

Measuring the Effects of Synthetic Phonics Instructions on the Reading Skills of Pre-Primary Students

Early Literacy Intervention Programme

PRE-TEST & POST-TEST PROGRESS

Comparative Closing REPORT

Public Schools – Pilot Project · 12 Schools · 120 ECE Students

PROGRAMME ADMINISTRATION & LEADERSHIP

The programme was coordinated by Dr. Fatima Tuz Zahra, who is also a programme trainer and administrator.

The project was conducted and completed by Alisha Ijaz.

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EXECUTIVE SUMMARY

This report presents the findings of the Jolly Phonics intervention programme piloted across twelve public schools in Gujranwala, Pakistan, during the 2025–26 academic year, following a quasi-experimental design. It evaluates the effectiveness of synthetic phonics instruction in improving reading readiness and phonemic awareness among 120 early childhood education (ECE) students aged 3–7 years, based on pre-test and post-test reading assessments. Teachers in the experimental schools received training in Jolly Phonics before the intervention began. This training helped them understand the approach and apply the programme consistently in their classrooms to maintain fidelity. The intervention achieved improvement in early reading outcomes. Experimental schools (those that received structured Jolly Phonics instruction) recorded a mean post-test score of 2.33, compared to 0.78 in control schools — a difference of 1.55 points. The mean gain from pre-test to post-test was +2.05 in the experimental group versus +0.53 in the control group, yielding a net programme advantage of +1.52 points.

These results indicate a clear, evidence-based positive impact of Jolly Phonics on reading skills among students and support its adoption as a public-sector early childhood literacy reform in Pakistan.

1. INTRODUCTION AND PROGRAMME OVERVIEW

Jolly Phonics is an internationally recognised programme that teaches children to read and write using a method called synthetic phonics. This method uses a multi-sensory approach in a structured and systematic way through letter sounds, blending, segmenting, and guided fun reading activities to teach children. It has been adopted in more than 100 countries. The programme is grounded in the science of reading and designed for implementation in diverse educational contexts.

This pilot evaluation was conducted in twelve public schools across Gujranwala, Pakistan, under the administration of Jolly Phonics UK. Six schools were selected as the Experimental Group, which received synthetic phonics instruction, while six control schools continued with conventional teaching methods. All assessment data were analysed through mean scores.

A complete evidence base — including voice recordings, classroom documentation, and monthly progress reports — is maintained for transparent programme accountability and stakeholder review.

2. SCOPE OF SYNTHETIC PHONICS

Synthetic phonics is a teaching approach that allows children to recognise letter sounds and blend them to form words. It helps them to build reading accuracy and fluency. Researchers have also discussed its positive impact on students' reading skills. Introducing synthetic phonics in Pakistan can bring revolutionary change in teaching methodologies. It develops reading fluency and phonemic sound awareness in students, which positively builds reading comprehension. Adopting this approach could be a wise decision for public schools in Pakistan.

3. RESEARCH OBJECTIVES

- › To measure the effectiveness of the synthetic phonics approach on students' reading skills in selected public schools.
- › To evaluate the impact of teachers' pedagogical strategies in implementing the Jolly Phonics programme on students' reading performance.
- › To examine the role of teacher-mediated instruction, within the framework of the Zone of Proximal Development (ZPD), in enhancing students' phonemic awareness through the Jolly Phonics approach.
- › To inform policy decisions regarding the adoption of Jolly Phonics in Pakistan's public schools through research-based evidence.

4. STUDY DESIGN: PARTICIPANTS AND SCHOOLS

A quasi-experimental pre-test/post-test design was employed. A total of 120 ECE (Early Childhood Education) students (ages 3–7) from 12 public schools were taken as the sample, with 10 students drawn from each school. Reading proficiency was assessed using a reading assessment test. Assessments were conducted before and after the intervention period.

Age Distribution of All Participants

Age Group	No. of Students
3 to under 5 years	52
5 to under 6 years	50
6 to 7 years	18
Total	120

Note: Ages are in completed years; each student appears in one age band only.

Participating Schools

Experimental Schools	Control Schools
GGPS Rana Colony	GGES Shaheenabad
GGPS Chahtalian Wala	GGPS Rajkot
GGES Kangniwala	GGPS Fazal Bibi
GGES Noshehra Sansi	GGPS Data Ganj Baksh
GGES Pak Model	GGPS Kallar Abadi
GGES MC No.4	GGPS Taleem Un Nisa

5. TEACHING AND LEARNING MATERIALS

Experimental schools were provided with Jolly Phonics instructional resources, enabling teachers to deliver systematic, activity-based phonics instruction across letter recognition, blending, word-building, and guided reading. Student practice was supported through the Pupil Book 1, a workbook covering all letter sounds and blending activities, alongside Blending Wheels, which were designed to develop children’s awareness of initial and final consonant blends. Sound Pens (Talking Pens) offered audio support to reinforce children’s learning, and reading fluency was built progressively through two levels of guided readers: the Red Readers, which provided foundational materials for early-stage reading, and the Orange Readers, which offered more advanced texts to support continued reading development. Finally, the Teachers’ Book served as a comprehensive multi-sensory guide, offering step-by-step lesson plans to support class teachers throughout the intervention.



Figure 1: Teaching and Learning Material: Book Guide



Figure 2: Blending Wheel



Figure 3: The Jolly Phonics Wall Frieze



Figure 4: Sound Pen

6. INTERVENTION IMPLEMENTATION

The intervention was implemented in a structured process to ensure consistency. In experimental schools, ECE classroom teachers received training through a dedicated Jolly Phonics Continuing Professional Development (CPD) course. This training equipped them with the methodological strategies and practical skills required to deliver synthetic phonics instruction effectively, including the use of the Jolly Phonics multi-sensory approach, sound actions, blending techniques, and supporting instructional materials. Teaching and learning materials were provided by Jolly Phonics UK, as mentioned in the section above.

The data collection procedure was divided into two phases. In phase 1, a **pre-test** was administered to students in both the experimental and control schools to establish a baseline measure of their existing reading and phonemic awareness skills prior to the intervention. The **intervention phase** then commenced. In the experimental schools, instruction was delivered through the Jolly Phonics course, incorporating its full suite of

materials and methodology (letter–sound teaching, blending practice, guided readers, and multi-sensory activities) as outlined earlier in this report. In the control schools, by contrast, teaching continued through conventional instructional practices without introducing the Jolly Phonics programme, allowing for a comparative evaluation between the two groups.

In phase 2, upon completion of the intervention period, a **post-test phase** was conducted, during which each student’s reading was individually recorded. Recording durations varied naturally by student—for example, one student’s recording lasted approximately 35 seconds, while another’s lasted approximately 45 seconds, reflecting differences in individual reading pace and fluency. Each recording was subsequently assessed to determine the number of words read correctly, along with the accuracy of sound blending and letter–sound recognition, and scored accordingly. From these individual assessments, school-wise scores were obtained by summing the scores of the 10 students in each school, and group means were calculated by dividing the sum of the school scores by the number of students in the group (60). This provided a standardised basis for comparing reading performance between the experimental and control groups.

Scoring

Scores on both tests are based on the number of words each student read correctly. Each recording was scored individually. The classroom observations and teacher feedback reported in Section 11 supplement these test scores.

7. ASSESSMENT RESULTS — EXPERIMENTAL SCHOOLS

The following table presents the pre-test and post-test scores for each experimental school. The gain and the reading level are also shown.

Table 1: Pre-test and Post-test Scores of Experimental Schools (school totals; group mean in the last row)

Sr.	School Code	School	Pre-Test Score	Post-Test Score	Gain	Level
1	E1	GGPS Rana Colony	1	16	+15	Developing
2	E2	GGPS Chahtalian Wala	2	21	+19	Developing
3	E3	GGES Kangniwala	6	31	+25	Developing
4	E4	GGES Noshehra Sansi	3	36	+33	Proficient
5	E5	GGES Pak Model	4	20	+16	Developing
6	E6	GGES MC No.4	1	16	+15	Developing
	Group Mean	Per student	0.28	2.33	+2.05	—

Scoring Note: School-wise scores are the sum of the scores of the 10 students in each school, based on the number of words read correctly in each student’s audio recording. The group mean is the sum of the six school scores divided by the 60 students (e.g., $140 \div 60 = 2.33$).

Among the experimental schools, GGES Kangniwala and GGES Noshehra Sansi achieved the strongest gains (+25 and +33 respectively). Similarly, GGPS Chahtalian Wala showed a substantial improvement of +19, while E1, E5 and E6 showed smaller gains (+15, +16 and +15). Hence, the results suggest that Jolly Phonics can be used in classrooms to improve reading skills among students.

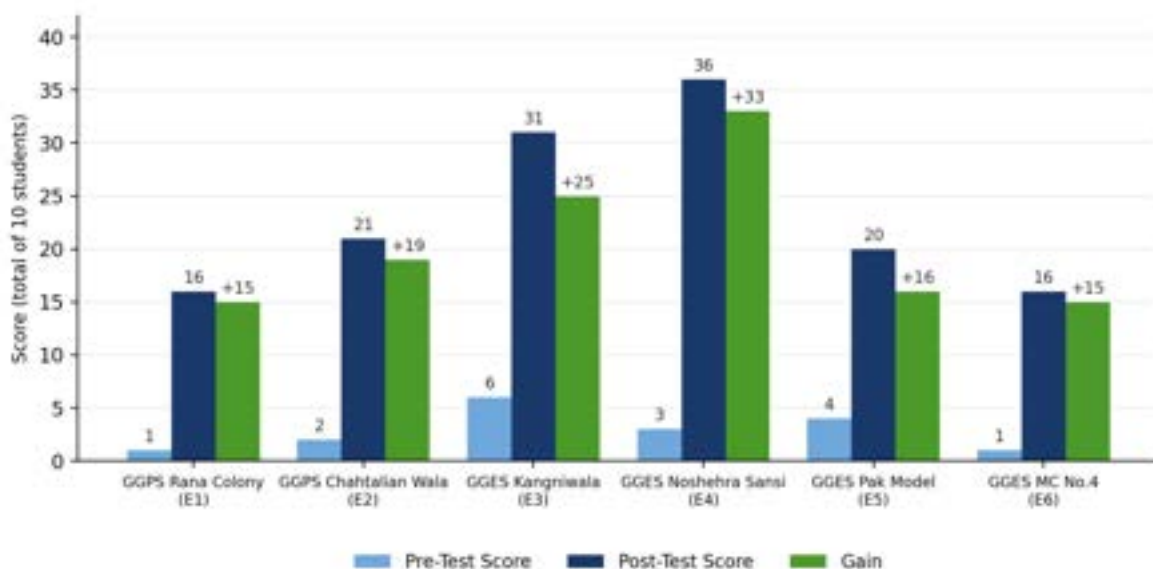


Figure 5: Pre-test and Post-test Scores of Experimental Schools (school totals)

8. ASSESSMENT RESULTS — CONTROL SCHOOLS

The following table presents the pre- and post-test scores of the control schools.

Table 2: Pre- and Post-test Scores of Control Schools (school totals; group mean in the last row)

Sr.	School Code	School	Pre-Test Score	Post-Test Score	Gain	Level
1	C1	GGES Shaheenabad	2	11	+9	Emerging
2	C2	GGPS Rajkot	4	7	+3	Emerging
3	C3	GGPS Fazal Bibi	4	10	+6	Emerging
4	C4	GGPS Data Ganj Baksh	0	6	+6	Poor
5	C5	GGPS Kallar Abadi	3	4	+1	Poor
6	C6	GGPS Taleem Un Nisa	2	9	+7	Emerging
	Group Mean	Per student	0.25	0.78	+0.53	—

Scoring Note: as for Table 1. The group mean is $15 \div 60 = 0.25$ (pre-test) and $47 \div 60 = 0.78$ (post-test).

GGES Shaheenabad recorded the highest post-test score in the control group (11). On the other hand, C2 and C5 showed the smallest gains (+3 and +1). GGPS Kallar Abadi showed a poor result, with only a +1 gain. The control schools showed markedly smaller gains, suggesting that conventional instruction is less effective at improving reading than the Jolly Phonics intervention.

9. SCHOOL RANKINGS

Experimental Schools — Ranked by Improvement (Gain)

Rank	School Name	N	Pre-Test Score	Post-Test Score	Gain
1	Govt. Girls Elementary School, Noshehra Sansi	10	3	36	+33
2	Govt. Girls Elementary School, Kangniwala	10	6	31	+25
3	Govt. Girls Primary School, Chahtalian Wala	10	2	21	+19
4	Govt. Girls Elementary School, Pak Model	10	4	20	+16
5 (tie)	Govt. Girls Primary School, Rana Colony	10	1	16	+15
5 (tie)	Govt. Girls Elementary School, MC No.4	10	1	16	+15

Control Schools — Ranked by Improvement (Gain)

Rank	School Name	N	Pre-Test Score	Post-Test Score	Gain
1	Govt. Girls Elementary School, Shaheenabad	10	2	11	+9
2	Govt. Girls Primary School, Taleem Un Nisa	10	2	9	+7
3 (tie)	Govt. Girls Primary School, Fazal Bibi	10	4	10	+6
3 (tie)	Govt. Girls Primary School, Data Ganj Baksh	10	0	6	+6
5	Govt. Girls Primary School, Rajkot	10	4	7	+3
6	Govt. Girls Primary School, Kallar Abadi	10	3	4	+1

Note: Scores are school totals (sum of 10 students). Schools with equal gains share the same rank.

10. COMPARATIVE ANALYSIS

The table below summarises the comparison of pre- and post-test means between experimental and control schools for evaluating programme impact. The experimental group's higher performance on all key measures indicates the effectiveness of the Jolly Phonics programme.

Table 3: Comparative Analysis between Experimental and Control Schools

Measure	N	Pre-Test Mean	Post-Test Mean	Improvement
Experimental Group	60	0.28	2.33	+2.05
Control Group	60	0.25	0.78	+0.53
Net Difference (Exp – Ctrl)	—	+0.03	+1.55	+1.52

The experimental group achieved a post-test mean of 2.33, compared to 0.78 in the control group — a net advantage of 1.55 score points ($2.33 > 0.78$). Mean improvement across the intervention period was 2.05 in the

experimental group versus 0.53 in the control group, a difference of +1.52 points favouring Jolly Phonics instruction. These are descriptive statistics; no significance test was applied (see Section 12).

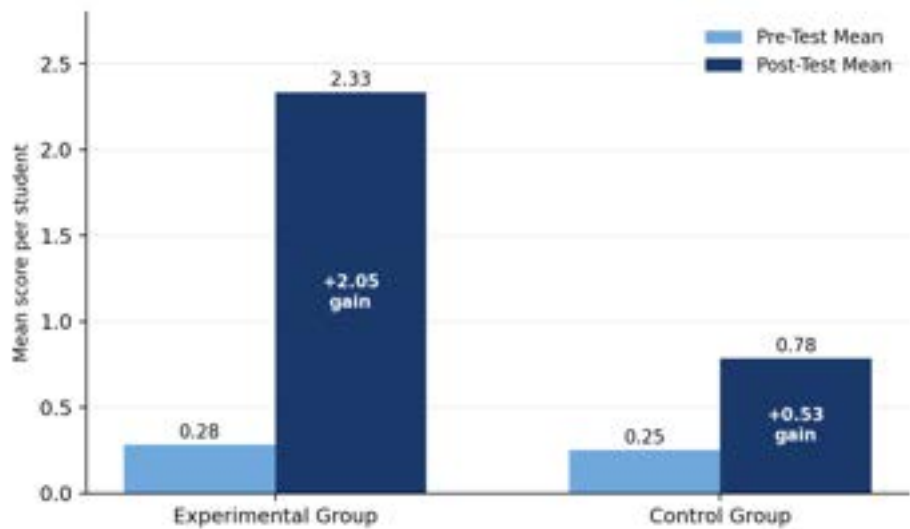


Figure 6: Mean Score Comparison between Control and Experimental Groups (mean per student)

11. KEY FINDINGS

Classroom observations across the experimental and control schools revealed consistent and meaningful differences in students’ phonics-related skills, teacher practice, and overall classroom engagement, offering direct evidence in response to the study’s research objectives.

Students in the experimental schools demonstrated an improvement in phonemic awareness, showing stronger recognition of individual sounds and letter–sound relationships, although a subset of students continued to require additional support. In comparison, students in the control schools displayed only a moderate level of awareness, with more frequent inconsistency in identifying and distinguishing sounds. A similar pattern was found in word blending: experimental students showed moderate-to-high improvement in combining individual sounds to form words, whereas control students showed only partial and inconsistent blending ability, corresponding to a moderate rating. Reading fluency followed the same pattern, with experimental schools rated high for gains in reading readiness, word recognition, and reading accuracy, though progress varied across individual students, while control schools showed only gradual, moderate development in reading readiness and limited gains in overall reading performance. These findings substantiate **Research Objective 1**, indicating the influence of synthetic phonics on the reading skills of pupils in experimental schools.

Students in experimental schools became more confident. They were noticeably more willing to identify sounds, blend words, and attempt reading tasks post-intervention, whereas confidence in control schools developed more slowly and participation in reading activities remained variable. Further, teachers in experimental schools reported a high level of increased student interest, participation, and motivation during phonics-based activities. These findings directly address **Research Objective 2**, which examines changes in teachers’ pedagogical strategies following the implementation of the phonics approach. Teacher feedback data indicate a clear shift toward more structured, multi-sensory, and engagement-driven instructional practices in the experimental schools, with teachers actively adapting their delivery to sustain the higher levels of student interest and participation they

observed. The findings also support **Research Objective 3**, concerning the role of teacher-mediated learning within the Zone of Proximal Development (ZPD) in shaping phonemic awareness and reading readiness. The consistently higher ratings for experimental schools across phonemic awareness, blending, fluency, and confidence suggest that the structured, teacher-guided scaffolding characteristic of the Jolly Phonics approach enabled students to progress beyond what they could achieve independently.

12. LIMITATIONS OF THE STUDY

The study is limited to the measurement of reading skills, specifically phonological decoding and word recognition, and does not address other aspects of language proficiency. The sample size is small, and the research was conducted across 12 public schools in Gujranwala. Additionally, the implementation of synthetic phonics relies on teachers' instructional practices, and learners' engagement may influence the research outcomes. Variation among teachers in terms of previous training, classroom experience, and fidelity of implementation may be an intervening factor that a quasi-experimental design, in which teachers are not randomly assigned, cannot entirely control for, despite the pre-intervention teacher training process. Students in public schools often lack a strong prior educational background and are therefore highly dependent on teacher-mediated learning, which may significantly influence the development of their reading fluency. Finally, the results are based on descriptive statistics (means and gains); no significance test or effect size was calculated, so the findings should be interpreted with caution.

13. CONCLUSION AND STRATEGIC RECOMMENDATIONS

Conclusion

This evaluation indicates that the Jolly Phonics intervention produced a marked, educationally meaningful improvement in early reading outcomes among ECE students in Gujranwala public schools. The experimental group achieved a post-test mean of 2.33, rising from a baseline of 0.28 — a gain of +2.05 points. The control group, by contrast, moved from 0.25 to 0.78, a gain of only +0.53 points.

One of the six experimental schools (GGES Noshehra Sansi) reached the “Proficient” level, while the other five were rated “Developing”. Although the overall results are not highly proficient, the noticeable improvement in the post-test scores of the experimental schools following the intervention indicates that the programme was effective. The findings provide an evidence-based case for the phased expansion of Jolly Phonics within Pakistan's public ECE sector, to be confirmed by a larger follow-up study.

Strategic Recommendations

- › The Jolly Phonics programme should be considered for phased expansion to ECE classrooms in public schools, supported by a larger follow-up study, to address early reading difficulties among learners.
- › Establish a formal teacher training and continuing professional development calendar to sustain instructional quality and fidelity across all implementation sites.
- › Conduct routine classroom monitoring within the intervention period to evaluate each student's performance.

- › Ensure uninterrupted availability of all Jolly Phonics teaching and learning materials in each participating school.
 - › Include student-level data, a significance test and an effect size in the follow-up study.
 - › These findings can be presented to the Punjab School Education Department to explore integrating Jolly Phonics as a standardised early literacy framework across the Punjab province.
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APPENDICES

Appendix A: Pre-Test and Post-Test Evidence

This appendix presents visual evidence of the assessment process conducted in the schools.



Figure A1: Pre-test was conducted in selected schools



Figure A2: Post-test assessment in an experimental school

Appendix B: Use of Teaching and Learning Materials

Appendix B describes the use of Jolly Phonics learning materials in classrooms.



Figure B1: Use of Pupil Books 1 and 2 in classrooms



Figure B2: Wall Frieze