SDPI
Sustainable Development Policy Institute

Policy Brief

Estimation of Learning Gains under ILMpact Programme

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Introduction

This policy brief assesses the performance of catch-up and remedial learning interventions implemented in Punjab to address foundational literacy and numeracy gaps. The analysis draws on ASER-aligned assessment data from 3,669 Out-of-School Children (OOSC) participating in an eight-week catch-up program and 4,858 in-school learners receiving remedial instruction across two districts. Results indicate substantial improvements in English, Urdu, and Mathematics, with learners progressing from foundational competencies toward benchmark proficiency levels. Variance analysis suggests that learning gains were distributed across learning levels, reflecting systematic progression rather than concentration at a single stage. Classroom observation and validation datasets further support the robustness of these findings, indicating high implementation fidelity and effective instructional practices. Overall, the evidence demonstrates that short-cycle, targeted learning interventions can deliver rapid and consistent learning gains and represent a viable strategy for addressing foundational learning gaps within constrained timeframes.

Catchup Program[1] Learning Outcomes: Evidence of Substantial Gains in Literacy and Numeracy

Baseline–endline assessments show significant improvements in literacy and numeracy among **2,981[2] Out-of-School Children (OOSC)** in Punjab participating in a catch-up learning intervention. Over an eight-week instructional cycle, learners progressed from foundational skills to higher-order competencies, including paragraph-level reading and more advanced mathematical operations. The observed **average variance of 2.17[3] across learning levels** is consistent with the assessment findings, confirming that learning gains were distributed across foundational, developing, and proficient levels and reflected systematic progression along the learning continuum rather than isolated improvements.

English Reading Proficiency

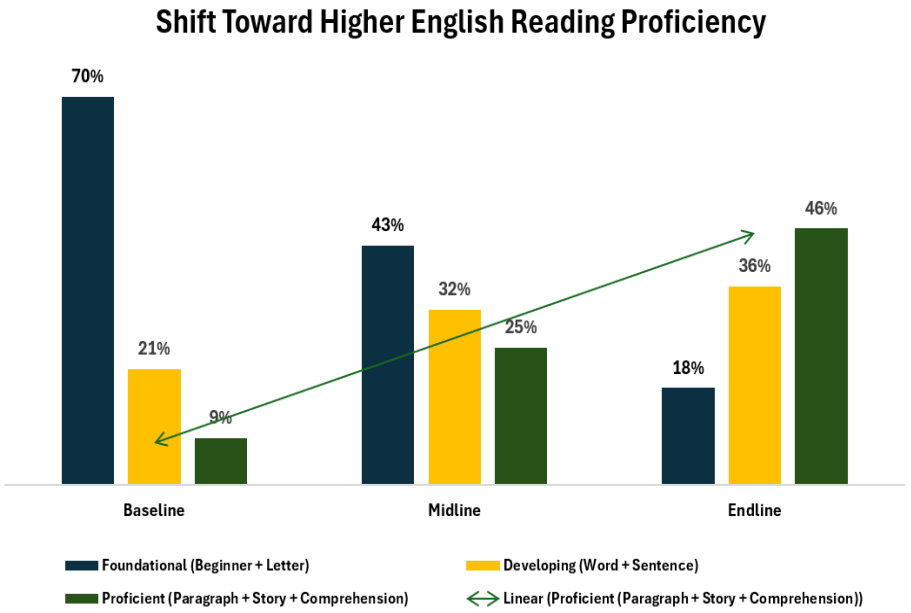
English reading proficiency improved significantly throughout the program. Initially, about three-quarters of learners were at the beginner level, but by the end, the number of learners reading connected texts had increased more than fourfold. Midline results showed steady progress in word and sentence skills, leading to notable gains in paragraph reading and

[1] Baseline, midline, and endline assessments were conducted using the same standardized English, Urdu, and Maths assessment tools developed by ASER.

[2] Number based on the assessments at baseline, midline, and endline received from Punjab.

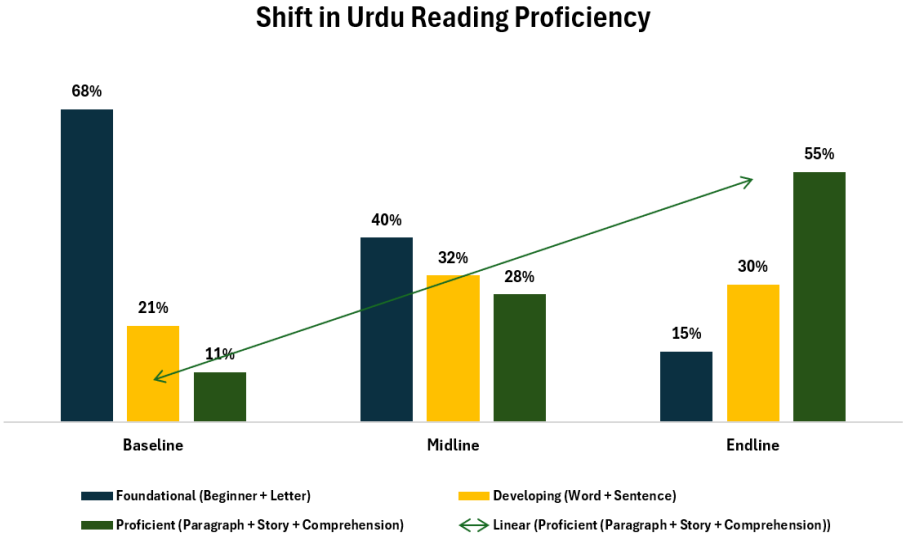
[3] For the catch-up learning assessment, percentage-point changes between baseline and endline were calculated for each learning level (foundational, developing, proficient) across English, Urdu, and Mathematics. Variance in these changes was computed within each subject, and the subject-level variances were averaged to obtain an overall average variance.

comprehension. Overall, these findings indicate significant improvements in English literacy and better readiness for independent reading.



Urdu Reading Proficiency

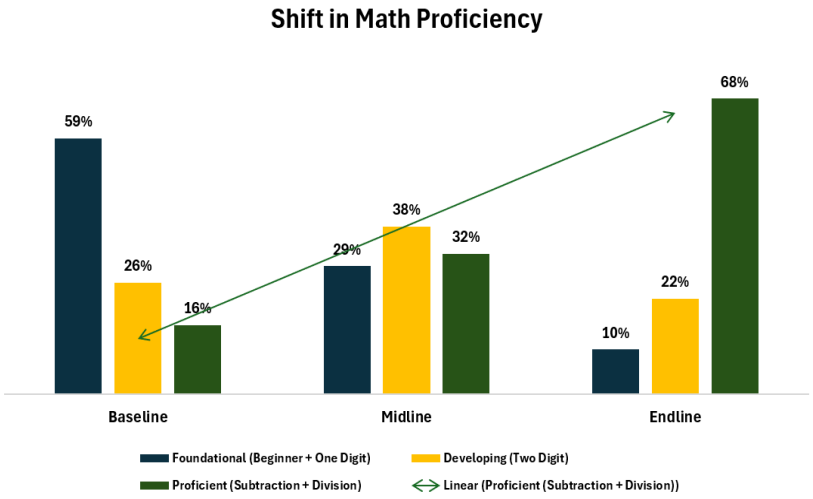
Learners showed significant progress in Urdu reading skills. The percentage of students at the beginner stage dropped from over 68% to around 15%. Meanwhile, those reading at paragraph level or higher increased fivefold.



Shift in Math Proficiency

Mathematics results show a significant improvement in numeracy skills. Initially, nearly 60% of learners were at beginner level, but by the end of the program, this cohort decreased significantly. Over two-thirds of learners demonstrated skills in more complex operations

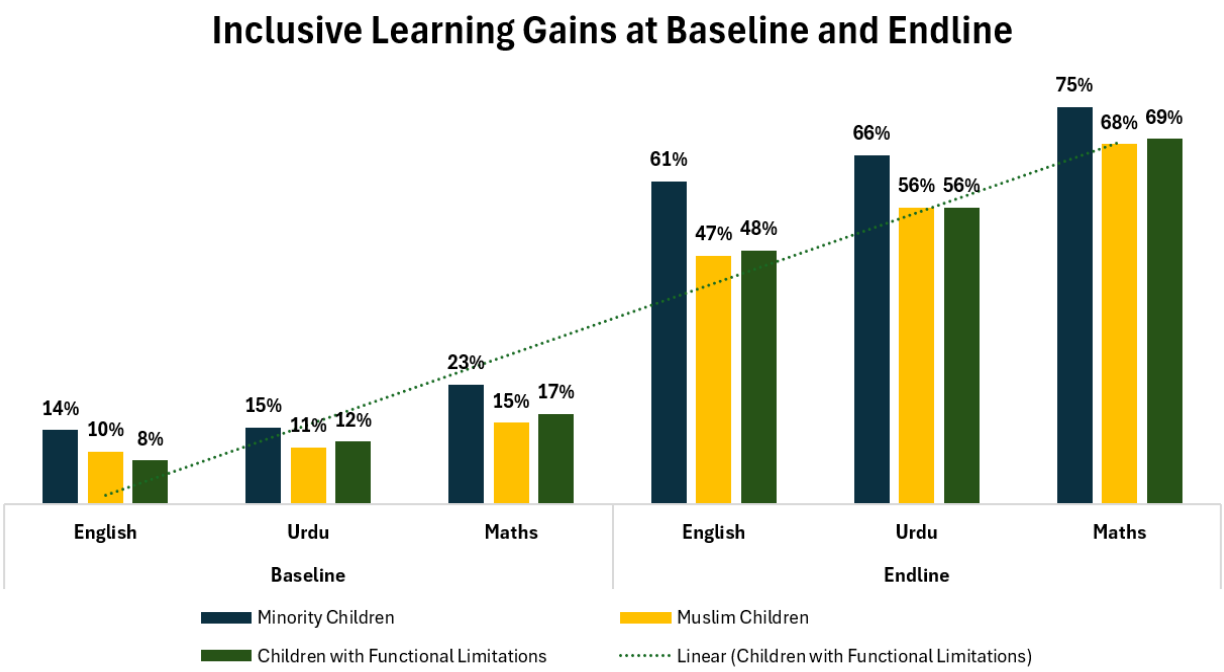
like subtraction and division, highlighting enhanced abilities and a stronger numerical foundation for further learning.



In Punjab, baseline-endline assessment results show that the catch-up learning intervention has significantly improved English, Urdu, and Mathematics skills in just eight weeks. The number of learners at beginner competency levels decreased, while those at benchmark levels increased markedly. These gains indicate that the intervention effectively addressed foundational skill gaps for Out-of-School Children, facilitating their reintegration into formal education. These findings are further supported by validation exercise conducted by SDPI in about 20% of randomly selected schools.

Equity Analysis of Learning Outcomes Across Learner Groups

Baseline assessments under the CLP revealed notable equity gaps across the learning groups, with most learners falling below benchmark levels in all three subjects. By the endline, all learner groups showed strong upward trajectories, indicating significant progress and a reduction in initial disparities. Minority children exhibited the most consistent improvement across English, Urdu, and Mathematics, while Muslim children and those with functional limitations made particularly strong gains in Urdu and Mathematics. Although progress in English is somewhat slower for some groups, learners overall demonstrated clear movement toward higher reading skills. These baseline-to-endline trends confirm that targeted instructional strategies effectively enhanced learning outcomes and fostered more equitable achievement among diverse groups.



Remedial Learning Program[4] Learning Outcomes: Evidence of Substantial Gains in Literacy and Numeracy

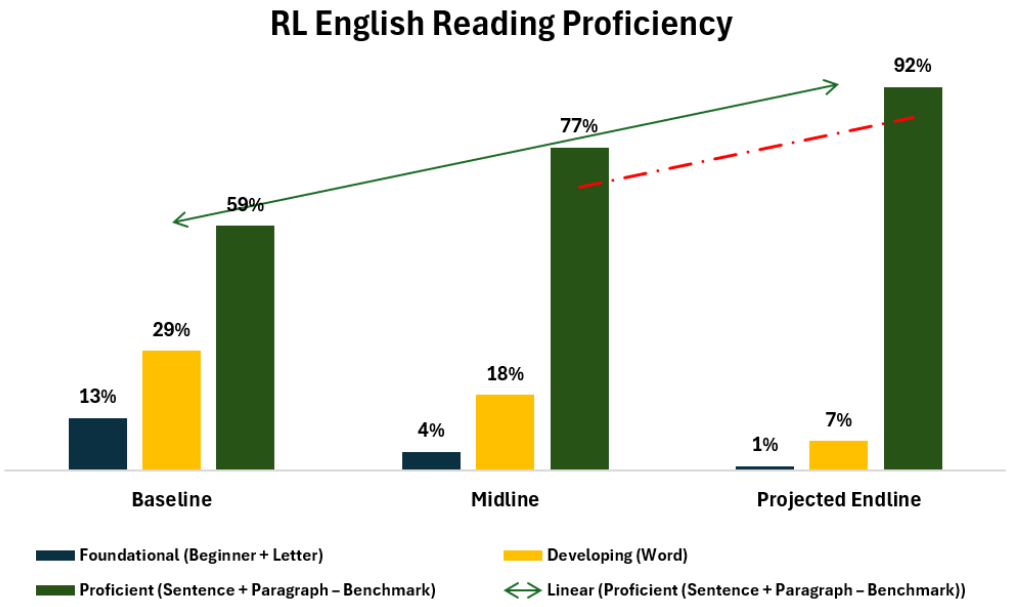
A comparative analysis of assessment data from **4,858 students from two districts of Punjab** indicates that learning levels improved following the remedial learning intervention, with substantial gains observed in English, Urdu, and Mathematics. The **average variance is 1.78[5]** indicates moderate dispersion in learning gains, suggesting that improvements were broadly consistent across learning levels. Overall, the findings indicate that the observed improvements were systematic and widespread, providing credible evidence that the intervention effectively enhanced learning levels across subjects.

English Reading Proficiency

In Punjab, English remedial learning demonstrates rapid progression toward benchmark reading proficiency. Benchmark attainment increased from 59 percent at baseline to 77 percent at midline and is projected to reach approximately 92 percent by endline, with foundational-level learners nearly eliminated.

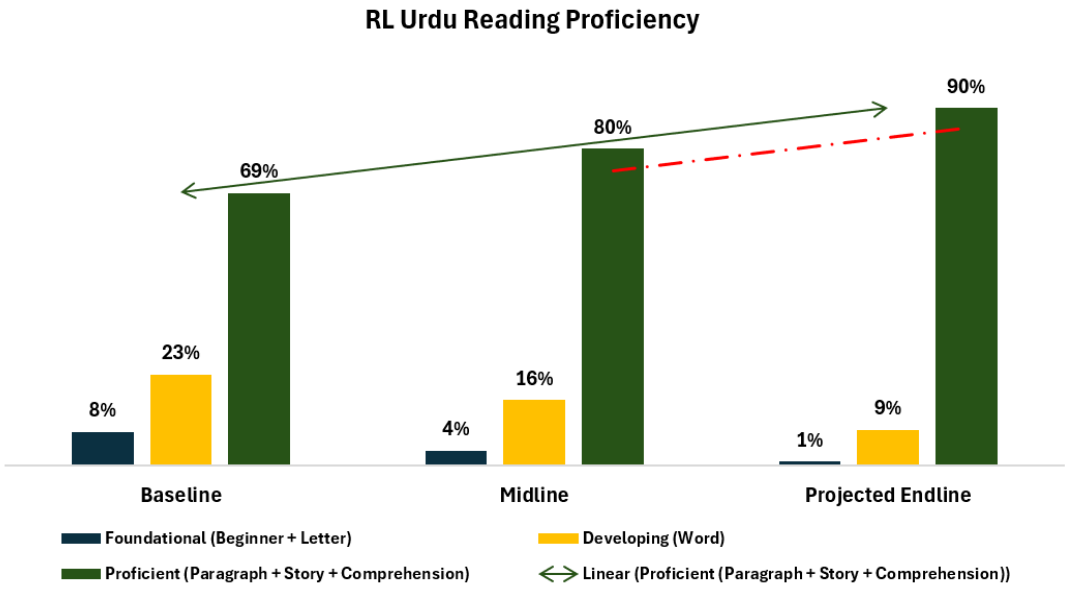
[4] Baseline, midline, and endline assessments were conducted using the same standardized English, Urdu, and Maths assessment tools developed by ASER.

[5] Average variance reflects the mean of subject-level variances in percentage-point learning gains across foundational, developing, and proficient levels between baseline and midline.



Urdu Reading Proficiency

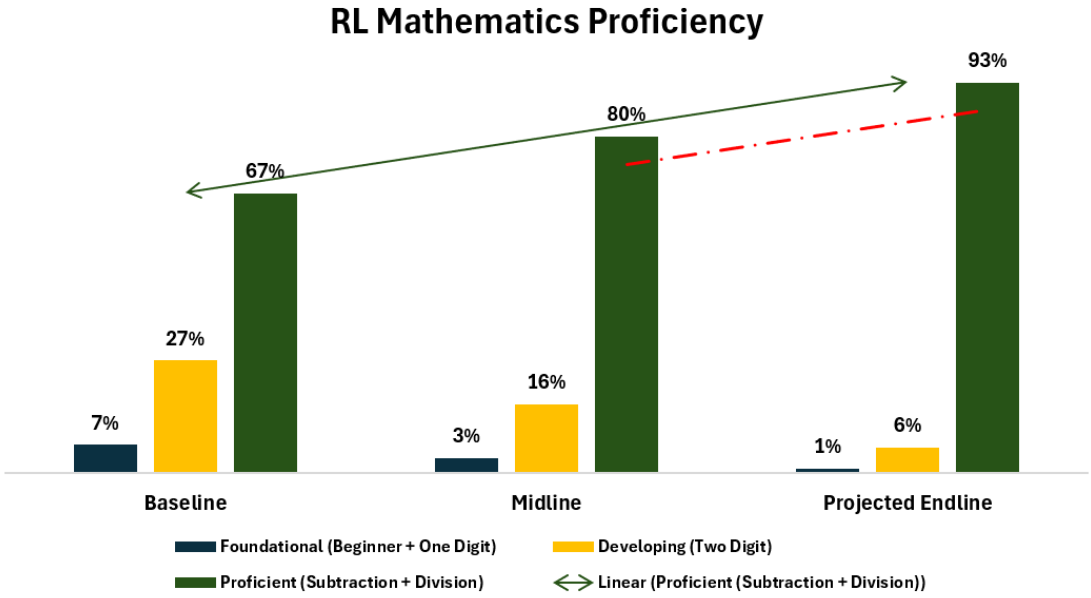
Urdu remedial learning shows a clear upward trend in reading proficiency, rising from 69% at baseline to 80% at midline, projected to reach about 90% by endline, while lower-level proficiency continues to decline.



RL Math Proficiency

Results indicate a sustained upward trajectory in mathematics proficiency under remedial learning, with the share of learners achieving benchmark competencies increasing from 67

percent at baseline to 80 percent at midline and projected to reach approximately 93 percent by endline, alongside a corresponding contraction at lower proficiency levels[6].

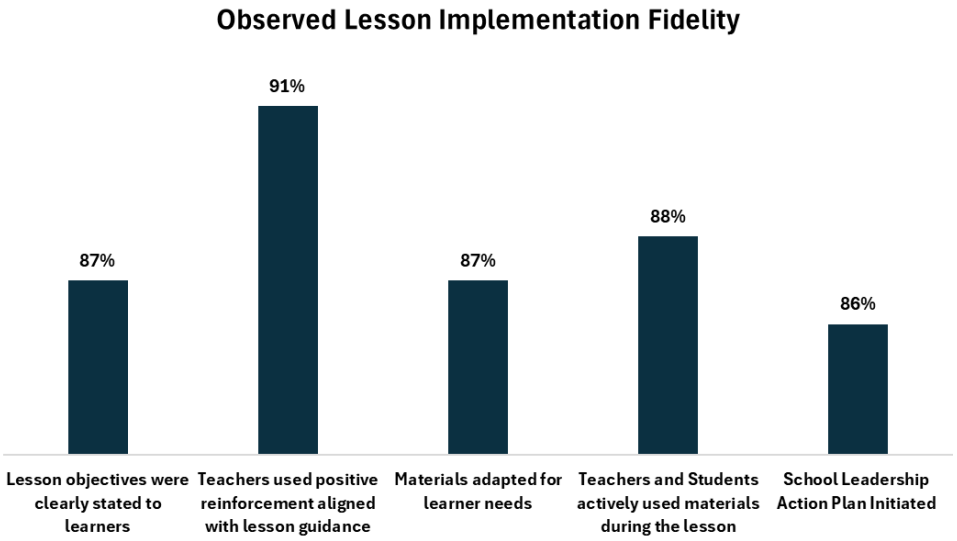


Overall, RL assessment results show significant improvements in English, Urdu, and Mathematics. A clear progression from foundational to benchmark competencies has been observed by midline and is expected to further strengthen by the endline.

Classroom Observation Findings (Implementation Fidelity & Teaching Practices)

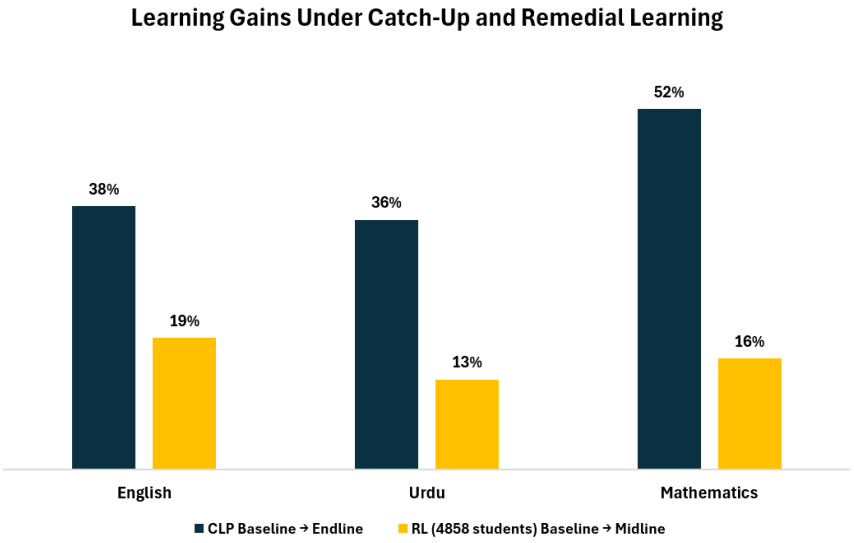
A total of 833 structured observations were carried out across all ILMpact program components, including Catch-up, ECCE, Remedial Learning, Dosti activities, School Leadership, SMC engagement, and STEAM Clubs, by PECTA, SDPI, the British Council, and DSP mentors. The findings show consistently high fidelity in implementation, particularly in lesson planning, instructional delivery, and program activities. Sessions typically featured clear objectives, positive reinforcement aligned with program guidance, effective use of materials, and active participant engagement. Additionally, evidence of leadership and community-level action supports the conditions for sustained implementation, reinforcing confidence that the program's success stems from quality delivery.

[6] Endline projections for English, Urdu, and Math are estimated using the baseline-to-midline rate of change in learning outcomes, assuming consistent instructional intensity. This approach provides a rough estimate of expected endline outcomes, which will be validated against final assessment data.



Estimation of Learning Gains Using Percentage-Point Change

Catch-up learning generated larger absolute gains due to its intensive design, while remedial learning shows strong early gains with potential for further improvement by endline, with the number of beginners nearly zero in all subjects[7].



[7] Learning gains were calculated using a percentage-point change method based on ASER-aligned benchmarks. For each subject, the proportion of learners meeting the benchmarks was compared across assessment rounds. Gains for the Catch-Up Learning Programme (CLP) were based on the endline and baseline results, while Remedial Learning (RL) gains were determined using midline and baseline results. This approach offers a clear measure of change over short intervention cycles and is commonly used in foundational learning assessments.

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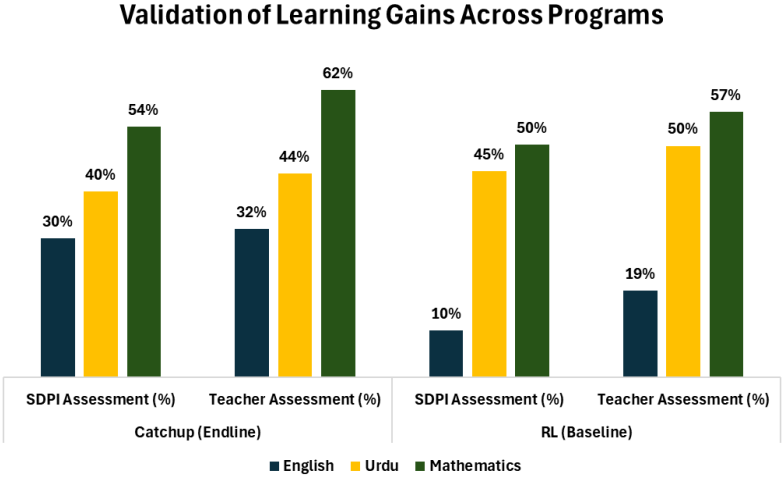
Validation of Learning Gains Across Catch-up and RL Programs

Validation[8] Findings indicate strong and consistent learning gains across both programs, with close convergence between SDPI-validated and teacher-reported outcomes in English, Urdu, and Mathematics. At the endline**,** CLP shows significant gains across all subjects, especially in Mathematics and Urdu. Conversely, RL baseline results indicate higher initial competencies, notably in Urdu and Mathematics. Teacher assessments across different programs tend to report slightly higher achievement levels than SDPI, likely because the independent validator applies more conservative proficiency thresholds. Nonetheless, the pattern and scale of learning gains are consistent across different assessment sources, confirming that the improvements are genuine and not influenced by measurement bias. Overall, the close agreement between SDPI and teacher evaluations supports the credibility of the reported learning enhancements and underscores the effectiveness of the program interventions across subjects.



Conclusion

In conclusion, both catch-up and remedial learning interventions can lead to rapid and meaningful improvements in foundational literacy and numeracy, even within limited instructional timeframes. For Out-of-School Children, the catch-up learning program enabled accelerated progress across learning levels in just eight weeks. This progress supports a movement toward functional learning outcomes and prepares students for reintegration into formal schooling.

[8] Using Stratified Simple Random Sampling, SDPI independently assessed approximately 15–20% of students of both CLP and RL from around 20% of schools in each district, following best practices for third-party verification, such as those outlined in *World Bank (2011). Results-Based Monitoring and Evaluation Handbook, DFID/FCDO (2018). Monitoring and Evaluation Framework for Education Programmes*.

Similarly, remedial learning results show consistent gains in English, Urdu, and Mathematics. Early improvements were observed at the midline assessment, with strong potential for further progress by the endline. Variance analysis confirms that learning gains were evenly distributed across learning levels, while classroom observations indicate high implementation fidelity and effective instructional practices.

Overall, these results provide strong, policy-relevant evidence that targeted, competency-based learning interventions are an effective and scalable approach to addressing foundational learning gaps and promoting equitable learning outcomes.