 67%, 67%, and 67% respectively.
 - ii . In Mathematics, students of SED, PEF, PEIMA, Private Chain, Private General, and SPED Slow Learner, SPED Physical Handicap, and PWWF schools scored 66%, 61%, 59%, 58%, 61%, 62%, 57%, and 66% respectively.
 - iii . In Urdu, students of both SED, PEF, PEIMA, Private Chain, Private General, and SPED Slow Learner, SPED Physical Handicap, and PWWF schools scored 68%, 68%, 64%, 67%, 68%, 70%, 65%, and 65% respectively.
 - iv . In Science; students of SED, PEF, PEIMA, Private Chain, Private General, and SPED Slow Learner, SPED Physical Handicap, and PWWF schools scored 73%, 68%, 64%, 67%, 69%, 71%, 67%, and 66% respectively.
- **Overall achievement of students** is 69%, 69%, 67% and 66% in primary, middle, secondary, and higher secondary schools, respectively.
- **Performance comparison of districts based on students'** percentage scores shows that Muzaffargarh, Narowal, and Khanewal are the top performing districts, while Gujrat, Chiniot, and Bhakkar are among worst performing districts.
- **Performance comparison of districts based on teachers'** percentage scores shows that Khanewal, Narowal, Muzaffargarh, and Jhelum are among the top performing districts, while the teachers from Bahawalnagar, Lahore, Chiniot, and Gujrat achieved the lowest scores.

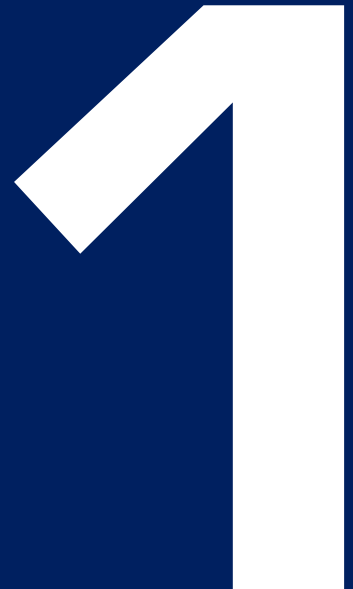
The data showed significant impact of parents, teachers, and school related factors on students' achievement:

- Higher academic and professional qualification of teachers, participation of teachers in training programs, use of study aids in classrooms, lesson planning by teachers, and other healthy teaching practices have significant positive impact.
- Availability of basic facilities in school and classrooms, use of curriculum and teachers' guides, availability of subject-specialist teachers in school, opportunities for students to participate in sports, effective monitoring of teachers performance and classroom inspections by AEO also have positive and significant impact on student's learning.
- Other factors having significant positive impact include parents' qualification, parents' active engagement with school, and availability of computer and other study-aids at home.
- Higher provision of Non-Salary Budget (NSB) was not found to have any significant impact on student scores.

In the last chapter of the report, recommendations to key stakeholders based on the findings of the study are provided. The recommendations are intended to facilitate the improvement in provision of education in the province by guiding the response of relevant stakeholders.



INTRODUCTION



Building a strong education system that promotes learning for all is fundamental to the development and economic growth of a country (Clarke and Luna, 2021)¹. The role of ‘assessment’ through tracking and measuring of this learning cannot be ignored. Developed education systems across the world focus on having a strong centralised assessment mechanism that measures student performance, provides feedback for policy actions and assists in alignment of all actors.

For the province of Punjab, the assessment mechanism is led by the Punjab Examination Commission (PEC). Under its Commission, PEC is mandated to ‘design, develop, implement, maintain, monitor and evaluate a system of examination for elementary education (Grade 1-8)². Till 2019, PEC conducted annual curriculum-based examinations for Grades 5 and 8. The examination system from February 2020 was replaced by the new assessment regime, the Assessment Policy Framework (APF)³.

1.1.

The New Assessment System Under the Assessment Policy Framework (APF)

The APF is the overarching framework for assessments in the province focused on serving all purposes of a best practice educational assessment system: (i) tracking changes from one learning point to the other (ii) making informed choices for grade promotions, and (iii) helping teachers make informed decisions to refine teaching practices according to student learning needs⁴.

The new assessment system focuses on introducing transparency and autonomy of teachers. This is a marked change from the previous examination system that focused on the notion of accountability with greater punishments attached with assessment results. The conduct of high-stake examinations previously led to the creation of an unfriendly learning environment at the school level; leading to continuous pressure on teachers to achieve results with students resorting to more rote learning and cheating.

The APF eliminates these concerns by introducing a set of three complimentary interlinked systems that cater to all tiers of the system; (1) system level through provision of feedback for improved policy decisions (2) school-level feedback for school-based changes and, (3) classroom-level consistent feedback for the teacher to continuously change and improve teaching and learning practices.

All of the three systems while are complimentary in nature are diverse in design, purpose, methodology and use of assessment results. The key objectives and three-tiered system is given in Box 1.1.

The envisioned system under APF can be classified into two types:

Large Scale Assessments (LSA) (International, National and Regional Level) – to monitor and provide information on overall performance levels in the system, changes in those levels over time, and contributing factors.

School-Based Assessments (SBA) (Summative and Formative) – to track students' progress at different intervals to refine teaching instructions and classroom assessments to provide real-time information to aid teaching and learning process in classrooms.

Objectives of APF and the Three Systems of Assessment

The Assessment Policy Framework aims to:

- help establish a systematic way of developing, implementing and utilizing assessments for teaching and learning process.
- assist and bridge information gaps by providing a platform to all stakeholders for discussion and use of assessment results for improved practices
- help the province to adopt internationally recognised best assessments practices appropriate to the context of the province of Punjab.

The APF Three-Tiered System Establishment:

The institutionalization of the system leads to the following.

- Sample-Based Large Scale Assessments (LSA),
- Summative School-Based Assessments (SBA) and
- Formative Assessments (FA)

SYSTEM LEVEL

The **system level LSA** focuses on assessing: elementary level curriculum of key subjects and skills, early grade assessment of literacy and numeracy, and need-based assessments.

SCHOOL LEVEL

The **school level SBA** is a term-wise curriculum based assessments conducted by schools themselves. Test papers were constructed using centralised item banks (developed by PEC).

CLASSROOM LEVEL

The **classroom level FA** is consistent testing by teachers during and after lessons periodically. These are an evaluation of students on a continuous basis on an SLO/unit/topic/sub-topic etc.

¹ Clarke, M. and Luna, B.D. (2021). Primer on Large Scale Assessments of Educational Achievement. National Assessments of Educational Achievement; Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/35494> License: CC BY 3.0 IGO

² PEC. (2010). The Punjab Examination Commission Act 2010. Can be accessed at: https://pec.edu.pk/system/files/THE_PUNJAB_EXAMINATION_COMMISSION_ACT_2010.pdf

³ APF (2019). Assessment Policy Framework. School Education Department (SED), Government of Punjab. Notification of February 3, 2020. Can be accessed at: https://pec.punjab.gov.pk/system/files/Notification%20of%20APF%202020_0.pdf#overlaycontext=node/113

⁴ PESP III (2019). Assessment Policy Framework Guiding Report. The Third Punjab Education Sector Project Technical Assistance, Cambridge Education. In collaboration with the Punjab Examination Commission (PEC), 2019.

1.2.

Implementation of the Large-Scale Assessment (LSA)

Large Scale Assessments (LSA) provide information on overall levels of student achievement in the system for a particular curriculum area and at a particular grade level.

Literature shows us that these assessments vary globally in terms of (i) school grades and age levels tested, (ii) population coverage, (iii) subjects and skills coverage, (iv) frequency (v) test administration, (vi) collection of background data and (vii) reporting and use of results⁵.

The assessment has a two-fold purpose as per its intended design:

- To assess core literacy, numeracy and scientific skills through subjects of English, Urdu, Mathematics and Science of students of Grade 4;
- To collect background information on external factors influencing the learning of students.

LSA 2023 provides the system with overall feedback on overall student performance of Grade 4 for improvements in teacher development and training, curriculum and textbooks and related policy considerations.

The assessment has been conducted in a representative stratified sample of 5000 schools in all 36 districts of the province. LSA 2023 has been designed following international best practices and a comprehensive development process including private and government school teachers, academics and relevant experts from all government education departments such as the Quaid-e-Azam Academy of Educational Development (QAED), Punjab Curriculum and Textbook Board (PCTB), Programme Monitoring and Implementation Unit (PMIU), Punjab Education Foundation (PEF) and the Punjab Education Initiative and Management Authority (PEIMA).

Key questions that LSAs address

Extract taken from Greanery and Kallaghan, 2008

LSAs can provide support in policy decisions by addressing some key questions:

- How well are students learning in the education system? Are they meeting specific learning standards?
- Are there particular strengths and weaknesses in student knowledge and skills?
- Do particular subgroups perform worse than others? Are there disparities, for example, between the performance of boys and girls or students from different language groups?
- What factors are associated with student achievement? To what extent does student achievement vary with the characteristics of the learning environment (teacher knowledge and preparation, school resources etc.) or with student's home circumstances?
- Does student achievement change over time? What factors are linked to changes in student achievement over time?

1.3.

Structure of the LSA Under APF

The APF provides the overall structure for all system-level LSAs. The key components and structure have been developed by PEC following a rigorous consultative process. The final structure of the assessment has been drafted taking into account the best international assessment models conducted globally; the Programme for International Student Assessment (PISA), Trends in International Maths and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS)⁶.

Key components of the LSA include:

- **Composition of Assessment:**
 - a.** Assessment of Literacy, Numeracy, and Science skills at primary level and cover additional subjects as directed by SED.
 - b.** Assessment of knowledge and key skills of core subjects at the middle level and cover additional subjects as directed by SED.
- **Population Coverage:** The assessments cover selected students through a representative stratified sample of schools, students, teachers and any other target audiences/points as per the assessment requirements.

- **Frequency and Timing:** The assessments are conducted at regular intervals (alternate years). PEC implements the LSA in a way that the pilot study of a grade is administered along with the main study. Hence, LSA for a specific grade is conducted simultaneously with the pilot testing of another grade.
- **Curriculum Coverage:**
 - a. Literacy skills (English and Urdu languages), Numeracy (Mathematical skills), and Science skills for primary level.
 - b. Selected (prioritized) and measurable SLOs in core subjects at the middle level.
- **Output:** LSA aims to achieve the following:
 - a. scores for Literacy, Numeracy, and Science for primary schools' sampled students.
 - b. scores in core subjects' knowledge and key skills/disciplines/ competencies assessed for sampled students from middle schools.
 - c. identification of factors influencing learning experience.
- **Reporting of Results:** Reporting of students' scores in form of percentage and mean scores.

1.4.

Guide to the Report

LSA 2023 Main Findings report provides the key insight and evidence gained on student and teacher performance for Grade 4. The report is organised into three chapters.

Chapter 1 provides an introduction to the implementation and structure of the Large Scale Assessment under the Assessment Policy Framework.

Chapter 2 provides an outline of the methodology followed in the development of LSA 2023. It enumerates the sampling methodology, assessment instruments, background data-collection instruments and the analysis techniques used.

Chapter 3 details the assessment results. A specific section on key highlights is already given at the start of the report in the Executive Summary. The detailed assessment data is further divided into three parts:

- a. overall performance of students including a comparative of scores with teachers and between students of different schools (SED and non-SED);
- b. relationship of student scores with key areas;
- c. feedback from various actors such as teachers, parents, and school councils.

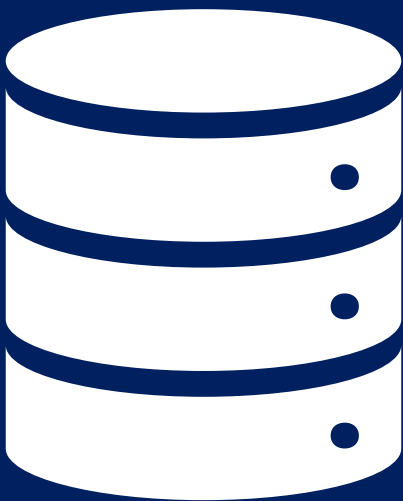
Chapter 4 provides the recommendations for different departments for use of LSA findings.

⁵Ibid. Reference 1

⁶PESP III. (2020). Large Scale Assessment (LSA) for Grade 5 Assessment Framework. The Third Punjab Education Sector Project, Technical Assistance, Cambridge Education. In collaboration with the Punjab Examination Commission (PEC), 2020.



METHODOLOGY



2

The LSA 2023 was conducted across 36 districts of Punjab.

The assessment is conducted on the Single National Curriculum (SNC) centered on the Student Learning Objectives (SLOs) previously developed and revised after implementation of Single National Curriculum (SNC) by the Punjab Education Sector Project (PESP III) team.

2.1.

Methodological Approach

Target Population: The total population of this study consists of 5000 schools under which 50,000 students have been assessed in 36 districts.

2.1.1. Sampling Methodology

Random stratified sampling based on probability proportional to size (PPS) was used for conducting this LSA.

- **Composition of Sample:**

Various types of schools are included as per their administrative arrangement: SED, PEF, PEIMA, DPS, L&NFBE, Private Chain, Private General, SPED Slow Learner, SPED Physical Handicap, and PWWF schools. The sample selected has the following characteristics:

- a) **Gender** (Boys and Girls Schools)
- b) **Type of school** (Primary, Middle, High and Higher Secondary Schools)
- c) **Location** (Rural and Urban areas)

In the data

1. Schools with less than 10 students are excluded.
2. Mosque schools are not part of the sample.
3. Co-education schools are categorised into boys or girls' schools according to the number of girls and boys students, i.e., the schools with more girls than boys are categorised as girls' schools and vice versa.
4. If the school has less than ten students after its categorisation on the basis of gender, it is excluded from the sample.
5. High schools are considered Secondary schools.

In the sample, each district of the province was stratified into multiple sub-strata, namely by urban and rural stratum, school type (i.e., Higher Secondary, Secondary, Middle and Primary) and boys' and girls' schools.

Considering the characteristic variability for which estimates needed to be prepared, population distribution and reliability constraints, different sample sizes for each type of school were computed and fixed.

The following sample sizes were selected to provide reliable estimates of key variables at both district (SED schools) and provincial levels (PEIMA and PEF schools):

Table 1a: Sample Size of Schools for LSA 2023

SCHOOL ADMINISTRATION TYPE	NUMBER OF SCHOOLS	STUDENTS (10 per school)
SED	3700	37000
PEIMA	144	1440
PEF	828	8280
L&NFBE	72	720
PRIVATE CHAIN	67	670
PRIVATE GENERAL	68	680
SPED (SLOW LEARNERS)	15	150
SPED (PHYSICALLY HANDICAPPED)	28	280
DPS	61	610
PWWF	17	170
TOTAL	5000	50000

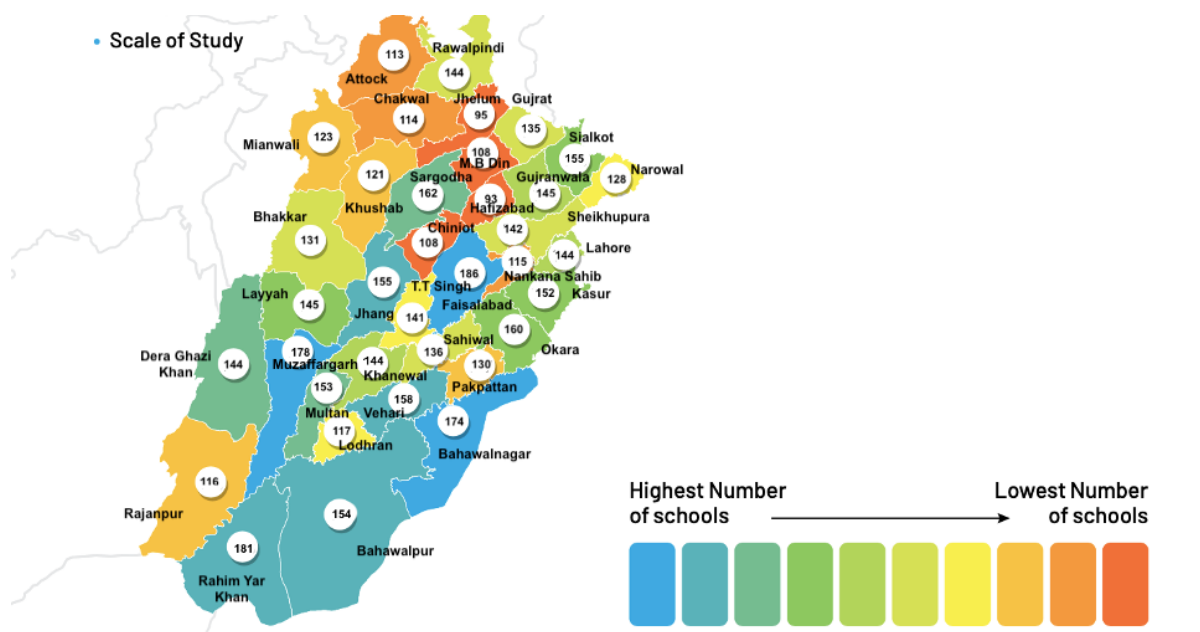


Table 1b: District-Wise Data: Number of Schools

DISTRICT WISE NUMBER OF SCHOOLS											TOTAL
	SED	PEF	PEIMA	PRIVATE CHAIN	PRIVATE GENERAL	SPED (PHYSICAL HANDICAP)	SPED (SLOW LEARNER)	DPS	L&NFBE	PWWF	
ATTOCK	88	10	4	2	2	3	1		3		113
BAHAWALNAGAR	128	33	4	2	2		1	2	2		174
BAHAWALPUR	103	39	4	2	2		1		3		154
BHAKKAR	99	20	4	2	2		1	1	2		131
CHAKWAL	84	16	4	2	2	1	1	2	2		114
CHINIOT	81	15	4	2	2		1		3		108
D.G. KHAN	101	34	4	1	1		1		2		144
FAISALABAD	145	20	4	2	2	1		7	2	2	186
GUJRANWALA	111	15	4	2	2			2	5	4	145
GUJRAT	108	15	4	2	2			2	2		135
HAFIZABAD	77	4	4	2	2			2	2		93
JHANG	114	30	4	2	2		1		2		155
JHELMUM	82	4	4		1		1		2	1	95
KASUR	114	25	4	2	2		1	2	2		152
KHANEWAL	109	21	4	2	2		1	4	1		144
KHUSHAB	84	23	4	2	2		1	2	1	2	121
LAHORE	104	25	4	2	2		1	2	2	2	144
LAYYAH	111	22	4	2	2			2	2		145
LODHRAN	80	32	4				1				117
M.B. DIN	87	10	4	2	2			1	2		108
MIANWALI	91	20	4	2	3		1		2		123
MULTAN	103	36	4	2	1	1	1	1	2	2	153
MUZAFFARGARH	117	49	4	2	2		1		3		178
NANKANA SAHIB	86	18	4	2	2		1	1	1		115
NAROWAL	99	18	4	2	2			1	2		128
OKARA	111	32	4	2	2	2	1	4	2		160
PAKPATTAN	93	24	4	2	2		1	2	2		130
RY KHAN	133	37	4	2	2		1		2		181
RAJANPUR	79	25	4	2	2			2	2		116
RAWALPINDI	110	16	4	2	2	5	1	2	2		144
SAHIWAL	104	18	4	2	2		1	4	1		136
SARGODHA	128	22	4	2	2		1	2	1		162
SHEIKHUPURA	99	24	4	2	2		1	4	2	4	142
SIALKOT	119	24	4	2	2			2	2		155
T.T.SINGH	107	20	4	2	2	2	1	2	1		141
VEHARI	111	32	4	2	2		1	3	3		158
TOTAL	3700	828	144	67	68	15	28	61	72	17	5000

2.1.2. Assessment Instruments

LSA 2023 assessment uses two instruments:

Assessments (Test Papers)

– for literacy (Urdu and English), Numeracy, and Science Skills

Background questionnaires

– for head teachers, teachers, school council members, students, and students' parents.

- **Type of assessment instruments:**

The assessments (test papers) are further divided by type. For LSA 2023, the students of Grade 4 have been tested using 4 types of instruments:

Table 2: Type of Assessments Conducted under LSA 2023

Sr No.	Type of Assessment Instrument	Used in Testing of
1	Listening (Oral)	Literacy (English and Urdu)
2	Reading Fluency (Oral)	Literacy (English and Urdu)
3	Speaking (Oral)	Literacy (English and Urdu)
4	Curriculum/SLO Knowledge (Written)	Literacy (English and Urdu), Numeracy (Mathematics), and Scientific Inquiry (Science)

- **Curriculum Content and Cognitive levels tested:**

The LSA 2023 focuses on assessing literacy, numeracy skills and understanding of different scientific concepts and their application in daily life as presented in the Single National Curriculum. This includes competencies, key learning areas and learning strands respectively. A brief description of each area⁷ includes:

⁷Ibid. Reference 6

Table 3: Summary of Content Coverage

Literacy	
Description	i. Literacy is the ability to identify, understand, interpret, create, communicate, and compute, using printed and written materials associated with varying contexts. ii. It involves a continuum of learning enabling individuals to achieve their goals, develop their knowledge and potential, and participate fully in their community and wider society. iii. With the knowledge of words, grammar and visuals, literacy has two major processes: (a) comprehending texts through listening, reading and viewing (b) composing texts through speaking, writing and creating.
Coverage Under LSA	LSA 2023 has assessed the knowledge, understanding, application level, and higher order thinking skills related to the two processes (excluding viewing and speaking) along with knowledge of words and grammar.
Numeracy	
Description	i. Numeracy is the ability to use numbers and solve problems in real life. It means having the confidence and skill to use numbers and mathematical approaches in all aspects of life. ii. It is organised into six interrelated elements: (a) estimating and calculating with whole numbers (b) recognising and using patterns and relationships (c) using fractions, decimals, percentages, ratios and rates (d) using spatial reasoning (e) interpreting statistical information (f) using measurement.
Coverage Under LSA	LSA 2023 has assessed the knowledge, understanding, application level, and higher order thinking skills related to the above six topics.
Scientific Skills	
Description	i. The term 'scientific skills' is defined as a set of broadly transferable abilities appropriate to many science disciplines and reflective of the behaviour of scientists. ii. Understanding various science concepts and their application in daily life is very important for students. It helps them understand the world, nurture their curiosity, and develop essential skills, including inquiry, observation, prediction, analysis, reasoning, and explanation. iii. Primary Science is both a process of inquiry and a body of knowledge. The development of scientific skills and attitudes is inextricably linked to the development of ideas in science. As students' ideas evolve, an understanding of the nature of science needs to be acquired along with its relationship to technology, society and the environment. iv. The curriculum of science is divided into four key learning areas: (a) life science (b) physical science (c) Earth and space science (d) technology, and technical education.

Coverage Under LSA

LSA 2023 assessed the knowledge, understanding, application level, and higher order thinking skills related to the three areas of primary Science. Technology and Technical Information content involves hands-on experience (operate, use, practise, assemble, prepare) and could not be assessed through the paper-pencil test. Therefore, the list of Science student-learning outcomes (SLOs) does not contain outcomes that are technology-based.

PEC followed a consultative process with Punjab Curriculum and Textbook Board (PCTB), Quaid e Azam Academy for Educational Development (QAED) along with practicing teachers from private and public schools to prioritize SLOs for Literacy (English and Urdu), Numeracy (Mathematics) and Scientific Inquiry (Science). All SLOs included have undergone a thorough review process by the experts. Final selection of SLOs under SNC was done through a series of workshops in 2022.

LSA 2023 includes:

⇒ Targeted SLOs for the basic concepts of Grade 4

These were selected by practicing teachers and assessment experts as they are considered the minimum benchmarks/ foundational knowledge needed for promotion to the next Grade.

⇒ SLOs needed to align with the international benchmarks for literacy and numeracy

Practicing teachers and assessment experts studied the national curricula for literacy and numeracy of three countries, namely Australia, Canada and Bangladesh, and noted the common topics/concepts. The prevalence of common topics/ concepts in the curricula of different countries indicates the significance of these topics as fundamental to the primary level education system.

● Quality assurance of Assessment Instruments

All assessments have undergone quality controls set by PEC. The validity and reliability of the assessment has been checked under the institutional processes and protocols set by the organisation that are aligned with best practices of international assessment agencies.

2.1.3. Background Data-Collection on Influencing Factors

The LSA 2023 focuses on understanding all factors that affect students' performance.

While the assessment instruments are designed to collect information on academic performance, additional factors such as socioeconomic status, household set-up, interests in learning, etc., are equally important. For this purpose, the LSA covers the use of comprehensive background questionnaires that can provide information about school and classroom pedagogy.

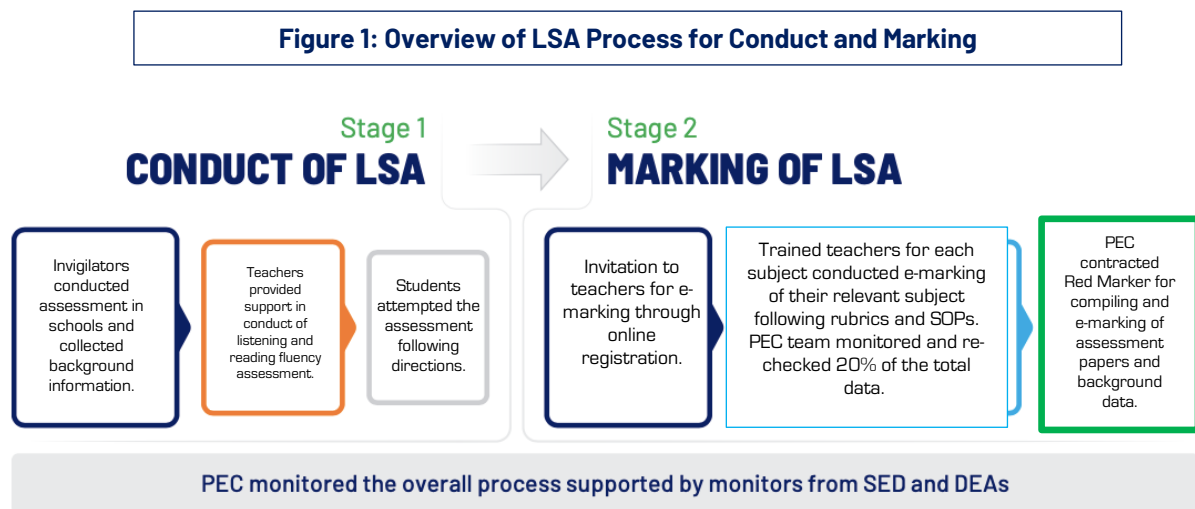
Information under the assessment has been collected at three levels which are as follows:

- Home-related factors
- School-related factors
- Classroom-related factors

2.1.4. Standard Operating Procedures (SOPs) for Conduct and Marking of LSA

PEC has led the implementation of LSA 2023 with its core team and staff of SED. Test administrators nominated from schools were the major actors engaged in conduct of the assessment at the school level. To assist the administration team, comprehensive SOPs detailing steps for conduct and marking of assessment were developed. The SOPs were finalised following a consultative process with all internal wings at PEC (research, administration, finance and IT wings). For scanning of instruments and e-marking, Red Marker was contracted.

The SOPs provide defined roles and responsibilities for each stakeholder engaged in conduct and marking activities. Figure 1 provides an illustrative overview.



PEC trained all the test administration teams about their supervisory responsibilities in schools through a 1-day workshop. The trainings were carried out across the 36 districts.

Required material packs were provided with detailed instructions, research tools and relevant stationery for students and test administrators to ensure smooth conduct of assessment.

Similarly, all teachers engaged in the marking of the assessment were provided training for use of the rubrics and related materials.

2.1.5. Quality Assurance Parameters of Assessment

For quality assurance, PEC and SED developed a robust monitoring system to observe the conduct of assessments in the field and marking at central marking centre. A monitoring plan was drafted with detailed instruments to ensure smooth and fair conduct across the sample of schools.

- **During the Conduct of Assessment:**

- a. PEC along with monitors from the SED and the 36 District Education Authorities (DEAs) conducted spot checks and visits across the province.
- b. PEC created a provincial control room to assist the test administrators and monitors and resolve all issues arising in the field.

- **During the Marking of Assessment:**

- a. PEC team monitored 50% of scanning and cropping to ensure visibility of each part of written questions for valid and reliable e-marking.
- b. PEC team rechecked 20% of the e-marked instruments to ensure data quality and reliability.

Results from the monitoring highlight that the assessment was successfully completed across the province with no major issues. The processes laid out for the assessment were fully followed by all stakeholders engaged in the assessment conduct.

2.1.6 Data Analysis

LSA data has been analysed using appropriate statistical techniques relevant to the nature of the variables. These include using:

- Descriptive Analysis
- Regression Analysis

The analysis results are explained in detail in Chapter 3 of this report. The descriptive analysis has been divided into various sections, i.e., overall student scores, overall teacher's scores, comparison of teachers' and students' scores, and comparison of scores based on types of school administration, levels of school, and districts.

Linear regression has been used to assess the relationship between student performance and factors related to schools, teachers, head teachers and parent's background.

Categorical variables were analyzed by creating dummy variables. However, some categorical variables were treated as continuous variables, e.g., educational qualification was converted into continuous variable by using years of education completed.

It is pertinent to note that only significant results are included in the analysis unless there is a valid reason or inference from results that are not statistically significant.



FINDINGS



3

SECTION 1

FINDINGS

LSA 2023 is conducted in 5000 schools of SED, PEF, PEIMA, DPS, L&NFBE, Private Chain, Private General, SPED Slow Learner, SPED Physical Handicap, and PWWF schools. The results of the assessment are given in detail in this chapter. The descriptive analysis has been divided into various sections, i.e., overall student scores, overall teacher's scores, comparison of teachers' and students' scores, and comparison of scores based on types of school administration, levels of school, and districts. Moreover, linear regression has been used to assess the relationship between student performance and factors related to schools, teachers, head teachers and parent's background. It is pertinent to note that only significant results ($\alpha=0.05$) are included in the analysis unless there is a valid reason or inference from results that are not statistically significant.

The first section of the chapter presents the descriptive analysis of students' and teachers' performance from different perspectives.

3.1.

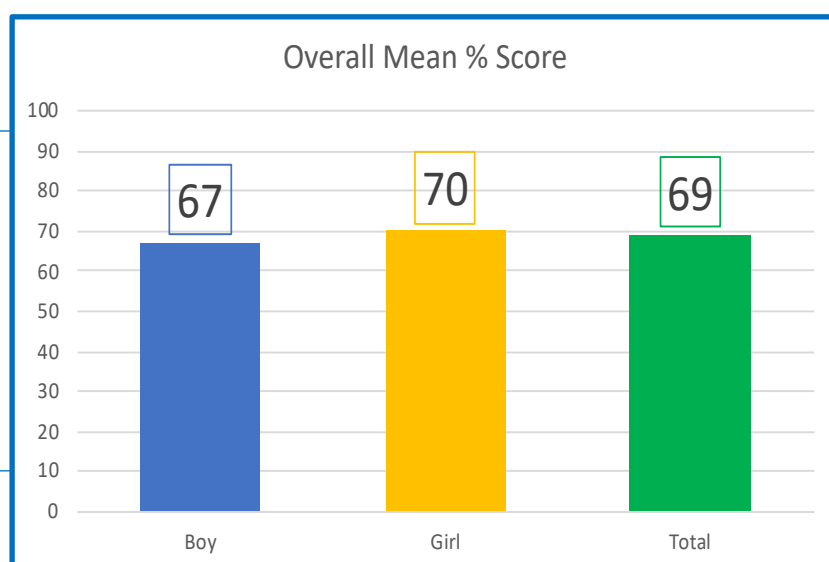
Performance of Students

3.1.1 Overall performance of students

The figure below shows the overall mean percentage scores achieved by students.

Figure 2: Overall Mean Scores Achieved by Students

Results show that overall students attained a score of 69% in the assessment. Girls scored 3% higher than boys.

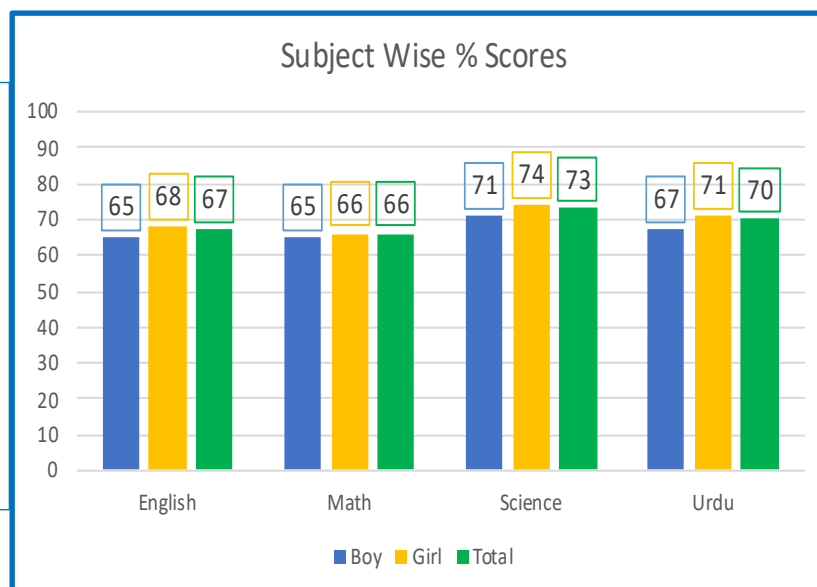


3.1.2 Subject wise performance of students

The figure below shows the subject-wise mean percentage scores under the curriculum of Mathematics, Science, Urdu and English.

Figure 3: Overall Students' Performance Achieved per Subject

Findings show that girls have performed better than boys across all subjects. Female students scored 3% higher in Science and English, 4% in Urdu, while in Mathematics, the difference is only 1%.

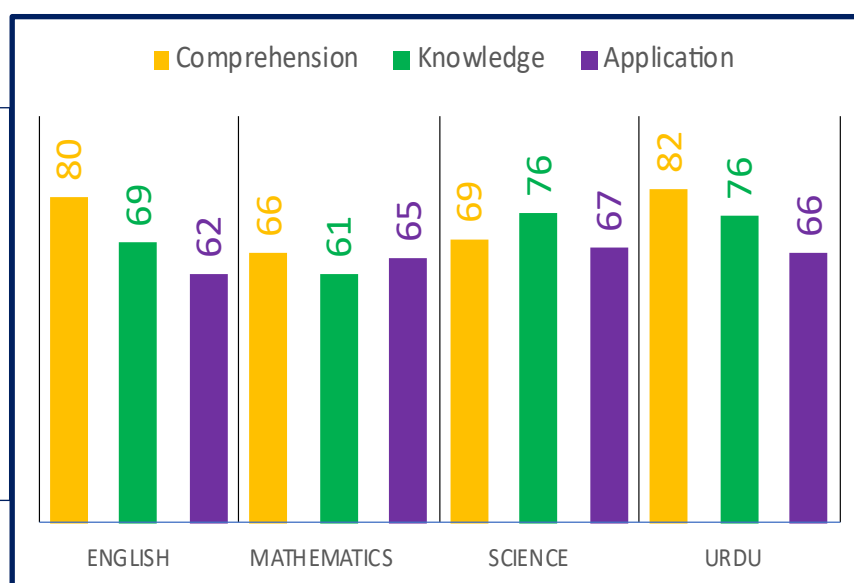


3.1.3 Student performance under targeted cognitive domains

The figure below shows the breakdown of scores achieved in key cognitive domains of Application, Comprehension and Knowledge for each subject.

Figure 4: Overall Students' Performance Based on Cognitive Domains

Students' performance was relatively poor in questions testing application of concepts, while achieving higher scores in questions testing their comprehension and knowledge.



Gender-wise student performance under targeted cognitive domains

Figures below show the gender wise breakdown of scores achieved in key cognitive domains of Application, Compehension and Knowledge for each subject.

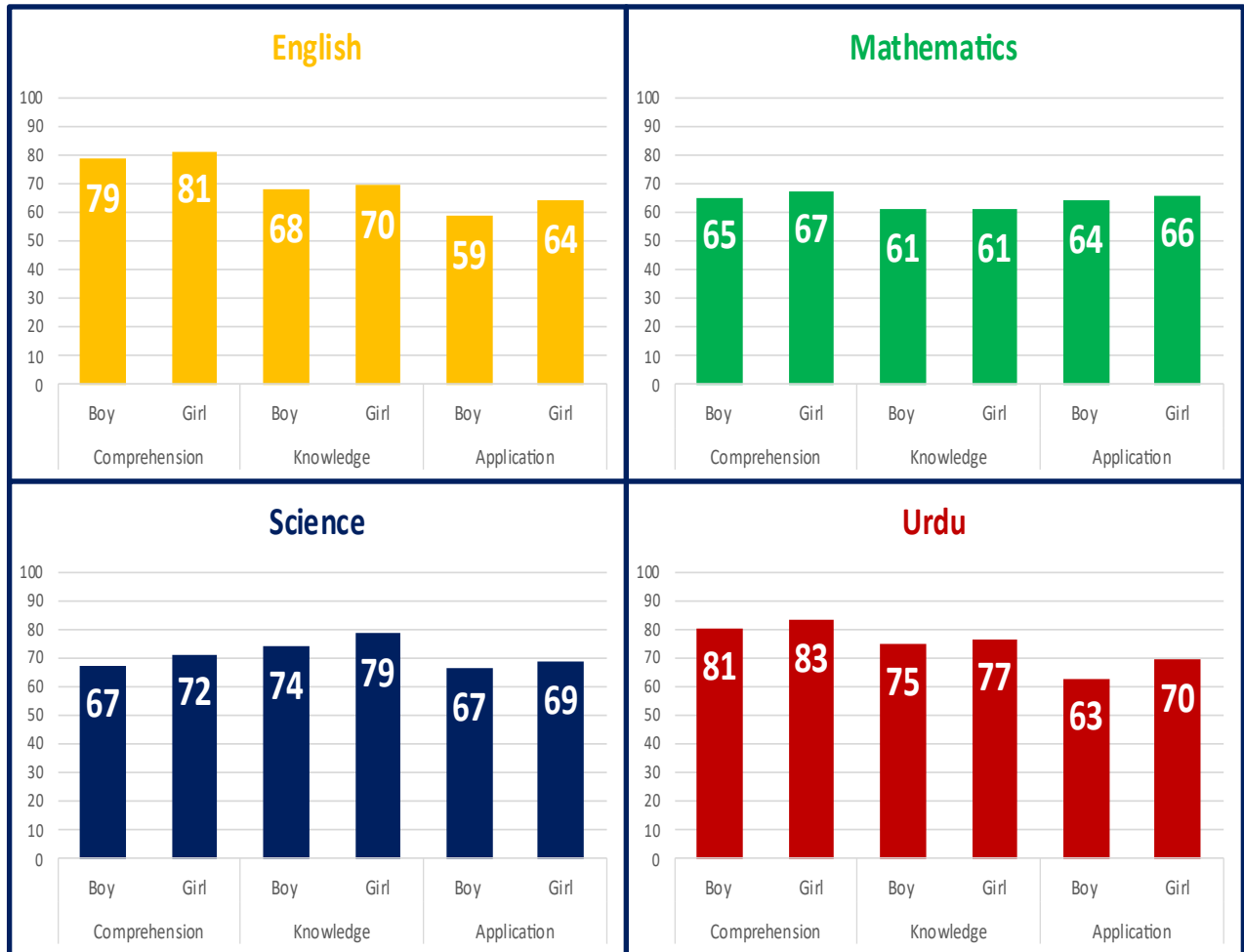


Figure 5: Students' Gender-Wise Performance in Cognitive Domains

English: performance of girls is higher in all domains. In application questions, the difference in scores is 5% while in other two domains it is 2%.

Mathematics: the performance by girls and boys is relatively similar across domains. Girls outperformed boys in comprehension and application domains.

Science: girls scored higher in all domains; 2% higher score in application and 5% in comprehension and knowledge questions.

Urdu: performance of girls was higher in all domains. The difference in scores is highest in application questions, of about 7%.

3.1.4 Topic-wise performance of students

Grade 4 students were tested on numeracy and literacy skills, and understanding of science concepts as per the division of the content areas into different standards/ components/ strands given in the Single National Curriculum (SNC).

The topic wise performance of the students in the 2023 assessment is given below:

Table 4: Overall Student Performance Achieved According to Topics

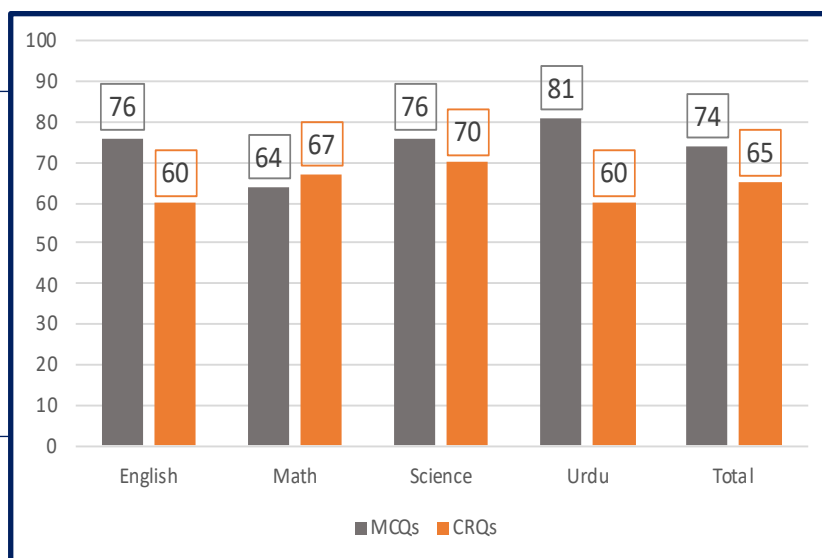
Subject / Topic	Average % Scores
English	
Reading and thinking skills	78%
Oral communication skills	75%
Formal and lexical aspects of language	76%
Writing skills	59%
Mathematics	
Whole numbers and operations	67%
Factors and multiples	65%
Fractions	51%
Decimals	76%
Measurements	68%
Geometry	63%
Data handling	74%
Science	
Life science	74%
Physical science	74%
Earth and space science	64%
Cross cutting elements	70%
Urdu	
Listening	79%
Reading	85%
Writing	68%
Creative writing	58%
Language cognition	77%
Life skills	70%

3.1.5 Overall student performance based on item type

The following figure shows the percentage of correct responses by the students in multiple-choice questions (MCQs) and constructed response questions (CRQs).

Figure 6: Overall Student Performance by Item Type

The scores show that students are performing much better in MCQs (average 74%) compared to CRQs (average 65%).



3.1.6 Student performance in SLOs

The table below shows the subject-wise SLOs in which the performance of students was poor. Students' scores in these SLOs were significantly lower than the overall mean score in the subject.

Table 5: SLOs With Weak Performance of Students

Science SLOs	
Comprehension	Explain biotic and abiotic factors (light, temperature, soil and water) and their linkages.
Comprehension	Describe how seasons in Earth's hemispheres are related to Earth's annual movement around the Sun.
Comprehension	Interpret that human actions such as urbanization, pollution and deforestation affect food chains.
Comprehension	Operate mobile phones for taking snapshots
Application	Identify and describe common predators and their prey.

English SLOs	
Knowledge	Pronounce and practice simple words with more silent letters.
Comprehension	Articulate and practice words containing digraphs, tri-graphs, and silent letters.
Knowledge	Recognize and use full stop with some abbreviations, apostrophe with contractions and hyphen with common compound words.
Application	Demonstrate the use of conventions of letter writing.
Application	Write a guided story using the elements of story writing.
Application	Read short notes written for different purposes to write short notes of their own to friends and family.
Numeracy SLOs	
Knowledge	Write numbers in words up to one hundred thousand (100,000).
Application	Compare and order numbers up to 5 digits.
Application	Identify and differentiate 2 digit prime and composite numbers.
Application	Arrange fractions in ascending and descending order.
Application	Find perimeter of a 2-D figures on a square grid.
Application	Find area of 2-D figures on a square grid.
Application	Interpret real life situations using data presented in line graphs.
Reasoning	Interpret real life situations using data presented in Pie Chart.
Reasoning	Analyze real life situation involving fractions by identifying appropriate number operations.
Application	Draw an angle of given measurement and use the symbol (D) to represent it.
Application	Convert hours to minutes and minutes to seconds.
Application	Convert improper fraction to mixed fraction and vice versa.
Urdu SLOs	
Knowledge	اردو میں سنی گئی گفتگو کا مفہوم سمجھ کر یاد رکھ سکیں اور بیان کر سکیں۔
Application	رموز اوقاف (قوسین اور واوین) کا درست استعمال کر سکیں۔
Application	خط، درخواست اور مکالمہ لکھ سکیں۔
Application	کسی بھی عنوان پر مختصر مضمون ربط اور تسلسل کے ساتھ لکھ سکیں۔
Application	اپنے مشاہدات اور خیالات کو مربوط رواں اور موزوں انداز میں بیان کر سکیں۔
Application	ہنگامی صورت حال (حادثہ، سیلاب اور زلزلہ) میں اپنے اور دوسروں کے بچاؤ کی تدابیر کر سکیں۔

3.1.7 Student performance in reading fluency

Reading fluency is gaining recognition as an essential element of every reading programme. Keeping in view the critical need to build reading skills in students and make them independent readers, LSA 2023 has assessed Grade 4 reading fluency skills. Reading fluency assessment has been carried out in Urdu and English. It mainly focuses on the rate of reading, measured as words per minute (WPM). To assess reading fluency, each student was given a paragraph to read, and the test administrator recorded the number of words read by the student in a minute. In addition, some words were highlighted in the paragraph to assess the accuracy (correct pronunciation). Reading fluency is calculated by taking the total number of words read in one minute and subtracting the number of errors:

$$\text{Total Words Read} - \text{Errors} = \text{Words Per Minute}$$

According to Urdu reading standards developed under the Pakistan Reading Project (PRP), at Grade 4 level, a student should read text at a rate of 100 to 140 correct words per minute.¹²

Similarly, under the reading competency of the Single National Curriculum (SNC) for Urdu, one of the learning outcomes states that students should be able to “read with accuracy at least 100 words per minute.”¹³ For native English speakers, the rate is 100 to 150¹⁴ words per minute whereas a pilot study informed that in Punjab, the rate for English (WPM) falls between 40 and 80¹⁵ words.

Figure 7: Average Student Scores Achieved in Reading Fluency

In Urdu, the average word count achieved by students is 90 while for English the average word count is 71. Girls have outperformed boys in both subjects.

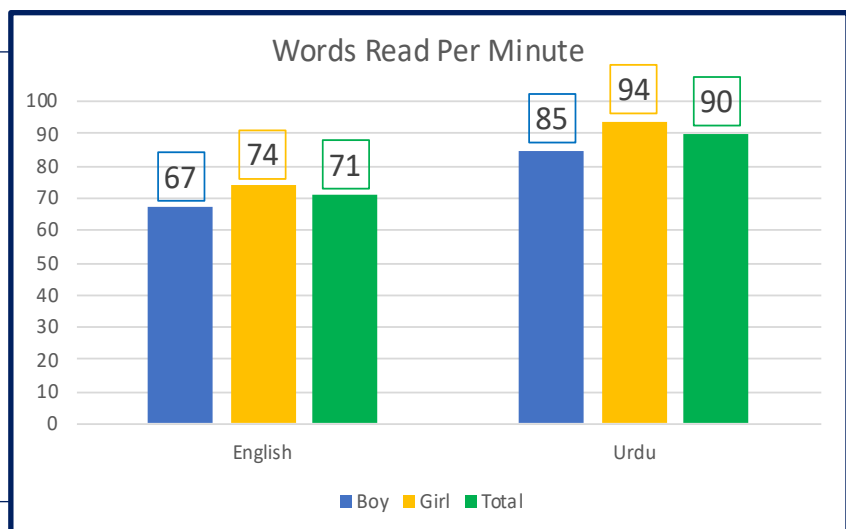
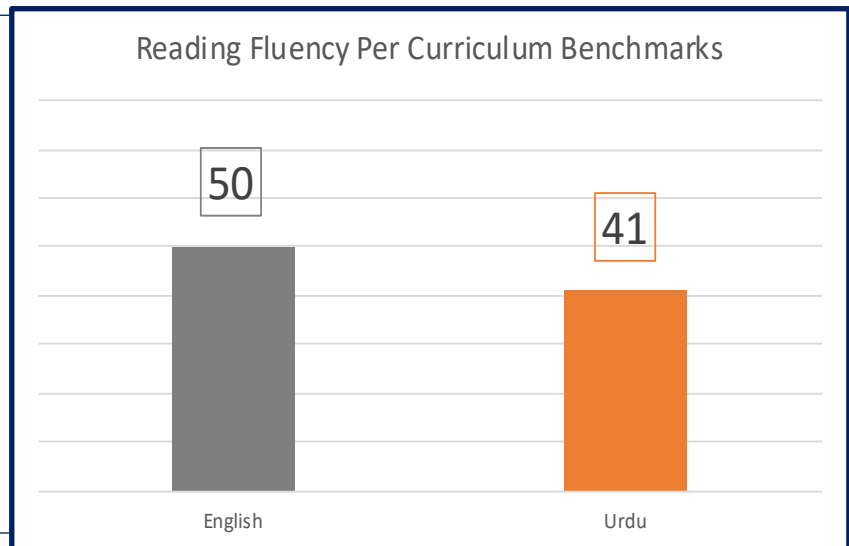


Figure 8: Performance of Students in Reading Fluency per Curriculum Benchmarks

This figure shows the percentage of students who read 100 words or above per minute in Urdu, and 65 words or above per minute in English, as defined in SNC.

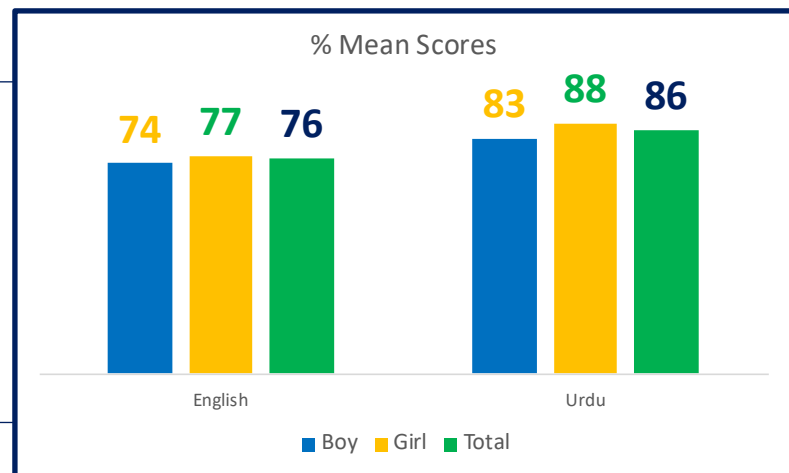


3.1.8 Student performance in dictation

The figure below shows the gender wise breakdown of % mean scores achieved in dictation assessment of English and Urdu.

Figure 9: Performance of Students in Dictation Assessment

On average, girls have performed better than boys in terms of mean percentage scores.



3.1.9 Student performance in speaking skills

Speaking is an important component of learning. A student's ability to speak on a topic has a major impact on building communication skills required inside and outside the classroom.

¹² SRP. (2015). 'Reading Performance Standards and Compliance: ECE to Grade 5' - Urdu Reading (2015). Pakistan Reading Project and Sindh Reading Programme (SRP) by USAID and Government of Sindh.

¹³ MOFEPT (2020). Single National Curriculum (SNC) 2020 - Urdu. Page No. 39

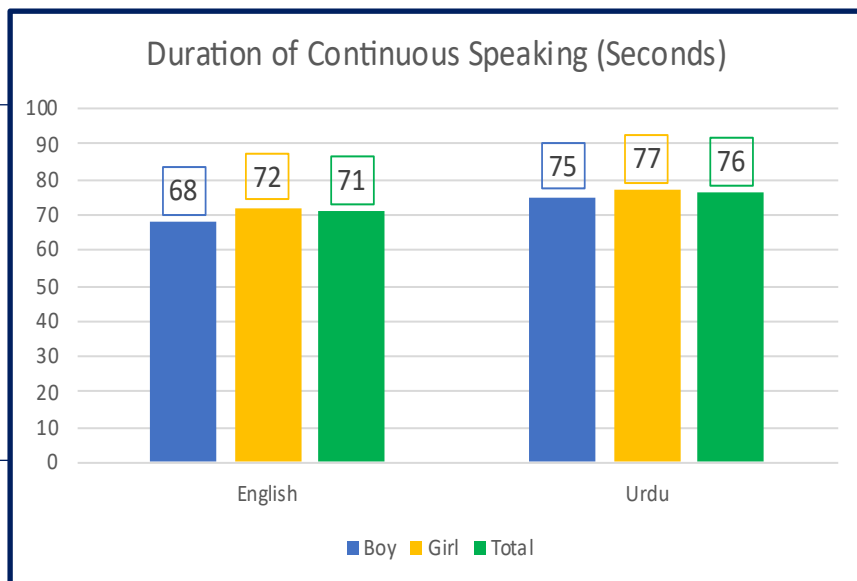
¹⁴ Rasinski, T. & Padak, N. (2005). 3-Minute Reading Assessments. New York, NY: Scholastic Inc.

¹⁵ PEC (2020): 'Large Scale Assessment - Item analysis report 2019 -20'. The Third Punjab Education Sector Project, Technical Assistance, Cambridge Education. In collaboration with the Punjab Examination Commission (PEC), 2020.

In LSA 2023, an initiative to assess speaking skills of the students was undertaken. Each participating student was asked to speak continuously on a given topic, and the duration of the speech was recorded.

Figure 10: Performance of Students in Speaking Assessment

The results show that the performance of girls is better than boys in the speaking assessment of both subjects, English and Urdu.



3.2.

Performance of Teachers

3.2.1 Subject wise performance of teachers

The figures below show the gender wise breakdown of overall % mean scores as well as subject wise mean scores of teachers.

Figure 11: Overall Mean Scores of Teachers

The figure below shows the overall mean scores achieved by teachers. Scores were similar across genders.

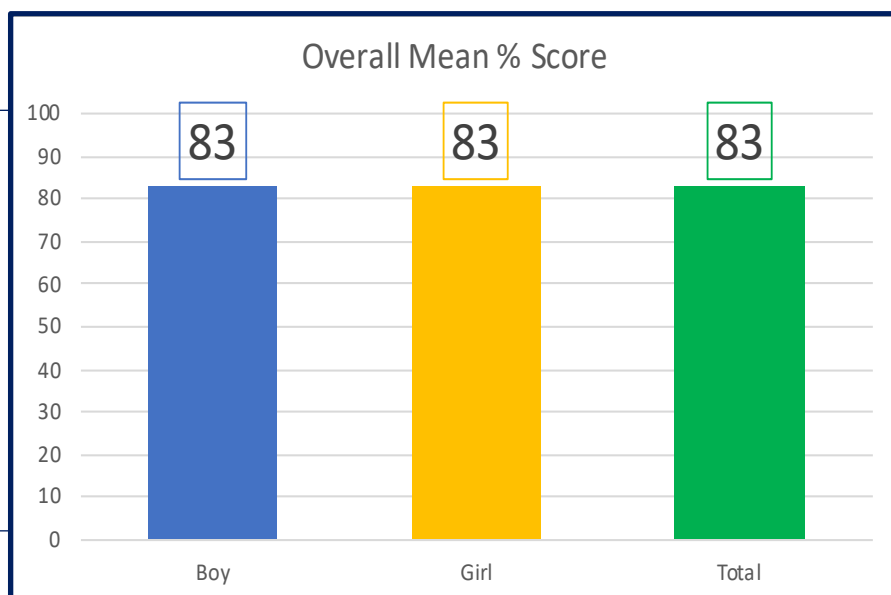
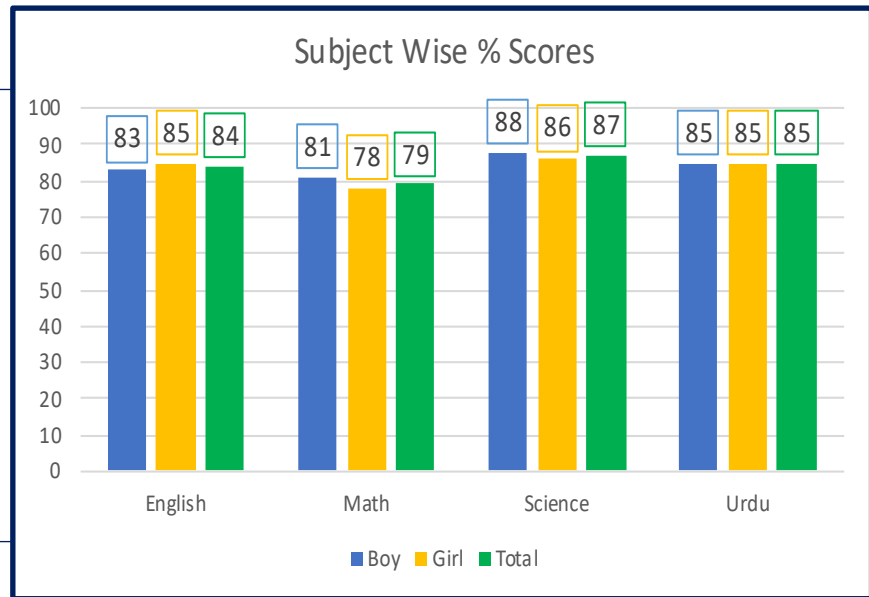


Figure 12: Overall Subject-Wise Mean Scores

The figure below show the subject-wise mean percentage scores in the subjects of Mathematics, Science, Urdu and English.

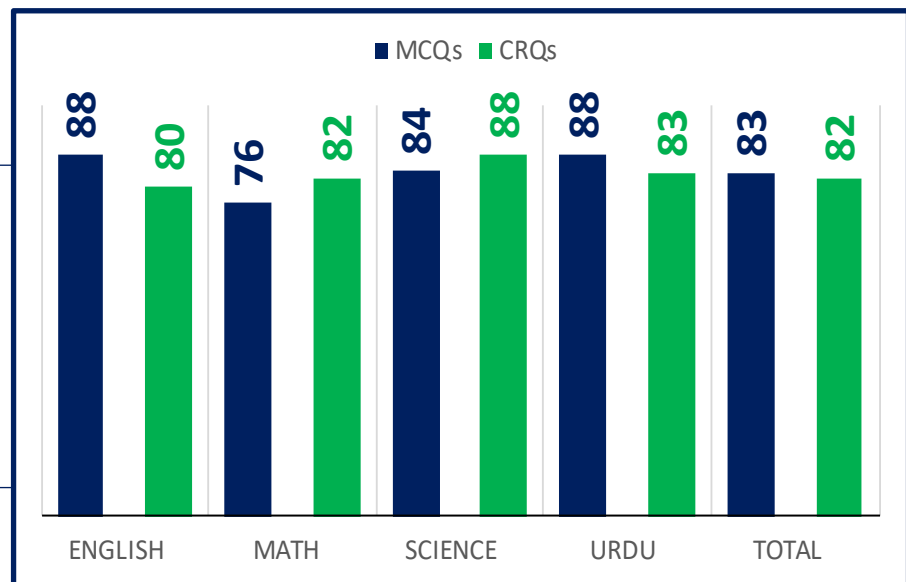


3.2.2 Item-type wise performance of teachers

The following figure show the percentage of correct responses by the teachers in multiple-choice questions (MCQs) and constructed response questions (CRQs).

Figure 13: Item Type-Wise Performance

The results show that the scores in MCQs have been much higher as compared to CRQs.

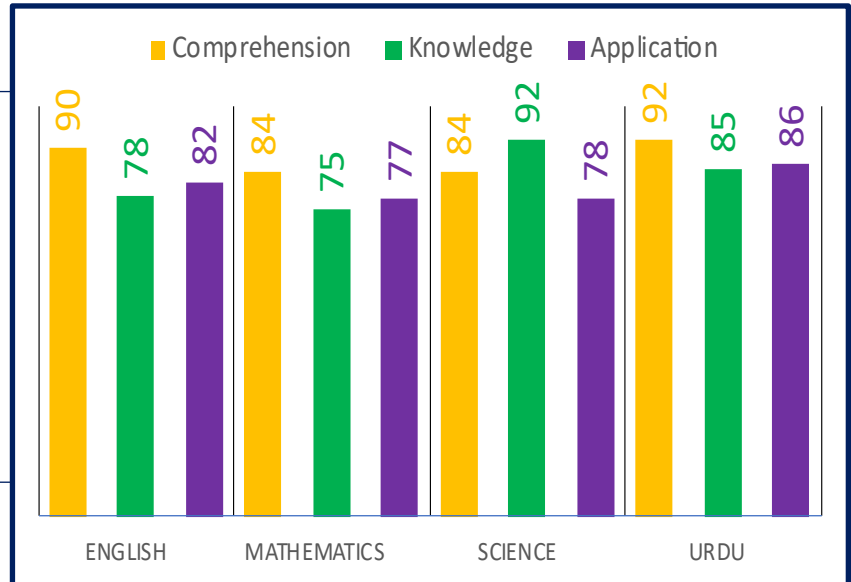


3.2.3 Teachers performance under targeted cognitive domains

The figure below shows the breakdown of scores achieved in key cognitive domains of Application, Comprehension and Knowledge for each subject.

Figure 14: Overall Teachers' Performance in Cognitive Domains

Overall, scores were much lower in application-based questions as compared to comprehension and knowledge based questions.



3.3. Performance of Students and Teachers

Overall scores of teachers and students in all four subjects were used to compare the performance of students and teachers.

3.3.1 Gender-wise performance of teachers and students

The figure below shows a comparison between overall mean scores of teachers and students.

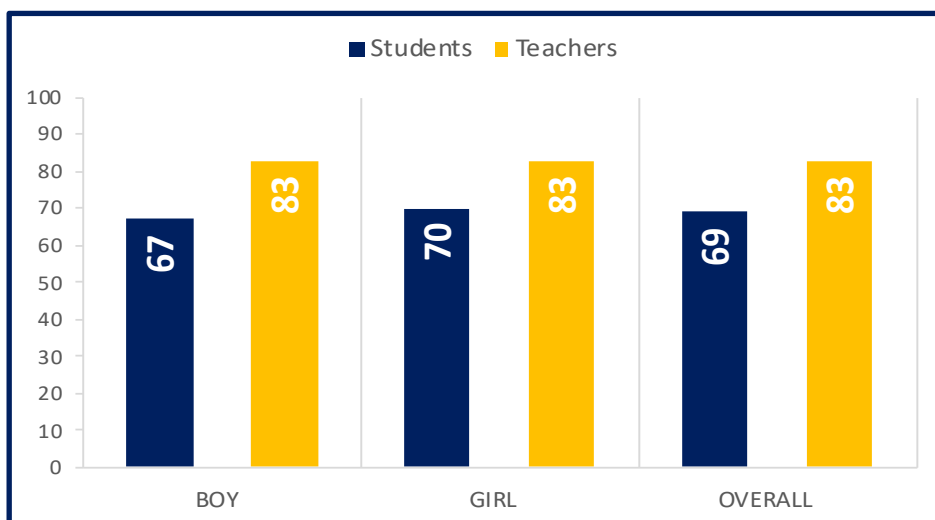


Figure 15: Overall Comparison of Mean Scores Achieved by Teachers and Students

Results show that teachers' overall performance is higher than that of the students by 14%.

3.3.2 Subject-wise performance of teachers and students

The figure below shows a comparison between subject wise mean scores of teachers and students.

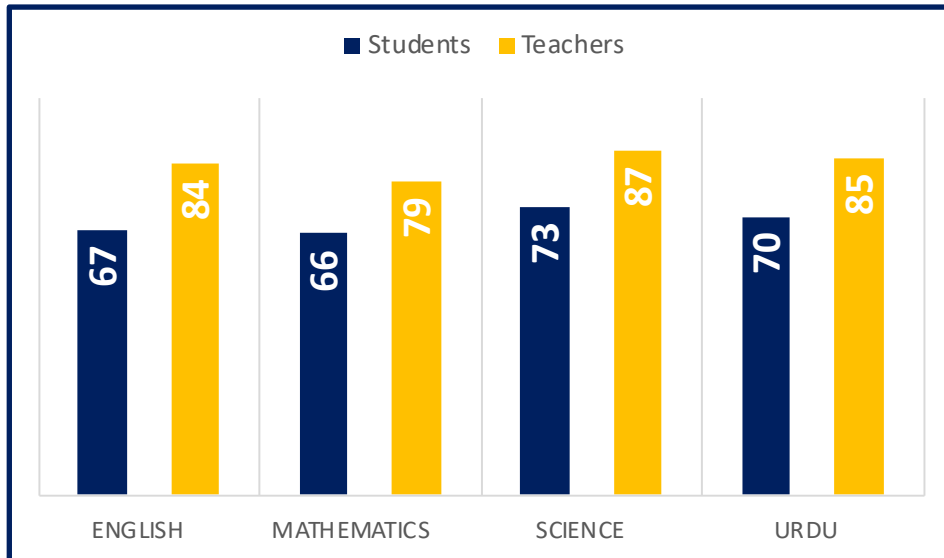


Figure 16: Overall Comparison of Subject-Wise Mean Scores of Teachers and Students

Results show that the difference in scores across all four subjects is between 13-17%.

3.4.

Performance by School Administration

3.4.1 Student's performance by school administration

The following figure shows the overall mean score percentage of SED, PEF, PEIMA, L&NFBE, Private Chain, Private General, SPED (SL), SPED (PH), DPS, and PWWF schools.

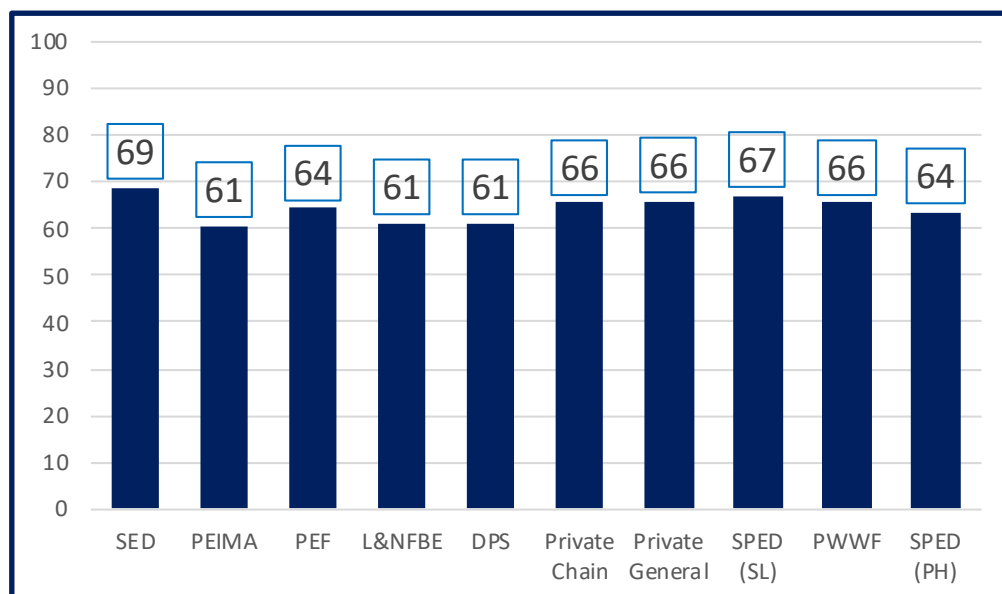


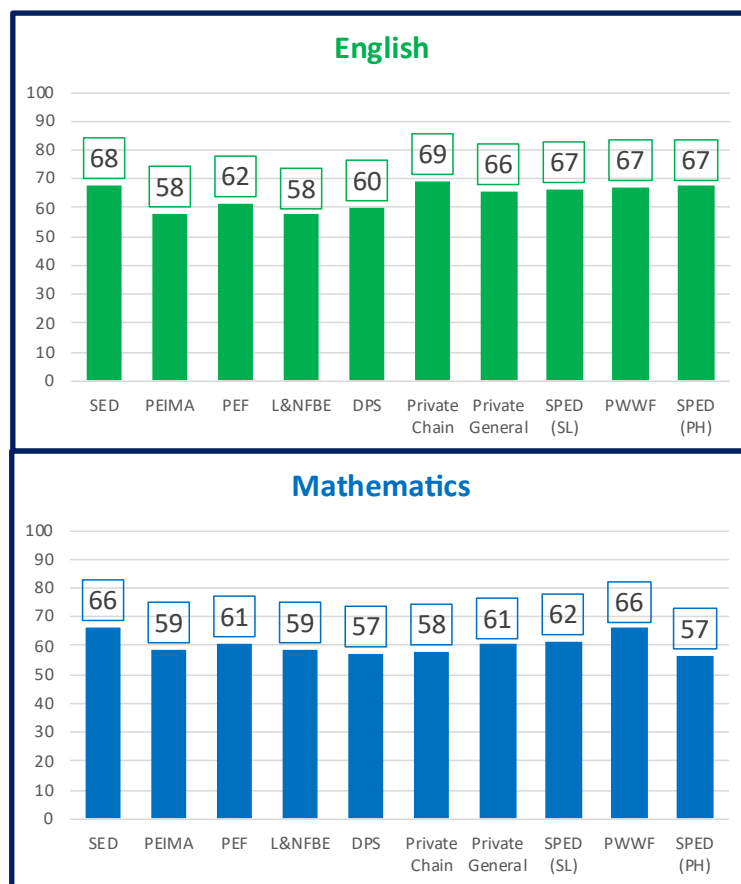
Figure 17: Overall Students' Performance by School Administrations Type

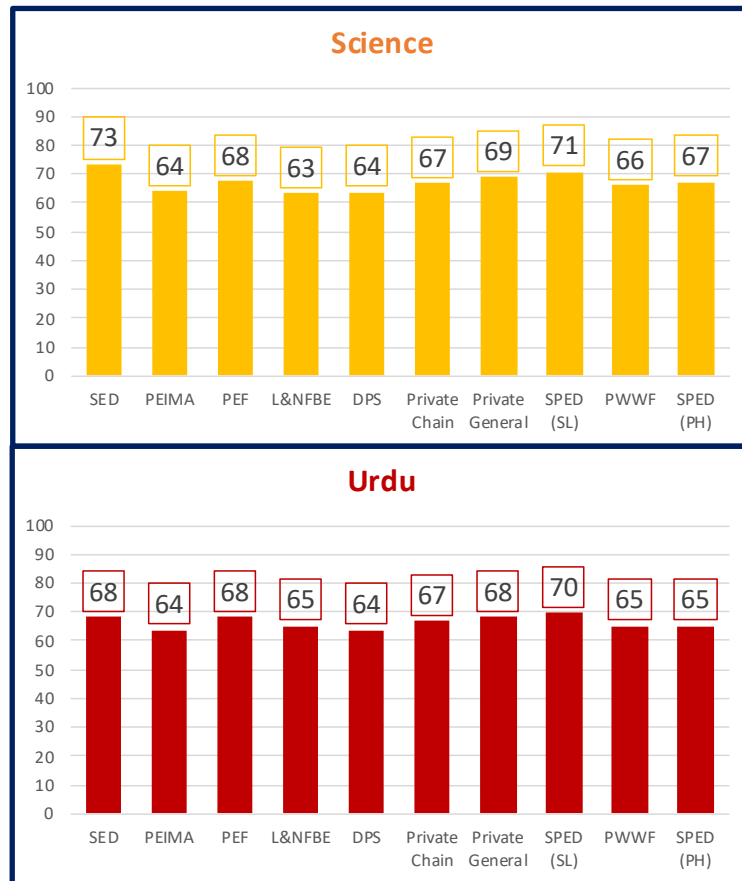
Overall, SED schools are the highest performing schools followed by SPED (SL) schools. Results show a difference of 5% between SED and PEF, and 8% between SED and PEIMA. SED and SPED (SL) have also outperformed Private schools.

3.4.2 Subject-wise student's performance by school administration

The following figures show the subject wise performance of SED, PEF, PEIMA, L&NFBE, Private Chain, Private General, SPED (SL), SPED (PH), DPS, and PWWF schools.

Figure 18: Subject-wise Students' Performance by School Administration Type





Overall, SED schools have outperformed other schools in Mathematics and Science, Private schools have outperformed others in English, while SPED (slow learners) schools have performed better in Urdu.

3.4.3 Teachers' performance by school administration

The following figure shows the overall mean score percentage of SED, PEF, PEIMA, L&NFBE, Private Chain, Private General, SPED (SL), SPED (PH), DPS, and PWWF schools.

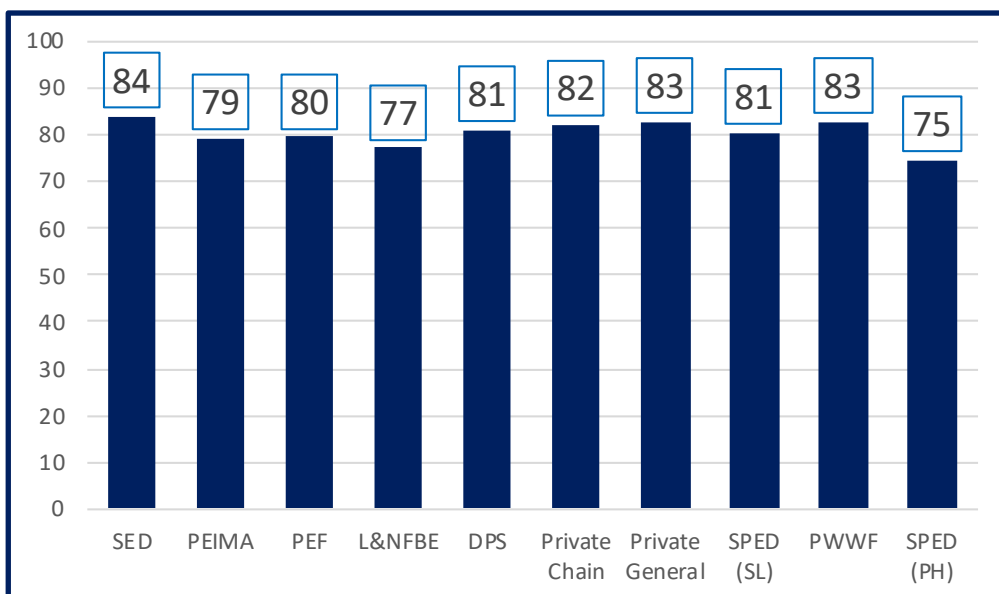


Figure 19: Overall Teachers' Performance by School Administrations Type

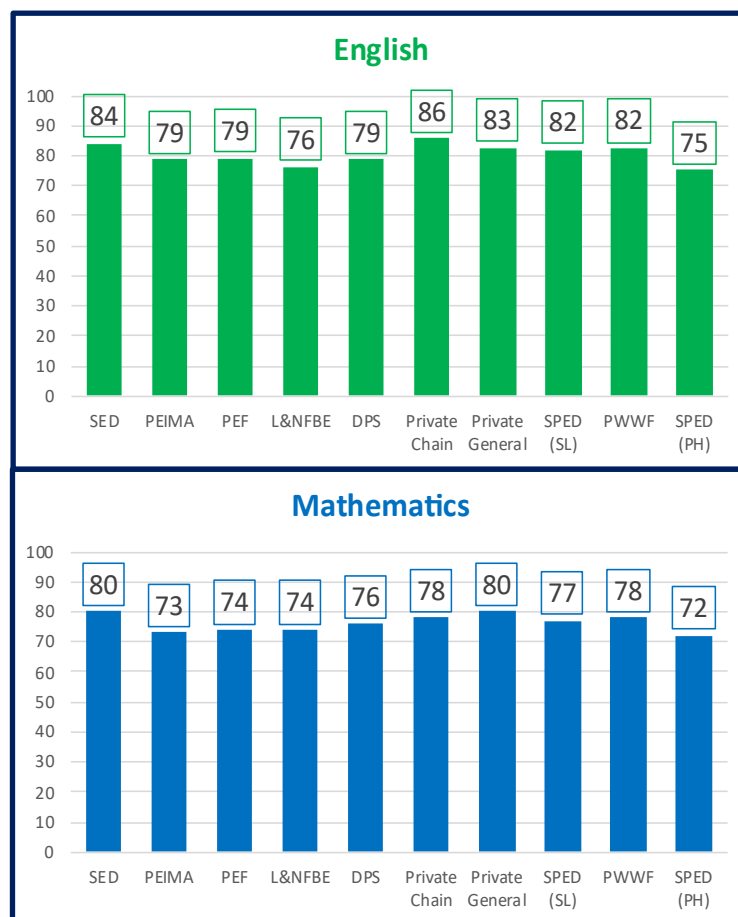
Results show that teachers of SED, SPED (SL), and Private schools have a better understanding of subject knowledge. This also translates in the scores of students, as the students of these schools are performing better than other schools.

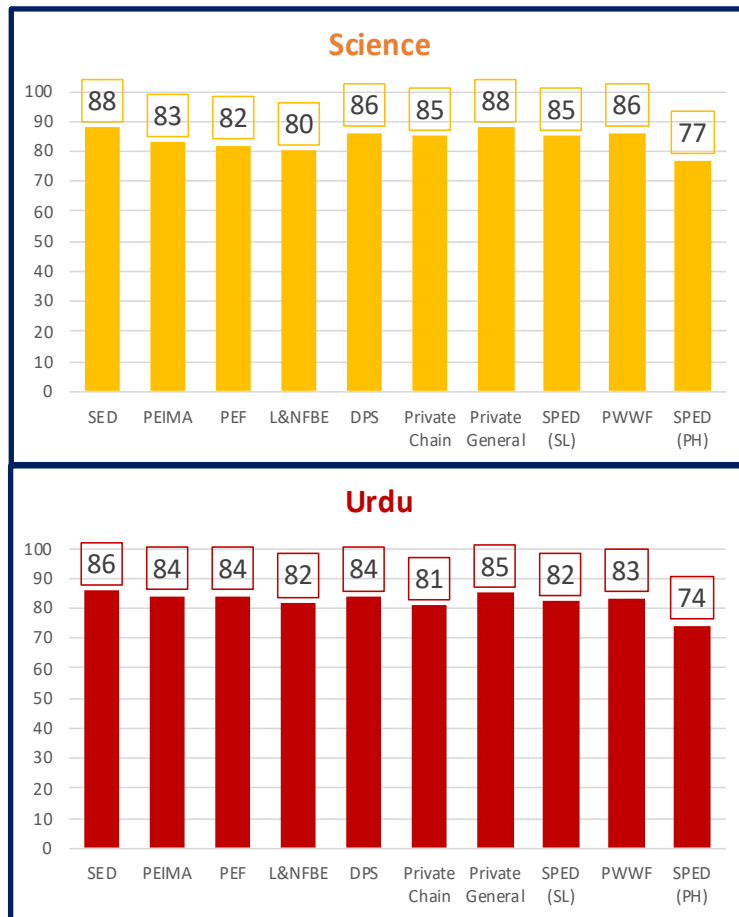
3.4.4 Subject-wise teachers' performance by school administration

The following figures show the subject wise performance of SED, PEF, PEIMA, L&NFBE, Private Chain, Private General, SPED (SL), SPED (PH), DPS, and PWWF schools.

Figure 20: Subject-wise Teachers' Performance in SED, PEF and PEIMA Administered Schools

The figures show that the teachers of SED and Private schools have outperformed others in all subjects.





3.5.

Performance of Different Levels of Schools

3.5.1 Students' performance by school administration

The following figures show the performance comparison of Primary, Middle, Secondary, and Higher Secondary schools based on students' scores.

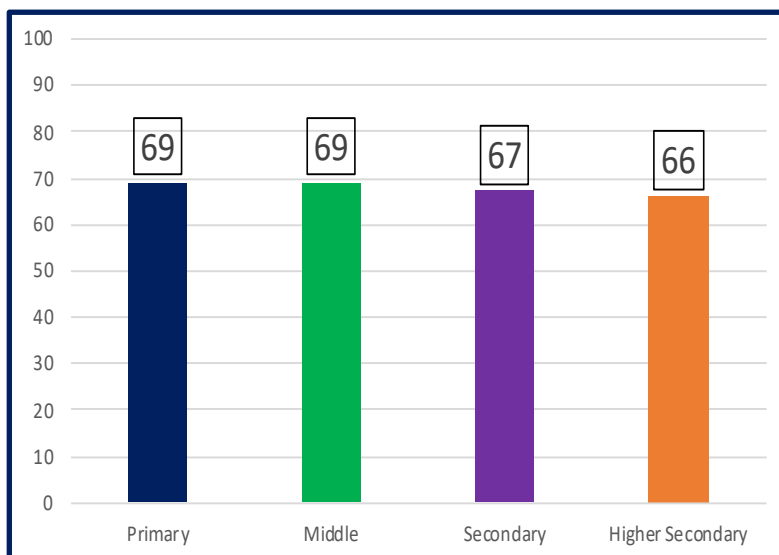
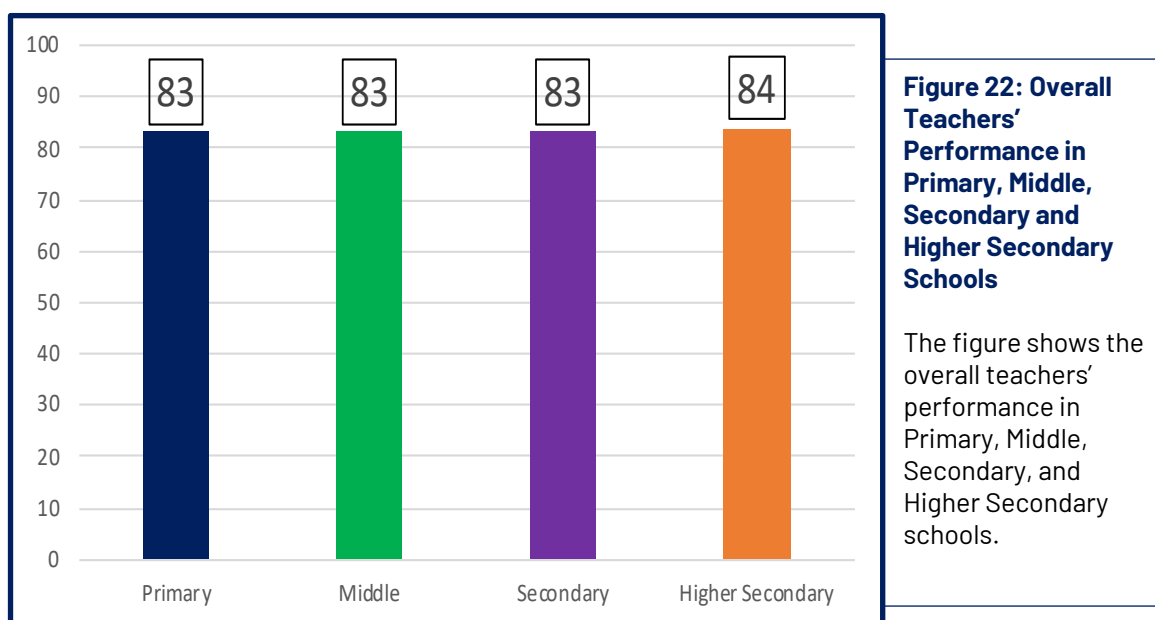


Figure 21: Overall Students' Performance in Primary, Middle, Secondary and Higher Secondary Schools

The figure shows the overall mean score percentage of Primary, Middle, Secondary, and Higher Secondary schools.

3.5.2 Teachers' performance by school administration

The following figures show the performance comparison of Primary, Middle, Secondary, and Higher Secondary schools based on teachers' scores.



3.6. Performance Comparison of Districts

3.6.1 Performance of districts based on students' %age scores

The table below shows a ranking of districts based on the subject-wise performance of students. The table shows that overall Muzaffargarh, Narowal, and Khanewal are the top performing districts, while Gujrat, Chiniot, and Bhakkar are among worst performing districts.

Table 6: Performance of districts based on subject-wise performance of students

ENGLISH		MATHS		SCIENCE		URDU		OVERALL	
Narowal	77	Muzaffargarh	80	Muzaffargarh	82	Narowal	75	Muzaffargarh	78
Muzaffargarh	75	Khanewal	76	Narowal	81	Khanewal	73	Narowal	77
Khanewal	72	Narowal	76	Multan	78	Muzaffargarh	72	Khanewal	75
Lodhran	71	Jhang	73	D.G. Khan	77	Multan	72	Multan	73
Multan	71	Multan	71	Toba Tek Singh	77	Layyah	71	D.G. Khan	71
D.G. Khan	70	D.G. Khan	70	Sialkot	77	Kasur	70	Layyah	71
Kasur	70	Layyah	69	Khanewal	77	Sialkot	70	Rajanpur	71
Layyah	70	Rajanpur	69	Sheikhupura	76	Rajanpur	70	Sialkot	71
Rajanpur	69	Toba Tek Singh	69	Rajanpur	75	Bahawalnagar	70	Toba Tek Singh	71
Sheikhupura	69	Sialkot	69	Lodhran	75	Gujranwala	70	Lodhran	71
Toba Tek Singh	69	Bahawalpur	68	Nankana Sahib	75	Lodhran	70	Sheikhupura	70
Bahawalpur	68	Sheikhupura	68	Layyah	74	M.B. Din	70	Kasur	70
Faisalabad	68	Lodhran	67	Sargodha	74	Nankana Sahib	69	Jhang	69
Sialkot	68	Sargodha	67	M.B. Din	74	Sahiwal	69	Nankana Sahib	69
Khushab	67	Faisalabad	67	Kasur	73	Attock	69	Bahawalpur	69
Okara	67	Kasur	66	Faisalabad	73	Bahawalpur	69	Sargodha	69
Jhang	67	Nankana Sahib	66	Jhang	72	Chakwal	69	Faisalabad	69
Nankana Sahib	66	Vehari	66	Okara	72	Sheikhupura	69	Okara	68
Sargodha	66	Chakwal	65	Bahawalpur	72	Toba Tek Singh	69	M.B. Din	68
Bahawalnagar	66	Gujranwala	65	Chakwal	72	Okara	69	Chakwal	68
M.B. Din	66	Okara	65	Vehari	72	Sargodha	68	Vehari	67
Chakwal	65	R.Y. Khan	64	Bahawalnagar	71	Faisalabad	68	Khushab	67
Vehari	64	Mianwali	63	Mianwali	70	Lahore	68	Gujranwala	66
Gujranwala	64	Khushab	63	Sahiwal	70	Dera Ghazi Khan	68	Mianwali	65
Hafizabad	63	M.B. Din	63	Khushab	70	Khushab	67	Bahawalnagar	65
Rawalpindi	63	Rawalpindi	61	R.Y. Khan	68	R.Y. Khan	66	R.Y. Khan	65
R.Y. Khan	62	Pakpattan	61	Rawalpindi	67	Pakpattan	66	Sahiwal	65
Attock	62	Hafizabad	61	Attock	67	Vehari	66	Hafizabad	64
Mianwali	62	Bhakkar	60	Hafizabad	67	Jhang	66	Pakpattan	64
Pakpattan	61	Jhelum	59	Pakpattan	66	Hafizabad	65	Rawalpindi	63
Lahore	61	Sahiwal	59	Bhakkar	64	Mianwali	65	Attock	62
Sahiwal	61	Chiniot	57	Gujranwala	64	Chiniot	63	Lahore	61

Jhelum	59	Bahawalnagar	55	Jhelum	63	Bhakkar	63	Jhelum	61
Chiniot	57	Lahore	54	Lahore	63	Jhelum	62	Bhakkar	61
Bhakkar	56	Attock	52	Chiniot	62	Gujrat	60	Chiniot	60
Gujrat	52	Gujrat	49	Gujrat	59	Rawalpindi	60	Gujrat	55

3.6.2 Performance of districts based on teachers' %age scores

The figure below shows a ranking of districts based on the subject-wise performance of teachers. The ranking can be helpful in assessing the training needs of the teachers. The table shows that Khanewal, Narowal, and Muzaffargarh are among the top performing districts, while the teachers from Bahawalnagar, Lahore, and Chiniot achieved the lowest scores.

Table 7: Performance of districts based on subject-wise performance of teachers

ENGLISH		MATHS		SCIENCE		URDU		OVERALL	
Jhelum	87	Khanewal	87	Mandi Bahauddin	90	Mandi Bahauddin	89	Khanewal	87
Narowal	87	Muzaffargarh	85	Toba Tek Singh	89	Jhelum	88	Narowal	86
Attock	86	Narowal	83	Narowal	89	Khanewal	87	Muzaffargarh	86
Khanewal	85	Jhang	83	Nankana Sahib	88	Bahawalpur	87	Jhelum	85
Muzaffargarh	85	Faisalabad	82	Chakwal	88	Attock	87	Faisalabad	85
Khushab	85	Bahawalpur	82	Khanewal	88	Layyah	87	Bahawalpur	85
Faisalabad	84	Multan	81	Muzaffargarh	88	Rahim Yar Khan	87	Toba Tek Singh	85
Nankana Sahib	84	Toba Tek Singh	81	Sialkot	88	Faisalabad	87	Chakwal	84
Multan	84	Gujranwala	81	Sahiwal	87	Gujranwala	87	Multan	84
Kasur	84	Rawalpindi	80	Faisalabad	87	Bhakkar	87	Nankana Sahib	84
Hafizabad	84	Sialkot	80	Sargodha	87	Chakwal	87	Mandi Bahauddin	84
Bahawalpur	84	Jhelum	80	Rawalpindi	87	Hafizabad	87	Sialkot	84
Toba Tek Singh	84	Vehari	80	Gujrat	87	Narowal	86	Khushab	84
Rawalpindi	84	Chakwal	80	Khushab	87	Khushab	86	Sargodha	84
Lodhran	84	Sargodha	80	Jhelum	87	Okara	86	Layyah	83
Chakwal	83	Nankana Sahib	79	Multan	87	Mianwali	86	Jhang	83
Sargodha	83	Bhakkar	79	Sheikhupura	87	Sialkot	86	Lodhran	83
Sheikhupura	83	Layyah	79	Bahawalpur	87	Muzaffargarh	85	Bhakkar	83
Lahore	83	Mianwali	79	Lodhran	86	Rajanpur	85	Gujranwala	83
Okara	83	Rahim Yar Khan	79	Mianwali	86	Nankana Sahib	85	Kasur	83
Sahiwal	83	Lodhran	79	Okara	86	Vehari	85	Vehari	83

Sialkot	83	Sheikhupura	78	Layyah	86	Kasur	85	Okara	83
Mandi Bahauddin	83	Rajanpur	78	Jhang	86	Gujrat	85	Sahiwal	83
Gujranwala	82	Kasur	78	Bhakkar	86	Bahawalnagar	85	Mianwali	83
Vehari	82	Khushab	78	Rajanpur	86	Chiniot	85	Rajanpur	83
Rajanpur	82	Pakpattan	77	Vehari	85	Toba Tek Singh	85	Rahim Yar Khan	83
Pakpattan	82	Okara	77	Kasur	85	Multan	85	Hafizabad	83
Bhakkar	82	Hafizabad	77	Attock	85	Sahiwal	85	Sheikhupura	83
Layyah	81	Sahiwal	77	Rahim Yar Khan	85	Lodhran	85	Rawalpindi	82
Dera Ghazi Khan	81	Dera Ghazi Khan	77	Pakpattan	84	Sargodha	84	Pakpattan	82
Rahim Yar Khan	81	Mandi Bahauddin	75	Dera Ghazi Khan	84	Lahore	84	Attock	81
Jhang	81	Chiniot	74	Hafizabad	84	Pakpattan	84	Dera Ghazi Khan	81
Mianwali	81	Gujrat	71	Gujranwala	83	Jhang	83	Gujrat	80
Chiniot	81	Attock	68	Bahawalnagar	82	Sheikhupura	83	Chiniot	80
Bahawalnagar	80	Lahore	66	Chiniot	82	Dera Ghazi Khan	81	Lahore	78
Gujrat	78	Bahawalnagar	65	Lahore	80	Rawalpindi	76	Bahawalnagar	78

3.7.

Relationship Between Student Scores and Individual Attributes

Students' scores have been regressed on several variables of interest to see the relationship between their performance and factors such as schools, teachers, head teachers and parent's background. Multiple linear regression was employed to assess the relationship between variables. The coefficients were estimated using the ordinary least squares method. Categorical data was analyzed by creating dummy variables. Only significant and positive results have been provided in the below chart.

Table 8: Relationship between student scores and individual attributes

SCORE INCREASING FACTORS	
Teachers and Teaching Practices	○ Higher academic qualification ○ Higher professional qualification ○ Subject specific training courses ○ Frequent participation in the CPD program ○ Assign group work to students ○ Encourage students to ask questions ○ Teacher asks questions from students ○ Friendly behavior with students ○ Conduct regular written tests ○ Give regular homework and provide feedback ○ Activity-based teaching ○ Keep parents informed about student performance ○ Use of models and pictures in classroom ○ Lesson planning
School Facilities	○ Provision of basic facilities (electricity, water, washrooms) ○ Subject specialist teachers ○ Adequate number of teachers ○ Adequate number of classrooms ○ Availability of library ○ Opportunities for students to participate in co-curricular activities ○ Availability of study aids in the schools including language kit, science kit, and mathematics kit ○ Access to playground
School Leadership	○ AEO inspections and guidance of teachers ○ Head teacher mentors and guides class teachers ○ Head teacher gathers reports from teachers about student performance ○ Head teachers keeps engagement with parents

Parents Engagement and Home Related Factors

- Parents higher qualification
- Supportive and healthy environment at home
- Parents staying in touch with school about child's performance
- Access to private tuition
- Allocation of study time at home
- Access to books other than syllabus books
- Access to resources at home

- Provision of non-salary budget (NSB) was not found to have any significant relationship with the performance of schools.
- Higher academic qualification of teachers was found to be significantly associated with higher academic scores of students.
- Higher professional qualification of teachers was found to be significantly associated with higher academic scores of students.

SECTION 2

FEEDBACK

DATA

3.8. Infrastructure and Resources Available

The figure below details the level of infrastructure, study-aids, and other resources available in schools.

Resource Category	Availability in %age Schools	Resource Category	Availability in %age Schools
Adequate Number of Classrooms	52	Science Kit	36
Adequate Grade 4 Employees	47	Science Room	27
Adequate Number of Teachers	48	Security Arrangements	85
Clean Drinking Water	86	Shady Trees	79
Electricity	84	SNC Copies	83
First Aid Box	84	Subject Specialist - English	83
Furniture	83	Subject Specialist - Science	84
Language Kit	24	Subject Specialist - Urdu	89
Library	56	Subject Specialist – Math	82
Math Kit	50	Teacher’s Guide	83
Playground	62	Washroom	80
Complete School Boundary	90	Washroom (Teachers)	85
School Main Gate	91	White Board	86

Table 9: Infrastructure and Resource Availability Situation in Schools

It was found that majority of the school lack libraries, science kits, math kits, language kits, science rooms, and playgrounds. The number of classrooms is also inadequate in about 50% of the schools. There is also a serious shortage of teachers and grade 4 employees. Many schools lack subject specialist teachers.

3.9.

Co-Curricular Activities

The figure below details the level of focus and attention given to various co-curricular activities conducted by schools.

Category	Conducted in %age Schools
Scouting/Girl Guide	39
Educational/Entertainment Tours	40
Science Exhibition	28
Poetry Competitions	33
Drama/Meena Bazar	46
Art Competitions	35
Science Quiz	44
Math Quiz	47
Essay Writing Competitions	46
Plantation Drives	70
Recitation Competitions	58
Debates Competitions	53
Sports Competitions	62
Hamd o Naat Competitions	64
Literary Competitions	69

Table 10: Co-curricular Activities Organized in Schools.

Although most of the schools are organizing some form of extra-curricular activities, it has been found that many schools have ignored some of the crucial extra-curricular activities which are necessary for the academic and personal development of a student.

3.10. Parents' Feedback and Demographics

3.10.1 Satisfaction with school

Parents were asked a series of questions to assess their level of satisfaction with the school and gather their feedback on ways to improve school performance.

- A large majority of parents was satisfied with the school's performance (59%). The major reasons for parent dissatisfaction were the shortage or absence of teachers and lack of basic facilities at school.
- It was also known that almost half of the students (51%) avail private tuition, which raises a question mark about the quality and effectiveness of the learning being delivered at the schools.

Table 11: Major Reasons for Parents' Dissatisfaction with School

Major Reasons for Dissatisfaction with School	% Age of Parents
Shortage of Teachers	28
Teachers' Absence from School	7
Lack of Basic Facilities	19
Lack of Study Aids	7
Unsatisfied with Teaching Methods Used	6

3.10.2 Suggestions for improvement

Parents were asked to provide suggestions for improvement in schools. Majority of them wanted schools to have a hard-working Head Teacher and to engage parents in school's activities.

Table 12: Parents' Suggestions for School Improvement

Suggestions	% Age of Parents
Need to have a hard-working and decisive head teacher.	58
Need of engaging parents in school activities.	34
Need for timely distribution of textbooks to the students.	34
Need for regular visits to be made by the education department.	24
Provision of basic facilities in school	36

3.10.3 School absenteeism

The responses show that a major reason for student absenteeism include crop harvesting and labour, to meet family needs. As most of the students belong to farming families (26%), there is a need for formal school vacations to coincide with the harvesting season, so students do not have to take leave from school.

Table 13: Major Reasons for Student Absenteeism

Reasons for Student Absenteeism	% Age of Students
Illness	64
Siblings Care	35
Crop Harvesting Season	27
Labour	17
Fighting at Home	15

3.10.4 Education level

It was found that the majority of parents are not very well qualified, and a large number are completely illiterate. Only about 17% of the parents have attained education above matriculation. Similar results were found in case of mother's education where 22% of mothers are completely illiterate.

Table 14: Guardian's Education

Guardian's Education	% Age of Parents
Illiterate	12
Primary	28
Middle	20
Matric	21
Intermediate	7
BA or Higher	10

Table 15: Mother's Education

Mother's Education	% Age of Parents
Illiterate	22
Primary	27
Middle	15
Matric	18
Intermediate or Higher	13

3.10.5 Parent occupation

Majority of parents are farmers (26%), followed by shopkeepers and traders (15%). 15% hold private jobs while 11% work in government sector.

Table 16: Parents Occupation

Major Occupations	% Age of Parents
Farmer	26
Shopkeeper/Trader	15
Private Job	15
Government Job	11
Unemployed	7

3.10.6 Parent income

The analysis of income level of parents shows that most of them are quite poor. Above 50% of the households have incomes much less than the official minimum pay announced by the government. This is the main reason that most of the children have to take leave from school and contribute to the family income through their labour.

Table 17: Parents Income

Income	% Age of Parents
Less than 5000	9
5000-10000	21
10001-20000	34
20001-40000	16
40000+	23

3.10.7 Language used with child

Majority of parents talk to their children in Punjabi (39%) followed by Urdu (31%). 24% use other local languages.

Table 18: Language Used at Home with Child

Language Used at Home	% Age of Parents
Punjabi	39
Local	24
Urdu	31
English	1

3.10.8 Resources available at home

The resource situation is not satisfactory as most of the households are poor with barely enough income to meet their basic needs.

Table 19: Resources Available at Home

Resources Available at Home	% Age of Parents
Computer	8
Car	7
Study Table/Chair	11
Internet/Cable	16
Gas	30
Motorcycle	30
TV	45
Mobile	55
Water	67
Electricity	82

3.11.

Teachers' Feedback

Teachers were asked a series of questions to understand their perceptions on key areas related to the school system that affect student performance.

3.11.1 Qualification

Majority of the teachers have completed their masters degree, followed by bachelors. Around 10% have completed MS or MPhil degrees, while the number of PHDs is negligible.

Table 20: Academic Qualification of Teachers

Academic Qualification	% Age of Teachers			
	MATHS	SCIENCE	ENGLISH	URDU
Matric	7	5	5	9
Intermediate	11	11	10	12
Bachelors	19	17	17	21
Masters	53	53	57	49
MS/MPhil	10	11	11	8
PhD	0	1	1	1

Table 21: Professional Qualification of Teachers

Professional Qualification	% Age of Teachers			
	MATHS	SCIENCE	ENGLISH	URDU
PTC	11	10	8	15
CT	5	5	5	6
Diploma (Education)	4	4	4	4
B.Ed.	48	49	49	43
M.Ed.	19	20	22	20
MA (Education)	5	5	5	5
MPhil (Education)	2	2	2	2
PhD (Education)	1	1	0	1

3.11.2 Experience and training

Majority of the teachers are young and inexperienced. Regular trainings are required to instill the required skills in them. This also highlights the need for training of senior teachers, so they can stay updated with modern teaching techniques used by young teachers.

Table 22: Teaching Experience of Teachers

Teaching Experience	% Age of Teachers			
	MATHS	SCIENCE	ENGLISH	URDU
1-5	37	39	38	33
6-10	27	30	28	22
11-15	11	11	12	12
15-20	8	7	8	10
20 +	12	9	9	17

Table 23: Training Situation of Teachers

Training Situation	
Number of Subject-Related Training Course Completed	More than 70% have completed two or more.
Induction Training	70% have completed their induction training.

3.11.3 Opinion about textbooks

Teachers were asked to provide their feedback on current textbooks being used in Grade 4 classrooms and majority of them were satisfied with the content.

Table 24: Teacher Feedback on Textbooks

The content in the books is given	% Age in agreement			
	Math	Science	English	Urdu
According to the students' age and class	76	80	70	74
In accordance with SLOs	86	90	74	85
In simple language	76	79	71	76
With interesting activities	74	81	74	76
With appropriate exercises	84	90	87	83
With appropriate font size	82	88	87	81
With interesting examples	79	87	83	78
With local examples	77	83	79	76

3.11.4 Assistant Education Officer (AEO) inspections

Under the digital Continuous Professional Development CPD program (i.e. distant learning school-based training programmes) of QAED, AEOs are to conduct two classroom visits per month. Responses of teachers over the frequency of these visits are as below:

Table 25: Frequency of AEO Inspections

Frequency of AEO Inspections	% Age of AEOs
Once in a month	14
Twice in a month	77
Once in two months	2
Do not visit the class room	1

Majority of AEOs visit schools twice a month.

Table 26: Behavior of AEO

Behavior of AEO	% Age of AEOs
Professional	87
Extremely Strict / Bossy	8
Humiliating	2

Table 27: Feedback on AEO Visit

Feedback on AEO Visit	% Age of AEOs
AEOs provide feedback after observation	92
The feedback given by AEOs helps improve teaching	90
AEOs conduct monthly forum meeting	85

Majority of teachers stated that they receive feedback from AEOs after each observation visit, and they were also positive over the usability of this feedback in improving teaching.

3.11.5 Teaching practices used in classroom

Teachers were asked a series of questions on their current teaching practices. The results show that majority of the teachers employ practices like using study aids in the classrooms, assigning group work to students, allowing questions during lecture, giving homework based on the taught lecture, and behaving in a friendly manner in the classroom.

Table 28: Teaching Practices in Classroom

Teaching Practices Used in Classroom	% Age in Agreement			
	Math	Science	English	Urdu
Teach according to SLOs	75	81	78	73
Use E-Learning Punjab's videos during lecture	51	46	49	49
Make lesson plans	92	89	88	89
Utilize teacher's guide to design class activities	90	91	89	90
Use of Urdu Language in Instruction	87	89	82	87
Use of Local Languages in Instruction	19	22	20	18
Use of English Language in Instruction	18	21	22	13
Use of Teaching Aids/Resources	91	93	91	91
Assign Group Work	88	91	92	88
Ask Questions While Teaching	90	93	93	90
Provide Opportunities to Students to Ask Questions While Teaching	86	94	94	91
Give Homework Related to the Lesson	87	91	92	87
Provide written feedback on homework	85	89	91	85

3.11.6 Methods used by teachers to assess classroom learning

The teachers assess classroom learning based on oral and written questioning, giving homework, and involvement in classroom learning.

Table 29: Methods to Assess Learning

Methods Used by Teachers to Assess Classroom Learning	% Age of Teachers			
	Math	Science	English	Urdu
Oral (Question/Answers)	78	95	85	78
Written	76	94	82	74
Homework	71	92	77	70
Involvement in Classroom Activities	71	93	78	69

3.11.7 Engagement with parents

To understand engagement with parents, teachers were asked questions over their involvement in school matters.

Responses show that 80% of the teachers discuss students' progress with their parents on a monthly basis. Other discussion areas are given below:

Table 30: Areas Discussed by Teachers with Parents

Areas Discussed by Teachers with Parents	% Age of Teachers
Student's Absenteeism	75
Co-curricular Activities	70
Students' Performance in Studies	80
School Discipline	68
Student's Psychological Issues	72
Student's Health	59
Student's Food Issues	76
Student's Behavior	67
Student's Security	77

3.11.8 Involvement in school administration

Teachers were asked questions about their involvement in administration activities in school. 92% of the teachers get involved in solving student's problems. Other responses are given below:

Table 31: Teachers Engagement in School Administration

Engagement of Teachers in School Administration	% Age of Teachers
Involvement in Solving Students' Problems	92
Discussion with Fellow Teachers to Improve Students' Learning	87
Meeting with Parents to Discuss Students' Issues	91
Handle School Administration	91

3.11.9 Feedback by teachers on head teacher's performance

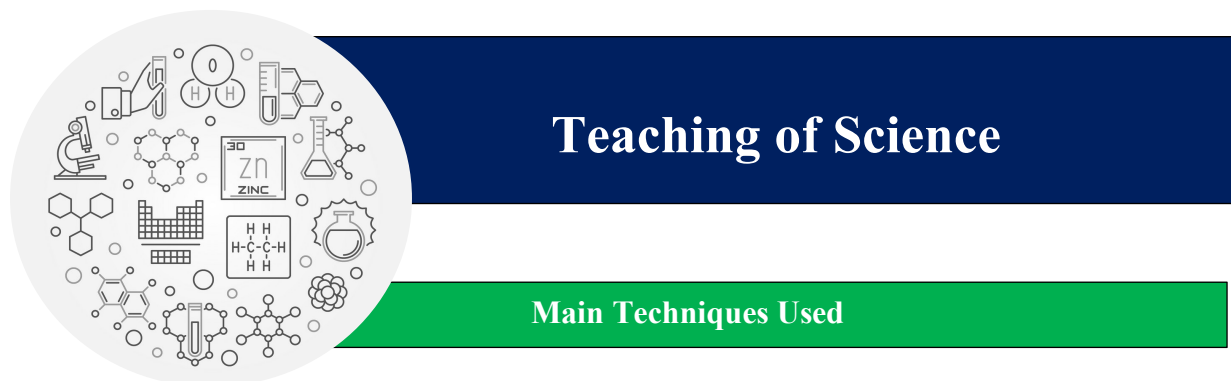
Teachers were asked questions about the performance of the Head Teachers of their schools. The findings highlighted that many head teachers did not invite guest speakers to talk about different topic and occasions.

Table 32: Teachers' Feedback on Head Teacher's Performance

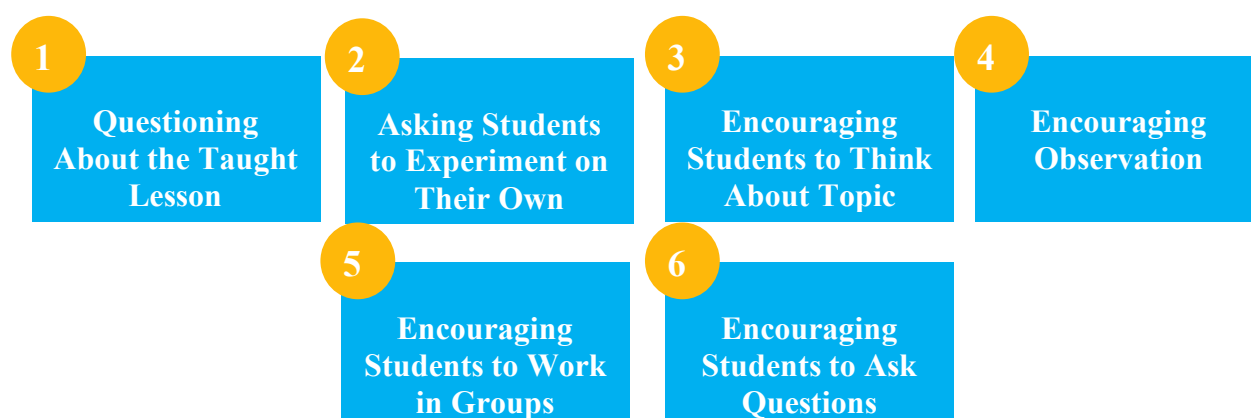
Feedback of Teachers on Head Teacher's Performance	% Age of Teachers
Head teacher always follows the rules and regulations of the school.	89
Head teacher always makes an effort to bring improvement in the school.	88
Head teacher always guides teachers in their teaching.	77
Head teacher facilitates in CPD trainings for teachers.	87
Head teacher always remains in contact with parents to discuss school affairs.	87

3.11.10 Main teaching practices used by teachers

Teachers were asked about their knowledge and experiences in teaching of the four subjects tested under the assessment i.e. English, Mathematics, Urdu and Science. Responses are given below:

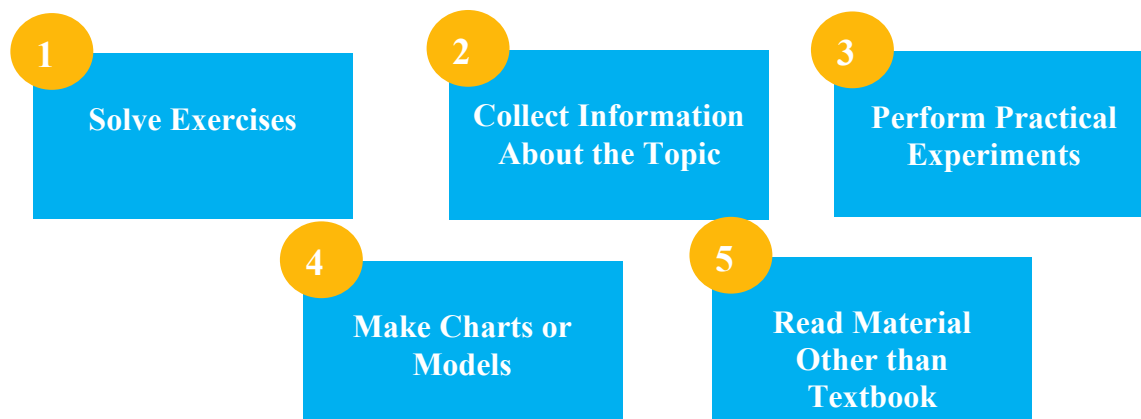


Majority of the teachers (about 88% to 99%) use the following techniques for teaching Science:



Major Homework Practices Used by Teachers

More than 75% of the teachers give the following as homework for science subject:





Teaching of Numeracy (Mathematics)

Main Techniques Used

Majority of the teachers (more than 85%) use the following technique for teaching Mathematics:

1

Use of Mathematics
in Daily Life

2

Provide
Opportunities for
Mental Exercise

3

Asking Questions
other than
Textbook

4

Encourage Students
to Ask Questions
About the Topic

5

Make Students
Work on Exercises
in Groups

Major Homework Practices Used by Teachers

Majority of the teachers (more than 75%) give the following as homework for Mathematics:

1

Solve Exercises

2

Collect Information
About the Topic

3

Perform Practical
Examples About the
Topic

4

Make Charts or
Models

5

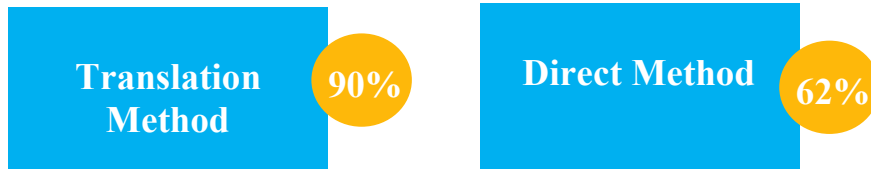
Read Material
Other than
Textbook



Teaching of Literacy (English)

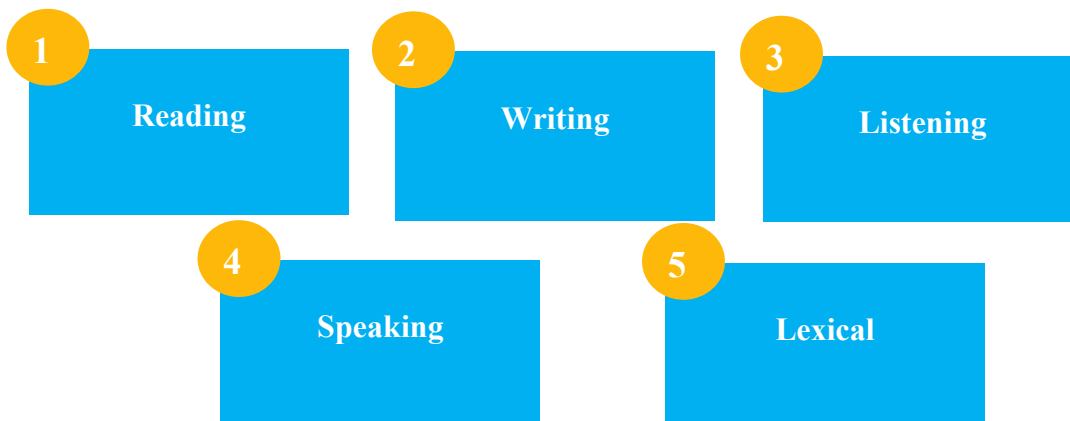
Main Techniques Used

Majority of the teachers use the following techniques for teaching English:



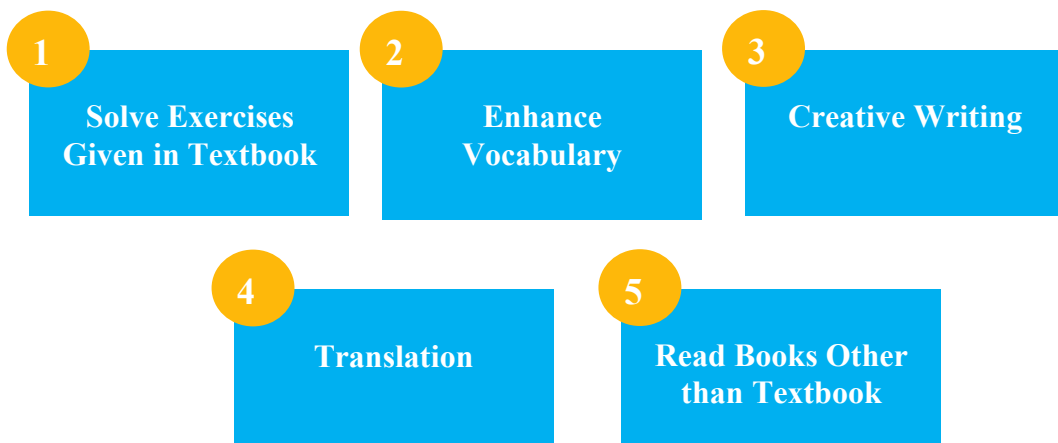
Major Competencies Focused by Teachers

97% of the teachers focus on teaching the following competencies:



Major Homework Practices Used by Teachers

Majority of the teachers (more than 75%) give the following as homework for English:





Teaching of Literacy (Urdu)

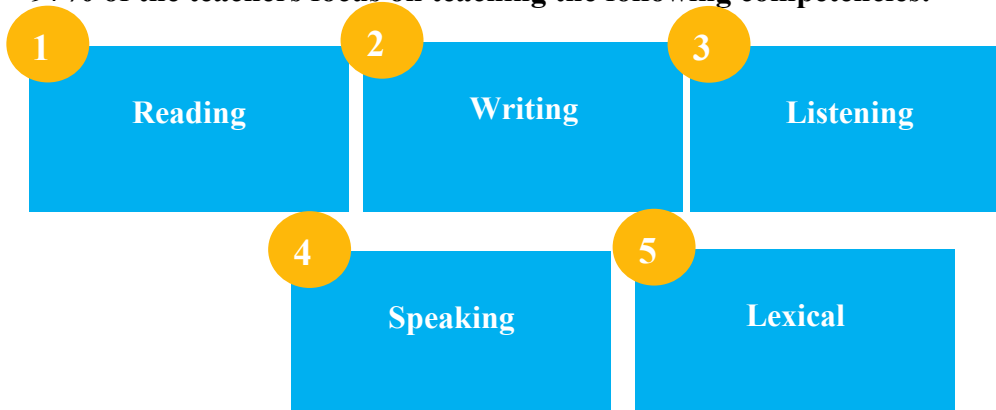
Main Techniques Used

Majority of the teachers use the following techniques for teaching Urdu:



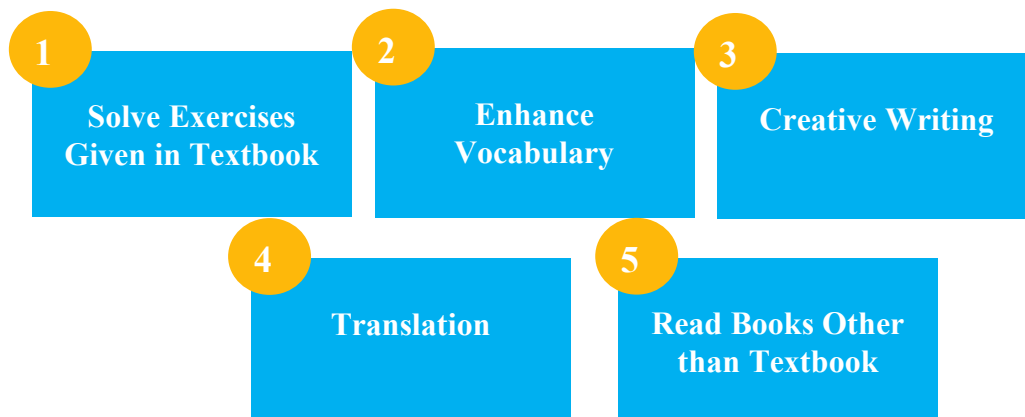
Major Competencies Focused by Teachers

97% of the teachers focus on teaching the following competencies:



Major Homework Practices Used by Teachers

Majority of the teachers (above 80%) give the following as homework for Urdu:



3.11.11 Difficult topics for teachers

More than 80% of teachers find the topics in the **Science** textbook easy. Breakdown of responses is given below.

Table 33: Topic wise Difficulty Level in Science

Topic-wise Difficulty Level in Science	% Age of Teachers Found it Easy	% Age of Teachers Found it Difficult
Characteristics and life processes of organisms	70	16
Ecosystem	77	8
Human health	80	5
Matter and its characteristics	75	7
Forms of energy and energy transfer	71	8
Force and motion	72	7
Earth and its resources	71	7
Earth's weather and its climate	65	9
Solar system and our Earth	63	8
Technology in everyday life	66	6

More than 80% of teachers find the topics in the **Mathematics** textbook easy. Breakdown of responses is given below. They reported some difficulty in Geometry and Data Handling related questions.

Table 34: Topic wise Difficulty Level in Numeracy

Topic-wise Difficulty Level in Mathematics	% Age of Teachers Found it Easy	% Age of Teachers Found it Difficult
Whole numbers	81	5
Addition and subtraction	87	3
Multiplication and division	84	4
Factors and multiples	80	7
Fractions	78	7
Decimals	80	7
Measurements and time	81	5
Geometry	73	11
Data handling	71	11

More than 70% of teachers find the topics in the **English** textbook easy. Breakdown of responses is given below. They reported some difficulty in handling topics related to creative writing and oral communication.

Table 35: Topic wise Difficulty Level in English

Topic-wise Difficulty Level in English	% Age of Teachers Found it Easy	% Age of Teachers Found it Difficult
Phonetics	69	21
Poems	76	11
Comprehension	76	11
Grammar	76	12
Sentence making	77	10
Essay writing	71	13
Creative writing	62	19
Letter or application	77	6
Oral communication	70	10
Listening and speaking skill	68	10
Dictation	68	7

More than 80% of teachers find the topics in the **Urdu** textbook easy. Breakdown of responses is given below. They reported some difficulty in handling topics related to creative writing, grammar, and comprehension.

Table 36: Topic wise Difficulty Level in Urdu

Topic-wise Difficulty Level in Urdu	% Age of Teachers Found it Easy	% Age of Teachers Found it Difficult
پڑھائی-نثر پڑھانا	85	4
پڑھائی-نظم پڑھانا	81	4
تفہیم	73	11
قواعد	76	10
جملہ سازی	81	4
مضمون نویسی	77	6
تخلیقی لکھائی	68	11
خط یا درخواست	78	3
بولنے اور پڑھنے کی صلاحیت	77	3
املاء	75	3

3.12.

School Council's Feedback

School councils were also asked to provide their inputs on their involvement in key areas of the school.

3.12.1 Council functional or dysfunctional

Council members were asked questions to judge whether the councils were working or not. Following table provides an overview of the number of meetings members of school councils have done in schools per month. It was found that almost half of the councils meet at least once in a month.

Table 37: Extent to which School Council is Functional

Council Functional or Not	% Age of Schools
Fully Functional	57
Mostly Functional	35
To some extent	4
Council is Dysfunctional	1

Table 38: Frequency of School Council Meetings

Number of Council Meetings During a Month	% Age of Schools
1	51
2	35
3	6
3 +	5

3.12.2 Areas of discussion in council meetings

In the meetings, key issues are discussed with the following frequency:

Table 39: Areas of Discussion in Council Meetings

Areas of Discussion in Council Meetings	Always	Mostly
Budget Utilization	66	21
Increase in Students' Enrollment	66	22
Students' Performance	63	27
Student Discipline	65	22
School Infrastructure	47	38
Financial Assistance of Poor Students (shoes, uniform)	40	34
Books and AV-Aids for school	36	33
Community's Participation in School Affairs	32	36
Sports Competitions in School	29	34
Aid in Educational Activities	52	31
Eliminate Sectarianism from School	61	18

3.12.3 School council participatory activities

The different activities in which the school council participates are given in the table below.

Table 40: Council's Participatory Activities

School Council's Activities	% Age of Schools
Planning for the use of NSB funds	47
Improve School Discipline	42
Solve Students' Problems	34
School Construction Activity	26
Improve Teaching-learning Process	35
Hiring of Temporary Teachers	15
Flood / Earthquake Measures	8

3.12.4 Suggestions by school council for strengthening council functioning

The suggestions given by different council members for further strengthening the functioning of school councils are as follows:

Table 41: Suggestions to Strengthen the Role of Councils

Suggestions to Strengthen the Role of Councils	% Age of Responses by Members
Increased Cooperation with Teachers	43
Assigning Set Responsibilities to Each Member	42
Training Each Member	31
Improving the Teaching Environment	26
Collecting funds for the school	19
Increasing Members of the Council	8

3.12.5 Suggestions by school council for utilisation of NSB funds

The suggestions given by different council members for usage of the NSB funds are as follows:

Table 42: Suggestions for Usage of NSB Funds

Suggestions for Usage of NSB Funds	% Age of Responses by Members
Improving the Teaching Process	57
Building Repair and Maintenance	48
Provision of Financial Support to Needy Children	33
Awarding Students with Prizes/Incentives	23
Organizing of Sports Activities for Children	21
Recruitment of Temporary Teachers	21
Purchasing Study Aids	20



RECOMMENDATIONS



4

In order to guide policy and improvement efforts, some recommendations have been prepared based on the findings of the report. In order to bring improvement in the system, a collaborative effort is needed by all stakeholders at the provincial, district and school levels.

4.1.

School Education Department (SED)

- Teachers of all subjects should be encouraged to improve their academic and professional credentials by continuing their formal education in addition to pursuing other targeted programs and short courses.
- Young and inexperienced teachers should be provided with ample trainings to build their skillset.
- Senior and relatively experienced teachers should also be encouraged to engage in training programs in order to keep their teaching skills updated with the modern trends.
- In order to meet the training needs of the teachers and support them in their pursuit of academic improvement, QAED can start short courses and other targeted programs through district QAEDs.
- CPD programs can be further enhanced in scope and targeted areas, in order to meet the capacity building needs of the teachers at primary and elementary levels.
- The serious lack of subject-specialist teachers needs to be addressed with appointment of new teachers.
- Lesson planning is a very effective technique and should be made compulsory for all teachers. With the support of QAED, PCTB and PEC, lesson plans can be provided in a digital format via the school information system (SIS) to ensure availability and consistent utilisation.
- Teachers should be required to engage in a mandatory reading of supplementary books and other reading materials in order to improve their subject knowledge.
- School councils can be used more effectively by assigning responsibilities to each member and increasing cooperation with teachers as highlighted in the report.
- The report has found that majority of students lack access to basic resources at home (computer, mobile, internet, books, study furniture). SED should explore ways to bridge this gap between students.
- Program are needed to raise awareness and develop necessary attitudes in parents so that they are better able to follow up on their child's studies.
- A supportive and healthy home environment is crucial to a child's success in studies, as shown in the findings. Steps need to be taken to create this realization among parents.
- Parent recommendations for school improvement should be met by ensuring professional and well qualified headteachers and provision of basic facilities in schools.
- The findings show that a large number of schools lack access to basic facilities. This calls for a comprehensive audit of resources and facilities available at each school in order to ensure their provision.
- Further in-depth diagnostic studies are required to study the weak areas identified in this report, so that improvements can be made by providing teachers with the required training.

4.2.

Quaid-e-Azam Academy for Educational Development (QAED)

- As majority of teachers are young and inexperienced, they should be provided ample training opportunities to build their skillset.
- Head teachers should be provided leadership trainings with a focus on managerial and interpersonal skills for effective engagement with the parents, council members, teachers and the wider community.
- Special programs need to be designed in order to keep the senior and more experienced teachers updated with the modern teaching practices.
- Detailed lesson plans should be developed based on the SNC. The plans should follow one standard template and be shared with all the schools in both print and digital formats. The usage of lesson plan should also be included in the school-based CPD programme (i.e., Innovative Teacher Support Package (ITSP)).
- QAED should develop training programs keeping in view the gender-based differences in teachers' performance in different subjects as highlighted in this report.
- Targeted subject-specific trainings should be given to teachers in each district. LSA findings can be used to provide teachers with topic-specific trainings in core subjects of Science, Mathematics, English and Urdu, keeping in view the identified difficult topics.

4.3.

Punjab Curriculum & Textbook Board (PCTB)

- PCTB may share data on weak SLOs with book developers for addition of simple and understandable content in books with sufficient number of examples.
- Textbooks should be provided with supplementary materials in a timely manner to ensure proper use in schools.
- LSA data received on difficult topics identified by teachers and students needs to be studied for developing improvement strategies.

4.4.

Program Monitoring and Implementation Unit (PMIU)

- The real-time school monitoring data should be regularly shared with teachers and head teachers in order to improve their practices.

- AEO must ensure specified number of inspections per month and must visit classrooms as part of the inspection.
- Missing infrastructure facilities, study-aids, and other resources should be identified in every school and the required support needs to be provided.

4.5.

District Education Authorities (DEAs)

- AEOs may ensure specified number of inspections per month and should also visit classrooms as part of the inspection.
- AEO must guide teachers about including different positive practices in their teaching. Teachers should be encouraged to use lesson plans, study guides, and other study-aids in their teaching.
- Monitoring needs to be done to ensure teachers' timely and regular participation in CPD trainings and use of lesson plans.
- AEOs must guide teachers about using E-Learning Punjab's resources as majority of teachers are not utilizing them.

4.6.

Schools

- The scope of co-curricular activities should be widened to include different kinds of activities in order to enable holistic development of students.
- Schools should promote positive norms and behaviours among students through collaborative learning, group activities, sharing of lunch boxes and fund raising activities.
- Head teachers should maintain regular two-way communication with the parents of students. Usage of different social media apps, e.g., WhatsApp groups, can also be considered.
- Head teachers should involve school councils to reach parents of students and develop linkages and feedback mechanisms for improving students' academic performance.
- Appropriate homework needs to be assigned to students with setting up of a proper setup of checking homework and seeing student responses.
- Regular engagements with parents are to be done through PTMs and informal sessions to ensure involvement in school activities.
- Head teachers should actively guide teachers in their lesson planning and lecture delivery.
- Head teacher should develop a detailed list of all the missing infrastructure, study-aids and other resources in the school. The list should be shared with the AEOs and MEA on their visits, as well as in the school council meetings.

- Teachers should try their best to maintain regular communication with parents, especially with the parents of academically weak students.

4.7.

Parents

- A supportive and healthy home environment is crucial to a child's success in studies. Steps need to be taken to create this realization among parents.
- Parents must regularly check up on the performance and behavior of the students with both the teachers as well as the head teacher.
- Parents should also get involved in the daily homework and other academic activities of the child.
- Effort should be made to fix a minimum number of daily study hours of the child at home as it has been linked with improvement in student performance.
- Students should be encouraged to read material other than the course books as it improves student performance.



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