

Article

A Systems Approach to Improving Foundational Reading Skills at a Preschool in India

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Abstract: Holistic Education School located in Mumbai, India, created a strategic improvement plan to address the poor foundational reading skills of its kindergarten students. Curriculum Based Measure (CBM) assessment data showed a rise in reading performance during the implementation of the plan, from 87% of the students scoring below grade level in 2016 to 89% achieving grade level benchmarks in 2021. An instrumental case study qualitative research design was employed to describe the nature of changes made in relation to the increase in performance. Data were collected from a variety of sources and coded through inductive and deductive processes that achieved intercoder agreement of 97.87% and 0.73 Kappa coefficient for reliability. Triangulation, member checking, and clarifying researcher bias, were employed to maximize validity. The findings describe the nature of transformation undertaken by the strategic improvement plan on key systems-level elements like curriculum, professional development, student engagement, parent engagement, and school leadership.

Keywords: literacy reform; preschool reading; preschool; English literacy



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1. Introduction

There is serious concern over the poor reading and comprehension skills of primary grade children in India. Reports have shown that a majority of students read multiple grade levels below their age [1–5]. Considering how important foundational reading skills are for students' academic success throughout their school years [6,7], the National Education Policy 2020 expressed the improvement of foundational reading as “an urgent national mission” and accorded it with the highest priority for all students before Grade 3 [8] (p. 8). Holistic Education School (Holistic Education School is a pseudonym)—a private K-10 school located in Mumbai, India—acknowledged this message and created a strategic improvement plan that included a set of evidence-based interventions to address the matter. International Curriculum Based Measure (CBM) assessment data over four years of the strategic plan's implementation showed a dramatic rise in student reading performance in kindergarten, moving from 87% of the students scoring below grade level or “at risk” in 2016 to 89% of the students achieving grade level benchmarks in 2021 (see Shenoy et al. [9] for a detailed analysis of these outcomes). This study aims to answer the research question—what were the nature of changes made to the instructional core that might be related to the dramatic increase in foundational reading skills experienced by kindergarten students over four years of the school's strategic improvement plan? In doing so, the authors wish to contribute to the scarce pool of peer-reviewed, empirical research, related to the process of transforming foundational reading outcomes in the context of Indian schooling, and inspire school leaders to design, implement, and iterate interventions in their own settings for the benefit of their students.

Holistic Education School was affiliated with the Indian Certificate of Secondary Education Examination (ICSE)—one of the most popular national boards for private schools

in India with more than 2300 school affiliates. The school was a mid-tier private school. Nearly half of India's students study at private schools [10], and the fees at such schools range from INR Rs. 2400 or roughly USD \$32 per year [11] up to INR Rs. 2,400,000 or USD \$33,000 per year. Hence, Holistic Education School can be said to fall in the mid-tier fee category with its annual tuition fee at around INR Rs. 114,000 or USD \$1500 per year. The medium of instruction at the school was English, as is typical with private schools in India. Almost all the students were English language learners—they spoke a home language different from English and came to the school to learn English. While the school operated grades from preschool to Grade 10, the focus of this study was limited to preschool grades only—"Nursery" (three year olds), "Junior KG" (four year olds), and "Senior KG" (five year olds).

2. Problem of Practice and Literature Review

On analyzing student CBM data in 2016, the Holistic Education School identified foundational English reading skills of its kindergarten students as a problem of practice that needed to be addressed. Student learning is influenced by the instructional core—the relationship between the curriculum, teacher knowledge and skills, and student engagement [12,13]. These variables have been a concern for Indian schooling, as detailed in subsequent sections.

2.1. Curriculum

School curriculum in India has been flagged for laying too much emphasis on advanced content instead of addressing foundational skills in a developmentally appropriate way [14–16]. The complex and vast amount of content that students are expected to complete forces teachers to resort to superficial coverage of learning materials and rote memorization, instead of facilitating deeper thinking [17,18]. Additionally, the curriculum does not always reflect current research. For example, even in its most recent and updated form, the National Education Policy 2020 makes no mention of integrating well-established, evidence-based, and developmentally appropriate English reading instruction approaches like phonics that are highly effective in building foundational reading skills in the younger years [19–30].

2.2. Teacher Capacity

While curricular interventions are critical in improving student learning, its effectiveness does depend on measures taken to build teacher capacity in its use [11,12]. The capacity of teachers in India has been a problem repeatedly expressed in research, government reports, and reform policy [8,18,24,31,32]. Studies in the field of literacy show that teachers require specific knowledge of the reading processes and methods such as phonics, in order to use evidence-based pedagogy [24,30,33–36]. However, there has been a systemic failure by teacher preparation universities to empower educators in India [18,37]. Further, job-embedded professional development (PD) practices continue to focus on transmitting knowledge from an expert to a teacher through digital or in-person workshops prescribed for a minimum number of hours per year, perpetuating the top-down approach to PD that has been ignoring the agency of teachers in their own learning process and the unique context in which their practice is situated [38,39].

2.3. Student Engagement

While teacher capacity building measures are critical in improving student learning, these must be supported by measures to increase student engagement in the classroom as well [12,13]. Educational reform policy in India has been promoting a learner-centered pedagogy that positions students as active protagonists in their learning journey however, classroom practices are still characterized by teacher-centered, didactic, lecture based, and rote learning focused activities that reduce the students to passive recipients of information [8,31,32,40–44]. One of the major factors impeding the implementation of

learner-centered pedagogies in contexts like that of India is large classroom size [45,46]. Overcrowded classrooms and poor teacher to student ratios make it difficult to deliver instruction that is differentiated to student needs and interests, engages them in activity based learning, or promotes collaborative learning and group work.

3. Methodology

Qualitative research methodology was chosen for this study because it is best suited to exploring complex, detailed understanding of a phenomenon in its natural setting, such as the mechanisms of change related to a theoretical framework or strategic plan in operation [47,48]. A case study qualitative research design was employed since the exploration was situated in the context of a real-life existing case or entity within a bounded system and the authors intended on using data from multiple sources to address the research question [47]. Such a design allows flexibility in the incorporation of multiple perspectives and tools for data collection [48]. More specifically, the authors employed an instrumental case study design which implies that the intent of the study was to illustrate a specific issue that might be of interest to diverse contexts as explored in the context of a specific case [47].

4. Participants

Teachers and Leaders

Critical case purposive sampling was employed to identify a select group of individuals that would be best suited to inform the research question [47,49]. Since the research question aimed to explore the changes made to the instructional core with the introduction of a synthetic phonics program, the participants most suited for the study were teachers that had been working at the institution from before the interventions were implemented and through its four year course. Nine such teachers were identified and participated in this study. The teachers had between six and 18 years of teaching experience and all of them taught across preschool grade levels. Their qualifications varied from diplomas in Early Childhood Care and Education to post graduate degrees in education. Additionally, three leaders were participants. One of the leaders was serving in the position of Vice Principal, and her role was essentially that of the school administrator. She had a Masters Degree in History and a Bachelor of Education, over 24 years of work experience and had been working at the school since one year before the introduction of the strategic improvement plan. The other leader served as the Head of Teaching and Curriculum—Early Childhood from precisely the time that the plan was launched till a year and half into the plan. She had a Masters Degree in Educational Leadership and a post graduate certification in Early Childhood Education as well as 30 years of teaching experience in India and the UK. She was then replaced by a newly appointed Instructional Leader that was in charge of all curriculum and teaching related matters. The Instructional Leader had 12 years of experience, Bachelors Degrees in Psychology and Education and diplomas in Montessori and early childhood education. All participants were female.

5. Data Collection and Analysis

Data associated with the research question were collected from a variety of sources including focus groups discussions and personal interviews. Interview questions and focus group questions were shared with the participants beforehand, thus allowing for a systematic way to elicit rich data in the most efficient way possible [48]. Each focus group and each leader was interviewed twice. Focus groups and personal interviews were semi-structured (Supplementary Material S1) and solicited the participants' perceptions related to the nature of interventions implemented over four years related to curriculum, teacher capacity building, and student engagement. Additionally, data were collected from documents such as the focus groups and personal interviews, the school timetable documents, the master curriculum document, the master daily planning document, parent emails and the school's PD workshop content and website. When used in addition to

interviews and focus groups, document analysis helps to verify the information shared by the participants and also promotes a deeper understanding of the events under study [50]. Finally, photographs of classroom teaching in action were used to provide a uniquely objective source of information [49].

A combination of inductive and deductive coding processes were used for data analysis [51] (Figure 1). First, the researchers used a deductive process [48,51] to establish three broad a priori themes based on key findings from research related to the construct of the instructional core [12,13]. These themes were curriculum, teacher capacity, and student engagement. Following this, an inductive approach was used to create a codebook (Supplementary Material S2) with emergent labels based on “phrases or terms used by the participants themselves, rather than using the, often theoretical, vocabulary of the researcher” [51] (p. 12). Two of the researchers then independently coded the focus group and personal interview data using an in vivo approach where segments of the data were assigned to corresponding codes from the codebook [49]. Details regarding the coding process can be found in Supplementary Material S3.

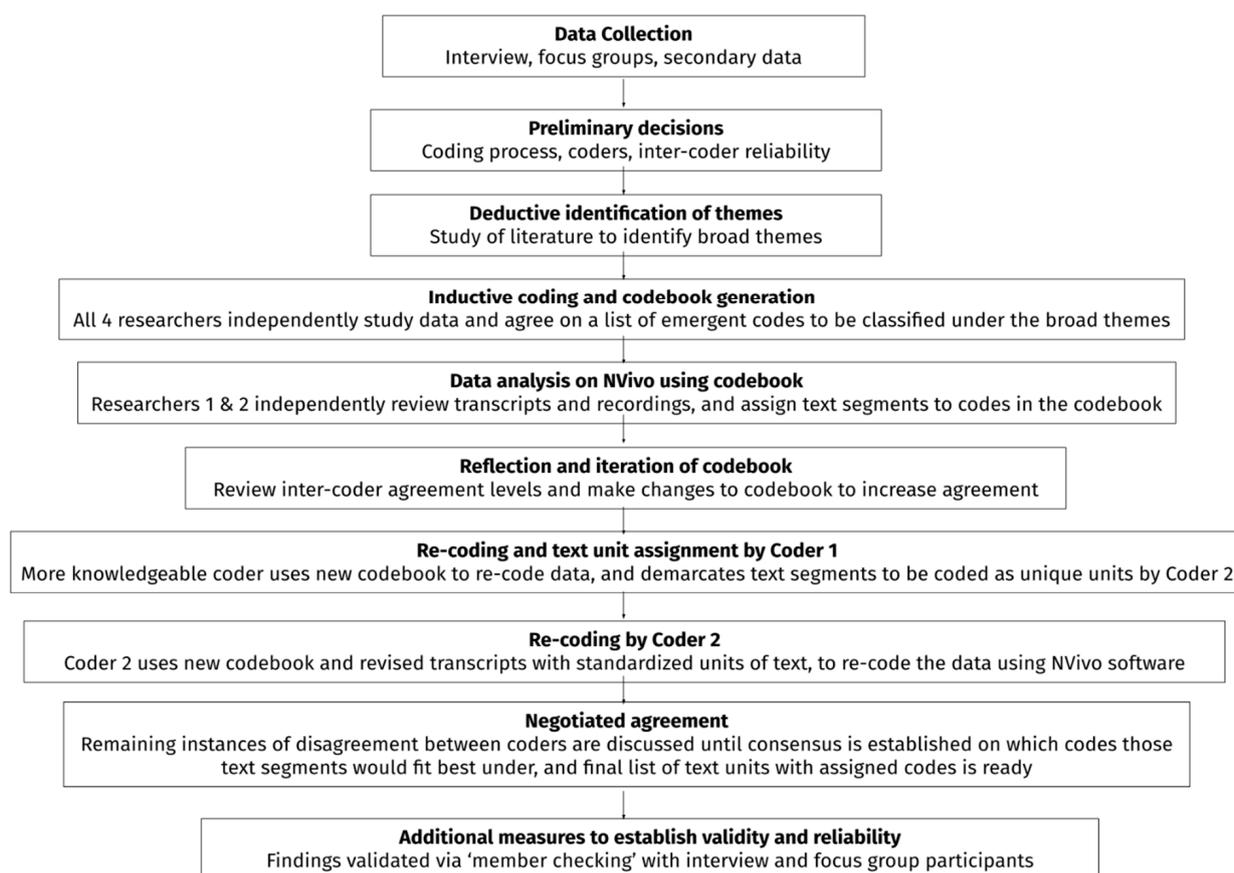


Figure 1. Steps Involved in Coding and Analyzing Qualitative Data.

To ensure reliability in data analysis, intercoder agreement was computed in terms of percentage agreement and Cohen’s Kappa coefficient [47,48]. The researchers achieved 97.87% agreement and a Kappa value of 0.73 implying substantial intercoder agreement [52]. In order to maximize the validity of a qualitative study’s findings, Creswell [47] presents eight strategies of which he prescribes any two to be sufficient for use. In this study, the authors employed three strategies—triangulation, member checking, and clarifying researcher bias. Details regarding the implementation of these strategies can be found in Supplementary Material S4.

6. Findings and Discussion

The research question under exploration was, “what was the nature of changes made to the instructional core that might be related to the significant increase in foundational reading skills experienced by kindergarten students over four years of the school’s strategic improvement plan?” The findings are organized under four themes with 18 codes under them based on deductive and inductive coding procedures undertaken.

7. Curriculum

7.1. Dosage

Focus group and personal interview data, and school timetable documents, showed that literacy class took place every day—five times a week—for 30 min each class, from 2016–2020. Literacy classes were structured in a way where four lessons introduced new concepts and the fifth lesson was a review or recap of previous content. This schedule aligned with recommendations from Jolly Phonics to introduce four to five letter sounds per week [53]. In her interview, the instructional leader explained that the team had planned to increase the dosage to six classes per week from 2020. However, the COVID-19 pandemic forced physical school to shut down and continue online for only about half the normal instructional time per day from 2020–22. This reduced the dosage of literacy classes to only three times per week.

7.2. Evidence-Based and Standards-Aligned

One teacher in the focus group explained, “We used to have the students learn the letter, for, e.g., ‘L’. So we’d show them how to write L, words that start from L. We didn’t focus on the sound of the letter much”. Another teacher added that, “earlier we used to do only rote learning for all the letters in the alphabet from A to Z”. Then, in 2018, the Jolly Phonics program was introduced—a commercially available, synthetic phonics program that teaches letter sounds rather than focusing on teaching letter names as was done traditionally [54]. The program takes a multi-sensory approach to teaching letter sounds, blending sounds in order to read and write words, segment and identify sounds in words, sight reading for words with unusual spellings, letter formation and writing (Jolly Phonics Website <https://www.jollylearning.co.uk/jolly-phonics/> accessed on 25 November 2022). This enables students to spell, pronounce, and read new and unfamiliar words independently [55]. International studies have shown that synthetic phonics programs are highly efficacious in building student foundational reading [20,23,26,55,56]. While empirical studies on effective reading programs in the context of India are scarce, there is evidence that the use of synthetic phonics programs—specifically, Jolly Phonics—have been successful in a few settings [57,58].

In addition to Jolly Phonics, the school began developing a structured and coherent written curriculum for all aspects of literacy and all other developmental domains too. In 2020, the school adopted the empirically validated HighScope (HighScope is an active learning and evidence-based curriculum for students aged three to five years from the United States. The curriculum lays out key developmental indicators across areas of learning which include language, science, creative arts and social-emotional learning amongst others and is aligned with Common Core State Standards, and the Head Start Early Learning Outcomes Framework. More information is available at <https://highscope.org/our-practice/preschool-curriculum/> (accessed on 25 November 2022) program and aligned it with learning standards prescribed by the Indian School Certificate Examinations (ICSE) that Holistic Education School was affiliated with. The Vice Principal explained, “It (HighScope) is a wonderful curriculum and aligns with our vision”.

7.3. Backward Designed

In 2016, the school did not have a singular, overarching, developmentally appropriate sequenced set of learning goals for its early childhood grades. The school leaders explained that earlier the curriculum was “activity-based” and not “goal directed”. To resolve this

problem, the school adopted the HighScope program which explicitly presents Key Developmental Indicators (KDIs) which are broad developmental goals along with Child Observation Records (CORs) with lists of behaviors for assessments making the KDIs concrete and describing them in visible terms. The Instructional Leader explained that, “now we know that even in our daily planners we have to start with KDIs and CORs”. Research suggests that such a backward approach to curriculum design is more effective—where one begins with the identification of learning objectives or goals, then moves on to determining what would constitute acceptable evidence of learners achieving the said goals, and finally deciding what learning experiences would best support learners in demonstrating the said evidence of learning and thereby achieving the goal [59–62]. Additionally, HighScope’s KDIs are spiraled from one year to the other in a developmentally appropriate sequence—a characteristic of effective curriculum design that ensures topics, subjects, or themes within a curriculum are organized in a way that allows for them to be revisited in an iterative manner over time with increasing depth and difficulty across visits, thereby supporting new learning to be connected to previous learning on the pathway to increased student competency and mastery [63–65].

7.4. Collaborative Decision Making

The Vice Principal explained, “In the monthly Network Leadership Committee (NLC), we discuss the whole month’s curriculum and we review what was done the previous month, what needs to be improved, changed”. She added, “The whole month’s curriculum is systematically discussed in the NLC. Then, week-wise planning is done, and these are shared with the teachers through instructional heads and the coordinators”. The weekly plans were then discussed in weekly professional learning community (PLC) meetings where grade level teachers met with leaders to go over the curriculum and suggest changes or edits. One teacher in the focus group explained that in the PLCs team members also “brainstorm and then decide on what resources will be used” in upcoming lessons. Systematic literature reviews speak to the benefits of such collaboration [66,67]. Further, while the new programs adopted—such as Jolly Phonics—were relatively prescriptive in their design, changes were made as per the discretion of the PLCs in consultation with leaders and resource persons from the relevant curriculum company.

7.5. Holistic Literacy Development

While the introduction of Jolly Phonics in 2018 was considered a milestone achievement in curricular enhancement at the school, the leaders believed that phonics alone could not make up a comprehensive literacy program. The Vice Principal added that while sounds and letters were being addressed by Jolly Phonics there were key parts missing from the literacy program. The Instructional Leader explained that the team “wanted students to have vocabulary, comprehension and communications which comes through books”. A rich library was set up to connect students with literature that was missing from the phonics program. Additionally, explicit instruction related to pre-writing concepts, print concepts, vocabulary, and other critical components of literacy were added to the curriculum as seen in the master curriculum document. These moves align with prior research which suggests that phonics programs alone do not make a holistic literacy program and that phonics should be integrated as a part of a broader and balanced curriculum that explicitly addresses phonemic awareness, fluency, vocabulary and comprehension too [19,26,29,30,68,69].

7.6. Universal Screening

The entire impetus for transforming the literacy program at Holistic Education School came from the concerning trends in student performance presented by a CBM assessment of universal screening that was administered in 2016. The Instructional Leaders at Holistic Education School expressed that the “CBM is a game changer; it tells us if we are on the right track or not”. The CBM administered from 2016–19 was the Dynamic Indicators of

Basic Early Literacy Skills (DIBELS). It consisted of a battery of tests to measure pre-literacy skills in kindergarten, such as phonemic awareness and letter-sound knowledge (i.e., First Sound Fluency, Phoneme Segmentation Fluency, and Nonsense Word Fluency). These assessment tools have been empirically validated [70–77] and are widely used to benchmark K-6 students against empirical milestones for early literacy and reading skills [78,79]. There is evidence to support the validity of the DIBELS measures for non-native English speakers as well [80]. The school implemented DIBELS at an annual frequency since its first administration, before replacing the test with a similar, tech-assisted EasyCBM battery of tests created by the University of Oregon. There is extensive evidence in the literature to support the technical adequacy of the EasyCBM assessments as valid and reliable measures of pre-literacy and reading skills of students in grades K-8 [81–84].

7.7. Systematic Formative Assessment

School leaders designed resources and protocols to continuously assess student learning on an ongoing basis. The Instructional Leader said that, “We need to do observations to see the way the children speak, the way the children write, their readiness to learn; those anecdotes and samples of what students say are evidence for us”. She explained further that, “small group check-ins are our personal meeting with the students where there are 4–5 students with one teacher. Here, we give the teachers a prescribed activity that is aligned with our goals . . . to check how the students are performing”. These assessments were done bi-weekly. Additionally, teacher observations of students were documented on a daily basis. For example, in grouping arrangements where two teachers taught 20 students, one teacher would be tasked with instruction delivery while the other would observe students and document notes. There is considerable evidence in the research literature to support the effectiveness of ongoing formative assessment, in terms of helping teachers individualize their instruction to meet the needs of individual students thereby promoting greater student learning [85–87].

8. Student Engagement

8.1. Active Learning Pedagogy

A major shift that took place in terms of pedagogy was from traditional teacher-centered approaches that made students passive learners to more student-centered approaches that promote active engagement in the learning process. Several recent studies have found that active classrooms significantly improve student engagement across various disciplines and grade levels [88–91]. The Vice Principal explained, “they (students) were learning like robots . . . teachers were just delivering (instruction) and children would just take in”. The leaders then provided several examples of how this was changed. The Head of Curriculum and Teaching shared an example of how after they would read books like ‘what the ladybird heard’ by Julia Donaldson, the kids were allowed to design and carry out plays/dramas based on the books. “A lot of children felt empowered to make decisions . . . they said they wanted to do a play on this and the teachers said ok . . . earlier what would happen is that we would do a play and the teacher would decide who plays what . . . the biggest difference was that the children became active learners”. The Vice Principal explained that, “Children are learning by engaging with the activity the teacher is teaching, going to various stations in the classroom, making decisions about which station to go to, where to explore and what to do”. She added that it entailed “learning through exploration” and “learning through interaction”. This is reflected in the master daily planning document which shows interactive and hands-on activities. A parent email to the school exclaiming that “you make some monotonous and boring activities also interesting for our kids! The way you both perform role play and act to make kids understand a concept is commendable”. Finally, the Vice Principal added that the teachers started learning how to elicit responses from students and that the student contributions were surprisingly rich.

8.2. Improved Student-Teacher Ratio

In 2016, the kindergarten classrooms had up to 24 kids with two teachers each. However, only one teacher was expected to be actively teaching while the other was busy with correcting homework or helping with discipline occasionally. The Head of Curriculum and Teaching explained that because of this arrangement the teacher student ratio in the classroom was practically 1:24. Then, in 2018, the school moved to a new campus with larger classrooms and now each class had 40 students. Four teachers were appointed in each class, and all four were expected to provide active instruction throughout the day. This changed the teacher student ratio in the classroom to 1:10. The Instructional Leader explained that this allowed for grouping where sometimes one teacher would work closely with 10 students and sometimes two teachers would co-teach 20 students. Additionally, each teacher was assigned 10 students for which they were expected to carry out formative assessments on an ongoing basis. The new student to teacher ratio was visible in photographs of the classroom. Thanks to the new arrangement, teachers expressed that they were able to check for understanding and learning of all students more effectively. Prior research supports these claims and show that positive learning outcomes are associated with a reduced student-teacher ratio and co-teaching and collaborative teaching models [92–98].

An important change to the teacher-student ratio was the introduction of special education needs (SEN) support. The school recruited counselors and special educators that supported each classroom. During the focus group, one teacher explained, “They come to the classroom for sometime and observe, and then they suggest strategies; we use them and give feedback about the strategies; then if the child needs more help, the SEN team members speak to the parents”. Studies have shown how the introduction of SEN teams can promote problem solving and provide students with relevant support thereby enabling more inclusive environments [99–104].

8.3. Restructured Physical Space

In 2016, the classrooms were arranged in rows of desks and chairs. This was changed in 2018 “because children need different spaces . . . you don’t just go to school to sit straight all the time”, explained the Head of Curriculum and Teaching. Two corners were created with desks and chairs for groups of five students each, and two other corners were created in the class—one with a large low table and one with a carpet. One teacher added, “now we have different areas in the classroom—like we have a play area, there’s a writing area with desks, and the other area is the play area with the desks; this is very helpful for the children”. Another teacher explained, “Previously, there was no space only for children to sit and play around; now there are more designated areas for the children to play in, read in, etc.”. These changes to the classroom arrangement were evident in photographs of the new classrooms. The Instructional Leader added that the new structure of the classrooms was a good move, however, she noted that initially they did not manage to fully understand how to utilize the design optimally, “Since we and the teachers didn’t know how to organize things, there used to be a big clutter because there were a lot of resources in the class—blocks, toys, animals, etc.”, Additionally, she explained, “the materials were good . . . but what had happened was that many times, the designs did not match, or the shelves were cluttered with resources that did not match the students’ needs”.

Small adjustments were made such as organizing resources at the level of the child, creating book corners, water corners, adding shoe racks and open shelves so that the students could independently use resources. Leaders explained that these adjustments enhanced the effectiveness of the new design. A number of literature reviews and empirical studies over the years have shown that the physical design of schools and classrooms have a significant influence on the engagement levels and learning outcomes of school-aged students [105–110].

9. Teacher Capacity

Interviews with teachers and leaders revealed that in 2016 event-based workshops at the start of the school year were the only type of PD engagements implemented. However, since 2018, a set of interventions were added to create a synergistic system of PD, including digital courses, coaching, PLCs, ongoing observation and feedback, and formal teacher evaluation protocols. This reflected findings from studies that have repeatedly shown that event-based PD engagements alone are not sufficient to change teacher practice in the classroom, and that workshops should be supplemented with engagements that promote active involvement by teachers in their learning process and center on the unique context of the teachers [111–117].

9.1. Workshop and Digital Courses

In 2018, a certified Jolly Phonics workshop leader was recruited to take teachers through intensive two-day workshops on the program at the outset of each academic year for the first two years of the program's introduction. Subsequently, the Instructional Leader took over the training. Workshops were also designed on alliteration, rhyming words, games for phonological awareness, and other aspects of literacy. More generic pedagogical topics were presented too, such as how to design class contracts for classroom management, designing assessments and student portfolios, routines, teacher language, and unpacking the overall curriculum. The Vice Principal explained that “workshops are done in a way that teachers learn how to implement skills in their classes . . . and we've kept slots for them to come and ask us if they face any difficulty during implementation”. Additionally, she added, “see the connection is made now . . . you do a workshop and then see to it that the teachers are taking it back to their classes”. The most recent PD engagements consisted of workshops that followed a hybrid format with a mix of self-paced online content and face to face sessions, as seen on the school's digital PD website. Teachers in the focus groups added that earlier workshops were one-size fits all and there was no differentiation available, however, the more recent content was designed with differentiated offerings for novice and experienced teachers. Finally, teachers shared that the workshops from 2018 onwards were designed in a way to be more interactive and engaging for participants. Past studies show that meaningfully designed workshops—when coupled with practical PD engagements—were associated with improved student learning outcomes [111,118,119].

9.2. Coaching

Coaching at the Holistic Education School involved intensively supporting teachers that were struggling with their teaching responsibilities. The Instructional Leader explained that teachers who required coaching were identified based on parent complaints, ongoing classroom observations by leaders, teacher performance during PD and PLCs, and other such sources. In this sense, it was a need-based engagement, and was provided by the instructional leaders. The teacher and coach together decided the frequency, duration, intensity and goals of the coaching engagement. “I see a video (of classroom teaching), I suggest changes, she incorporates them and sends me another video, and I review it”. Next, she explained, “we see what has changed, and what has not; we keep doing this process till the time we feel that the teacher can be off coaching”, explained the Instructional Leader. By providing coaching, teachers were given an opportunity to change and improve their practice before their annual evaluation. Coaching may be one of the most effective strategies to build teacher capacity and improve student learning outcomes [120–123]. Additionally, there is evidence that coaching is an effective PD engagement for teachers who are expected to implement phonics instruction with students who are non-native English speakers [33].

9.3. Collective Sensemaking

In addition to workshops and coaching, the school created structured spaces for team members to engage in collective sensemaking. First, leaders at the school attended a monthly network learning community (NLC) meeting with other leaders across school

sites. This promoted a space for active curriculum-planning. Second, teachers at the school attended weekly PLC meetings in grade level teams. The Vice Principal explained that the main agenda at these meetings was to talk about the curriculum that was being rolled out. Reviews of research on learning communities suggest that they are a highly effective strategy to develop teacher capacity and improve student learning outcomes, with many specific benefits for participating teachers such as higher levels of authentic pedagogy, increased collective efficacy, and better attitudes towards change [67,124,125]. Further, such engagements provide a valuable platform for teachers to engage in collective sensemaking of new initiatives and practices [126–128].

9.4. Ongoing Observation and Teacher Evaluation

Teachers at the school received ongoing feedback on their classroom practice through observations by leaders. The frequency of these engagements was monthly or quarterly, depending on the leaders' schedules. The Instructional Leader shared that sometimes teachers asked her to visit their classrooms themselves and sometimes she went in unannounced. "I make notes of these observations so that when they meet me I can tell them what I liked about their class, how the class was in general, and I can clear some of my doubts (questions)", she said. Observations were done using an observation form based on the Danielson Framework for Teaching (<https://danielsongroup.org/free-downloadable-resources/> accessed on 25 November 2022) [129–131]. The teachers were observed by the instructional leaders that were part of the team, and also by peers. Teachers would go to each other's classes and observe peers, "not to analyze or score them, but just to observe the practices", explained by the Instructional Leader. Research on teacher development indicates that giving teachers individualized, ongoing feedback based on observations of their classrooms is an effective strategy to transform their beliefs and practices [122,132–134].

In addition to ongoing observations and feedback, teachers participated in an annual evaluation process called "Rev&Dev" (Review and Development). Each teacher was observed by two leaders as part of the process. Teachers were allowed to submit classroom recordings of their choice for evaluation. The leaders received training beforehand, to try and ensure maximum inter-rater reliability from observations. The Instructional Leader explained, "this was important because if you're one leader and I'm one leader, you're very lenient and I'm very strict, our ratings are going to affect the teachers' scores". She also explained that while one of the purposes of the Rev&Dev process was to evaluate teachers for appraisal, the other was to support their PD and "not to penalize someone . . . it's for the improvement of the teacher, her students and the vision of the school". The teachers received their Rev&Dev report along with a workshop where the teachers were guided through the analysis of the data and were supported to create a self development plan for improvement. Research suggests that receiving systematic feedback promotes self-reflection and self-directed improvement for the teacher, improves their instructional practices, and subsequently increases student learning outcomes [129,132–140].

10. Other Influencing Factors

10.1. Engaging Parents

The leaders took concerted measures over the years to increase parent engagement. Earlier on, in 2016, "the parents were clueless—they did not know what was being done in class . . . the curriculum was not discussed with them as such", explained the Vice Principal. The following were the changes that were implemented from 2018 onwards: (a) the entire year's curriculum was shared with them at the outset of the year; (b) students would take home all their classwork at the end of the week so parents knew what had been done in school; (c) a detailed update on what was completed in the curriculum was shared at the end of each month; (d) parent workshops were conducted on a regular basis. As one teacher explained, "this keeps us and parents on the same page... we got the liberty to share the curriculum with the parents to tell them that we are following Jolly Phonics . . . they then downloaded the app and they learnt the pronunciations too". The leaders

wanted to establish transparency about what was being taught and how it was being taught. One parent in an email shared, “The app helps me provide with everything I need to teach my child as well as revise for everything that is taught in school”. Initially, the parents were confused and even concerned about why the school was teaching sounds instead of alphabets, but through repeated explanation at the workshops and ongoing communication by teachers, the parents started to understand. One teacher explained that “We are not just teaching students, we are teaching parents also”. Meta-analytical and systematic literature reviews of research on parental involvement suggest that schools who actively and meaningfully engage parents as partners in their child’s education see significant improvements in students’ academic achievement [141–146].

10.2. Supportive Leadership and Change Management

The leadership structure at the school changed dramatically since 2016. Earlier, there was only one apex level leader—the Headmistress, and her responsibilities included teaching and curriculum related matters as well as all administrative matters. However, she was not an instructional expert. This is a common issue with school leadership in India, where apex leaders are usually only seen as administrative leaders [31]. She was supported by coordinators that were in charge of instruction, however, the Rev&Dev reports of these leaders showed that they were low performers in the organization. Then, the coordinators were changed, and also another apex level leader was added to the team to work in partnership with the Headmistress (who has since taken on the title of Vice Principal). The new leader was titled Instructional Leader and her sole responsibility was to oversee teaching and curriculum while all administrative tasks would be carried out by the Vice Principal. The Instructional Leader was a qualified and experienced expert in the field of teaching and curriculum, and her Rev&Dev reports ranked her in the top percentile of performers in the organization. The Vice Principal explained that the function of teaching/curriculum and the function of administration were distributed between the two leaders. However, at the same time, there was a synergy, “She and I work very very closely . . . I know what’s happening in instruction and she knows what’s happening in administration & operations . . . We both were like two wheels of the leadership vehicle”.

Both leaders worked closely with the teachers in helping them through the change process. The Vice Principal explained, “any change requires patience and perseverance, so we were also very patient with them . . . we used to meet teachers daily”. One teacher explained that “our feedback is taken into consideration . . . and none of us fear sharing opinions with our leaders”. This aligns with the findings of studies suggesting that school leaders can successfully tackle such resistance and increase teacher buy-in towards change initiatives if they take time to engage with teachers around their specific concerns, establish a shared vision, and support them through the change process [147,148]. Additionally, teachers expressed their appreciation towards the environment created by the leaders. Teachers shared, “the transparency that the organization maintains with us is really nice . . . all the teachers, whoever works in this organization, were made to understand the vision . . . everyone kept transparency with us about what is being done in the organization”. Reviews of research from the past few decades unequivocally point to the significant impact of effective leadership on student learning and overall school effectiveness [149–157].

11. Limitations

Considering the qualitative case study nature of the research design, this study presents limitations with regard to generalizability of its findings across contexts. However, qualitative case study designs offer insights that other traditional methods cannot, and hence should not be simplistically judged by “traditional gold standards such as generalizability, replicability, control groups, and the like” [48] (p. 174). Another limitation of the study was that three of the four researchers were leaders or executives in Holistic Education School. This might pose a potential for bias. However, being a part of the organization under study had advantages that external researchers would not be able to

leverage, especially in terms of gaining the trust of the participants, having unobstructed access to critical data, and having an accurate understanding of the credibility of the data available [48]. Additionally, any potential concerns related to the observers also being researchers were mitigated by the fact that the fourth author had no affiliation of any kind with the site under study.

12. Conclusions

Holistic Education School successfully transformed the foundational reading performance of its kindergarten students during the implementation of its four-year strategic improvement plan. While it is hard to isolate and pinpoint exactly what caused this improvement, it coincided with a set of deliberate changes and interventions implemented to support the instructional core. In this sense, a systemic approach to change was undertaken, instead of solely addressing the curriculum or teacher PD. To begin with, the curriculum was revamped. A synthetic phonics program was introduced and designed to be part of a holistic reading program which was evidence-based and standards aligned with the affiliated ICSE board. Further, the curriculum was backwards designed and goal driven, engaged teachers and leaders in its collaborative design, and was supported by universal screening assessments and systematic formative assessments to check for student understanding and adjustment of the course ahead.

Measures were also taken to improve student engagement, including improved student-teacher ratios, a conscious move from traditional teacher-directed pedagogy to student-centered pedagogy that promoted active learning, and restructured physical spaces to support a variety of grouping opportunities and student independence in the classroom. With regard to improving teacher capacity, the school built in multiple additional lines of action for PD to supplement and complement the typical workshops and digital courses. These included instructional coaching, PLCs, protocols for ongoing peer observations and feedback, and systems for formal 360-degree teacher evaluation and personal development planning. Finally, the change process was supported by parent engagement strategies and supportive leadership structures. Key elements of the strategic plan are depicted in Figure 2, and are supported by a large body of prior research on school improvement [157–167].

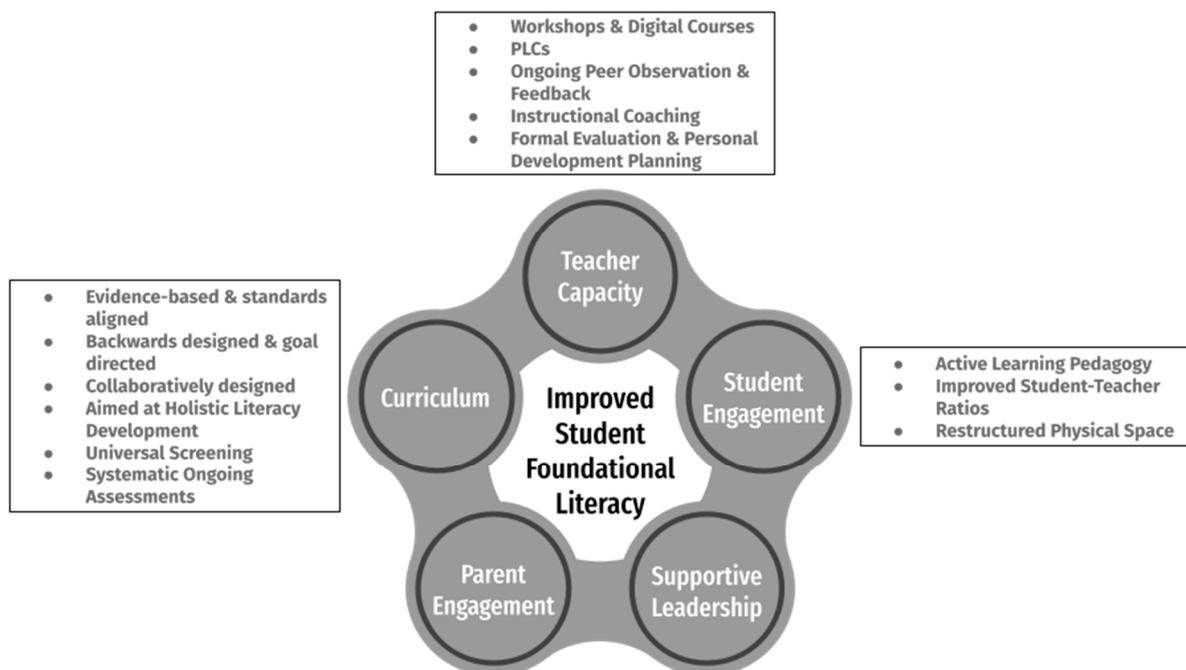


Figure 2. Change Process Implemented at Holistic Education School.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/educsci12120878/s1>, Supplementary Material S1: Interview and focus group guides, Supplementary Material S2: Final Codebook, Supplementary Material S3: Details Regarding the Coding Process, Supplementary Material S4: Reliability and Validity of the Data.

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