

Literacy Research in Indian Languages (LiRIL)

*Research report of a Study
of Literacy Acquisition in
Kannada and Marathi
(2013-2016)*



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A variety of quantitative and qualitative data were collected over a period of three years, including children's performance on a variety of literacy tasks, classroom observations, teacher interviews, in-depth child studies, and curricular analyses. The advantage of using such a design is that it not only tells us what we all know – that learning outcomes in reading and writing are poor in many Indian contexts – but, it also permits us to gain specific insights into why these outcomes are poor and what we could do to address it.

The LiRIL project confirms what is well known – children in both sites perform very poorly in a variety of reading and writing tasks. It was clear that children are not just unable to read words and passages at an appropriate level of difficulty, but that, even those who are able to read the script, are often unable to comprehend it. Higher order skills like comprehension and composition are alarmingly poor. Key findings are summarized here:

1. The scripts—Kannada and Marathi—like most Indian scripts— take several years to master. This is because the number of symbols in the *varnamala* and *barakhadi* is extensive and complex. Even in Grade 3, students have not completed the process of script acquisition. This is not factored into curriculum design, and cannot be attributed entirely to poor instruction.
2. Even though lower-order skills occupy much of the time in early language classrooms, children perform poorly on tasks related to reading the script. Word and passage reading are not automatic outcomes of learning to read the *aksharas*. Even children who knew *aksharas* often failed to be able to read words and passages successfully. Children need access to a well-thought out phonics/word-solving curriculum that goes beyond copy-writing. The LiRIL study was able to identify specific sources of difficulties that students face in decoding the script; and also to identify “phases” of decoding that most students in the sample appeared to go through. The implications of these findings are presented and discussed.
3. Comprehension and composition are not automatic outcomes of learning to read the script. Even students who performed well on script-reading tasks, performed poorly on tasks assessing their understanding of what was read, and their ability to communicate ideas through writing. As with decoding, the LiRIL project was able to identify specific sources of difficulties that children faced in comprehending what they read, and is able to suggest implications for instruction.
4. Curricular approaches matter. While both curricula result in poor outcomes, MGML poses further unique difficulties and challenges to language and literacy learning. The self-paced nature of the MGML curricula severely restrict opportunities to engage in oral language activities, or to access meaningful texts and social interactions.

5. There is significant variability in student performance across schools within a site; and amongst students within a given school/classroom. Students in the top 20% of performance bracket came into Grade 1 knowing approximately as much about reading and writing as students in the bottom 20% of performance bracket left Grade 3 knowing. 40-60% of students made very slow progress over time.
6. Performance at the end of Grade 1 was significantly correlated with performance at end of Grade 3, emphasizing the importance of well-designed early language curricula and teaching practices.
7. Supplementary instruction that addressed various aspects of early reading and writing appeared to be beneficial to students.
8. Teachers are not prepared specifically to teach language and literacy teaching. Most teachers in our sample did not possess clear understandings about aims and purposes of early language curricula, approaches to teaching early language and literacy, or ways to address specific student difficulties. When classrooms of teachers whose students performed “better” were compared with the classrooms of teachers whose students performed very poorly, the main differences appeared to lie in classroom management strategies, attention to students, and feedback. Neither group possessed specific understandings related to the teaching and learning of early language and literacy. Both teacher beliefs and teacher knowledge appear to hamper the teaching and learning of early language and literacy.
9. Case-studies of marginalized learners suggest that even a cutting-edge literacy curriculum would be limited by the larger sociological constraints that surround formal education.

This work has important implications for curricular and pedagogic reforms and for teacher education curricula. We need to urgently move beyond general understandings of “child-friendly” and “activity-based” reforms in early language education, and draw upon conceptually sound and empirically valid principles and practices that support early language and literacy learning.

In this report, the findings reported in terms of five broad categories:

- (1) The teaching of literacy;
- (2) The learning of literacy;
- (3) Teacher beliefs and knowledge;
- (4) Sources of variability in performance; and
- (5) Case-studies of academically and socioeconomically marginalized learners. Implications of the findings are discussed.

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Introduction

1.1 Problem Statement and Rationale

One of the key goals of education is to produce literate individuals. What does it mean to be “literate”? In certain conceptions of literacy, the ability to sign one’s name or to learn to decode the script at a basic level is seen as evidence of literacy. In other conceptions, literacy might be viewed as the ability to read and write in order to study and succeed at school. However, if the intent is to educate human beings so that they can live to their fullest potential in modern-day societies, and to be able to participate as citizens of a democratic society, then, literacy needs to be viewed as a broader and more complex social construct. As Freire and Macedo (1987) put it, “Reading the word and reading the world are, at a deep level, integrally connected – indeed, at a deep level, they’re one and the same process.”

Learning to read and write are not ends in themselves, but are foundational to most other text-based learning, expression and communication. Meaningful interactions with print serve both humanistic and instrumental purposes; and importantly, provide students with access to cultural, social and economic capital. Worryingly, statistics published by large scale assessment and evaluation reports claim that 65-70% of school children in rural areas of India cannot satisfactorily read a Grade 2 text by Grade 5 (ASER, 2012, 2013, 2014). Similar results have been reported in the PISA, 2009 pilot (OECD, 2010) conducted in the states of Himachal Pradesh and Tamil Nadu. Despite the many limitations of these large-scale studies, it is clear that Indian children are struggling profusely with acquiring even a basic proficiency in learning to read and write, let alone being able to use reading and writing for accomplishing broader purposes.

Beyond knowing that many Indian children are struggling with learning to read and write, we know little else. We don’t know much about how young children navigate Indic scripts, or what the nature of their struggles are. We don’t know much about the contexts in which they learn to read and write the curriculum, the teachers, their knowledge and beliefs, and the like. NGOs such as Room to Read,

Akshara/Pratham, and the Azim Premji Foundation are currently engaged in large scale efforts to reform and/or supplement the existing facilities for delivering high quality education to all. In Karnataka, government schools have adopted the Nali Kali curriculum for teaching language (Grades 1-3), which is based on the Multi-Grade Multi-Level (MGML) method developed by RIVER of Rishi Valley. MGML methodology in its various forms is currently one of the largest language-based interventions spreading across government schools in different states of the country. Literacy is central to many of the ongoing policy and reform-based efforts. At present, these efforts are based on prevalent ideas of how children learn (e.g., joyful learning, peer-based learning, etc.), but not on robust understandings (specific to language and literacy) of what helps/hinders children in learning to read and write in diverse Indian contexts. This should ideally serve as the bedrock of educational initiatives and efforts.

What kinds of research in early literacy could inform practice? Five major aspects of literacy have been carefully documented in the West. First, the stages, phases, and aspects of learning to read and write have been described from a cognitive perspective (e.g., Anderson & Pearson, 1984; Ehri, 1992; Flower & Hayes, 1981; Juel, 1988). Second, the sociocultural contexts in which children become literate have been studied extensively, focusing especially on gaps between home and school-based literate skills, discourses and practices (e.g., Au & Mason, 1981; Delpit, 1988; Heath, 1982; Purcell-Gates, 1997). Third, the impact of different forms of literacy teaching have been documented in classroom-based studies and interventions (e.g., Duke & Pearson, 2002; Graham, 2008; Palincsar & Brown, 1984; Pressley, 2000). Fourth, teacher beliefs and teacher knowledge related to literacy and language learning have been studied (e.g., Duffy & Anderson, 1984; Fang, 1996; Phelps & Schilling, 2004). Finally, the nature of the scripts themselves, and the implication of the script for learning to read and write have also been analyzed (e.g., Adam, 1990; Henry, 2005).

While incomplete and imperfect, these five areas of research appeared to be productive lines of inquiry for the LiRIL project. Drawing selectively upon each of these lines of inquiry, the LiRIL project conducted longitudinal research on children's early acquisition of reading and writing in two different Indian languages – Kannada and Marathi. The intent of the project was to provide a much-needed preliminary mapping of practices, issues and challenges that arise in the teaching and learning of literacy. At the descriptive

level, it provides a grounded empirical and theoretical understanding of status quo ideas, beliefs and practices that shape early literacy instruction in the two Indian contexts in which it was undertaken. At the analytical level, a longitudinal data set provides power in generating models of growth and learning over time. A contextually based understanding of this nature has implications for curriculum design and development, pedagogy, student assessment frameworks and teacher education programs.

1.2 Background of The Project

The need for longitudinal studies of early literacy in Indian contexts, especially in contexts of social and economic disadvantage, emerged as a strong theme during discussions at the national consultation on Early Literacy sponsored by Tata Trusts (Tata Trusts, New Delhi, April, 2011). Shortly thereafter, it was decided that Tata Trusts, in collaboration with two Tata Trusts partners and Dr. Shailaja Menon (of Azim Premji University), would undertake a longitudinal project on early literacy in Indian languages. Piloting for the project began immediately thereafter and continued over the next two years (2011-2013). The longitudinal data collection for the project began in September, 2013 in collaboration with two Tata Trusts partners, QUEST (Wada, Maharashtra) and Kalike (Yadgir, Karnataka), and continued until March 2016. To arrive at an in-depth, progressive understanding, it was decided that this project would

track a cohort of students as they moved from Grades 1-3. Analyses from the three years of data collection are ongoing.

Rather than being a single study, LiRIL, with its focus on the aforementioned five areas, is an umbrella project answering multiple research questions. LiRIL's work has focused on economically disadvantaged districts because we have a deep interest in understanding these contexts, in the hopes of eventually designing relevant interventions for those who most need it. The learnings from the project, therefore, may not be generalizable to the overall population of these states; nevertheless, they provide focused points of insight and input into the strengths and challenges of language teaching in disadvantaged districts within the states.

1.3 The Conceptual Frame

Our conceptual frame is located largely within the sociocultural and cognitive perspectives. Given our simultaneous interest in issues that impact literacy acquisition at various levels of analyses (from the cultural to the script-specific), we have borrowed and adapted a conceptual frame (Rogoff, 1995/2008) that permits movement across levels without losing integrity or coherence. Rogoff, a neo-Vygotskian, described

developmental processes as occurring along three inter-locking planes of analyses – the personal, the interpersonal and the community – which we adapt here for our needs. Rogoff notes that each of these planes is inherently involved in the definition of the others; yet, the parts making up the whole can be foregrounded one at a time, without losing track of their inherent interdependence in the whole.

The Child-level

Our project has an emphasis on the individual child – how is she developing literacy (across grade levels) within the sociocultural context of the classroom curriculum? Rogoff refers to this as the personal or the “participatory appropriation” level of analyses in which a child develops by appropriating culturally valued skills and activities through participation in a given cultural context. The literacy and language curriculum enacted in the classroom is a primary cultural context of interest in this project; the child, through participation in this (and other) context(s), appropriates (or fails to

appropriate) certain literacy skills. Thus, development of literacy skills is not viewed as an inherent “unfolding” of biological capabilities, but as the appropriation of culturally valued skills through participation in cultural contexts. Child-level data were tracked in our project through the bi-annual assessment of students on a variety of literacy skills; as well as through certain in-depth assessments of a smaller cohort of students. (Details on methodology will be provided in Chapter 3.) Questions related to the nature of the scripts (Kannada and Marathi) will be answered through data collected at the child level.

The Classroom And Teacher Level

Rogoff, emphasizes that participatory appropriation by the individual takes place only in the context of guided participation in culturally valued activities. This is the interpersonal plane of analyses in her model. The question being raised at this level by our project is: What is the system of interpersonal engagements and arrangements that are involved in literacy acquisition? To answer this question, we look at, at least two kinds of data (as described in a later section). First, we conducted classroom

observations to help us understand how literacy is transacted in classrooms in Maharashtra and Karnataka. We examined the curricular materials, activities, and guidance offered by the classroom setting and the teacher. We also observed participation by students as they engaged in or avoided activities. Second, we focused on the teacher as a key mediator of literacy in the classrooms and evaluated teacher beliefs and knowledge related to language and literacy.

The Community Level

Participatory appropriation and guided participation occur in the context of culturally organized activities that involve purposes, cultural constraints, resources and values, as well as cultural tools and technologies. Rogoff refers to understanding the culturally organized nature of an activity as the community-level of analysis. The scope of investigating the community level of literacy learning is potentially vast. To give pragmatic boundaries to

our project (given time-lines, priorities and resources), we investigated the community level in a limited manner—through constructing case-studies of socio-economically and academically marginalized children, that looked at their lives both within and outside the context of formal schooling. The community level is also invoked in our examination of curricular materials, which is the way in which the large culture organizes early literacy instruction in classrooms.

1.4 Research Objectives and Questions

The Broad Objectives For The Longitudinal Project Were:

1. To study the acquisition of several literacy skills and sub-skills (e.g., akshara recognition, phonological awareness, comprehension, free writing, etc.) in a cohort of students as they move from Grades 1-3, in each of the two languages – Kannada and Marathi;
2. To understand the classroom contexts in which a small sub-set of the students acquire literacy by examining classroom transactions, curricular materials and teacher knowledge and beliefs;
3. To identify sources of variability in literacy acquisition, including identifying the most significant predictors of literacy acquisition; to gain insights into significant challenges to literacy acquisition, especially in the lives of some of the most marginalized students in the classroom.
4. To understand teacher knowledge and beliefs related to early literacy.

Specifically, the longitudinal research aimed to answer the following questions:

I. Curricular Level:

- i. What are the understandings or the vision of language/literacy learning that appear to have guided the preparation of curricular materials (textbooks, learning cards, etc.) used for language/literacy teaching?

II. Teacher Level:

- i. How does the teacher enact/transact the literacy/language curriculum in the classroom?
- ii. What beliefs and knowledge does the teacher hold about literacy development and instruction?

III. Student Level:

- i. How do students interact or engage with texts in these classrooms?
- ii. What are typical developmental trajectories within our sample for the acquisition of:
 - a. The akshara set (comprising of moolaksharas, swarachinhas and jodaksharas)?
 - b. Phonological skills?
 - c. Word and passage level decoding (what level text, by when?)
 - d. comprehension?
 - e. spelling?
 - f. compositional writing?
- iii. Which of these sub-skills and SES variables are the best predictors of later reading/writing success? What are the sources of variability in student achievement?
- iv. Do the same students remain poor readers/writers at each grade level? What enables children identified as “low” achievers to move to average or high levels, and conversely, what prevents them from doing so?
- v. What are typical error patterns that children of different ages make in these languages?

IV. Intervention Level:

- i. Do students who receive SRTT-funded interventions through QUEST Bal Bhavans perform similarly or differently from their peers who do not receive these interventions?
- ii. Can we learn anything from or about the instructional design of the interventions?

V. Larger Cultural Level (Language, Site, Schools, etc.):

- i. What is similar and different about literacy acquisition across the two Indian languages studied?

- ii. How do larger socio-cultural variables (e.g., SES, first-language, home background and literacy levels of parents) impact early literacy learning?
- iii. What are some learnings about literacy instruction gained from an analysis of practices at different sites, schools and classrooms?

1.5 What This Project is Not

As described earlier, the intent of the project is to provide a broad and deep mapping of the teaching and learning of early literacy in two Indian contexts. As such, it is not an intervention project—that is, it did not aim to change what was observed. It doesn't purposefully investigate issues related to second language learning. It was also located more in a socio-cognitive, than in a socio-critical theoretical frame. It could be justifiably critiqued for not adopting a more sociological frame of reference.

1.6 Organization of The Remainder of The Document

Chapter 2 provides readers with a brief tour of key theoretical issues related to the project; it also selectively reviews empirical literature that speaks to our theoretical concerns. Chapter 3 provides an overview of the research sites and partners, piloting, research design, and methods of data collection and analyses. Chapters 4-9 detail different aspects of the emergent findings from the project, while Chapter 10 summarizes learnings and considers limitations of such a project.

A note on terminology. A few words like akshara, swarachinha and jodakshara are used consistently throughout this document. The reader can find a description of what each of these terms means in the Glossary.



Theoretical Issues and A Selective Review of Literature

Given the breadth of this project, it is beyond the scope of this proposal to describe relevant theoretical issues at all the levels indicated in our conceptual frame, or to exhaustively review the literature related to different aspects of this project. Instead, we selectively review a few key theoretical issues in this section, weaving in empirical evidence generated in West contexts and also from Indian studies (wherever available).

2.1 What is Literacy?

Literacy is not a unitary construct, and any attempt to examine how children learn to read and write first needs to unpack the term itself. Different scholars and practitioners understand the term in different ways, ways that are politically vested and signify different theoretical stances and positions vis-à-vis what constitutes literacy and how it should be taught. Making our own theoretical stance visible and clear is thus important to understanding of this project.

Traditionally, the field of literacy has been enmeshed in debates of various kinds, of which one is - should literacy be understood as a set of neutral cognitive competencies or skills that should be imparted similarly to all children, regardless of cultural context? This is known as the “autonomous” model of literacy, as opposed to the “ideological” model of literacy that views it as a set of cultural practices that can be linked to power structures within a given context (Jayaram, 2011; Street, 1995; 2003). According to the ideological model, the seemingly “neutral” set

of skills represent the skills and practices most valued by the dominant power groups within a given culture, while other, less powerful skills and practices may co-exist within sub-cultures or cultures, but are misunderstood or ignored.

This project takes the stance that literacy is a set of culturally defined practices and skills. Some of these skills and practices are more valued than others in modern day economies and societies. Our project examined how children navigate (or, fail to navigate) the world of valued skills and practices related to literacy (see Chapters 7, 8, 9 and 10); while, our case-studies of marginalized students (see Chapter 13) raise critiques of the same. Skills, processes and the interplay of sub-components of literacy remain important to this project. However, the contexts in which they’re acquired and the purposes for which they are used also assume significance in how we interpret our findings.

2.2 How Should Literacy be Taught?

A second debate in the field is related to how children should be taught reading and writing. In India, children were traditionally introduced sequentially to one akshara at a time until the entire varnamala was mastered. *Aksharas* were introduced and learnt through association with pictures (/k/ – “kamal” and so on) (Bernsten, n.d). Children were expected to

learn to write by copying these *aksharas* down over and over again, until they were internalized through repetitive practice. In the relatively recent past, people and organizations have been experimenting with an alternate approach. The *varnamala* is organized into groups of letters (not necessarily sequentially). As soon as a handful of *aksharas* are

introduced, they are presented to the child in two or three letter word combinations, so that the child gets practice in sounding them out within the context of real words. As the repertoire increases, these words are strung together into simple, and later, more complex sentences. Children are expected to learn to read by sequentially decoding each akshara within words. The intent behind the recent changes is that children are introduced to meaningful words from the outset of reading. However, the nature of these words, or their relevance to children's lives, is rarely considered carefully enough (with a few exceptions). When children get into reading longer passages, comprehension, earlier, and well as today, is treated as a "by-product" of fluent decoding, such that children can be assessed for comprehension of what was read, but they are seldom taught to comprehend.

This emphasis on early and fluent decoding (over comprehension) existed in the West, as well. The English language doesn't have many regular one-to-one correspondences between sound and symbol; hence, there are many commonly used words that are irregular in pronunciation (e.g., the, her, these, etc.). Therefore, in addition to the sequential decoding (phonics) method, the sight word method was also favored, where a set of commonly used words would be introduced and repeated over and over again, until the children were able to recognize them effortlessly. In both the sight word and the phonics (sequential decoding) approaches, children were first expected to "break the code", and only then learn to comprehend.

Around the time that Chomskian theories of language acquisition were gaining prominence in the 1960s, Ken and Yetta Goodman proposed a radical new theory of literacy acquisition and instruction. They suggested that reading is a parallel language system akin to speaking (Goodman, 1967; Goodman & Goodman, 1977) such that exposure to, and immersion in, a rich linguistic environment is sufficient for children to acquire the written code of the language. Children were viewed as meaning-makers from their very first attempts to read, which implied that comprehension should be placed front-and-center in literacy instruction. This spawned off the Whole

Language Movement in the 1970s and 1980s in the West, and more recently, in India.

The debate between the Whole Language and the Phonics movement triggered what is popularly referred to as the "Reading Wars" (Chall, 1967/1983). Two influential reports at the turn of the 21st century summarized a vast body of research on the acquisition of reading and writing in alphabetic languages, especially, English, as taught mostly in the United States (Prevention of Reading Difficulties, Snow, Burns & Griffin, 1998; and National Reading Panel, NICHD, 2000). Both reports advocated the use of a "balanced" or "comprehensive" approach to literacy instruction that pays attention to both meaning making and helping children to master the code (script). Explicit and systematic methods of instruction were found (in these meta-analyses) to be more effective than incidental learning through immersion, or implicit methods of instruction.

On this project, we take the view that children learn best to read and write through a comprehensive approach. To us, this means that we don't view literacy as a set of hierarchical skills starting with decoding and leading up to comprehension. Nor does it mean an exclusive focus on creating rich, meaningful contexts for children without appropriate attention to, or focus on, decoding and fluency. Rather, we stand with noted reading comprehension theorist, Pressley (2005) who stated that skilled comprehension (which is a key goal of literacy acquisition) requires a fluid articulation of a variety of related skills. The same might be said of skilled composition in writing. The intervention work conducted by the Early Literacy Project in government schools in Delhi (Jayaram, 2008a; 2008 b) illustrates that it is possible to take a comprehensive approach to literacy instruction in Indian contexts and with Indian languages. Therefore, keeping meaning-making at the center of our work, we ask how children could be facilitated in acquiring various skills and strategies that will enable them to become fluent readers and writers.

2.3 Skills Related to Literacy

As stated in an earlier section, literacy is not a unitary construct, but the result of the development of a variety of sub-skills, processes, attitudes and values, in supportive contexts of engagement. A few of the

skills and processes related to literacy are described in this section, with the intent of being illustrative and not exhaustive.

2.3.1: Orality

The development of children's reading and writing is embedded in a larger system of oral communication (speaking, listening) and non-verbal symbols (e.g., art, gesture, play, images, etc.) that work together to help the learner negotiate the world and make sense of experience. We take orality as the foundation on which all literacy skills are built. Emerging evidence from studies in Kannada suggest that oral language skills significantly interact with and impact reading and writing development (Nag, 2007; Nag & Snowling,

2011). While at a theoretical level, we acknowledge the centrality of orality to literacy, our methodology (at present) is not designed to centrally study the development of children's oral language skills. Instead, we examine the orality that young readers display as they interact with texts that they are not yet able to conventionally read. This is only a small part of the overall project. A deeper investigation of the development of orality in Indian contexts is required.

2.3.2: Relationships between Reading and Writing

Reading and writing are two highly inter-related sub-components of literacy. Along with speaking and listening, they were considered to be separate, but related parts of the language pie until the 1970s (Langer & Flihan, 2000). The 1980s saw a redefinition of this understanding, with reading and writing viewed as interacting, synergistic symbol systems, rather than as separate pieces of the puzzle. Stotsky (1983), in her classic review of studies of reading and writing, noted that better writers tended to be better

readers, and that better readers tended to produce more syntactically mature writing than poorer readers. Shanahan (1987) and Langer (1986) based on extensive correlational and qualitative studies concluded that while significant correlations existed between the two, instruction in one could not be expected to lead to improvements in both. Based on these and other related studies, we take the stance on this project that reading and writing are distinct, but synergistic and overlapping domains.

2.3.3: Sounds, Symbols and Words

The evidence from research on alphabetic languages is unequivocal that it is critical for beginning readers and writers to learn how to manipulate the sounds of the spoken language (phonological awareness), and to develop strong sound-symbol relationships and word recognition skills (phonics/decoding) (Adams, 1990; Snow, Burns & Griffin, 1998). In fact, the two most important predictors of later reading

achievement in English are letter naming and phonemic awareness (Snow, Burns & Griffin, 1998). Both word recognition and word production (spelling) also explain a large amount of the variance in children's reading and writing skills (Snow, Burns & Griffin, 1998, NICHD, 2000). There is some controversy related to how these aspects would play out in Indic scripts that are alphasyllabic (see Section

2.4: Issues Related to Script), rather than alphabetic in nature. For example, would awareness at the syllabic level be a more important predictor of reading success than awareness at the phonemic level, given the semi-syllabic nature of our scripts? Preliminary evidence (Nag, 2007) seems to indicate that while the trajectories for the mastery of akshara knowledge and phonemic awareness are rather different in Kannada as compared to alphabetic scripts, both remain important predictors of reading

ability in this language. Another debate concerns whether “sight word” acquisition has any role to play in the acquisition of highly transparent, rule-bound orthographies such as those used by many Indian languages. Sequential decoding and encoding are the preferred methods of teaching reading/spelling in India. This is an open empirical question at present, and we haven’t located any empirical work conducted in India that could speak to this.

2.3.4: Fluency: Bridging Lower- and Higher-Order Skills

Proficient readers and writers don’t just decode and spell accurately, but also read passages with a certain amount of automaticity (Kuhn & Stahl, 2003). One theoretical perspective holds that the more automatic, or fluent, the word recognition or production, the more attention the reader/writer can pay to meaning-making (LaBerge & Samuels, 1974; Perfetti, 1985; Stanovich, 1980). Fluency has several aspects to it: accuracy; pace, or speed of recognition/production; and finally, prosody, or the rhythmic aspects of reading. When readers read with expression or rhythm, they typically chunk

meaningful groups of words together in syntactically appropriate ways. This has been shown to increase comprehension of what is read; as has the pace of reading. On the other hand, children who read word by word, often end up “word calling” without preserving meaning. Reading fluency has been studied far more extensively than has writing fluency, but it is possible that children who can spell accurately enough to communicate meaning are freed up to consider the actual message(s) they wish to communicate through their writing. We were not able to identify any Indian work related to fluency development in our review.

2.3.5: Higher-Order Skills: Comprehension and Composition

The traditional view in the West and in India has been that lower order skills (letter recognition, decoding, spelling) have to be mastered before shifting the focus to higher-order skills like reading comprehension and compositional writing. Higher-order skills like comprehension are often assessed, but rarely taught. The view that lower order skills have to be mastered before higher order skills can be learned has been seriously challenged by work conducted in the 1970s and 80s that revealed that children are active meaning-makers from the beginning, making it indefensible to teach in hierarchically sequenced ways. Educators working in the cognitive tradition have examined and analyzed the strategies and processes used by good readers and writers as they engage in higher order skills related to each of these areas (Block & Pressley, 2001; Flower & Hayes, 1981; Pressley & Afflerback, 1995), and have shown that these same strategies

and processes can be taught explicitly to all students or to students who are struggling (Duke & Pearson, 2002; Graham & Harris, 2005; Palincsar & Brown, 1984). The research generated in the West is thus unequivocal in stating not just that meaning-making should not be delayed until lower-level processes are in place; but also that these processes and strategies should be demystified and modeled extensively for beginning readers and writers (Calkins, 1994; Duke & Pearson, 2002). Sinha (2012) bemoans the lack of comprehension instruction in most Indian classrooms and cites a few studies (e.g., Matrija, 2006, as cited in Sinha 2012; Narasimhan, 2004; Sinha, 1985) conducted in the Indian context that substantiates her point. We were not able to locate any Indian work on higher order writing skills in primary grade language classrooms.

2.4 Issues Related to Script

Current understandings about literacy acquisition (such as those summarized in the reports described in the previous section) are based largely on empirical studies of alphabetic writing systems, most notably English. The implicit assumption in the past was that findings from the acquisition of English would generalize to other languages (Vaid & Padakannaya, 2004). This assumption has been tested over the past two decades by a considerable body of cross-linguistic literature that has compared literacy processes in English to other alphabetic and non-alphabetic systems, such as, Spanish, German, Italian, Portuguese, Hebrew and Chinese (Leong & Tamaoka, 1998; Wimmer & Goswami, 1994; Zoccolotti, et al., 1999). However, considerably less is known about literacy processes and teaching-learning situations in syllabic and semi-syllabic writing systems, such as those used by a sizeable proportion of the world's population, including many of the languages of the Indian subcontinent.

The Indic scripts, as they are sometimes called, are alphasyllabaries or semisyllabaries that combine aspects of the syllabic and alphabetic systems. Like syllabic languages, the basic symbol unit, the *akshara*, maps on to phonology at the level of the syllable. For example, the *akshara*, /k/ has an attached (schwa) vowel sound, /ə/ in Kannada, making it /kə/, which is an entire syllable. The *akshara* also has vowel markers (*swarachinhas*) that can transform the schwa vowel sound inherent in the consonant symbols, making it, for example, /ki/, /kʰ/, /kʰə/. Even though the *akshara* represents a syllable, these scripts also can also represent phonemes at times, for example, in the case of *jodaksharas*, or symbols representing conjunct consonants. Since our scripts work both at the syllabic as well as the phonemic level, they are referred to as semi-syllabaries, or alphasyllabaries.

There are several crucial features of the Indic alphasyllabaries that distinguish them from English. First, there is no difference between letter name and letter sound, such that *akshara* knowledge requires the mastery of a single *akshara* name-sound (Nag, 2007). Second, because there is a one-to-one

correspondence between *akshara* and sound (at the level of the syllable), most Indian languages have symbols for approximately 35 consonants and between 12-16 primary vowel symbols – a total of approximately 49-51 primary symbols (*moolaksharas*) in the *varnamala*. Each vowel sound can also be represented through secondary diacritics (*swarachinhas*) that are combined with consonants to produce unique sounds (e.g., /gu/, /sai/, /ko/, etc.). The orthography is very regular, highly transparent and rule-bound. Third, given the highly transparent nature of sound-symbol relationships, there are distinct graphemes for several phonologically close variants in a sound neighborhood, for example, the aspirated and the non-aspirated versions of a sound. Fourth, the visuo-spatial arrangement of syllables in the *akshara* script is very complex. The *swarachinhas* can be placed above, below, to the left, or to the right of the *moolakshara*, and does not always follow the left-to-right linear sequencing of English. The script might, therefore, lend itself to visual processing to a greater degree than the largely phonological processing of English, because syllabic boundaries are often visually apparent. The final feature of Indic languages that potentially influences reading acquisition exists at the morphemic level of the spoken language. Several Indian languages, especially the Dravidian languages of the South, are extremely inflected and agglutinative, that is, a single word may be made up of several smaller morphemes, with each morpheme carrying its own unit of meaning.

Thus, Indic languages differ from English at several significant levels: at the levels of writing systems (alphasyllabic versus alphabetic); at the level of orthography (shallow and transparent versus deep and irregular); and at the level of script (visuo-phonological versus phonological) (Perfetti & Liu, 2005). On this project, we're interested in understanding how some of these significant differences in scripts influence children's acquisition of literacy in two alphasyllabic languages (Kannada and Marathi) and in what ways the acquisition process is similar and/or different from that in English.

2.5 Issues Related to Curriculum

Curriculum can be differentiated as: intended, enacted, assessed, and learned curricula (Porter, 2004). We will be examining each of these aspects of the literacy curriculum in our project. Of especial significance to this project is the intended curriculum, given the very different curricular programmes in place at the two sites included in this project. The Yadgir site uses the state-mandated Nali Kali curriculum in Yadgir classrooms (Grades 1-3). The Nali Kali system includes an elaborate set of curricular materials, as well as organizational structures for using these materials in the classroom. The Wada site uses a textbook series (*Balbharati*) mandated by the Maharashtra government.

The role of state-mandated curricular materials in the classrooms is a contested one. Developers and state boards of education have long seen curricular materials as scaled up interventions in the classroom (Ball & Cohen, 1996). However, professionals engaged in working with teachers and classrooms have argued that this leads to a “deskilling” of teachers and erodes their professional autonomy (Apple, 1990). Like most complex debates, this is not one that has a yes-no/right-wrong answer. It is true that not all teachers across our country are enabled to create curriculum for themselves. Textbooks and other curricular materials can play a critical role in helping teachers to structure the curriculum and to provide learning opportunities for their students. However, curricular materials should not be “teacher-proofed”, but designed in a manner that sensitively considers the relationship between teachers and

curricular materials within the classroom (Ball & Cohen, 1996). Further, they should also consider the relationship between students and curricular materials, and be responsive to the lived experiences of students. As Freire put it, “...I have always insisted that words used in organizing a literacy program come from what I call the “word universe” of people who are learning, expressing their actual language, their anxieties, fears, demands, and dreams. Words should be laden with the meaning of the people’s existential experience, and not of the teacher’s experience” (Freire & Macedo, 1987).

Both the National Policy on Education (Government of India, 1986) as well as the more recent National Curriculum Framework (NCERT, 2005) emphasize the need for contextualized and flexible curricula, but the trend in language/literacy programs runs counter to these recommendations. Jayaram (2008) notes in her study of government schools in Delhi that teachers are sometimes perplexed when confronted by open-ended/flexible curricula, and prefer linear, prescribed routes through the curriculum. While we came across several pieces of literature that described or provided descriptive and evaluative commentary on the MGML/Activity Based Learning model (Anandalakshmi, 2007; Hariharan, 2010; Vasantha Devi, Rajagopalan & Jayakumar, 2008; World Bank Report on Sarva Siksha Abhiyan, 2008), we did not find any pieces that had carefully considered the relationships among curriculum, teachers, students and learning in relation to the language curriculum.

2.6 Issues Related to Social and Cultural Background of Learners

It is theoretically significant that we're conducting our investigations in contexts of economic and social disadvantage – contexts on which very little work has been done from the language learning perspective before. It is with this in mind that we propose to construct case-studies of marginalized learners within the contexts in which we plan to work.

Psychologists and educators have acknowledged for more than three decades now that cultural contexts significantly shape the outcomes of cognitive development (Saxe, Gearhart & Guberman, 1984; Scribner & Cole, 1981). In classic ethnographic work conducted in the early 1980s in the United States, Shirley Brice Heath demonstrated that the language and literacy home environments of children from different socio-economic and racial environments differed significantly from each other; and that “school-literacy” was most compatible with the

norms followed in middle-class, white homes (Heath, 1982; 1983/1996). Purcell-Gates (1997) demonstrated through her case-study of a white working-class Appalachian family, that learning the culture of literacy (especially school-based literacy) was as important a task as learning the skills related to literacy.

Researchers working from the sociocultural tradition have suggested that rather than viewing students in terms of deficits, we should understand differences between the home and school contexts and inquire into possible strengths or “funds of knowledge” that students and their communities bring to the teaching learning situation (Moll et al, 1992). We were not able to locate studies conducted in the Indian context on the literacy and language learning of children from different SES/cultural groups.



Methods

In this chapter, we outline the different methods used to answer the research questions raised in the previous chapter.

3.1 Description of Partner Organizations, Research Sites and General Process

3.1.1: Selection of Partner Sites and Languages

Some context is needed to understand why we selected QUEST and Kalike (and Marathi and Kannada) as the sites/ languages to be worked on for this research. Tata Trusts organized a national consultation in early literacy in New Delhi (April, 2011). The consultation revealed a lack of careful documentation related to early reading and writing in Indian contexts – both of teaching and learning situations (curricular and pedagogical contexts), as well as of students’ learning of Indian scripts. It was decided that Tata Trusts would fund longitudinal research in literacy acquisition at their partner sites.

Tata Trusts approached Dr. Shailaja Menon to be a lead investigator of their project. Initially, the intent was to study one South Indian language, Hindi and one North Indian language other than Hindi at partner sites that Tata Trusts perceived to be stable and “research ready”. The Tata Trusts partner selected for the Hindi study chose not to participate in LiRIL. We decided to move forward with our work in Kannada and Marathi – based on the other two sites selected by Tata Trusts. A brief description of each of our two partner organizations is provided here.

Quest - QUEST is a non-profit organization working in tribal areas of Palghar block in Thane district, Maharashtra. QUEST runs a supplementary instructional program (two hours before or after school hours) for children enrolled in government schools in the area, focusing on foundational skills in literacy, mathematics and science. QUEST has a strong interest in research, and a committed on-the-ground team. Therefore, it was selected as the field site for studying the acquisition and development of literacy in Marathi.

Kalike - Until 2012, Kalike was the direct implementation arm of the SRTT in Karnataka, implementing select interventions catering to needs of children in the 0 to 14 age group in 50% of the blocks in Yadgir district. At that time, it was called ‘*KalikeSamrudhhiUpakram*’ (KSU, Learning Enhancement Initiative). KSU focused on promoting learning and development of children from marginalized backgrounds by working with the community, school and district administration. In 2012, the Trust set up a separate registered entity called Kalike to spearhead KSU’s work in Karnataka. Given Kalike’s ongoing work in remedial teaching of reading and writing to weak students from class III to V, and the desire of Kalike and Tata Trusts to develop field tested approaches and knowledge to inform policy and action, this was a natural choice for a site to study children’s literacy development in Kannada.

3.1.2: Description of Research Sites

Both sites selected for the project are in socio-economically disadvantaged districts of the two states.

Wada - Since its inception in 2007, QUEST has been working in Wada, in the Wada taluka of Palghar District. The geographical area of Wada talukais home to the Katkari, Malhar Koli and Warli tribes. These three tribes, classified amongst the primitive tribes, together form nearly 70% of the population in that area. In addition, there is a significant proportion of the population who are classified as OBC (Other Backward Castes). As per the census data 2011, the literacy rate of Wada is 63%.

QUEST's intervention extends to around 35 kms around Wada block; enrollment in the intervention consist of 87% ST and 7% OBC students. About 30% of this population migrate to nearby brick kilns after the rainy season. Sometimes, the whole family migrates and, occasionally only the parents migrate, leaving their children in the care of extended relatives. Considering the huge tribal population and their migratory nature of work, the Tribal Department of Maharashtra has established Ashram schools, or, residential schools for tribal children. Most of the Ashram schools go from Grade 1 to Grade 10. In our LiRIL study, we focus on government run Ashram schools and Zilla Parishad schools run by Sarva Shiksha Abhiyan.

Yadgir - Yadgir district is composed of four educational blocks, of which, Kalike works in the Yadgir block of the district. A base-line study commissioned in 2009 by Tata Trusts found that about 44% of the population of this district are registered as Below Poverty Line. About half the population consists of small or marginal farmers, another 28% is landless, while the rest are big farmers. Approximately 58% of the population are OBCs, 24% are SC and 12% are STs, while another 5% is accounted for by other categories, such as, Muslims and Christians. Linguistically, while the northern dialect of Kannada is the majority language, Telugu and Urdu are also spoken by a small percentage of the population. The adult literacy rate is approximately 58%, and 70% of the children in the 6-14 year age-group are in schools. Of these, nearly 88% attend the government schools. Since the density of population is high in this district, the government schools are well populated with large Nali Kali class sizes (35-60 students from Grades 1-3 in a single classroom) and there are multiple Nali Kali centers within a given school. Migration in the school-age group is approximately 17%, and there's an 8% drop-out rate each year.

3.1.3: Nature of Intervention Provided by QUEST and Kalike

Quest - QUEST works with children in Grades 1-4, as well as at the pre-primary level. QUEST predominantly works through the structure of the "Grameen Bal Bhavan" that provides students with two hours of supplementary instruction per day, outside of their regular school hours. Trained, local "Balmitras", who have completed higher secondary education teach students reading, writing, maths and science at the *Bal Bhavans*. The literacy curriculum with primary aged students is designed around the *Maze Pustak* series of books designed for students of Grade 1 to 4. There are eight books in all, each one divided into two units. Students are tested at the

beginning of the year to find out their existing level of reading-writing, and are accordingly placed in the appropriate unit of *Maze Pustak*. The *Maze Pustak* set of books and workbooks reinforce basic facility with letter decoding, word decoding, passage reading and comprehension and include some structured and free writing tasks.

Kalike - The Kalike Literacy Intervention Programme (LIP) provides literacy support to 40 government schools in the Yadgir block of Yadgir district. 25 of the most struggling readers from Grades 3, 4 and 5 are identified each year at each of these 40 schools on

the basis of teacher recommendations and some base-line assessments conducted by Kalike. These 25 students are provided with extra after-school inputs in reading and writing for approximately an hour each day over the 10 months of an academic year. Most students leave the LIP program after

participating in it for the duration of a whole academic year, while a very few are retained for the next academic year. The intervention consists of a Kannada adaptation of the *Maze Pustak* series described earlier, and is delivered by Kalike animators, most of whom hold D.Ed degrees.

3.1.4: Nature of the Collaborative Research Group

Dr. Shailaja Menon from AzimPremji University (APU) led the research effort in close collaboration with a core research team who guide all decision-making within the project. The co-principal investigator was Mr. Ramchandar Krishnamurthy who enabled the design of the MIS for the longitudinal study, as well as led quantitative analyses of data. Each partner organization hired two people who were core members of the research team – responsible for quantitative and qualitative data collection and analyses, respectively. These research associates (RA) are proficient in the languages and scripts being studied. Each RA had a background in education/

social sciences. One of the RAs had a D.Ed degree, while all others held a Master's degree in social sciences. The RAs further trained and supervised data collectors at each site – who administered, scored and entered the bi-annual LiRIL battery. The data collectors had D. Ed degrees. All qualitative data collection was done by the RAs themselves, while the data collectors only administered and managed the LiRIL battery data. In addition, interns worked on the project from time to time on specific pieces of the project. An M.Phil dissertation (TISS, Hyderabad) was designed and conducted around one of the project's pressing research concerns.

3.2 Piloting (July 2011- July 2013)

Objectives, Processes and Implications for Longitudinal Study

We were engaged in both the research sites for a period of two years prior to beginning our longitudinal research. We piloted our work with the following objectives:

1. To form core teams at each site who would be a part of the longitudinal study.
2. To develop a detailed assessment battery in reading and writing in each language.
3. To pilot and refine these assessments.
4. To develop ideas and methods for qualitative data collection.
5. To develop schemes for coding and analyzing the data.

In order to develop the LiRIL battery, we reviewed two key assessment batteries – the Qualitative Reading Inventory (Leslie & Caldwell, 2006) and the Literacy Assessment Battery (LAB, Promise Foundation, 2004). We also reviewed Nag and Snowling (2011)'s recommendations for skills that

should be assessed during the acquisition of alphasyllabic scripts. From this, we shortlisted a set of sub-tests for development in Kannada and Marathi. Assessments in each of these languages were developed in face-to-face “workshop” format with cross-site sharing to ensure approximate similarity of methods, procedures and levels of difficulty for the different sub-tests of the assessment. The assessment items are not literal translations of each other – each site has developed original items for their batteries in keeping with their own contextual needs. However, the structure of assessments and approximate difficulty level at each site is deliberately kept similar to permit some meaningful comparisons.

The assessments were field-tested in February 2012 on 125 students (Grades 1-5) in Yadgir, and 134 students (Grades 1-5) in Wada. Wada also completed a second round of data collection on the same students a year later (February 2013). In short, three data-sets are available on these assessments – one from Yadgir, and two from Wada. Development and field-testing of the assessment battery took up most of the first year of piloting. During the second year, we worked on developing the qualitative frames for our project and collected and analyzed observations and interviews from each site. Subsequently, both item response analysis and a reliability test of the

LiRIL battery data set was carried out. Item response analysis revealed the strength of the tools as highly effective measures for the sub-skills of literacy acquisition. Based on the findings of the reliability test, one component of the LiRIL battery (i.e. phonological awareness) was revised in order to ensure stronger predictability of eventual reading. We consolidated the quantitative and qualitative insights from piloting and presented a detailed description of these learnings in the proposal submitted for the longitudinal research project (and hence is not repeated here).

3.3 Research Design of the Longitudinal Project

3.3.1: Mixed Methods

The LiRIL project used mixed methods for meaning-making. Both quantitative data—derived from the LiRIL battery, as well as in-depth qualitative observations and interviews were used to answer our

questions. The epistemology is largely interpretivist, rather than positivist, meaning that more emphasis is placed on contextual validity of our claims, than on issues related to reliability, generalizability, and so on.

3.3.2: Sample Selection and Size

We tracked a cohort of approximately 360 students from each participating site as they moved from Grades 1-3 during the years 2013-2016. There is some fluctuation in the number of students assessed per round for two reasons. First, we lost students due to seasonal migration in certain rounds, but they would rejoin the cohort in other rounds. Second, students dropped out of our study due to families moving permanently away, students dropping out from school, and so on; likewise, new students entered our cohort by joining the classrooms that were included in our sample. We knew before starting our study that Yadgir had a relatively high drop-out rate of approximately 8% per year. Hence, we started with a higher number of students in Yadgir in Round 1 (n=394); which quickly fell to the target range of approximately 360 students by Round 2 itself. We chose to sample entire classrooms in order to analyze classroom-level effects on student

achievement (see Tables 3.1 & 3.2). Due to differences in class sizes across the two sites, we selected 31 classrooms in Wada (approximately 6-9 first-graders per class) and 22 classrooms in Yadgir (approximately 15-16 first-graders within the consolidated Grades 1-3 Nali Kali classrooms). Classrooms were selected using purposive sampling. The purposive samples were selected on the basis of several criteria. For example, each selected class had at least four first-grade students at the beginning of the study. Further, both Zila Parishad (regular governmental) and Ashram (residential, tribal) schools were represented in the Wada sample (see Table 3.1); while both Higher Primary Schools (HPS) and Lower Primary Schools (LPS) were represented in the Yadgir sample (see Table 3.2). Schools were also selected to be at varying distances from the nearest urban center (Wada town in Wada; and Yadgir town in Yadgir). In addition, in Wada, since QUEST's

intervention starts in Grade 1 and is limited to select schools, both schools that received QUEST's intervention as well as schools that did not receive the intervention were included in the sample (see Table 3.1). In Yadgir, Kalike's LIP begins in Grade 3 and hence was not a factor in selecting schools. Our primary aim was to study literacy in the first language. As such, we made efforts to recruit largely first language speakers for our sample. In Wada, even though several children spoke the languages of the tribes in those regions, these languages are

transparent to Marathi (and vice-versa). In fact, most families self-identified as Marathi-speaking during samples selection. In Yadgir, the situation is somewhat different. While the majority of our sample consists of Kannada-speaking children, children who speak other languages (e.g., Telegu, Urdu, Lambani) are also present in our sample. The largest of these sub-groups in our sample are Lambani speakers (n=34). The Lambani language is wholly different from standardized Kannada, such that the languages are not transparent to one another.

Table 3.1

Sample Details:

Number of Schools (Students), Wada, Maharashtra

Zilla Parishad Schools	Ashram Schools	Total
25 (249)	6 (115)	31 (364)
Government School (No Added Intervention)	Government (+ QUEST Intervention)	Total
24 (251)	7 (113)	31 (364)

**Data as per Round 1*

Table 3.2

Sample Details:

Number of Schools (Students), Yadgir, Karnataka

LPS	HPS	Total
6 (85)	16 (309)	22 (394)

3.3.3: Sources of Data

Three "levels of data" were collected on the LiRIL project: at the levels of the child, classroom, and community.

Child Level Data. The 360+ students at each site were assessed using the LiRIL comprehensive battery of reading and writing assessments at two points of

each academic year – between August-September; and February-March. The battery consists of two forms: Form A of the battery was administered each August-September; while Form B was administered each February-March. Table 3.3 provides an overview of the number of students tracked per round per site.

Table 3.3

Distribution of Students across Rounds in Yadgir and Wada

Sites	Grade 1		Grade 2		Grade 3	
	Round 1 (Aug-Sept 2013)	Round 2 (Feb-Mar 2014)	Round 3 (Aug-Sept 2014)	Round 4 (Feb-Mar 2015)	Round 5 (Aug-Sept 2015)	Round 6 (Feb-Mar 2016)
Yadgir	394	361	347	366	372	376
Wada	364	346	368	334	359	343

24 “target students” at each site from the larger sample were tracked in greater depth for understanding their comprehension and engagement with texts qualitatively. These 24 students were drawn from four different classrooms at each site (6 students per classroom). The students were selected to represent a range of achievement proficiencies within the classroom, based on quintile scores (4 students were selected from each of the top three quintiles, while 6 students were selected for the lower two quintiles). In-depth investigations into these students’ text engagement, comprehension, spelling strategies and reading strategies were undertaken.

In addition to this, in order to develop detailed profiles of the children, 10 of these 24 students (2 from each quintile) were observed closely during literacy/language class time thrice in Grade 2, for an open-ended following of their journeys as readers and writers. In total, between August to March 2014, four observations is available for each of the 10 target child based on these observations.

Curriculum, Classroom and Teacher Level Data

Several sources of data inform this level of analyses, each of which is described briefly here.

Curricular Analyses

Early on in our project, we undertook systematic analyses of the curricular materials used at each site. We analyzed all the lessons in the *Balbharati* textbooks (Grades 1-2) in Wada (see Appendix F1). Since *Balbharati* had undertaken a revision in 2013, we included both the pre-revision texts as well as the post-revision texts in our analyses to get a sense of how the curriculum had changed. In Yadgir, due to the large number of activity cards associated with the Nali Kali curriculum, we selected a total of 177 activity cards representing the beginning, middle and end of the academic year for each of Grades 1, 2 and 3. These materials were qualitatively analyzed for the aims and objectives of literacy that they seemed to encode; the methods by which literacy was to be transacted; the connection of the material to the students’ lives; the extent to which they permitted teacher agency, supported growth in teacher

knowledge; and so on (see Appendix F2).

Classroom Observations

Detailed observations were conducted in four government school classrooms per site per year (the same classrooms from which the 24 target students described in the previous section were drawn). In Wada, two of these classrooms were in areas with supplementary QUEST provided *Bal Bhavan* support, while the other two were drawn from areas without. In the areas with *Bal Bhavan* support, the classrooms of the two teachers conducting QUEST interventions were observed as well. That is, the same children were observed in two instructional settings – in the government schools and in the *Bal Bhavans*. The planned and enacted curriculum were the focus of these observations (as will be described in detail in a later section). We worked out a system whereby the researcher/observer could spend some time observing/analyzing overall classroom teaching and learning, and could also spend some time observing each of the target students within the classroom (hence observations were spread across two consecutive days in each cycle – to permit sustained focus on different aspects of interest to us). Each cycle of classroom observation was followed up with a few open-ended questions to the teacher, pertaining her to reflect and provide us with feedback on what was observed during the two days.

In addition to more open-ended, semi-structured observations of four classrooms per site, we also conducted more structured observations of all participating classrooms at each site twice during the three years – once during Year 1 (see Appendix F3 for the report on all our sample classroom observations in Wada) and again during Year 3. Table 3.4 shows the number and pattern of observations over time.

Table 3.4**Number of Classroom Observations****A. In-Depth Observation of Few Classrooms**

Timing of Observations	Number of days	Wada	Yadgir
Spread over Grade (2013-2014)	2 day observational cycle X 3 cycles = 6 days per classroom	4 government school classrooms + 2 Bal Bhavans	4 government school classrooms
Spread over Grade 2 (2014-2015)	2 day observational cycle X 5 cycles = 10 days per classroom	4 government school classrooms + 2 Bal Bhavans	4 government school classrooms
Total	16 days of in-depth observation per classroom	64 observations of government schools and 32 observations of Bal Bhavans.	64 observations of government schools

B. Structured Observations of All Classrooms

Year 1	1 day per classroom	31 government schools + 2 Bal Bhavan observations	22 observations of government schools
Year 1	1 day per classroom	31 government schools + 2 Bal Bhavans	22 observations of government schools
Year 1	2 days per classroom	62 government schools + 4 Bal Bhavan observations	44 observations of government schools
Total Number of Classroom Observations Across Methods		126 government school observations + 36 Bal Bhavan observations	108 observations of government school classrooms

Teacher Interviews

All participating teachers were observed while teaching (as described earlier). In addition, they were also administered a Teacher Belief and a Teacher Knowledge interview (interview protocols described in a later section). A total of 31 schools were included in our Wada sample, and 22 schools in Yadgir sample. The teachers of these schools was administered the interviews in Year 3 of our project. Unfortunately, in Yadgir, four schools had no teachers during Year 3; however, we had collected interview data on two of these teachers before they got transferred/moved away. Hence, the total number of teachers from whom we have collected interview data in Yadgir is

20. In Wada, several teachers changed across the three year time-period of our study. We have data on all the 31 teachers who were teaching Grade 3 in Year 3 of our project. In addition, we have data from one additional teacher who used to teach one of the classrooms selected for in-depth observation, but who was later replaced by another teacher. Hence, we have data from both teachers who taught that class across the three year period, yielding a total of 32 teachers who were interviewed there. Table 3.5 summarizes information on the teachers participating in our sample.

Table 3.5**Description of Participating Teachers: Wada and Yadgir**

Site	No. of Teachers	Male	Female	Educational Qualifications				Number of Years of Teaching Experience			
				SSC + D.Ed	HSC + D.Ed	BA + D.Ed	MA + D.Ed	0-5	6-9	10-14	15
Wada	32	21	11	22	1	8	1	5	5	6	16
Yadgir	20	8	12	13	1	3	3	0	10	1	9

Community Level Data

We have conducted a total of three case-studies across the two sites. The case-studies were of academically and socially marginalized students. Each of these children was observed extensively in various contexts – school (each child was observed for 12-15 days a year), home, community – with the intent of developing a rich portraiture of the needs, challenges and possibilities associated with enabling these children to develop into literate individuals. In Yadgir, we have constructed one case-study. Two LiRIL researchers collected data on the case-study student only in Years 1 and 2 of the study (due to unforeseen logistical problems).

In Wada, we have completed two case-studies. The first one was done over a few months of piloting and served as the basis for an M.Phil dissertation for a student from TISS-Hyderabad. During the main period of the study, a LiRIL researcher along with a key member of QUEST designed as an “early literacy intervention” with another case-study student. However, the case-study student migrated in the middle of our study. Following this, we had to track her down at a brick kiln and continue long-distance and occasional interactions with her. These issues notwithstanding, we have managed to capture some insights into each of these students.

Tools and Administration

An extensive set of tools was developed during the two-year piloting. Table 4.1 provides a complete list of the tools used during the LiRIL project. Each of these tools was refined and revised during and after piloting.

Table 4.1

LiRIL Tools (2011-2016)

Tools	Administration Details
1. Home Background Questionnaire	On all children, once
2. LiRIL Assessment Battery	On all children, twice a year X 3 years = 6 rounds of data
3. Orality, Text Engagement and Comprehension Assessments	Each of these was administered once on the 24 target children per site.
i. Listening Comprehension	
ii. Text Engagement (with listening comprehension)	
iii. Text Engagement (with reading comprehension)	
iv. Children's Orality while Engaging with Texts	
4. Classroom Observations	4 classrooms per site were observed a total of 14 -17 times each over 3 years.
i. LiRIL Classroom Observation Tool	All the other classrooms in the sample were observed twice (Year 1 & Year 3)
ii. Semi-Structured guidelines for classroom and school observation	
5. Teacher Interviews	Administered once for each teacher in our sample (n = 20 in Yadgir, n=32 in Wada)
i. Teacher Background	
ii. Teacher Beliefs and Practices	
iii. Teacher Knowledge	

We now describe each of these briefly in terms of rationale and administration

4.1 Home Background Questionnaire

In order to understand both the child's socio-economic background as well as their initial or ongoing exposure to literacy in the home, a questionnaire was developed. Initially this questionnaire focused only on the parents' education level, caste and a few other details. Later, it was

revised, in consultation with knowledgeable resource persons (e.g., The economist, Dr. Santhakumar at Azim Premji University) to include a wider set of indicators. This was administered to all children in our sample through home visits.

4.2 LiRIL Battery

The LiRIL Assessment Battery has two equivalent forms – Forms A and B. Each of these forms has several sub-tests. Table 4.2 summarizes these details.

Table 4.2

Description of Sub-Tests in the LiRIL Battery

Sub-Test	Description
1. <i>Akshara</i> Recognition	- Part A of this test measures recognition of 49 <i>aksharas</i>. - Part B tested recognition of 12 sawarchinhas - Part C tests 5 jodaksharas
2. Phonological Awareness	3 sub-tests: Syllable Segmentation, Phoneme Blending, Phoneme Segmentation 10 items per task.
3. Non-Word Reading	- Non-words of differing lengths and complexity. 15 items
4. Word Lists	6 word lists of differing levels of difficulty of words. - Word difficulty matched approximately to range found across Grades 1-5 in government schools. 15 words per list. - Word list at which student could read with 80-90% accuracy identified as student's "word reading level". - Word List 7: One consolidated word list with 3 words from each list (n=18 items) also administered to all students.
5. Passage Reading – Decoding, Fluency and Comprehension	9 passages of different levels of length and word-difficulty. - Vary from simple narrative passages at early levels to information-based and complex narrative passages at later levels. - Passage difficulty matched approximately to range of passages found across Grades 1-5 in government schools. - Passage at which student could read with 90-94% accuracy identified as student's "passage decoding level". - Passages were timed, yielding fluency (pace) measures. - They were followed by 4 comprehension questions each – 2 implicit and 2 explicit. - Passage at which student could comfortably decode and answer at least 50% of comprehension questions identified as student's "passage comprehension level".
6. Word Dictation	The word list that was one level below the word list that the child could read comfortably was administered for dictation.
7. <i>Akshara</i> Dictation	10 <i>aksharas</i> were dictated to children.
8. Free Writing Task	Children were shown pictures and asked to free write in response to it.
9. Concepts of Print	13 items, adapted from Marie Clay's Task, tested child's knowledge of basic concepts of print like book directionality, text directionality, concept of a word, of a letter, and so on.

4.3 Comprehension, Orality and Text Engagement Assessments

While the LiRIL assessment battery gave us a breadth of information on each of 360 students over three years, we also wanted tools and measures that would permit a more qualitative and detailed engagement with children in our sample. In particular, we wanted to understand children's orality, comprehension and

text engagement. For this purpose, we selected 24 students per site and administered a series of in-depth assessments over the three years of our study. Table 4.3 provides a brief overview of these assessments.

Table 4.3

Description of Comprehension, Orality and Text Engagement Assessments (n=24 Target Students per Site)

Assessment	Description	Time of Administration
Listening Comprehension	Two simple passages were read out to students and they were asked a total of 8 comprehension questions based on these passages. The comprehension questions addressed main idea, sequencing, inferring, understanding character and retelling story.	Towards last quarter of Grade 1
Orality with Text Engagement	A wordless picture book (Mango Tree, NBT) was given to students who were asked to narrate a story based on the pictures in as much detail as they could. The students' responses were recorded and transcribed verbatim.	Towards the middle of Grade 2
Engagement with Unknown Text (emphasis: listening comprehension)	Children were given a simple picture book and asked to look at it, read it. Researchers observed how the child interacted and engaged with the text – whether the child had Concepts of Print, whether the child appeared interested, and whether and how the child made meaning out of the text. Children were encouraged to read the first 3 pages, following which, the researcher read out the rest of the text and asked a series of comprehension questions (during and after reading the text).	Towards the last quarter of Grade 2.
Engagement with Known Text	Students were given a short passage from their texts/curriculum that they had already completed in class. Researcher observed how students interacted with this known text – whether they seemed to recognize and understand it, or not.	Towards the last quarter of Grade 2.
Engagement with Unknown Text (emphasis: reading comprehension)	Students were given a picture book. They were asked to read the text by themselves (no support from researcher, unlike in previous administrations). Comprehension questions were asked before, during and after the book was read, tapping students' ability to predict, make picture-text connections, retell, infer, to connect text with their lives, and so on. Student's word-solving strategies as well as strategies for solving comprehension difficulties were probed.	Towards the last quarter of Grade 3.

4.4 Classroom Observations

Two kinds of tools/methods were developed for conducting classroom observations.

Structured observations of all classrooms

We developed a structured classroom observation tool that was used to provide information on all participating classrooms in our sample at each site. The structured observation tool was adapted from the Beginning Teacher Quality Observation Tool (Sindelar et al., 2009). It was used twice over the course of our study—once when the students were in

Grade 1, and once when they were in Grade 3. Table 4.4 summarizes the dimensions included in this tool. Each dimension was rated by a trained observer on a 4-point Likert scale. An overall rating of the quality of teaching-learning in the classroom was also obtained on a 4-point Likert scale for each classroom.

Table 4.4

Dimensions of LiRIL Classroom Observation Tool for Early Language and Literacy

Dimension

I. General Instructional and Pedagogical Practices

1. Physical Aspects of the Classroom
2. Teacher-Student Ratio
3. Atmosphere and Tone
4. Classroom Management: Planning and Organization
5. Classroom Management: Effective and Skillful Management
6. Classroom Management: Attention to Students
7. Student Engagement
8. Time on Task
9. Assessment and Quality of Feedback

II. Instructional Practices Specific to Early Language and Literacy

1. Oral Language
2. Letter and Word Recognition
3. Vocabulary and Comprehension
4. Higher Order Writing
5. Other Activities Observed during Language and Literacy Time
6. Transaction of content
7. Use of teaching-learning materials that support early literacy
8. Perceptions about student learning
9. Language(s) in the classroom

Semi-structured, in-depth observations of a few classrooms

In addition to getting this bird's eye view/ratings of all classrooms included in our study, we also conducted semi-structured classroom observations in four classrooms per site to get an in-depth idea about the curriculum in those classrooms as described in an earlier section. We used ethnographic, largely

non-participant methods for observation. We engaged in a process of detailed observations, reflections and an active process of interpretation and meaning making during these observations (Bogdan & Biklen, 1992; Emerson, Fretz & Shaw, 1995). All classroom observations were audio-recorded and transcribed; these were used to supplement the RA's extensive note-taking efforts in

the classroom. RAs informally talked to teachers after each round of observations to gain clarity on the teacher's intentions, goals, and the like.

By following one teacher (and six target students per classroom) over a span of time, we ensured that our views of teaching and learning in the classroom were not based solely on one-off observations, rather, we invested time in getting to know the teachers and students in each of these classrooms. Over time, therefore, we were able to make robust connections between the teacher's background, knowledge and beliefs and their observed practices with the children. In addition, we got a deeper sense of student engagement and learning in these classrooms, especially as it pertained to the six target students in each of these classrooms. These in-depth observations were conducted during Years 1 and 2 of

the study, and were conducted in two-day cycles.

During these two-day cycles we observed by turn the teacher's practices as well as each of the target students. By the end of Year 2, we felt that we had understood what we needed to do about these classrooms; therefore, in Year 3, we visited each classroom only once, during the more structured observation described earlier.

Although the observations were not rigidly structured, they had clear intentions and goals in terms of capturing meanings related to how early language and literacy were transacted in the classroom. As such, certain categories were frequently invoked during these observations. Table 4.5 summarizes the foci of the semi-structured observations.

Table 4.5

Semi-Structured Guidelines for LiRIL Semi-Structured Classroom Observations

Guidelines for Observations	Brief Description
I. School Environment	The physical setting, the social-economic background the school caters to, the cultural relationship between school and community, the structure of the school day, etc.
II. Classroom Environment	Teacher-student ratio, seating, nature of interactions between teacher and students, amongst students, and the like.
III. Language and Literacy Instruction – General Details	How often do language/literacy classes occur per week, when, how long does each session last, what are the teacher's preferred curricular materials, and the like.
IV. Details of the Lesson Observed- Teacher	The goals of the lesson; how it was structured, grouping, aspects of language/literacy addressed, clarity and quality of lesson, assessment and feedback, classroom management, tone of classroom, and the like.
V. Details of the Lesson Observed—Target Student	Child's participation and engagement in lesson, interaction with teacher, with peers, strategies used, evidence of learning, instructional downtime, quality of individual assessment and feedback received, and the like.
VI. Teachers' Reflections and Comments	The lesson would be reviewed in an open-ended way with teachers and their reflections and comments obtained.
VII. Researcher's Analytical Memo Writing	Each day's lesson was reflected upon by the RA who wrote a brief analytical memo for that lesson.

4.5 Teacher Interviews

The child-level data and the classroom observational data were supplemented by teacher interviews on the LiRIL project. Before the mid-1970s, research on teacher thought processes focused mostly on organization of activities, classroom management, structuring assignments and the allocation of rewards and punishments. However, this emphasis did not permit a closer understanding about teacher cognitions. Teacher beliefs (Richardson, Anderson, Tidwell & Lloyd, 1991); and teacher knowledge (Shulman, 1987) are two aspects that appear to significantly influence teacher practices in the classroom. Hence, we decided to interview the teachers in our sample and have them respond to a series of semi-structured tasks that enabled us to understand their beliefs and knowledge. Each teacher was interviewed thrice over the course of our project –once to get background information, and once each on teacher beliefs and knowledge. The interviews were semi-structured and permitted considerable probing by the interviewer.

Teacher Background Interview

Researchers who have examined teachers' background characteristics look at teachers' educational qualifications, achievement and experiences and, even, intelligence test scores (Darling-Hammond, Berry, & Thoreson, 2001; Dunkin & Biddle, 1974; Ehrenberg & Brewer, 1994, 1995; Rowan et al., 2002; Wayne & Youngs, 2003; Wenglinsky, 2002). Of these, we chose to focus on the teacher's qualifications and educational experiences. We collected basic information on teachers' background, such as, qualification, years of experience, grades taught, teacher trainings attended, and so on. We also collected information on how many languages they know, how they were taught language during their own school days, their perceptions about language development, and the like. We interviewed teachers about their perceptions of the current curriculum and the students in their classrooms, about their professional aspirations and needs, and their connections with the community.

Teacher Beliefs and Practices Interview

Teacher beliefs are known to significantly shape teacher practices in classroom settings. We were interested in understanding the beliefs of teachers in our sample. Insights generated during piloting were used to develop a Teacher Belief Interview, which also adapted and borrowed items from The Literacy Orientation Survey (LOS): A Survey to Clarify Teachers' Beliefs and Practices (Lenski, 1997). We tried to access several categories of beliefs through this semi-structured interview: (1) Aims and goals of early language and literacy teaching; (2) Instructional practices (as reported by the teacher); (3) Thoughts about prescribed curriculum and curricular materials in use in their state; (4) Beliefs about students; (5) Language links between home and school; (6) Relationships with parents and community; and (7) Reflections on self as a teacher of early language and literacy. The interview had two kinds of questions – open-ended probes on these dimensions; as well as the presentation of vignettes followed by asking teachers how strongly they agreed with the decisions made by the actors in that vignette and why. We believed that asking teachers to respond to specific instances of instructional practice would deter them from providing socially desirable responses, which the more open-ended questions permit.

Teacher Knowledge Interview

The overlap between teacher beliefs and knowledge is strong, since both refer to teacher cognition. Researchers who study the two (e.g., Pajares, 1992; Richardson, 1991) suggest that the two can be distinguished in several ways, of which we mention two here. The first is the need for a "truth criterion" for knowledge that beliefs need not have. Beliefs can be personal and held only by the self, while knowledge has to be accepted as true by others. The second is that beliefs may be sub-conscious, hence relatively resistant to change, while knowledge may be held more consciously and may be more amenable to change when new information is provided. Shulman (1987) has referred to teacher knowledge as the "missing paradigm" in teacher research. Shulman identifies both general

pedagogical knowledge as well as pedagogical content knowledge (PCK)—specific knowledge related to the teaching of a given domain—as important to teaching. Accordingly, we developed a tool for assessing teacher knowledge. Ball, Thames & Phelps (2008) have suggested that content knowledge for teaching consists of at least two empirical verifiable categories: (1) Teachers’ knowledge of content and students; and (2) Teachers’ knowledge of students and teaching. To this, we added a third category: Teachers’ own

knowledge of reading the language in which she teaches. Given the contexts in which we were working, we were unsure about whether the teachers in our sample were themselves proficient readers. This tool—which takes about 1.5 hours to administer—does not provide an exhaustive view of teachers’ knowledge of early language and literacy; rather, it is indicative and to be used along with information on teacher beliefs and practices. Table 4.6 provides a brief overview of the tool.

Table 4.6
Description of Teacher Knowledge Interview for Early Literacy

Guidelines for Observations	Brief Description
Teachers’ Knowledge of Content	This aspect assessed teachers’ own proficiency with reading comprehension. The question we were trying to answer was: How well do teachers know the language? A newspaper article (approximately 10th grade reading level) was given to teachers, who read and answered various explicit and inferential questions about it.
Teachers’ Knowledge of Content and Students	Here, we were trying to understand: How well do teachers know their students’ challenges while learning language? Two tasks were designed. Task 1: Teachers read a passage (third-grade level) and anticipated difficulties that their students might have while reading it Task 2: Teachers were presented with a passage writing by an early language learner and asked to discuss the difficulties faced by the student in writing it.
Teachers’ Knowledge of Content and Teaching	The question asked here was: What do teachers know about teaching literacy? In order to ascertain this, teachers were asked what strategies and techniques they would use to help the students facing difficulties in Tasks 1 & 2 described above.

4.6 Data Collection, Management and Analyses

4.6.1: Data Collection

An initial three-day workshop was held at each site at the beginning of the project in order to orient all members of the field team to the administration protocol of the LiRIL battery. The RAs supervised the field team members during the initial days of administering the battery, providing feedback as required. In addition to this, prior to the administration of each round of the battery, 2-3 day workshops were held for re-orientation.

Informed consent was obtained from all participating teachers, in addition to the district level permission.

Given the contexts we were working in, we were strongly advised to not try to obtain written consent from participating students and parents. However, teachers informed parents of students in their classrooms verbally about the project and obtained their verbal consent.

Rapport was built with each student prior to administration of all assessments. Students were given a break in-between the administration of longer assessments, and assessments were discontinued if students displayed signs of discomfort.

4.6.2: Data Coding

Codes for both quantitative and qualitative data were generated through cross-site multi-day workshops conducted throughout the five years of piloting and longitudinal project, where sample data-sets for each assessment were collectively discussed and coded. Codes were refined through a process of piloting,

discussion and revision. Finalized codes were applied to the data. One RA at each site cross-verified a random sample of 20% of codes. It was decided that if there was more than 5% error on data coding, then the entire data set would be re-coded. However, this did not happen in actuality.

4.6.3: Data Storage: Development of MIS

An MIS was developed in-house to manage and store the extensive LiRIL battery assessment information. All data related to the LiRIL battery were entered into the MIS after coding. All hard copies of data have

been filed and stored in safe locations at each site. They are currently being scanned and put on hard-drives for further safety.

4.6.4: Data Entry and Verification

After coding, data were entered into the MIS by data collectors at each site. An RA from each site verified a random sampling of 20% of data entries done by

each data collector. It was decided that if there was more than 5% error, the entire data would be re-entered. However, this did not happen in actuality.

4.6.5: Data Analyses

Software for qualitative data analyses.

During the first year of data collection, we did not possess any software for qualitative data analyses; hence, interviews and observations were transcribed and coded manually. However, in Year 2, we obtained license for the NVivo software. From then on, all transcriptions were done directly into the software, which were then available for coding and analyses.

Analyses of quantitative data set.

Despite much effort and experimentation by members of the LiRIL team, we received minimal statistical support during the three-year period of our project. Hence, much of the analyses we present in

subsequent chapters remain at a basic descriptive level. We believe that our longitudinal data set could yield more sophisticated understandings if provided with the right minds and tools to support our analyses.

Analyses of qualitative data.

We have largely used thematic analyses. After coding our data, we have read and re-read the transcripts, observation notes and analytic memos to ascertain larger “chunks of meaning” – which we refer to here as “themes”. Each “claim” that we made related to the data were then verified for strength – is it a credible claim? Only claims that have been strongly verified by our data have been presented as a part of our qualitative learnings.



Findings: overview and background

Given the vast scope of the LiRIL project both in terms of breadth (the range of issues explored) and the depth (3-year longitudinal study), we decided to present different aspects of the findings from the project in different chapters. This will enable readers to understand the report in manageable chunks; as well as permit readers to skip chapters that do not interest them. The findings broadly address the following questions:

1. How are students taught early reading and writing in classrooms in Wada and Yadgir?
2. What are students learning in terms of different aspects of early literacy at different grade-levels?
3. What are the sources of variability in performance in the population included in our study?
4. What do teachers believe and know about the teaching of early literacy?; and
5. What can we learn by closely observing the most marginalized of the learners at our sites?

The first of these questions can be answered through curricular analysis – both of the curricular materials in use at each site, and qualitative class observations (and teacher interviews) of the transacted curriculum. Chapter 5 presents some answers to this question.

Answers to the second question provide insights into student learning. It provides two kinds of answers. First, it provides a snapshot of student performance on different indicators of early literacy at six points in time during Grades 1-3. Second, it permits an analysis of student growth over time; as well as challenges to this growth. It also permits us to look at relationships between and amongst different aspects of early reading and writing. Chapters 6, 7, 8, 9 and 10 summarize these insights.

One of our key findings is the large amount of variability in student performance –within schools,

across schools and across the two research sites. In Chapter 12, we examine factors that could be contributing to this variability in a variety of ways. For example, we analyze students' sociocultural backgrounds; school and curricular contexts; and teacher beliefs, knowledge and practices. Chapter 11 presents a coherent synthesis of what we have learned about teacher beliefs and knowledge. Chapter 12 presents a brief description of three case-studies of academically and socially marginalized students in our sample.

With the purpose of robust sense making, triangulation and interpretation, we have merged both our qualitative and quantitative data in this report, rather than presenting them separately. The rest of this chapter provides a brief overview of background information on homes, school and curricula that will permit readers to make better sense of the chapters that follow.

5.1 Home Background

The role that socio-cultural factors play in literacy acquisition has been well documented in the West. The children from the LiRIL sample at both sites come from socially and economically disadvantaged

backgrounds. For children from the middle and upper classes, home discourses and literacy habits develop in conjunction with notions of what is required for school success. Preparedness for early

literacy instruction is affectively, culturally and practically grounded in the home prior to exposure to print at school. Studies conducted in Western contexts show that children benefit when the literacy practices of the home match closely with the expectations of the school (Heath, 1982).

Data on the economic status of the households were collected and an overall weighted economic score was created that included the type of house and land ownership. From an economic assets point of view the Yadgir households were much better off than the Wada households. Almost 75% of the households in Wada have either Low or Very Low economic status, while in Yadgir 60% are in the Medium economic status (see Appendix A, Table 1). In terms of caste/tribe background, while the Wada student cohort have a homogenous background with 93.9% belonging to Scheduled Tribes, in Yadgir student backgrounds are more diverse, with 33.6% OBCs, 31.28% Scheduled Castes, 16.67 % in Category 1 and 13.85% in Scheduled Tribes (See Appendix A, Table 2).

At both sites, both parents work predominantly in agriculture – either as agricultural laborers or as self-employed agriculturalists. In Wada, approximately 60% of mothers and 65% of fathers work in agriculture, while in Yadgir 75% of mothers and 41% of fathers work in agriculture (see Appendix A, Tables 3 & 4). The agricultural work in Wada is often seasonal, such that families engage in farming during certain months of each year, and migrate (typically to work in brick kilns) during other months of the year. In Yadgir, however, a very significant proportion of fathers—42.71%—hold non-agricultural, self-employed positions.

Students in our cohort come from families where parents have had little or no education. The majority of the mothers of our student cohort have had no schooling—52.77% in Wada and 80.21% in Yadgir (See Appendix A, Table 5). The fathers are slightly better educated—34.11% in Wada and 61.84% in Yadgir have not been to school (See Appendix A, Table 6). However, home visits suggest that within the home, regular exposure to print is severely limited, if not negligible. There are a few exceptions to this, for example, the children of Anganwadi workers or Sarpanch heads who regularly see their parents engaging with print are found to be amongst the top performers in school. This kind of exposure in the family or neighbourhood is a salient characteristic of the top 40% of the student cohort. When asked, the great majority of parents could not identify places where print is in use in their environment: neither on signboards nor in any of their village administrative buildings, buses, and the like. Literacy specific support from parents is, therefore, extremely rare to come by.

We asked parents about the overall purpose of schooling and whether this may lead to the betterment of their children's lives. Parents' responses pertained more to the instrumental functions of schooling. While a handful of parents believe that school is an avenue for their children to have better career prospects, almost all parents spoken to held that school would not give their children better professional scope and that they would end up continuing in the same line of work as their parents. In that sense, schooling and literacy is not seen as opening up avenues of possibility for children.

5.2 School Information

Wada, being a tribal area, has two kinds of public schools: the Zilla Parishad (ZP) schools managed by the Education Department and the Ashram schools (residential schools for tribal children) managed by the Tribal Department. Due to the seasonal migratory work of the tribal people, the Ashram schools are a convenient choice for parents and caregivers. In our

sample of 31 schools at Wada, 5 schools are Ashram schools and 26 are ZP schools. While Ashram schools cater to Grades 1-12, ZP schools may teach only Grades 1-5 or 1-8. The ZP schools tend to have a minimum of two classrooms. The number of students in ZP schools that cater only to Grades 1-5 tend to fall between 20 to 50, while the enrollment in schools

that teach Grades 1-8 have an enrolment range of 175 to 200 students. Ashram schools, working with children from Grades 1-12, typically have an enrollment of 400 children. Because of their larger student body, schools have an average of four to six classrooms in which teaching-learning processes regularly occur. Class sizes are typically small in ZP schools, but each teacher manages two grades, such that the average teacher:student ratio is 1:27. It is higher in Ashram schools (1:47).

In Wada, barring one ZP school, all the schools we have worked with have a playground facility/ common space for children and a library. A “library” is not necessarily a dedicated space, but a cupboard stocked with books. One of the conditions of having a library, however, is the commitment to stocking solely National Book Trust books.

In Yadgir, all the public schools in our sample are managed by the Education Department. In addition,

the government has set up special Tanda schools to work with the migration-prone, scheduled caste of the Lambani community. Unlike Ashram schools in Maharashtra, these schools, are not residential.

In our sample, there are 22 schools, of which 5 are in urban areas of Yadgir and 17 schools are rural. Since the public schools follow the Nali Kali system through Grades 1-3, these schools, for the duration of the study, had only one teacher for the first three years of school education. Given that Nali Kali groups students of Grade 1-3 together, each Nali Kali class size tends to be fairly large in terms of number of students per center, and the adult-child ratio. If one Nali Kali teacher leaves the school, and the school has two official Nali Kali centers, they often get merged together, creating one huge center. On average, the teacher:student ratio in the classrooms observed was 1:42; while in the Tanda schools, it was 1:15. Of the 22 schools in our study, 11 schools do not have a playground and two schools do not have library facility.

5.3 Description of Balbharati and Nali Kali Curricula

Government schools in Wada follow the *Balbharati* curriculum. *Balbharati* is a textbook based curriculum, with approximately one to two textbooks per grade-level. In their most recent revision (2013), *Balbharati* textbooks have attempted to follow the suggestions of the National Curriculum Framework (2005). Thus, the introduction to the textbooks lay stress upon children learning in a ‘free’ environment such that they can talk freely, ask questions, teach others what they know and, develop their reading and writing skills. Language lessons are taught in 60-65 minute sessions.

The Nali Kali program is used in government schools in Karnataka for the teaching of language, mathematics and EVS between Grades 1-3. With its focus on activity-based, joyful learning it is seen as a better alternative to standard textbook based teaching. The method underlying Nali Kali was developed as part of the Rishi Valley RIVER project, and has since been adapted and adopted by several states, including Tamil Nadu, Karnataka and others.,

Based on the multi-grade, multi-level (MGML) teaching approach, the salient features of the program are as follows. First, children in Grades 1-3 are grouped in the same classroom with a teacher who has been trained to use this methodology. Second, each language lesson is about 90 minutes long. Third, self-paced learning forms the foundation for the structure of the program. The students have to scale a learning-ladder driven curriculum, of which each learning-ladder is broken up into milestones, and each milestone into several steps. Each step consists of activities that are presented on cards, supplemented by workbooks, deploying the use of manipulatives, (for example, beads). A few steps have readers associated with them. Activities are divided into five types: preparatory activities, pre-learning activities, teaching-learning activities, practice activities and evaluation. Each phase of learning is completed through a combination of six varying levels of control for student and teacher. These are, whole class, complete teacher assistance, partial teacher assistance, peer assistance, partial

peer assistance and self-evaluation. Every child, even the youngest, is responsible for picking up the card they're currently working on and working through it. The teacher's role during the class is to a) facilitate the whole class activity; b) assist the group whose work is completely or partially teacher led, and; c) evaluate the work of each and every learner in her classroom.

The next chapters provide an overview of findings from our project.

The Teaching of Literacy

A key assumption of the LiRIL project is that all learning is contextually located. It is futile and even absurd to present detailed analyses of children's learning of early literacy, without referring to the contexts in which it is acquired. A key context for the acquisition of early literacy is formal schooling. Hence, we were interested in understanding how literacy is taught at each of the two sites, within the context of the classroom. We will refer back to the findings presented in this chapter to explain different aspects of student learning (Chapter 6).

Early on in our project, we undertook systematic analyses of the curricular materials used at each site (see Menon & Thirumalai, 2016; Menon et al., in press: Appendices E1 & E2). We analyzed all the lessons in the Balbharati textbooks (Grades 1-2) in Wada. In Yadgir, due to the number of activity cards associated with the Nali Kali curriculum, we selected a total of 177 activity cards representing the

beginning, middle and end of the academic year for each of Grades 1, 2 and 3. In addition, we observed the 31 classrooms in Wada and the 22 classrooms in Yadgir twice each over the 3-year period to get a sense of how teachers were transacting the curriculum. Four classrooms from each site were selected for more frequent and in-depth observations – each of these four classrooms was observed a total of 16 times each during the period of our study. The rich data sets generated through classroom observations, curricular material analyses and teacher interviews were qualitatively coded and analyzed for themes and key findings, which are summarized in Table 6.1. While it is beyond the scope of this report to discuss each of these findings in depth in this chapter, we take up a few of key ideas in our discussion here.

The teacher interview data are invoked only tangentially in this chapter, since greater attention will be devoted to them in Chapter 7.

Table 6.1
Key Findings Related to the Teaching of Literacy

Aspect	Description
Aims and Goals of Early Literacy Classrooms	a. The aim of reading instruction in the early grades is largely to teach children how to decode words and spell them correctly.
Overall Method of Instruction	a. Literacy (reading and writing) is taught in a sequential manner – first aksharas, then words, then sentences, then passages. b. Rote and repetition are the main mechanisms of pedagogy and assessment. c. The focus of what is taught remains on very narrow lower-order sub-skills.
Environmental Print	a. "Print rich environments" are typically static/decorative displays that have little bearing on the curriculum, and are never invoked during teaching/learning encounters.
Oral Languages and Dialects	a. Children's oral languages are not invoked in the pedagogy or curriculum. b. When children use home languages or dialects, teachers do not always respond sensitively. c. The aim seems to be to replace home languages and dialects with standard language as quickly as possible.

Table 6.1

Key Findings Related to the Teaching of Literacy

Aspect	Description
Decoding Instruction	a. In teaching decoding, the method privileges the repeated copying of the symbol (akshara), but does not highlight the sound-symbol relationship.
Comprehension/Meaning-Making	b. Not observed in many classrooms. c. Where observed, takes few forms: i. Connecting lesson to child's life outside of school (rare) ii. "Samjhana" method (more common): Teacher explains passage sentence by sentence to children.
Writing	a. Writing is restricted largely to copy-writing and dictation.
Assessment and Feedback	a. Students are often successful in hiding what they don't know from teacher. b. Many teachers are not attentive to the learning of individual students, hence are not aware of where many students in their class are (in general), or in picking up a specific need that arises during a given lessons. c. Once Teachers become aware of a student need, many of them do not spend enough time with the child trying to understand the source and implications of the problem. They may merely correct the child without providing the rationale, or they may simply say that what they have written is wrong without explaining why. d. Repetition is the favored method of re-teaching.
Time-on-Task	a. Overall, we observed very inefficient uses of teachers' and students' time in the early literacy classrooms. Sometimes, students spent as little as 15 minutes "on-task" in a 90 minute session.
Home-School Relationships	a. Teachers do not invoke children's lives outside the curriculum in discussing texts. b. Parents are not brought in as meaningful participants in children's schooling.
Teacher Knowledge	a. Teachers appear to lack specific knowledge of how to teach beginning reading and writing. Repetition and copy-writing could be ways by which they compensate for this lack of knowledge. Curricular materials design appears to support this.
Curricular materials and the teacher	a. Curricular materials significantly influence pedagogy in terms of what is taught and when. b. It appears as if teachers are not deliberately positioned as strategic and critical agents, but are treated as conduits of the curriculum. c. Curricular materials do not provide teachers with any explanations or rationale. d. Teachers often modify the intended curriculum to better fit their own prior beliefs and contextual needs.

Table 6.1

Key Findings Related to the Teaching of Literacy

Aspect	Description
Characteristics of better teachers in our sample	a. More regular. b. Attention to individual children. These teachers monitored every child in their classrooms regularly and carefully. They gave individualized attention to all children in their classes. c. Feedback and Re-teaching. They gave specific feedback and opportunities to practice skill again through repetition (word dictation, copy writing and reading). d. Classroom atmosphere and tone of teacher. They maintained a friendly tone and atmosphere in their classrooms. e. Meaning-making. We observed some limited opportunities for meaning-making in these classrooms. For example, sometimes, children's out-of-school experiences would be invoked. However, overall, even in "better" classrooms, there were very few opportunities for elaborated responses, discussions, etc.

6.1 “Deep Structures” of the Curriculum

A key argument that we make in this chapter echoes the one that we make in publications emerging from our analyses of the literacy curriculum (Menon & Thirumalai, 2016; Menon et al., in press). We argue that even though the curricular materials used at each of the two sites are seemingly very different, at their core, they share certain similarities (“deep structures”) in terms of (1) aims and goals of literacy instruction; (2) models of learner guidance; and (3)

positioning of teachers vis-à-vis the curriculum. MGML curricula (of which Nali Kali is an instantiation) are widely seen as representative of more progressive pedagogies. Yet, what we found is that despite changes and revisions in curricula in both states (Karnataka and Maharashtra), the materials represent deeply entrenched beliefs about literacy instruction (Menon et al., in press).

6.1.1: Aims of the Curricula and Sequential Teaching

One of these beliefs is that the aim of literacy instruction, especially in Grade 1, largely consists of the acquisition of the varnamala and the barakhadi. Literacy also needs to be taught in highly sequenced ways—first letters, then words, then sentences, with meaning-making postponed to later grades. Even when the traditional sequence of the *varnamala* has been abandoned by the curricula, the new groupings of aksharas are presented in equally sequenced ways. Teachers echo this belief in sequence in transacting the curriculum. For example, in the Nali Kali

sequencing, the first letter grouping has the *aksharas* ರ/ರ/; ಗ/ಗ/; ಸ/ಸ/; ಡ/ಡ/; ಲ/ಲ/. The sequence of presentation is so important to the teachers, that children are encouraged to even write/copy them down only in the same order, as shown in this excerpt from a classroom observation: A child showed his writing to the teacher. He had written ರ/ರ/; ಗ/ಗ/; ಡ/ಡ/; ಸ/ಸ/; ಲ/ಲ/. Teacher: Um Hmn...Write this letter first (ಸ/ಸ/) and then this (ಡ/ಡ/). [The teacher said this while pointing at the *aksharas*, without sounding out what the symbols represented.] [Classroom Observation Notes, Yadgir, Grade 1]

The picture card used during this transaction shows the picture of an elephant.

(Teacher points to the card)

Teacher (T): What do you see?

Child (C): “*aane*” (commonly used word for elephant)

(T looks puzzled because she realises that “*aane*” is correct but does not fit the milestone *aksharas*)

T: Yes, “*aane*” is correct, but there is another word, and that is called “*salaga*” (tusker).

(The word “*salaga*” is used in the curriculum, because it is easier to spell than *aane*; it also models the *aksharas* currently being taught.)

(C does not respond)

(The Teacher makes child repeat after her, then goes through three pictures on the same card. Finally, she comes back and points to the elephant picture again)

T: What do you see?

C: “*Aane*”.

T: Yes, correct, but I said “*salaga*” is another word.

(Makes child repeat after her, then goes through the other three pictures and points to the elephant picture again)

T: What do you see?

C: “*aane*”.

T I said say “*salaga*” (impatiently).

(Makes child repeat after her, then goes through the other three pictures and points to the elephant picture again)

T: What do you see?

C: I don't know.

(Teacher moves on to the next student)

[Yadgir, Class Observation Notes, Grade 1]

What is noteworthy and poignant in this exchange is the shift in the child's position from “one who knows” (this picture is that of an *aane*) to “one who doesn't know”. It tells us that the ordered presentation of *aksharas* can never be the only basis for a meaningful early literacy curriculum.

6.1.3: Rote and Repetition as Preferred Teaching Methods

The transcript presented here also brings to light another strong belief relates to teaching methods. Each part of the sequenced content is taught through rote and repetition, with the repetition restricted to a very narrow, isolated sub-skill at a time (e.g., in this case, of the identification of a picture). This creates

two different issues in the classroom. The first is that the teacher has no recourse, but to repetition, in trying to help a child who is not successful at learning the narrow sub-skills. The second, more problematic, implication is the loss of numerous learning moments and a neglect of meaning-making.

6.1.4: Emphasis on Lower-Order Skills

Even when the curriculum moves past the teaching of decoding skills (say, in Grade 3), methods of repetition to reinforce lower-order thinking remains the teacher's mainstay in transacting the curriculum. We present here a slightly long transcript from one of our class observations of a Grade 3 classroom in Wada to reinforce these points of repetition as the preferred method of re-teaching to a child who has not understood. The content of repetition is the answer to a lower-order question. The teacher has asked some children to read out a passage from the third grade textbook in front of the class. After reading, she takes the questions at the back of the lesson one by one. [The following exchange took

approximately 5 minutes of actual instructional time].

Teacher (T): Now I am going to ask questions.

Everyone must answer. Those who know, raise your hands. (Reads from textbook) “Answer in one sentence”. “How did the Thengus (dwarfs) reach the window sill? Those who know, raise your finger. How did they reach? Kajal, tell me?”

K: The Thengus (dwarfs) reached the window sill via the Sayali creeper.

T: Correct. Nilesh, you tell? Tell! How did they reach?

N: Via the Sayali creeper.

T: Now Shailesh, you tell me.

(Shailesh is silent.)

T: Did you hear? Tell me.

(S is silent)
T: You must listen. If we don't know, we must listen to others. Tell me. Stand up.
(S makes no move to stand)
T: Stand up! Tell me.
(S still does not speak).
T: How did they reach? Tell me? Javanti, you tell me?
J: The Thengus (dwarfs) reached the window sill via the Sayali creeper.
T: (To Shailesh): Did you hear that? Tell me.
S: (In a very small voice) Thengu... Sayali...
T: (More impatiently) How did they reach? From where did they go up? Hmmm?
(S is silent).
T: Now they've told you
(S is still silent).
T: Tell me. Nivedita. Stand up.
N: The Thengus (dwarfs) reached the window via the Sayali creeper.
T: (To another child) You say?
T: (To Shailesh): Listen once more.
Child: They reached up via the Sayali creeper.
T: Where did they reach? The window sill.
T: (To Shailesh): Hmmm. Now tell me properly.
(S is silent).

T: Tell na!
(More silence)
T: Arre! How did the Thengus (dwarfs) reach the window sill? The Thengus (dwarfs) reached the window sill by climbing the Sayali creeper. Did you understand? Tell me.
S: Via the Sayali creeper
T: What did you say? I couldn't hear.
S: Thengu, by the window creeper,
T: (Very impatient) Arre, The Sayali creeper! Reached the window sill. Say it. Say na!
S: Reached the window sill.
T: Tell me properly.
S: On the Sayali sill...
T: Via the Sayali creeper, they reached the window sill.
S: Via the Sayali creeper, they reached the window sill.
T: Via the Sayali creeper, they reached the window sill. Did you understand?
S: Yes.
T: Will you be able to write it?
S nods.
T: Sit.
[Wada, Class Observation Notes, Grade 3]

6.1.5: Teacher Knowledge

The transcript presented here is not an exception; we came across such interactions fairly regularly during our observations in classrooms. It can be seen from this transcript that the teacher is not ignoring the student who has not understood in her classroom—she is making a concerted effort to reach out and “teach” the child. She does not give up on him when he continues to fail to understand. She repeatedly interacts with him, until she gets the

desired response. This is commendable. But, unfortunate is the lack of vision (in both the lesson and the transaction) of how to get young children to engage meaningfully with texts. It is also unfortunate that the teacher does not appear to have knowledge about how to re-teach beyond repetition. Areas of weaknesses in teacher knowledge is a key theme that is emerging from our ongoing analyses and will be reported on in greater detail in Chapter 7.

6.1.6: Copy-writing

Not surprisingly, the teaching of writing in the observed classrooms is largely restricted to dictation and copy-writing. In observation after observation at both sites, we noticed that students spend an inordinate amount of time (a) copying down words,

questions and answers from the board; and more troublingly (b) copying down entire passages from their textbooks/cards into their notebooks. For example, in Yadgir, a Grade 2 teacher was observed conducting the following lesson:

The children were given a card that had the instruction: 'Frame sentences using the given words and write them in your workbook'.

In class, the lesson was transacted as follows:

The teacher dictated the sentences to the children.

But the children could not write.

Then the teacher wrote the sentences in the space given in the workbook and asked them to copy this in their notebook saying, "See you have to read these sentences and write them in your notebook".

[Yadgir, Class Observation Notes, Grade 2]

When we probed teachers' reasons for favoring the copying method over the activities or thinking tasks suggested in the book, at least two kinds of reasons were cited frequently: (1) ease of classroom

management; and (2) teachers' beliefs about student capabilities – they perceived their students to be incapable of performing the higher-order tasks, therefore, "simplified" it to the students' perceived levels of functioning. While students clearly face difficulties, teachers do not consider alternative ways to raise student performance to meet grade-level expectations. Rather, the preferred solution is to simplify the task/ While this is indicative of damagingly low expectations from students, this-more than a *laissez-faire* approach. We believe that it is more of a *laissez-tomber* approach (let it fall!)-which speaks volumes about teachers' beliefs about the curriculum and what it seeks to accomplish.

6.1.7: Assessment and Feedback

Assessment and feedback emerged as a significant theme in our analyses. Two key ideas emerged. First, that teachers do not always know what their students' learning strengths and needs are; and students could be quite facile at hiding what they don't know. In fact, this is one of the characteristics that distinguished the relatively better from worse teachers in our sample. The better teachers were alert to the presence of each student and checked up regularly on them, pausing to re-teach, as needed. A second idea that came up is that given the focus of the entire early literacy curriculum on lower-order learning, even when teachers assessed students, the focus of their attention was on the accuracy of the lower-order decoding/spelling and rarely on meaning-making. This led sometimes to lack of

meaning in children's responses going unchecked. For example, we observed the following instance in a Grade 3 classroom in Wada, where the teacher had given children some words from a recently read passage to "make sentences" with. One of the "better performing" students of this class had written the following sentences, which were assessed as "correct" by the teacher:

Pride: I have seen pride.

Engrossed: I don't know engrossed.

Customer: I have not seen a customer.

Key: I saw a key.

Hole: My friend's name is hole.

Action: My name is action.

[Wada, Class Observation Notes, Grade 3]

6.1.8: Role of Curricular Materials

Lest we have given the impression that it is only teachers' beliefs that constrain the implementation of otherwise rich curricular material, we would like to underline that the materials themselves do not appear to have a particularly rich vision of children's early literacy learning. Much of the focus of the early literacy lessons is on the presentation of the

varnamala; other aspects of literacy learning, such as, vocabulary, meaning-making, and engagement with literature are neglected in the design of the materials. We found that curricular materials play a significant role in the classroom in terms of what to teach. Teachers in our sample did not often venture outside of the prescribed materials in finding

content. Hence, the richness of the materials included matter; they also need to have a vision for teacher-learning. When curricula are revised, teachers deserve an explanation for what has been changed and why. Even when no revisions have been made, the rationale for why certain kinds of activities are suggested for language learning can be made available to the teachers. While these can be discussed at teacher training workshops, the

materials, themselves, could have more detailed instructions for the teacher-learner. Without this, teachers are unsure about the changes introduced in the curriculum and often displayed their ignorance of these, when asked. The weakness in the design of the materials is further exacerbated by the teachers' transaction, such that even the few opportunities that are provided for meaning-making are largely ignored.

6.1.9: Adaptations of Curricular Materials by Teachers

Even though teachers relay on prescribed materials for content, they often adapt the pedagogical suggestions accompanying the materials. For example, in Wada, a Grade 1 teacher was discussing the lesson "Ramila's Shadow" with the students. One of the suggestions to the teacher says, "Ask children to observe their own shadows at various times of the day and then discuss the lesson". It was transacted in the following manner:

Teacher: Today, we have to read the lesson 'RamilachiSawali' (Ramila's shadow).

[The teacher reads the sentences in the lesson one by one. After each sentence, the children repeat after him].

T: Ramila set out in the morning to go to school.

C: Ramila set out in the morning to go to school.

[One by one, T finished reading all sentences and has the students repeat them after him. There was no discussion in class about shadows, or what causes them.]

[Wada, Class Observation Notes, Grade 3]

The suggestion to the teacher, which demanded the children's observation, experience and understanding of the text was ignored completely. The focus stayed wholly and solely on reading the text out loud and copy-writing it down after it had been read. As mentioned earlier, when probed for why they make these adaptations, teachers refer to convenience (classroom management), their perception of children's abilities and (sometimes) their own prior experiences and beliefs about how children learn, or what should be the focus of early language lessons.

6.2 Differences between the Two Sites

We have argued in this chapter that despite surface differences between the two sites, there are certain "deep structures" that unite them. We will now complicate the discussion by pointing to a few key differences between the sites.

First, our analyses suggest that by design, the *Balbharati* curriculum is a less prescriptive one than Nali Kali. Therefore, the teacher could, potentially play an agentic role in shaping how the TLMs are transacted in the classroom. In fact, our observations indicate that teachers do use the textbooks in a variety of ways, ranging from completely ignoring it,

or largely following it, to appropriating it into their existing schemas of how to conduct a language lesson. Therefore, the variety of instructional variations we observed were larger in Wada, than in Yadgir classrooms, where each child follows the same sequence of cards in the self-paced learning system of Nali Kali.

Second, as mentioned in Chapter 5, the *Balbharati* curriculum—following its 2013 revision—tries to accommodate some of the broader visions of NCF, such as welcoming the child's language and words in the classroom, favoring more constructivist

approaches to teaching and learning, and the like. We have also reported how many teachers ignored most of these suggestions or adapted them to suit their beliefs and needs. At the same time, the curriculum did provide slightly more opportunities for meaning-making as compared to the Nali Kali curriculum, which was far more tied to the sequential presentation and review of letters and sounds.

Third, the complexity of the grouping arrangements in Nali Kali classrooms meant that teachers attended largely to children in the teacher-assisted groups, and only tangentially to children in other grouping arrangements (peer-assisted; self-learning, etc.). Children on average, got less time with the teacher in Nali Kali classrooms, than in the more traditionally organized classrooms of Wada. The administration of the Nali Kali class was a complex one for teachers, who often could not manage the large number of students (Grades 1-3 grouped together) very

effectively, leaving assessment and progress checks largely to individual students. Only a few teachers we observed were able to efficiently and effectively manage the numbers of students, the number of grouping arrangements and the number of activities simultaneously going on in the average Nali Kali class. Even within teacher-led groups, students were each working at their own level (their own card), making it impossible for teacher to effectively focus attention on the learning of individual students, except in rare instances.

These differences in teaching arrangements between the two sites are as important to understanding differences in student learning outcomes; as are the similarities – the key one being the focus on lower-order skills in the early years. Table 6.2 summarizes some of the challenges posed by MGML curricula to early language and literacy learning.

Table 6.2

MGML Curricula and Early Language/Literacy Learning

- Self-paced nature of curriculum makes it difficult to have meaningful whole-class and small group language experiences. Even in teacher-led groups, the teacher is attending to several different activity cards within the same group, instead of taking up a small group activity that is relevant to all the children in that group.
- Format of MGML severely restricts opportunities for oral language activities, such as conversations, discussions, storytelling, and teacher read alouds of good children's literature.
- Materials are largely focused on lower-order skills; lack of meaningful texts in curriculum.
- Opportunities to write for expression and communication are missing.
- Disconnects between children's everyday vocabulary and vocabulary of curriculum.
- Complex grouping arrangements give students less direct attention from teacher, who is attending to many different children working on many different activity cards.

Given this focus on lower-order skills and decoding at both sites, we would expect to see learners who come out performing well on decoding and spelling words, even if they are poor meaning-makers. What does a scrutiny of student learning of reading and writing across the first three years of schooling show? The next four chapters provides an overview of our findings about student learning.



Literacy Outcomes: Phonological Awareness And Concepts Of Print

This is the first of four chapters describing different aspects of student learning. Across these chapters, we will refer to “rounds” of data collections, “quintiles” of student performance and “tasks” of the LiRIL battery. Each of these terms is explained here.

Rounds.

We collected six rounds of data during the three years of the project—Grade 1 (Rounds 1 and 2); Grade 2 (Rounds 3 and 4); and Grade 3 (Rounds 5 and 6). Many of the graphs and tables in this chapter will refer to these rounds.

Quintiles.

We noticed a high degree of variation in learning within the student cohort at each site – Wada and Yadgir. We divided the student cohorts at each site into five quintiles based on performance, enabling us

to track the progress of different groups of learners. An index was computed giving appropriate weightage to different tasks in the battery. Each student was assigned a quintile based on their relative rank ordering on this index. This quintile determination was done at the end of Round 2 (end of 1st grade) and has been used to understand the variability amongst students. Students in Quintile 1 are in the bottom of the sample in terms of performance and students in Quintile 5 are in the top.

Tasks.

The sub-tasks on the LiRIL battery can be grouped into three broad areas: phonological awareness and concepts about print tasks (emergent literacy tasks); letter and word related tasks (lower order skills); and passage decoding and comprehension, and free writing tasks (higher order capabilities).

7.1 Phonological Awareness

The importance of Phonological Awareness (PA) for the acquisition of literacy is well established in alphabetic scripts (Adams, 1990); it also appears to be important to alphasyllabic scripts (Nag, 2007). As described in Chapter 3, after piloting we retained only three of the six PA tasks in our final battery -- syllabic segmentation, phonemic blending and phonemic segmentation. Scores on the two phonemic level sub-tasks were negligible across the three years of our study (see Tables B1 to B6 in Appendix B). Given that both Marathi and Kannada are alphasyllabic scripts, it would be expected that students would find it easier to discern sounds at the level of syllables as opposed to phonemes. Nag (2007) also reports that phonemic awareness is late to emerge in reader of alphasyllabic as opposed to

alphabetic scripts. She maintains that this is an important predictor of early reading even for readers of alphasyllabic scripts. Since our study only tracked students’ progress till Grade 3, we were not able to see any movement on phonemic awareness sub-tasks, until about age 9 years. Therefore, we focus the rest of our discussion on the syllabic segmentation task.

Syllabic segmentation refers to the ability to segment words into constituent syllables. Given that the *aksharas* of Marathi and Kannada represent syllables, it stands to reason that the ability to discern the syllabic units in words would be critical for the development of accurate decoding and spelling.

Syllabic segmentation development saw the top four quintiles of the student cohorts achieving at a 75% proficiency by the end of Grade 3. For the lowest quintile, however, syllabic segmentation remained a challenge. These students continuously lagged behind their peers by a substantial margin. When we categorized students as segmenters and non-segmenters (based on a 75% accuracy cutoff), we found significant differences in their word reading

ability through a one-way ANOVA (see Table B7 and B8 in Appendix B), suggesting that syllabic segmentation is an important skill for word reading. However, while most of our sample can segment syllables by Grade 3, not all of them can read words (as will be described in a later section), suggesting that this is a necessary, but not sufficient skill for word reading. The complex relationship between PA and other reading skills requires further analysis.

Summary

- We obtained minimal scores on phonemic level task on our battery, even at the end of Grade 3.
- Phonemic level tasks were not significant predictors of later reading ability in a regression analyses.
- Syllabic segmentation tasks appeared to be significantly related to word-reading ability.

7.2 Concepts about Print

Concepts about Print (CaP) look at whether students are able to understand rudimentary concepts necessary to read and write: for example, if they are able to place the book the right side up (book directionality), follow text from left to write and then back to the left of the next line (text directionality) and if they are able to understand the concepts of a letter, a word and of punctuation. Records show that

most of the students in our sample have attended *anganwadis* although we have not be able to verify their regular attendance. Ideally students who have attended *anganwadis* should come into Grade 1 with adequate CaP. Figure 7.1 and Figure 7.2 show how the quintiles at each site have performed across rounds on CaP.

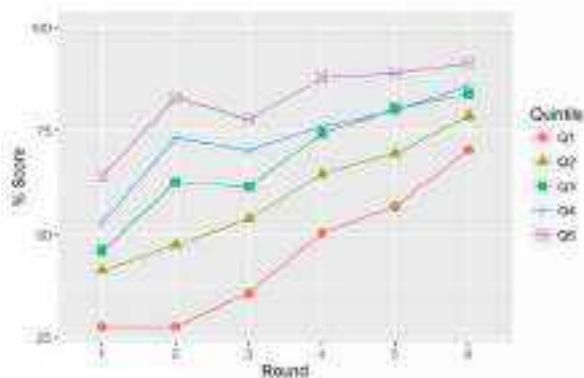


Figure 7.1: Performance in concepts about print in Wada

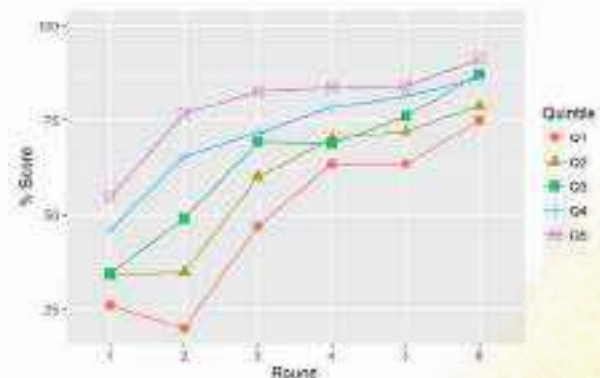


Figure 7.2: Performance in concepts about print in Yadgir

Only the top quintile in Yadgir and top two quintiles in Wada arrive in Grade 1 with more than 50% scores in CaP tasks. Students in the bottom quintile at both sites achieve this level of proficiency (50%) only by Grade 2 (Rounds 3 to 4). This means that some students in our sample start school with a level of proficiency that others accomplish only a year-and-a-half or two years later. By the end of Grade 3, all quintiles, even the lowest, could score with more than 70% accuracy on the CaP tasks.

Surprisingly, none of the CaP tasks (e.g., directionality of print, concept of akshara, concept of word, etc.) were significantly correlated to the other aspects of reading and writing that we assessed - either lower-order (word-reading) or higher-order (comprehension) reading skills. Hence, we will not discuss this aspect further.

Summary

- Students arrive at school with very different levels of CaP.
- CaP tasks do not appear to be statistically predictive of other reading tasks, such as word and passage reading; or comprehension and composition.



Literacy Outcomes: Decoding

In Chapter 6 we analyzed the excessive focus on lower-order skills, asking whether this resulted in students acquiring strong decoding skills. We see strong site level differences in findings related to this question.

The LiRIL battery had 6 levels of word lists and 9 levels of passages. Word List 1 consists of very simple two to three *akshara* with only /a:/ *swarachinha*. Words. Likewise, Passage 1 is short approximately 30 word text with similarly simple words. With each increasing level, the difficulty level of words, unfamiliarity of words, and length of passages increased.

The levels of the word lists and passages were not exactly pegged to expected grade level outcomes, but approximate comparisons could be made between

grade level expectations and the LiRIL word lists and passages. We would expect that by the end of Grade 3, students should be able to read at least Word List 3, and read and comprehend Passage 3. We will refer to these as the “grade level” word list and passage. We will refer to Word List 1 and Passage 1 as the “simple” word list and passage. How did students in the LiRIL sample fare on the “simple” and “grade-level” word list and passage by the end of Grade 3?

Figure 8.1 shows that although 85% of students in Wada can read a very simple list of words by the end of Grade 3, only 24% of them can read a word list at their own grade level. In Yadgir, the situation is a little worse – only 65% can read a very simple word list and 18% can read a word list at the Grade 3 level.

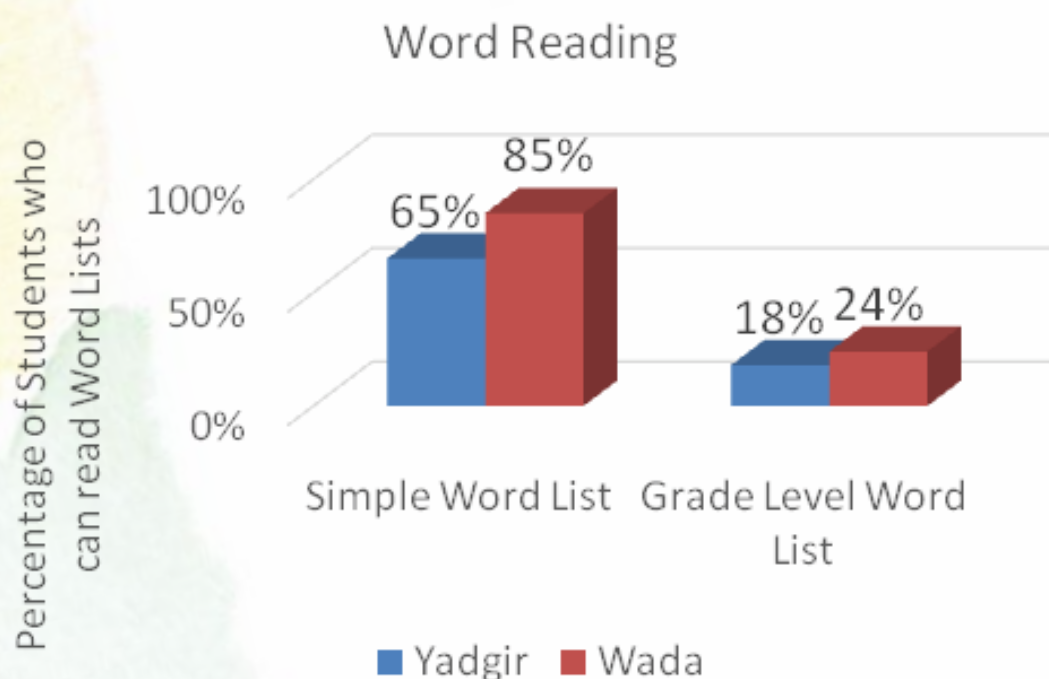


Figure 8.1: The percentage of students who can read a simple and grade-level word list at the end of Grade 3.

Figure 8.1 indicates that while the majority of students at both sites are not able to decode at the grade appropriate level, a greater percentage of them have learnt minimal levels of decoding in Wada as compared to Yadgir.

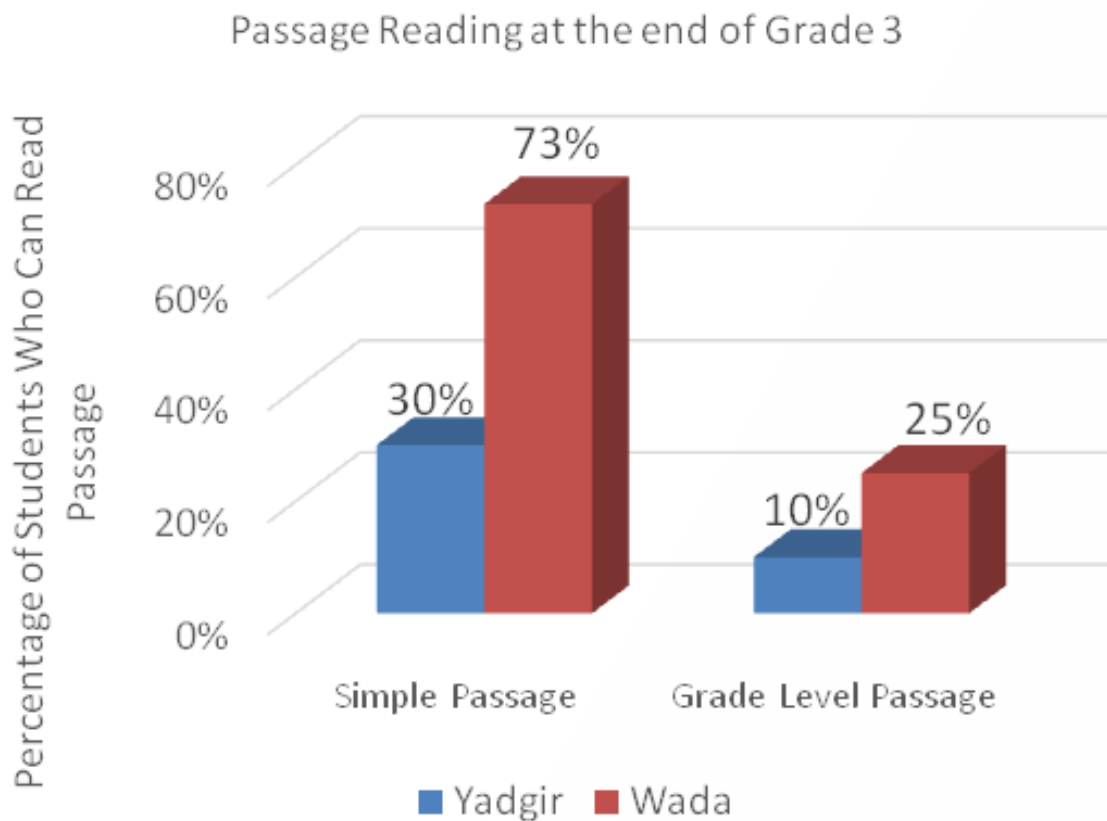


Figure 8.2: The percentage of students who can read a simple and grade-level passage at the end of Grade 3.

Figure 8.2 shows that children perform even worse on reading passages than on reading individual words. 73% of the students in Wada can read a very simple 30-word passage, but only 25% of them can read a passage at their own grade level of difficulty. In Yadgir, only 30% of the students can read a very simple passage, and only 10% can read a passage at their own level of difficulty.

This is the paradox of early literacy teaching and learning in India. The curricular and teaching methods are heavily decoding focused as described in Chapter

5; despite this, student learning even of lower order skills is well below grade level expectation. In this chapter we try to analyze and explain the various factors that contribute to these very low literacy outcomes.

In this chapter we will look at students' progress over time in a few indicative sub-tests of the LiRIL battery. Through this presentation we will try to understand areas of difficulty with decoding. We will also examine the role of decoding in the construction of meaning.

8.1 Akshara Recognition

There were four *akshara* level tasks in the LiRIL battery – *Moolakshara* Recognition, *Swarachinha* Recognition, *Jodakshara* Recognition and *Akshara* Dictation.

Table 8.1
Mean Percentage Scores on *Akshara* Tasks

	Description	End of Grade 1	End of Grade 1	End of Grade 1
<i>Moolakshara</i>	Wada	55	71	77
	Yadgir	44	66	78
<i>Akshara</i> (with <i>Swarachinha</i>)	Wada	14	45	56
	Yadgir	8	29	49
<i>Jodakshara</i>	Wada	4	17	32
	Yadgir	1	7	22
<i>Akshara</i> Dictation	Wada	45	61	68
	Yadgir	32	34	44

Nag (2007) has pointed out that the acquisition of alphasyllabic scripts continues well into Grades 4 and 5. This is evident in our data. We find that while the acquisition of *moolaksharas* plateaus towards the end of Grade 3 (most of the commonly used *moolaksharas* are recognized by this stage), the acquisition of *swarachinhas*, *jodaksharas* and *akshara* writing are still in progress (see Table 8.1). Curriculum designers do not appear to be aware of the length of time it takes to acquire the extensive *akshara* sets of Indic scripts. They assume that most *moolaksharas* are

mastered by the end of Grade 1 and most *swarachinha* and *jodaksharas* latest by the end of Grade 2. The sequential curriculum moves on to passage reading by the middle of Grade 2 at the latest, and there are no opportunities for the teacher or students to simultaneously continue with task of *akshara* acquisition. Students who have not mastered *aksharas* by Grade 2 are likely to find it extremely challenging to read the long dense passages of the Grade 3 curriculum. Figure 8.3 and Figure 8.4 show the unequal progress made by different groups of students in *moolakshara* recognition.

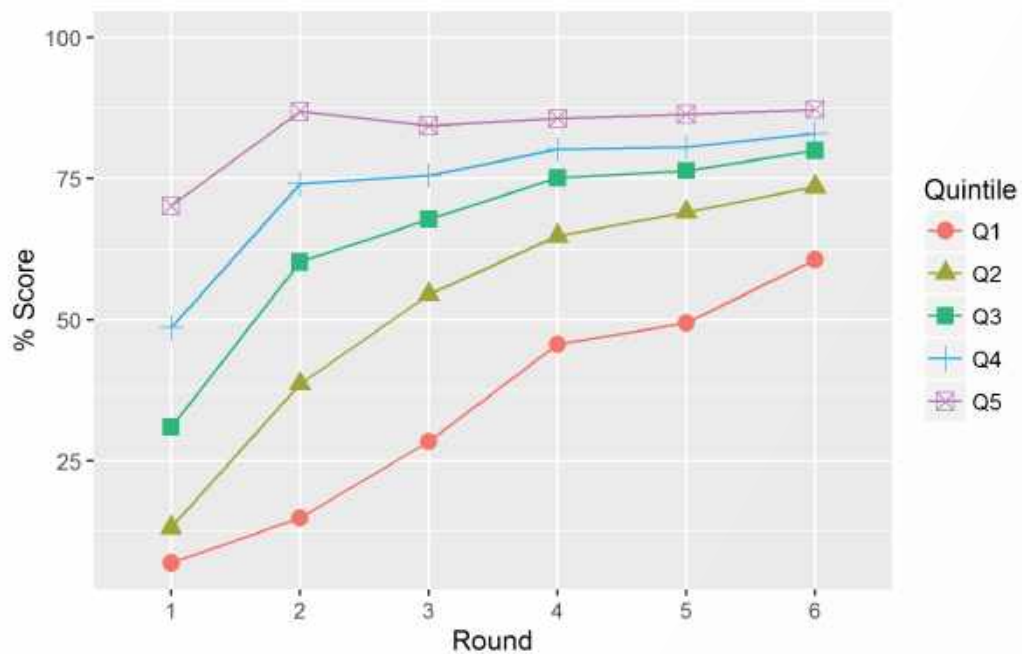


Figure 8.3: Performance in *moolakshara* recognition in Wada

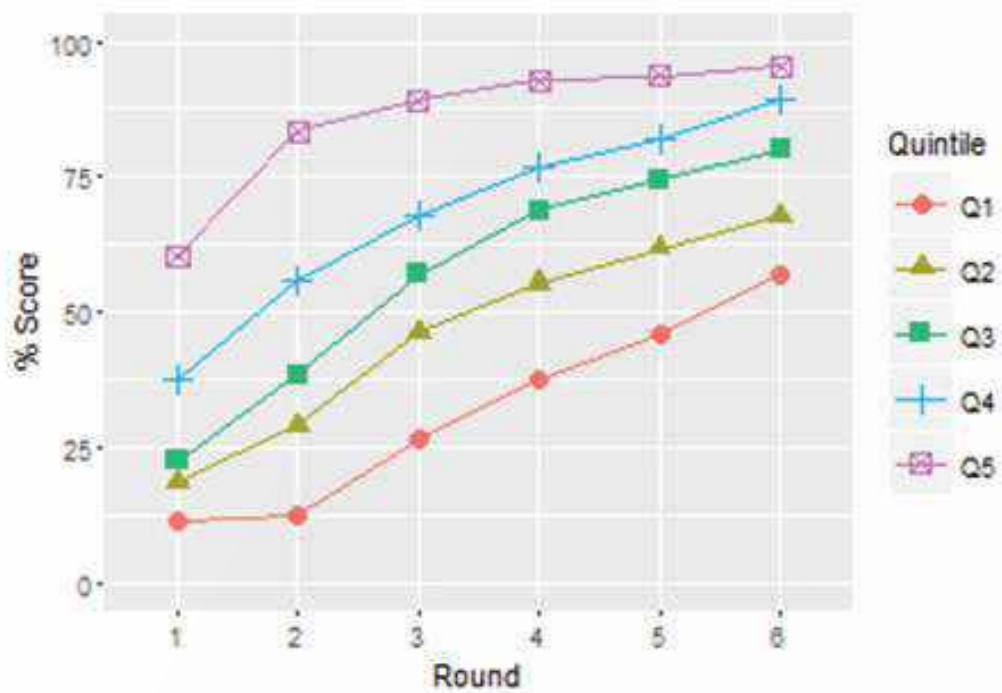


Figure 8.4: Performance in *moolakshara* recognition in Yadgir

What is of note here is that the top quintiles in both sites begin Grade 1 with substantial knowledge of the *moolaksharas*. There is a huge gap between these top

performers and the bottom two quintiles. The bottom quintiles enter school with minimal knowledge of *moolaksharas*. While students in Q2 make progress

over three years, students in Q1 (the bottom quintile) remain woefully unprepared to face the reading challenges coming up in Grade 4. This is exacerbated for *swarachinha* or *jodakshara* recognition. (see Figure 8.5&Figure 8.6). With *swarachinha* recognition the top quintile comes into Grade 1 able to recognize 15% of the *swarachinhas*. This steadily grows over the six rounds and by the end of third grade they know about 75% of the *swarachinhas* in Wada and Yadgir. However, it is worthwhile to note that even at the end

of the third grade, the bottom two quintiles at both sites have not learnt most of the *swarachinhas* or *jodaksharas*. At both sites the bottom two quintiles are stagnating in their growth in these tasks.

Site level differences can be seen in these tasks. While, in Wada only the bottom quintile is lagging behind the rest of the students in the *akshara* tasks, in Yadgir the bottom two quintiles (40% of the students) are not progressing sufficiently.

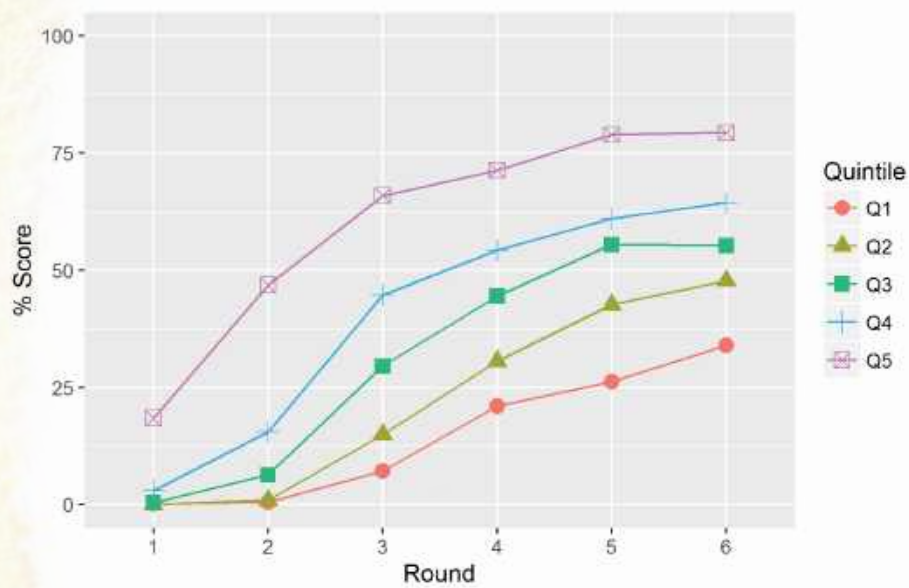


Figure 8.5: Performance in *swarachinha* recognition in Wada

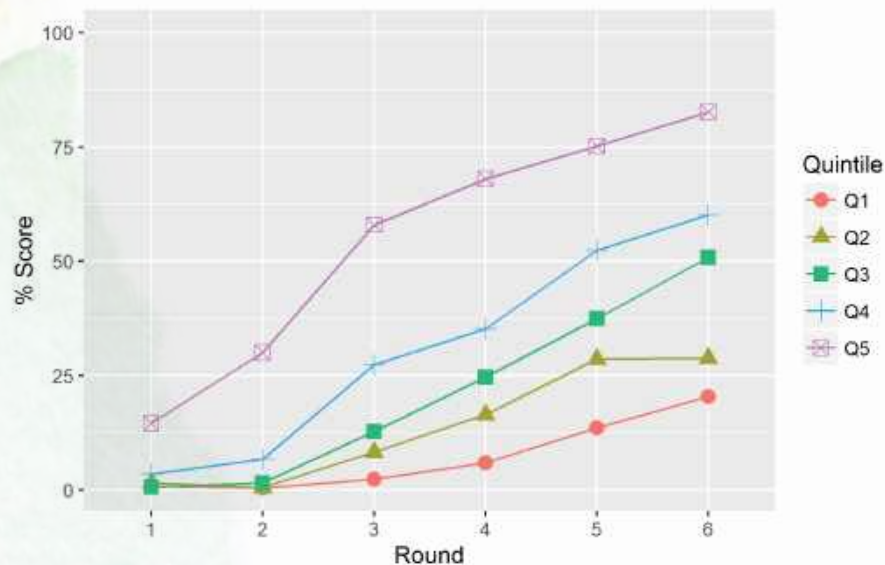


Figure 8.6: Performance in *swarachinha* recognition in Yadgir

In order to get to the heart of the difficulties related to such a foundational skill of reading and writing - *akshara* recognition, we examined whether there were specific letters which were easily recognizable to our student cohort in Yadgir and particular letters which were difficult for them to recognize (analysis for the Wada sample are ongoing).

We took the order of introduction of *aksharas* in the Nali Kali curriculum (introduced mostly during Grades 1 & 2) and checked the students' proficiency in recognizing them at the end of Grade 3. As Table B9 (see Appendix B) shows that the students are more easily able to recognize *aksharas* introduced early on in Grade 1 (July-August) and are less proficient in recognizing *aksharas* introduced later on in Grade 1 (September-October). This means that knowledge of *moolaksharas* (even fairly common ones like /k^a/) are not consolidated by end of Grade 3. The reasons for this are not very clear. All students learning to read and write in Indic scripts have to master a fairly extensive *akshara* set. Many students in the classrooms we observed appeared to be disengaged and even fatigued as the year (Grade 1) wore on. This could be one reason. It is also true that greater curricular time is spent on the earlier *akshara* sets as compared to the later ones. The complexity of the orthography possibly requires more attention to even the later *akshara* sets. At the same time it should not be done at the expense of meaning and relevance to the learner.

Challenges posed by *Swarachinhas* and *Jodaksharas*
Swarachinhas and *jodaksharas* pose unique challenges to the acquisition of Marathi and Kannada. Approximately half the *swarachinhas* had not been mastered at the end of Grade 3 at both sites. Only a third of *jodaksharas* were recognized in Wada and a fifth in Yadgir. Nag (2007) has commented on the difficulties that students face in acquiring these signs and symbols. Here we have presented students' performance in recognizing isolated *aksharas*. These difficulties might get compounded when *aksharas* are encountered within words. Error analysis conducted during piloting in Yadgir (see Appendix F4), revealed that approximately 42% of the errors made during word reading by Grade 3 student were accounted for

by mispronunciation of *jodaksharas* and nearly 16% by *swarachinhas*. The figures were marginally better for Wada.

Quintile Analysis

While the top quintile in Yadgir knows nearly 100% of their *swarachinhas*, the bottom quintile knows none. Q2 sits at about 12.5, Q3 at 50 and Q4 approaching 80. What can be noted by the quintile distribution of *swarachinhas* in Yadgir are rather neat strata that separate the quintiles by a significant margin. In fact the 100% of the student cohort is almost so evenly distributed among the quintiles (barring Q2 suffering from slight inertia) that one's ability to recognize *swarachinhas* may even come to determine one's overall performance, or, one's quintile allocation.

Regression Analysis

When we fitted the *akshara* tasks into a linear regression model with word reading (reading isolated words from a list) as the dependent variable (see Tables B10 and B11 in Appendix B), we found that at both sites, all the three *akshara* level tasks were significant predictors of word reading ability. In both sites the ability to recognize *swarachinhas* had a bigger contribution towards word reading than *moolakshara* or *jodakshara* recognition. In Yadgir the ability to recognize *jodaksharas* seems to have a higher impact on word reading when compared to Wada. The model seems to explain 89% of the variation (adjusted R-squared) in the word reading ability in Yadgir and 82% in Wada. All three aspects of *akshara* recognition are also significant contributors to word decoding in connected text (passage reading) (see Tables B12 and B13 in Appendix B). The model's explanatory power (adjusted R-squared) decreases to 71% in Yadgir and 64% in Wada, indicating that the students also use other cues to decode words in connected text.

The preliminary analyses presented here seem to indicate that the ability to recognize *swarachinhas* (at both sites) and *jodaksharas* (more so in Yadgir) are the perhaps the most significant challenges students face in acquisition of decoding ability. In alphabetic scripts, like English, phonemic awareness and letter recognition are the two most significant predictors of reading (decoding) ability. In our analysis, *akshara*

recognition is a very significant predictor although we have not been able establish phonemic or even syllabic level skills as significant predictors of decoding. The low proficiency in these abilities at the end of Grade 3 in a large proportion of the students, explains their overall poor performance in decoding tasks like word reading and passage decoding.

Script

Some part of the poor performance can be explained by the nature of Indic scripts. As Nag (2007), has pointed out, Indic scripts have several unique characteristics that leads to longer acquisition period than alphabetic scripts like English. First, the sheer number of symbols is much larger. Second, they are more visuo-spatially complex with symbols placed to the left, right, above and below the main text. Third, they are bound by complex ligaturing rules, for example, to the ways in which *swarachinhas* get attached to *moolaksharas* or *jodaksharas* get combined together. The rules are far more complex for a script like Kannada than Devanagiri, where *swarachinhas* appear in predictable ways vis-à-vis *moolaksharas* and there are fewer unique symbols for *jodaksharas*.

Instructional Analysis

The script no doubt poses unique challenges to beginning readers. However, observational data suggests that these are exacerbated by the instructional methods. Despite the large amount of time devoted to decoding instruction, most of this time is spent in copywriting or tracing the symbols. Very little time is spent in understanding the sound symbol relationships or in reading it in the context of meaningful words and text. For example, here is a vignette from a Nali Kali classroom in Yadgir. Teacher goes to a group where a second grader was sitting with an activity card with a *jodakshar* /gg/ (ಗ್ಗ) on it.

Teacher (T): This is called /g/ pointing to ಗ್, and the small /g/ಗ written below it is called a vattakshar. What is it called?

Student (S): *Vattakshara*

Then the teacher asked him to place beads on the letter and remember the shape of the letter.

(Observational Notes, Yadgir, Grade 1)

Both the decontextualized nature of akshara teaching as well as a greater emphasis on symbol mastery than on sound-symbol relationships can be seen in this vignette. There are at least two problems we see with the teaching of *swarachinhas*. Firstly, they are introduced several months into the reading program. This results in children reading, *moolaksharas* and sanskritized words that are not likely to be there in their own vocabulary for at least the first six to eight months of their schooling (examples have been provided in Chapter 5). Second, when they are introduced they are added on to the *moolaksharas*. Keerti Jayaram (2008) argues that the syllabic nature of aksharas requires their presentation as a coherent unit (*moolaksharas* with or without *swarachinhas*). Breaking these up makes the task more incomprehensible for the student (add vignette from Wada). The teacher (T) presented Grade 1 students (S) with several instances of “adding” and asked the students to complete while he went to supervise another class:

फ+ए= न+ए= ट+ए=

One of the students completed the task in the following way: प+ए= 1, न+ए= 2, म+ए= 3 (Observational Notes, Pilot Study, Wada, Grade 1) In her Early Literacy Program (successfully field tested in Delhi and Ajmer), Jayaram (2008) recommends teaching *aksharas* in varna samoocha approach. The varna samoocha consists of groups of *aksharas* with and without *swarachinhas*. For example, /kʌ/, /ka:/ and /kl/ are taught together in the very first samoocha. Two advantages are provided by this approach. First, it enables students to make simple words from their oral vocabulary from the very beginning of schooling. Second, it gives early and sustained exposure to *swarachinhas* in the context of reading and writing meaningful words.

Summary

- Acquisition of akshara recognition continues beyond end of Grade 3 in our sample. This could be because there are many different symbols to learn – the basic varnamala has 45+ symbols.

- More than three-fourths of the *moolaksharas* can be recognized by students by the end of Grade 3.
- *Swarachinhas* and *jodaksharas* pose a significant amount of difficulty to students. In addition, these scripts have *maatras* and *samyuktaksharas* – which can be very challenging for young learners. In scripts like Kannada, the *gunitas* (*maatras*) attach differently to different *moolaksharas* – so children have to not just learn the symbols for the *moolaksharas* and the *gunitas*, but also the rules for attaching them!
- The scripts are visuo-spatially complex – the *maatras* can go above the line, below the line, or to the left or right of the *aksharas* to which they are attached.
- *Akshara* recognition is significantly predictive of later word reading ability.
- The instructional emphasis is on teaching symbols without relating them to their corresponding sounds; and to emphasize on rote and repetition in the learning of the symbols. It also introduces *maatras* late and ineffectually, creating a variety of student difficulties.

8.2 Word and Passage Decoding

8.2.1: Student Performance towards end of Grade 3

We begin this section by reiterating a snapshot of student performance that we began this chapter. We examined students' ability to decode isolated words in leveled word lists which retrospectively were matched approximately to grade level. Likewise, we examined students' ability to decode words in leveled passages which were also matched to approximate grade levels. Table 8.2 presents the performance levels of students at each site. We notice that the majority of students across both sites were reading below grade level in both the word reading and passage decoding tasks. However, students in Yadgir performed considerably worse in both tasks as compared to Wada. At end of Grade 3, 36% of students in Yadgir are not able proficiently read even a simple word list with two to

three akshara words. 72% of them are not able to decode a short (approximately 30 words) passage composed of similarly simple words. The profile of students in Wada is somewhat different. While 84% of students are able to read simple words, nearly half the sample is still reading below grade level. 72% of them are able to read a simple passage proficiently, but only 26% are reading at or above grade level. Further analysis reveal that 34% of students in Yadgir are not able to decode a single word in a grade level passage while only 7% in Wada were unsuccessful at identifying a single word.

Table 8.1

Percentage of Students Reading at Different Levels towards End of Grade 3

Site	Below Grade Level	At Grade Level	Above Grade Level	At Grade Level
Site	Level 1 >	Level 1/Level 2	Level 3	Level 4 and above
Word Decoding Level				
Wada	16	47	29	9
Yadgir	36	35	18	11
Passage Decoding Level				
Wada	28	46	19	7
Yadgir	72	16	8	5

8.2.2: Quintile-Level Analysis

We administered a consolidated list of words (Word List 7) that included three words from each of the word list levels (1 to 6). Figure 8.7 and Figure 8.8 show the quintile-wise growth over the six rounds of data collection on Word List 7. The first thing we notice – as with other tasks – is the enormous variability in student performance in each site. Students in the top quintile (Q5) come into Grade 1 with more capability

in word decoding than students in the bottom quintile attain by the end of Grade 3. Worryingly, students in the bottom quintile at both sites show negligible growth over the three years. In Yadgir, this is true of the bottom two quintiles and the middle quintile's (Q3) progress is also very slow. In short, 60% of the students in Yadgir are not making much progress in word reading.

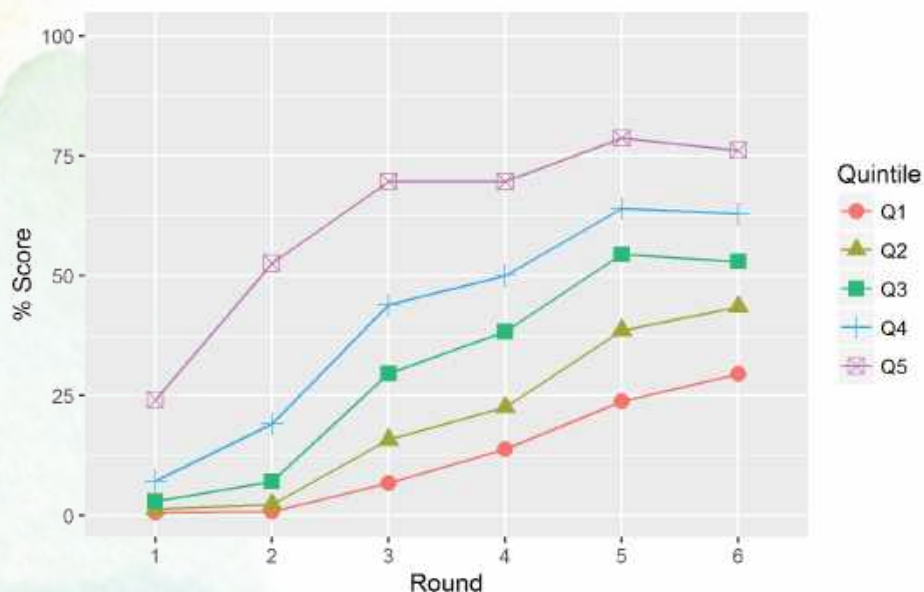


Figure 8.7: Performance in Word List 7 in Wada

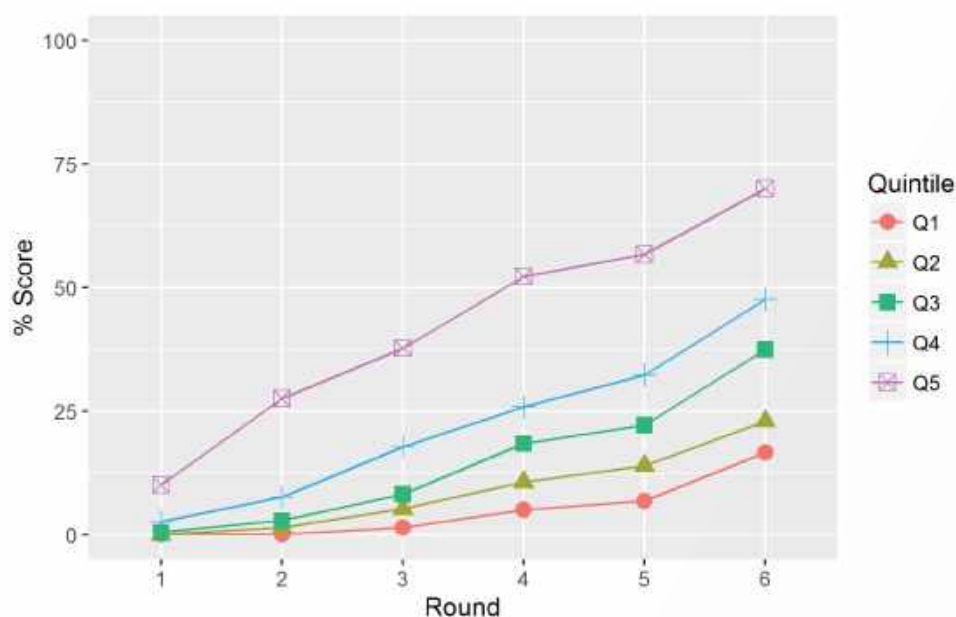


Figure 8.8: Performance in Word List 7 in Yadgir

8.2.3: Growth in Capacity to Decode Words

We also notice that the capability to decode words grows throughout the early years. Curriculum designers appear to assume that once all the moolaksharas, swarachinhas and jodaksharas have been introduced, students will be able to decode words with facility. Yet our data suggests that most students need considerable scaffolding and opportunities for reinforcement and exploration with word solving. This is contrary to the commonly held assumption amongst many educators and practitioners in India that given the highly transparent orthography (one-to-one symbol-sound correspondences) word decoding occurs automatically after students have learnt aksharas.

We have commented on students' ability to decode passages at the end of Grade 3 earlier in this section. When we look at their growth over time (see Tables B14 and B15 in Appendix B) we notice three things. First, there is not much growth in students' ability to read passages over the first three years of schooling Yadgir. Second, many students (57%) in Wada are able to read a simple (Level 1 passage of 26 simple words) passage during the second half of Grade 2 (between Rounds 3 and 4) and most (72%) are able to read this passage by end of Grade 3 (between Rounds 5 and 6). Third, even in Wada only 26% of the students are able to read passages at or above grade level. This has significant implications for curriculum development as well as pedagogical reflection.

8.2.4: Phases of Word Decoding

By triangulating various sources of data—most importantly, responses on the LiRIL battery over time, as well as detailed classroom observations of different students' reading—we have identified some fairly predictable phases that students appear to progress through as they master word decoding. Table 8.3 presents the tentative phases that we have identified thus far. It should be noted that by ending

the project at Grade 3, we may have missed a phase beyond the full aksharic phase (described in the table) when students consolidate their knowledge of *aksharas* and become more strategic. Also, instructional conditions greatly influence the progressions that we have noted here. For example, if *swarachinhas* are introduced along with *moolaksharas* in a different program, a different progression might be seen.

Table 8.3

Phases of Word Reading in Kannada and Marathi

Pre-Akshara Reading

Reading

- During this phase, the child does not attend much to the *aksharas* or print presented.
- The child may use other cues to read. These cues could be pictures, or may be drawn from the child's background knowledge (e.g., common words the child hears), or from the context of the classroom
- The child may recognize a few *moolaksharas* when presented separately, but is not able to recognize them during word reading. We found that children are able to recognize an average of 6 *aksharas* during this phase.

Spelling

- If given opportunities to free-write, children write in scribbles, wavy marks, circles, etc.
- Sometimes, children write known *aksharas* or numbers all over the page, in no particular order.
- Some children may refuse to write.

Partial Akshara Reading: I

Reading

- The child begins to attend to *aksharas* while reading words in this phase. In the beginning, some characteristics of the pre-*akshara* phase might still be seen. This means the child will sometimes attend to, and sometimes ignore text.
- The child seems to understand that for each symbol, there is a sound.
- Children in this phase are able to segment, or break up, spoken words into syllables.
- In reading words, the child may not maintain the order of *aksharas* from left to right, and may omit *aksharas* entirely (e.g., माकड – कम). In this example, the child has recognized 2 *aksharas* in the word and made up another word with those *aksharas*.
- If *aksharas* look or sound similar to each other, this poses a challenge during this phase.

- In reading words, children in this phase still focus almost exclusively on the *moolaksharas* and omit reading the *maatras* (e.g., कैलास – कलस).
- We notice that children in this phase begin to decode simple words when they can recognize between 20-30 *moolaksharas*.

Spelling

- Children are able to write a few *aksharas*. To write a given word, child may represent only few *aksharas* for a word, or may write incorrect *aksharas*. For e.g., माकड – मकन
- Children group together *aksharas* when writing words. So, they have realized that letters need to be grouped together to form words.

Partial Akshara Reading: II

Reading

- The child continues to attend to both cues from the context and from the *aksharas* in decoding words.
- The child typically recognizes 1-5 *maatras* (ण ि ि ु) during this phase.
- The child can read simple words with few *maatras* during this phase.
- Differences between the long and short vocalic sounds (raswa-deergh) of the *maatras* may not be recognized at this phase.
- Some *maatras* that are read correctly in one word may not be identified correctly in another word – that is, recognition of *maatras* is inconsistent.
- While reading, the child may not blend syllables into words, but may read syllable by syllable across words in a text without recognizing word boundaries.
- When given longer words to read, the child may not be able to attend to all parts of longer words.

- The child in this phase cannot yet recognize most *samyuktaksharas*, or the *maatras* that are taught late.
- In reading *samyuktaksharas*, many children either identify both sounds in the *samyuktaksharas* as separate syllabic sounds, or only identify one of the sounds and omit the other.

Spelling

- Children are able to write a few simple words without *maatras*, like घर, वन.
- When writing longer and more difficult words, children write phonetically using invented spellings, with the *aksharas* representing a sound close to the sound in the original word. For example, डौल – डऊल; पपिरी – पापीरी.

Partial Akshara Reading: III

Reading

- While decoding words, children still make use of cues from the context and from *aksharas*.
- More self-corrections (that is children correcting themselves when they make word-reading errors) can be seen during this phase.
- The ability to blend or put together syllables into words improves, although some children may still not be able to do this yet.
- The child may succeed in decoding long words by breaking them into syllabic chunks.
- Commonly used *maatras* (ण ि ि ु) can be recognized within words and the child reads these *maatras* consistently.
- *Maatras* that are introduced later in the curriculum are still not mastered fully.

- Words with multiple *maatras* can still pose challenges for the child.
- The child can read *samyuktaksharas* in commonly occurring words, for example, आपल्या, तुमच्या, माझ्या (Marathi); ಅಪ್ಪಅಮ್ಮಮಕ್ಕಬ(Kannada).
- But, *samyuktaksharas* continue to be difficult and challenging for children, overall.
- During this phase, children are able to read a simple passage with frequently used *maatras*.
- Children are able to write simple and frequently used words correctly. Words with the *maatras* ण ि ि are written correctly.
- While writing long words all *aksharas* are represented correctly, but there may be errors related to *maatras* that are taught late.

Full Akshara Reading

Reading

- All the *moolaksharas* that are used commonly in the Kannada and Marathi script are recognized. Some *aksharas* are used very, very rarely or not at all – these may not be recognized (Eg. *ಞ* and *ಙ*).
- Most of the *maatras*, with few exceptions, are recognized consistently. Some errors may still be seen on rarely used *maatras*, or on *rasva* vs. *deerghmaatras* (long and short versions of the same vocalic sound).
- Commonly occurring *samyuktaksharas* are read consistently and accurately. Sometimes, when a *samyuktakshara* is accompanied by a *maatra*, the child may omit reading either the *samyuktakshara* or the *maatra* (e.g., *चंद्रादय* instead of *चंद्रोदय*).
- Children may struggle with reading *samyuktaksharas* in longer words that have more than three *aksharas*, and in words where there is more than one *samyuktakshara*. In other words, children could still struggle with reading complex or unfamiliar words during this phase.

- At this phase, most of the words read in isolation are blended. In connected passages, there may be a small percentage of words which are not blended. These are mostly the longer words which are still sounded out syllable-by-syllable.
- Children are able to read passages with simple words with *maatras* and a few simple *samyuktaksharas*.

Spelling

- We could not see much improvement in children's writing during this phase.
- Children at this phase can write simple words correctly, but make mistakes with words with *maatras* that are introduced late, and with words that have *samyuktaksharas*.

Consolidated Word Reading

Very few children in our sample at each site reached this phase by the end of Grade 3, hence we have a relatively smaller set of data to describe this phase.)

Reading

- Children have mastered akshara recognition (including *maatras* and *samyuktaksharas*) for the most part during this phase.
- Blending is consistent and the child is able to read with expression.
- Children read faster and more easily.
- Children use strategies to “word-solve” with difficult/unknown words—both while reading and while spelling.
- On an average, children are reading passages at the Grade 2 and Grade 3 level at this phase.

Spelling

- No improvement in writing could be seen across the last 3 phases of reading.
- Simple words are spelled correctly. But children still struggle with words with *maatras* that are introduced late, and with words with *samyuktaksharas*.
- This lack of improvement could be due to the nature of the instructional programmes that do not give children many opportunities to write, other than copy-writing.

8.3 Relationship of student performance to how decoding is taught

Based on our curricular analysis and classroom observation we have come to certain conclusions about the relationship between poor student performance in decoding and how decoding is taught in classrooms. Table 8.4 summarizes some of these relationships.

Table 8.4
How is the Script Typically Taught in Indian Classrooms?

Classroom Teaching of Decoding The script is taught with more stress on learning the symbols (<i>aksharas</i>), than their sounds. Children spend a lot of time tracing and copywriting <i>aksharas</i> and words, but not enough time trying to match the symbols and sounds together.	What difficulties does this create? Learning the script involves understanding that symbols and sounds are associated. When we look at symbols and can remember their sounds, we can read, or “decode” the script; when we think of sounds and can find the right symbols to match them, we can spell, or “encode” the script. Activities that require children to go back-and-forth between symbol and sounds are required for strong script acquisition.
Rote and repetition are the only strategies used to help students learn.	When children learn the script only through rote and repetition, they do not get a chance to practice their new skills, or to try to read (“solve”) unknown words on their own. This contributes to children not being able to decode individual words, or read passages for themselves. They can only “read” words that have been learnt by rote.
Children are not taught to blend <i>aksharas</i> into words.	Students end up reading <i>akshara-by-akshara</i> , and do not know when a word has been read, or where the next word begins. They end up calling out a meaningless series of syllables that do not make sense to them (or others).
Maatras are not introduced early or taught effectively.	Most everyday/common words in Marathi and especially in Kannada, have <i>maatras</i> in them. When <i>maatras</i> are introduced late (e.g., 6 months into Grade 1), students end up reading rare/difficult words in the early part of Grade 1, which are difficult for them to understand. When the <i>maatras</i> are introduced, as mentioned earlier, there is more emphasis on learning the symbols, than the sound, making the <i>maatras</i> learning process long and tedious for most students in our sample.
Children are not given opportunities to read passages at an appropriate level of difficulty.	Children spend most of their time in Grades 1 and 2 reading and copy-writing <i>aksharas</i> , words and sentences. They have very few opportunities to read meaningful passages at a level of difficulty that they can manage with some support. As a result, their passage reading skills are very poor, and speed (pace) of reading is very slow. Very slow and effortful reading disturbs the meaning-making process.

Meaning is not used as a foundation to teach children the script.

The script is taught in way that completely separates it from the child's life. Words formed from the taught *aksharas* are not words that the child is likely to understand; nor, is copy-writing an engaging or meaningful activity. As a result, children fail to see the relevance of reading and writing to their lives.

Summary

- 60-70% of students decode words “below grade level” by the end of Grade 3. 75-90% of students are decoding passages below grade level by the end of Grade 3.
- There is a lot of variability in student performance, with students in the top quintile coming into school with decoding ability comparable to what the bottom quintile accomplishes by the end of Grade 3.
- Growth over three years is worryingly low for the bottom two quintiles at Wada, and for the bottom three quintiles at Yadgir.
- Distinct “phases” of word reading ability could be seen at both sites.
- There are no appropriate pedagogic strategies for word decoding. Rote and repetition seems to be the only ‘method’. Specific ‘word solving’ skills are not being taught.

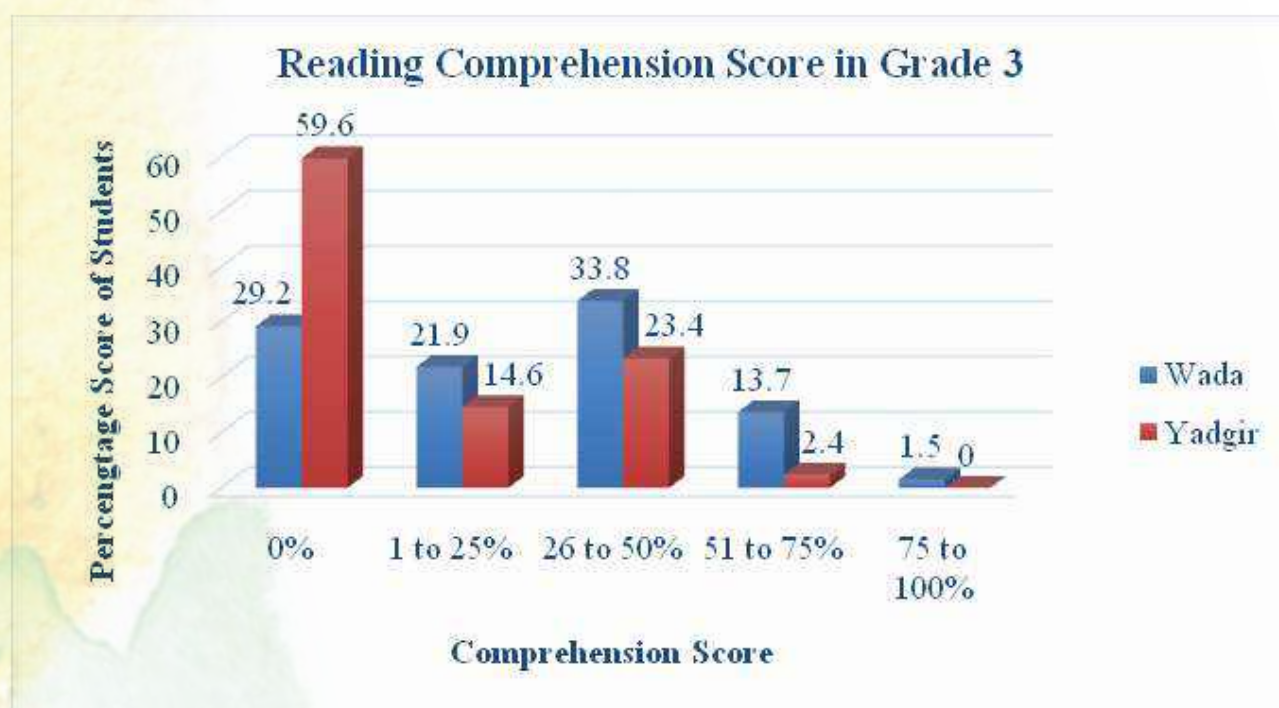


Literacy Outcomes: Comprehension

The LiRIL project has studied comprehension using various methods (see Chapter 3). Comprehension questions on the LiRIL battery were administered only if students were able to read a passage with 90% accuracy. If not they were moved to a lower level passage and so on. As data presented in the last section shows, even at the end of Grade 3 very few students in Yadgir (28%) were able to proficiently decode passages at any level of difficulty. Hence we have comprehension data on a very small subset in Yadgir. The data set at the end of Grade 3 in Wada is larger (72%). Hence, longitudinal analysis of these data

is difficult. Instead we present here a snapshot of students' comprehension at the end of Grade 3.

In Round 6, we administered a common passage that was approximately at grade level to all students at both sites irrespective of their decoding ability. Students were assessed on their ability to respond correctly to five kinds of comprehension tasks – explicit, implicit, retelling, sequencing and vocabulary. A combined score was generated for each student. Percentage scores on this passage are presented in Figure 9.1.



.Figure 9.1: Student percentages and reading comprehension scores

While in Yadgir close to 60% of children got a score of zero in the comprehension questions, in Wada 85% of students got a score below 50% on comprehension. The overall picture from this figure is clear. Students are struggling with comprehension, even after three years of being in school.

As we can see, there is a definite difference between the performance of the students in Wada and Yadgir. This might be because of the difference in classroom instruction between the two sites. While we found that both sites focus on copy writing and learning the script –and not on developing the child's meaning –in

Wada we also worked with Balbhawans (after school programs) that tried to do some comprehension based activities. It must be stated, however, that both these results are very poor.

Figure 9.1 presents scores on a grade level passage, but even if we look at a most simple passage reading exercise, which contains only simple 2-3 akshara words, the outcomes are still very poor (see Figure 9.2).

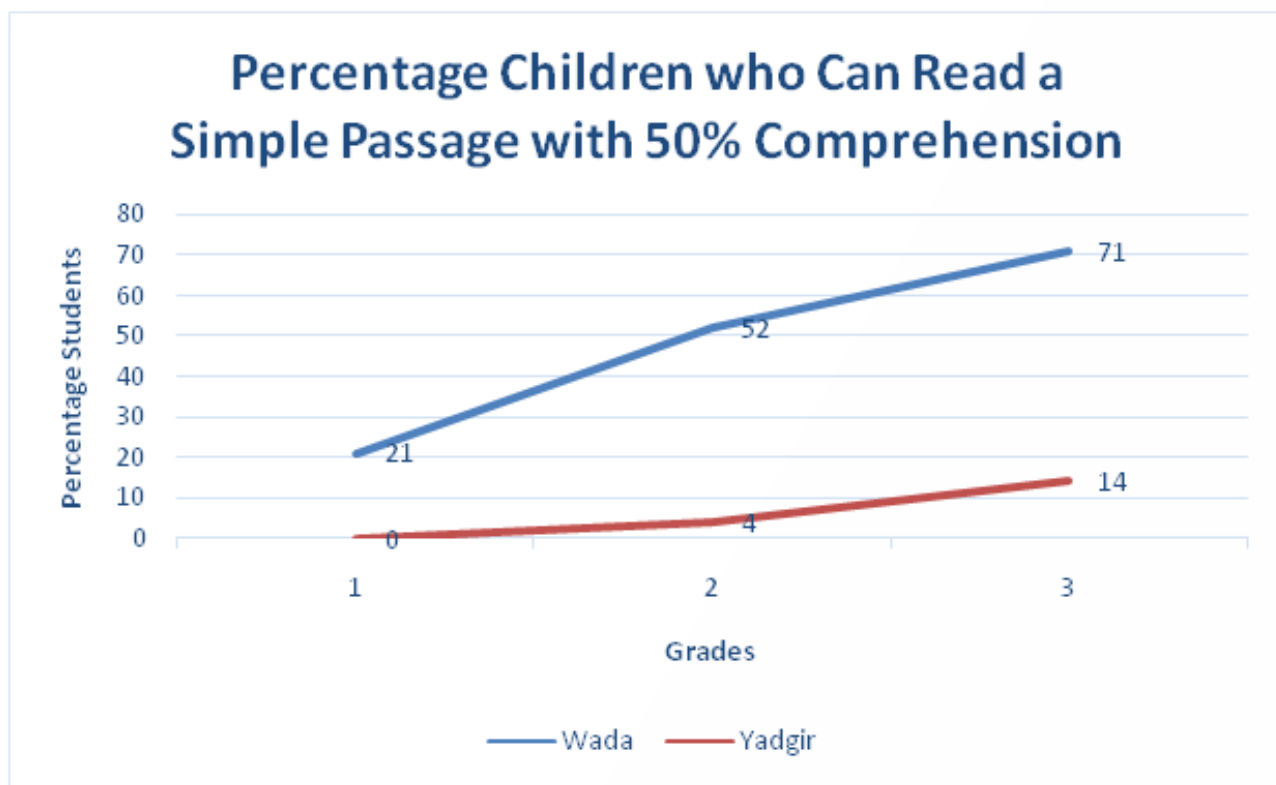


Figure 9.2: Percentage of students who can read a simple passage (of the level of a 1st grader) with 50% comprehension)

No children in Yadgir could read a 1st Grade passage at the end of Grade 1 and understand enough to score 50% in the simple comprehension questions asked. Only 21% of students in Wada could manage to read and score 50% on a passage of their level after Grade 1.

Even after three years of school, in Yadgir 86% of students cannot read a Grade 1 passage and get 50% comprehension. In Wada 29% of students can't read a Grade 1 passage with 50% comprehension at the end of Grade 3.

In short, this data tells us that after spending three years in school, children cannot even read a Grade 1 passage with a decent amount of understanding.

Let us look more closely into comprehension and where exactly students are struggling. To understanding the difficulty in comprehension we will frame the capability of comprehension into five distinct features (as elaborated by Michael Pressley (2000) – Decoding, Vocabulary, World Knowledge, Active Comprehension Strategies and Monitoring. Now, let us look at the challenges the students, we have observed, face in each of these areas.

9.1 Comprehension Challenges: Decoding

Students cannot understand texts if they cannot read the words. Decoding is the ability to recognize letters, understand letter-sound relationships, know letter patterns and correctly pronounce written words. Once children are able to put sounds together into words, they can see whether the words they read make sense in the sentence. Along with teaching children to recognize letters and words, therefore, we must also

teach children to ask themselves if what they are reading is making sense. Children should know that they can misread and be ready to read again if they are not understanding. In this way, learning the script and searching for meaning can go hand in hand as children get more and more exposure to reading aloud on their own.

Look at this example of a child in Grade 3, reading a storybook we gave her.

Comprehension Reading, Grade 3, Wada

We gave the child the story A Catty Ratty Tale. This story is about a group of cats who invite the rats for a feast with the intention of eating them up. The rats, however, dig holes before they go to the feast for their escape, in case the cats attack. And so, when the cats start suddenly chasing them, the rats run away, unhurt, and are safe at the end of the story.

The following is an example of a child in Grade 3 reading this story:

The text says: "The leader was very smart. He said, 'You go. But remember that the cats are our enemy. If you go there, dig holes. And if there is any trouble, get into the hole and run.'"

The child reads:

नेता (उगा) हुशार होता तो ... म्हनाला जातुम्ही पन एकलक्षात ठेवामाजरही आपली शत्रू आहे...

कोणालाही इजा होणार नाही याची काळजी घ्या मेजवानीच्या ठीकाणी गेलात की पहिल्यांना दाबीळ खो...

खोदा काही संकट येतय असवाटलतर सरलतर बीलात घुसून तीथून पलकाढा

Except for a few words, we can see that the child is not even reading words. Instead, after three years of being in school, the child is calling out aksharas!

After she "reads" the entire paragraph, this is how she responds to questions:

Q: नेता कसल्या संकटाबद्दल बोलत आहे? (What trouble is the leader talking about?)

A: बीळ ... reads again – खोदला. (To dig hole)

Q: OK.. कशासाठी? (OK. But for what purpose?)

A: कारण त्यांना भूक लागली. (Because they were hungry)

Q. Asked once again. नेता कसल्या संकटाबद्दल बोलत आहे? (What trouble is the leader talking about?)

A नेता हुशार होता. (The leader was smart)

In this example, we see that the child is trying hard to answer the questions being asked of her. However, since she does not put together the words in her reading, she is not able to grasp a story and answer questions. So, when asked a question, the child quickly puts together a set of words by relooking at the text. Her answers, therefore, have nothing to do with the questions.

with reading has just been to decode and not read out words with meaning. For this child, reading has mostly been a meaningless exercise. The child, therefore, still struggles with reading and understanding is too difficult. This disconnect between decoding and comprehension is further illustrated when we compare the decoding abilities of students with comprehension.

Decoding is very important for comprehension, but it is not enough! Here, we see that the child's experience

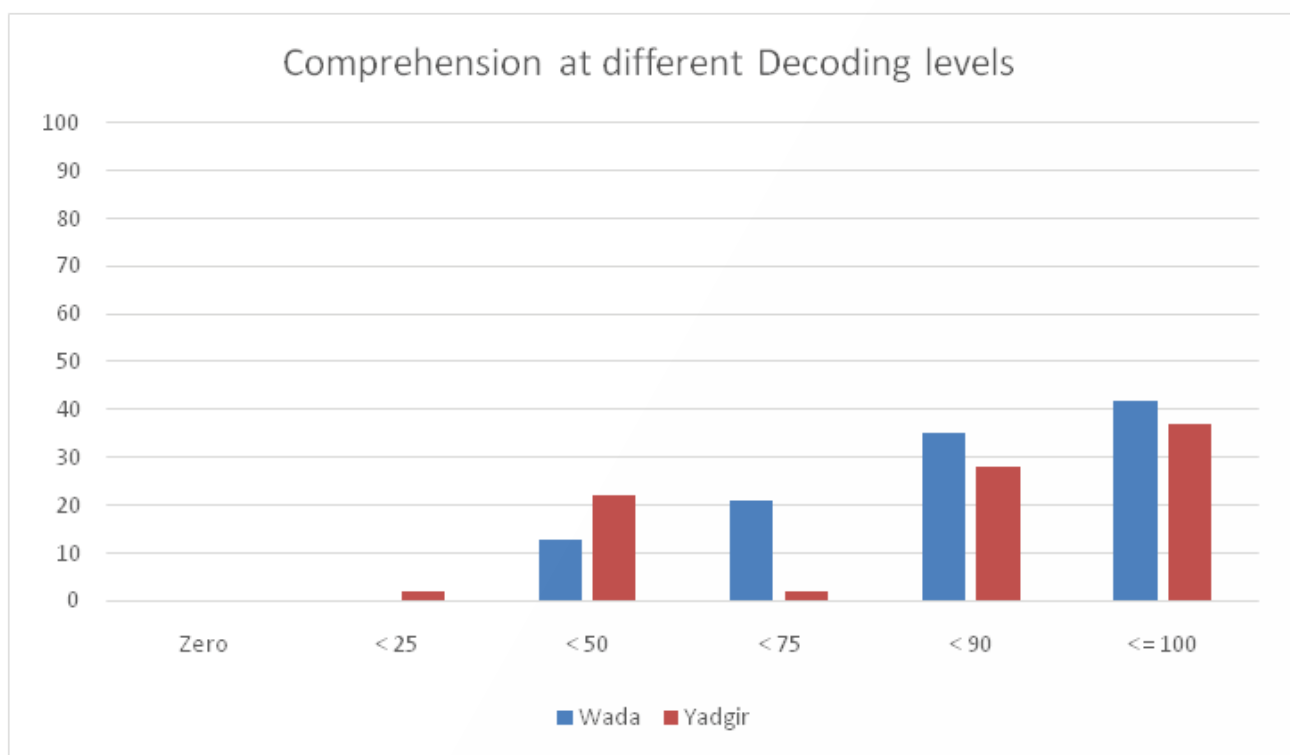


Figure 9.3: Comprehension at different decoding levels

Figure 9.3 shows the average comprehension of students at different levels of decoding. Even students with higher decoding ability show average comprehension. This corroborates with our previous illustration of decoding, even when accurate, is done in a way that hinders meaning making.

9.2 Comprehension Challenges: Vocabulary

We gave students a passage called, “The Flower and the Butterfly” about the wish of a flower to exchange places with a butterfly, until the flower’s adventures with the butterfly’s borrowed wings makes her yearn for her own existence as a flower. The passage is approximately at a Grade 3 level. Within this passage

occurs the term in Marathi for “peecha karna” (give chase). We asked the students if they understood the meaning of this term, which is central to understanding the passage. Figure 9.4 presents the results of correct student responses.

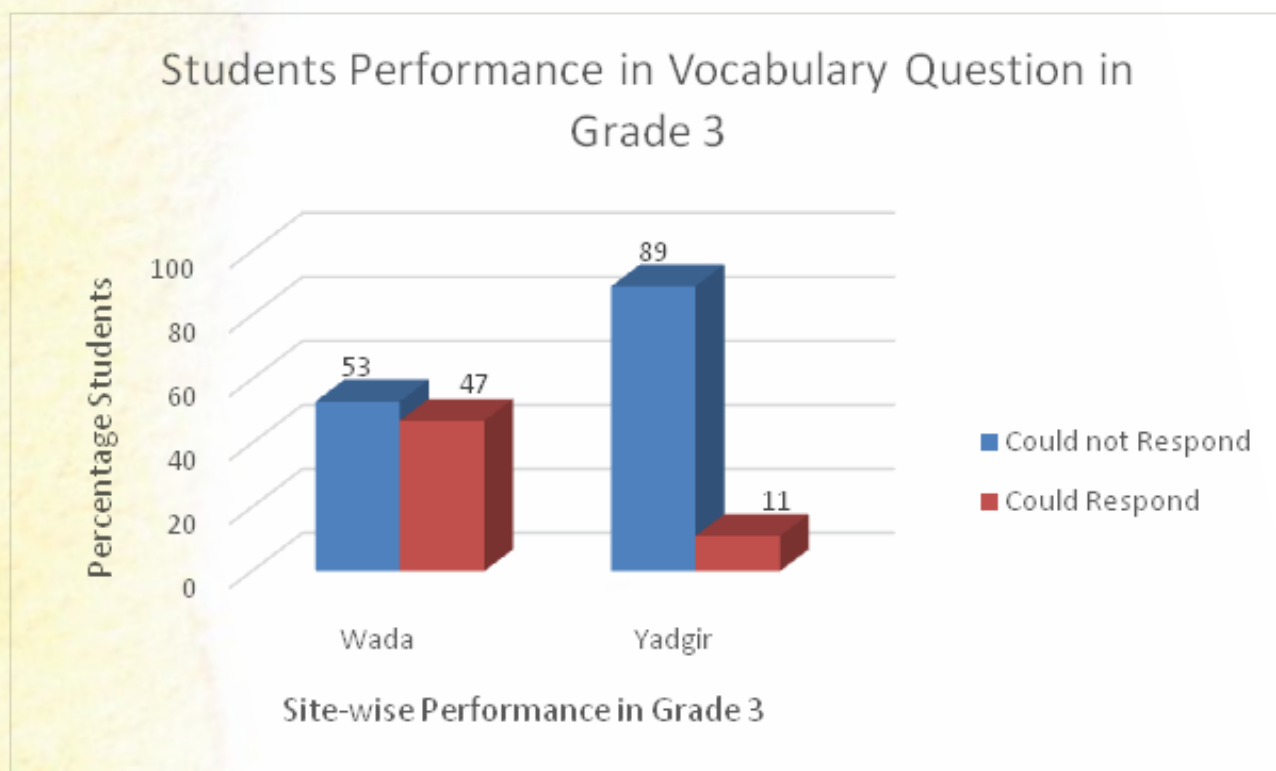


Figure 9.4: Students’ Performance on Vocabulary at the end of Grade 3

In Wada, just below half of the students were able to respond correctly. In Yadgir, however, an overwhelming 90% of children could not give the meaning of the term. The term was chosen because it is quite easy to guess from the context, if children had not come across it before; and also because it was key to understanding the flower’s adventures. We see, however, that even with a word that is quite easy to guess from the context, children still struggled with figuring out unfamiliar vocabulary.

This is quite telling of the classroom environment and the way vocabulary is dealt with. It appears that the children’s finding out of the meaning of words is not encouraged. In fact, in most classrooms we observed it is the role of the teacher to give the child meaning. The child’s understanding is to come from the teacher, not from their own efforts. We will explain how this responsibility for meaning happen in our classrooms in the following section, when we look into reasons behind student performance.

9.3

Comprehension Challenges: World Knowledge/Connecting with Life

Readers who have knowledge about the texts they are reading, do better at reading than their classmates who do not know much about a topic. One way to build prior knowledge is to ask students what they think a text might be about before beginning to read. Discussion of a text in the classroom, with students sharing ideas can help introduce texts and prepare readers for what they are going to read. Difficult words or concepts in the text can be introduced before reading starts. With fiction texts, children can be asked to think about a specific feeling in detail with the teacher's guidance before they read what happens to the characters in a story.

We found something very interesting in the way that our students were connecting with life or using their world knowledge with texts. Unlike the finding in Western research that shows struggling readers find it difficult to connect the text with life, our readers connected text very richly with their lives. However, we found that the connections with life and happenings in the real world overshadowed what was happening in the text. Have a look at these example and see how this happens.

Text Engagement, Grade 3, Wada

The children were given the story of The Catty Ratty Tale.

The text said: One day, the cats called the rats for feast. They made rice, puris and lots more. Everybody's mouth was watering. They invited the rats.

Q: What do you think will happen now?...

A: खचिडी खायला ... लापशी खाया , खचिडी खाया.

To eat khichdi, to eat lapsi, to eat khichdi.

[When the school or anganwadi serve lapsi or khichdi, all the children go and

Beyond the story, the child connected to the word "feast" and talked about what it meant in his own experience. The cats and the rats and what was happening in the story was not discussed. But, real life feasts were talked about.

We stopped at the very same juncture in The Catty Ratty Tale, when asking a student in Yadgir to make a prediction about the story, she said:

Text Engagement 2, Grade 3, Yadgir

Researcher: So now what will happen? Will the rats go to the feast?

Child: The rats will go.

Researcher: Why?

Child: You invite us for dinner, we will come, na? Like that.

This child response to the dinner invitation is based entirely on her own experience. Her response has no connection to the enmity between cats and rats that has been talked about in the story before this.

Text engagement, Grade 3, Wada

In The Catty Ratty Tale, the cats decide to start singing so that all the cats know that it is time to attack the rats.

When the cat starts to sing the child is asked:

Q: Why are the cats singing?

A: Because it is Ganapati [puja].

Here we see the child is almost oblivious of the story. She responds to the question drawing only from personal experience of community singing. This is a very interesting trend indeed. Perhaps such responses emerge because children are getting opportunities to talk in school and they would rather talk about their lives. But what these examples show, is that children are not able to connect their lives in a way that helps them to better engage with the text.

Children do not create a coherent storyline in the minds, based on what is happening in the text. Instead, they connect to some parts of the text because it has meaning for them, and leave out others. They do not seem to know that the text as a whole has a meaning and story of its own. No coherent representation of the text appears to be forming due to these personal connections.

9.4 Comprehension Challenges: Lack of Strategies

Good readers are very active when they read.

Research tells us that these are some of the strategies that good readers use:

- ✓ They are aware of why they are reading a text. Their reading has a clear purpose.
- ✓ They glance through the whole text before they start reading. Then they chose what to read carefully based on the overview.
- ✓ They make predictions about what they will encounter in texts.
- ✓ When they come across information that is different from their prior knowledge, they revise their knowledge based on new information.
- ✓ They underline, re-read and make notes to remember important points.
- ✓ They review important points when they are done reading.
- ✓ They think about how what they read will be useful in the future.

Reading researchers have found ways to stimulate active reading. To do this they put children in the habit of using the following strategies:

- 1) Asking questions about the text while they are reading
- 2) Making mental images as they read
- 3) Predicting what will happen next in the text
- 4) Summarizing
- 5) Thinking about the setting and characters in a text
- 6) Recapping the problems characters in the text encountered, the solutions characters tried and the solution that finally worked.

We observed students' comprehension strategies in three areas – retelling the story, answering explicit questions and answering inferential questions. In the next few paragraphs we present our observations.

9.4.1: Retelling

Retelling the story is an important strategy because it determines that children have understood the text and are able to put it in their own words. Children who retell well are also able to separate important and non-important information which is necessary for good reading.

When given The Catty Ratty Tale, this is how students responded, at the end of Grade 3, when asked to retell the story:

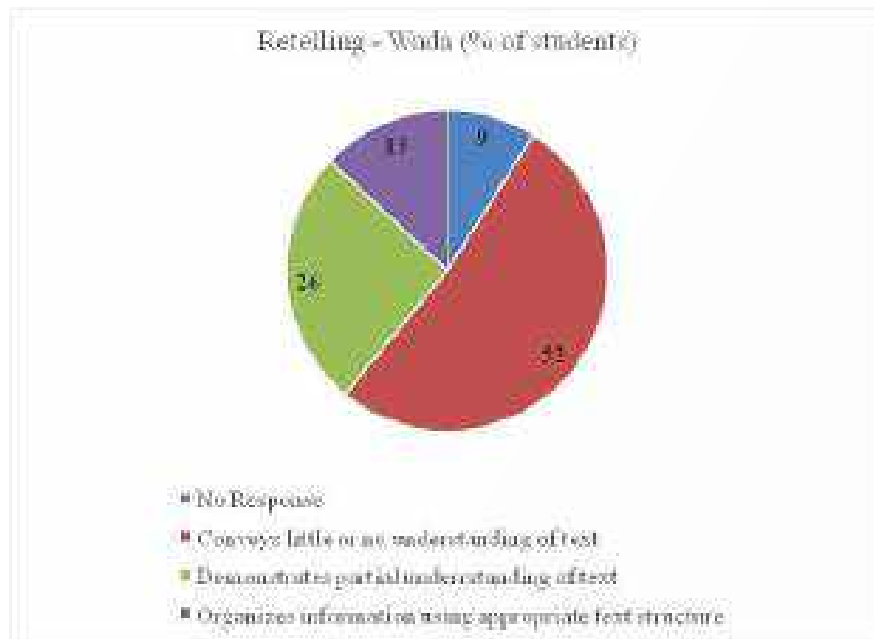


Figure 9.5: Students' performance on retelling at the end of Grade 3

At the end of Grade 3, we see that more than half of the students show little or no understanding of the text in Wada. Only a very small 13% of the students are able to retell the story with some order and sequence.

Answers were typically, something like this: "There were cats. The rats go into the hole. Their house inside the ground." Another student: "The cats caught the rat and the rats bit the cats." Yet another student: "There was a rat. There were two cats. They were thirsty. Something happened. Then they started running. They were hungry and they ate."

We see from these answer that students seem to have a very minimal understanding of what happens in the story. Rather than the text, they seem to be guessing story and meaning from the pictures. Children were not able to communicate any details about the text. Children also did not present a clear beginning, middle and end in their stories. There is

not sense of story structure.

This is interesting because it reveals a lot about what children think about stories. From this it is clear that:

- Children do not seem to find meaning in the text. They rely mostly on the pictures for their retelling.
- Often children do not connect information given across pages into a story.
- Children are not aware that a story has a beginning, middle and an end.

It appears that the concept of a story. A world that has characters, a setting and a plot is unfamiliar to the children. They do not know how to put together information on multiple pages and make one coherent understanding from this. In short, children do not understand what a story is. They do not know that all stories follow a text structure.

9.4.2: Answering Explicit Questions

We gave children The Flower and the Butterfly passage and asked them, “why did the flower want to take the wings of the butterfly”. Since the answer is clearly written in the passage, this is an explicit question.

Figure 9.6 shows the student’s performance on this explicit question.

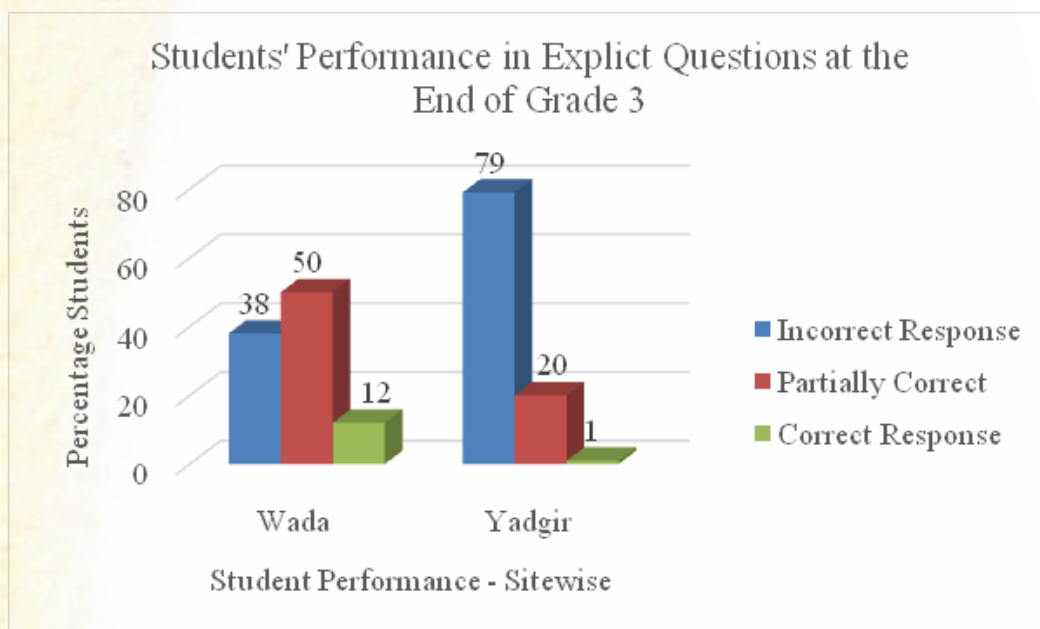


Figure 9.6: Students’ performance on an explicit question at the end of Grade 3

The answer to this question is very clear in the text. However, the correct responses to this question are so very few in Yadgir and in Wade only half the students were able to answer it correctly. It seems clear that since students cannot answer very basic questions about the text, they are not following along. Children do not seem to be able to read and understand what is happening in this story.

9.4.3: Answering Inferential Questions

Here, we looked at whether students were able to make connections in the text and logically link different sentences and the pictures to answer questions.

The questions were:

- 1) What trouble is the rat leader talking about? (He thinks the feast may be a trap to catch the rats.)
- 2) Why are the cats singing? (The cats decide between themselves that they will sing when it is time to attack the rats.)

Ability to Infer from text (Wada)

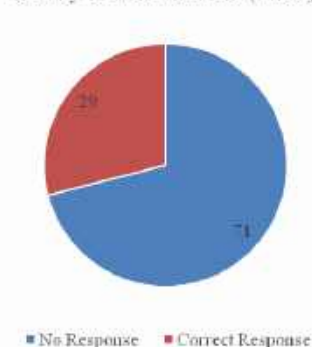


Figure 9.7: Response to inferential questions in Wada

We see that a huge 71% were not able to answer these questions in Wada (see Figure 9.7). However, when we asked questions based only on information from the picture (“Were the cats able to catch the rats?”), student performance improved slightly (see Figure 9.8).



Although it seems that children are better able to read picture than texts, children still perform poorly. Only 42% are able to answer this questions correctly and see that the rats escaped from the images. This is very troublesome.

This could again empahsize the point that children do not seem to understand the connection between the pages. The text is not seen as connected. What happens on one page and what happens on another are not clearly linked to questions and content.

Ability to Infer from pictures (Wada)

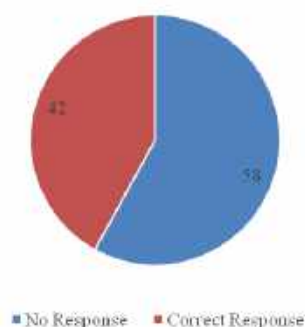


Figure 9.8: Response to inferential questions (pictures) in Wada.

9.4.4: Monitoring

Here we ask, “Are students able to check for themselves whether the text is making sense?”. We look at this question in the specific area of prediction. We asked students to predict what a text may be about after at the story book’s cover and looking through the pictures in the book. We found that children readily volunteered their predictions. However, when what they read and saw (in the pictures) was contrary to the predictions they made, children did not revise their ideas. Instead, they continued to tell their own story that was entirely different from the one in front of them.

Text Engagement, Grade 3, Wada

A student was reading the book The Catty Ratty Tale. She narrated what she was thinking about as she read the story



Researcher: कायवाटतुलापुढेकायहोईल? कायवाटतुलापुढेकायहोईल?

(?आणिपुढेकायहोणार? (What do you think is going to happen

Child: There is water. She is filling water. She is making rice. The monkeys will be serve food. The rats have come. They will go home. Now they are dancing singing. Now one cat is looking here. The cats and rats are friends. They are hiding in the hole. The old lady has come and is hiding in the hole

Children do not seem to have the ability to monitor their own understanding and to revise it based on new inputs that they receive through various cues – pictures, responses from teachers, responses from other students. This meta-cognitive ability is crucial for good comprehension and it is not emphasized at all in classrooms.

Summary

- Reading comprehension is very poor. 70% of the students in Yadgir cannot comprehend anything at all from a given text of appropriate grade level. In Wada, a large majority of the students comprehend less than 50%
- A large part of this deficit is explained by the students' inability to decode, but even among those who can decode, comprehension is poor.
- All the foundational abilities for comprehension – decoding, vocabulary, knowledge of the world, comprehension strategies and monitoring are poorly developed, leading to very poor comprehension outcomes.
- Very little explicit instruction on developing such foundational comprehension ability were observed in the classrooms.



Literacy Outcomes: Writing And Composition

In this section we look at all levels of writing – writing *aksharas*, writing words and performance on a prompted writing (composition) task.

10.1 Outcomes: Akshara Dictation

As been noted in all the tasks until now, there is great variability both within sites and across sites in students' ability to write *moolaksharas* (see Table B16 in Appendix B). The top four quintiles in Wada make steady progress across the years such that even the fourth quintile (Q2) can write about two-thirds of the *moolaksharas*. Even the bottom quintile (Q1) can write about 50% of the *moolaksharas*. While this may not seem like an impressive achievement at the end of Grade 3, it contrasts positively with students' ability to write *moolaksharas* in Yadgir (see Table B17 in Appendix B). There is a big gap between the top quintile (Q5) (69%) and the next quintile (Q4) (47%). Students in the bottom quintile (Q1) can barely write 27% of the *moolaksharas* accurately, while students in

the second lowest quintile (Q2) can only write about 33% of the *moolaksharas* accurately. Growth (learning over time) appears to be slower in Yadgir.

The performance in akshara level dictation tasks closely correlate to their corresponding akshara recognition tasks (coefficients are above +0.8). But as Figures 6.13 and 6.14 indicate there are site level differences. In Wada, the students' performance in the dictation tasks are marginally lagging behind the recognition tasks. There is no discernable difference between *jodakshara* recognition and dictation tasks and there are some marginal differences between recognition and dictation tasks for the *moolaksharas* and *swarachinhas*.

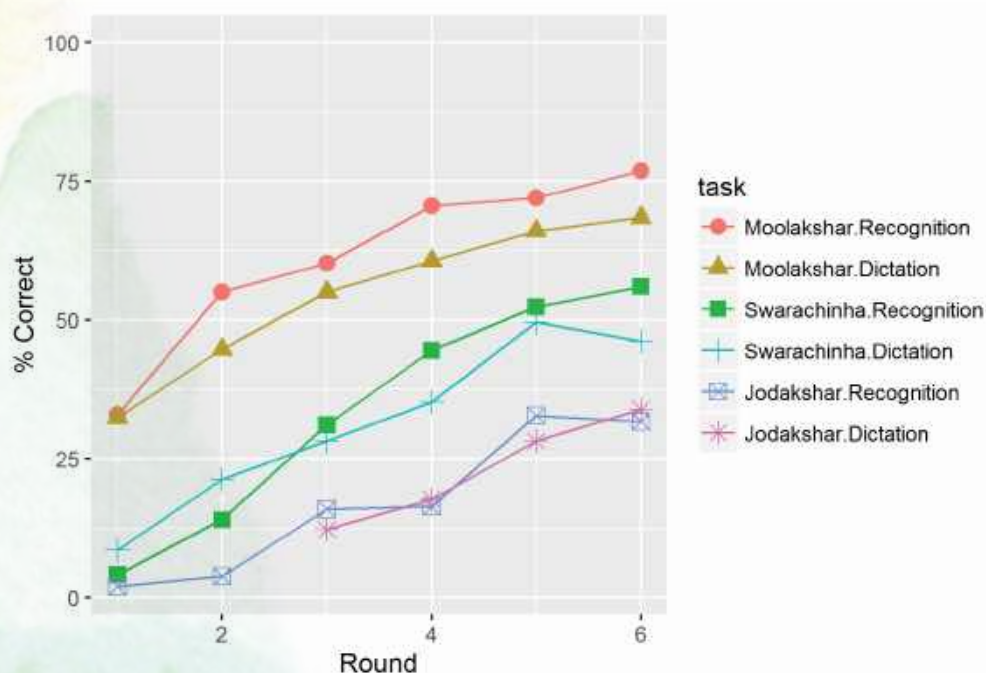


Figure 10.1: Comparison of akshara recognition and dictation tasks in Wada

In Yadgir, while there is no difference between recognition and dictation tasks for *jodaksharas*, there is a discernable difference between dictation and recognition tasks for *moolaksharas* and *swarachinhas*. The dictation tasks are trailing behind recognition tasks very significantly for *moolaksharas*.

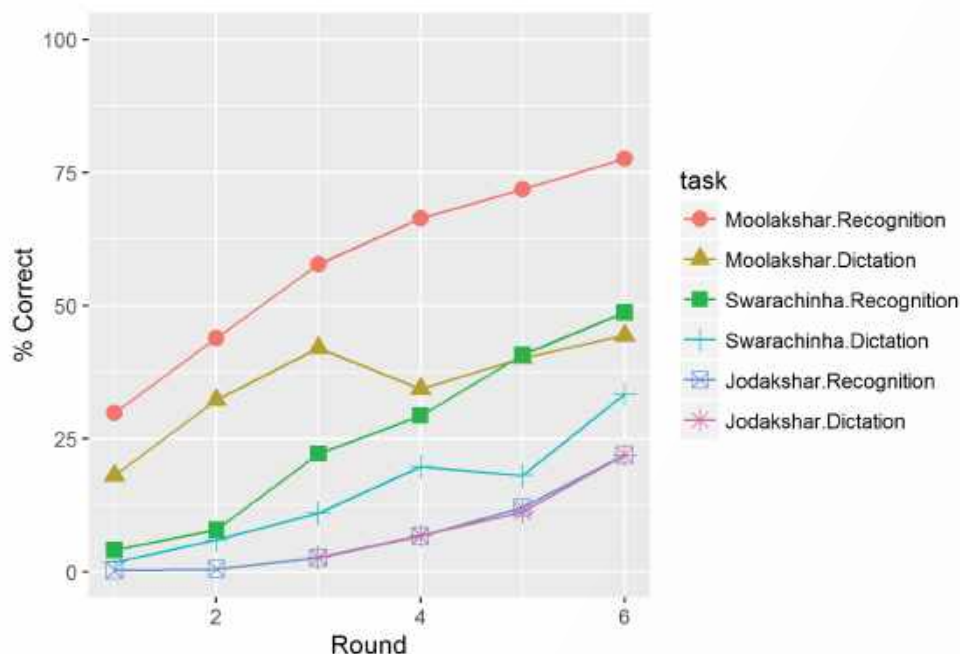


Figure 10.2: Comparison of akshara recognition and dictation tasks in Yadgir

Summary

- Writing of *aksharas* lags behind reading of *aksharas*, much more so in Yadgir than in Wada. It is to be expected that children will recognize letters before they learn to write the symbols conventionally.
- What is of concern is the poor level of writing outcomes at both sites, but especially at Yadgir, where 80% of students are not able to write 50% of *aksharas* by the end of Grade 3.

10.2 Outcomes: Word Dictation (Spelling)

As described earlier different students read word lists at different levels, and hence, received word dictation on lists at their own levels. Hence, all students did not receive dictation across the six rounds on the same list, making it difficult to present a comparative analyses. Realizing the limitations of this design, from the beginning of second grade (Round 3), we administered the same word list to all students to read (Word List 7). This same word list was also administered as a

dictation task. This word list was designed for students in Grade 1-5; therefore, at its higher levels, it contains fairly challenging, complex, technical words. We would not reasonably expect third-graders to achieve 100% proficiency in this task; however, we would expect to see growth over time.

In Wada, there does not seem to be much perceptible growth in the word dictation tasks (see Figure 6.15).

While the students in the top quintile (Q5) have almost 50% performance in the beginning Grade 2, they also end only with marginally higher performance in the end of Grade 3. In Yadgir, the top quintile (Q5) starts at a much lower level of proficiency but ends up with slightly higher proficiency when compared to the top quintile in Wada (see Figure 6.16). It should be noted that across tasks the top quintiles of both sites

perform similarly. The variability lies in the performance of the lower four quintiles.

Even though growth in spelling appears to be slow across quintiles in Wada, the middle three quintiles (Q2, Q3, Q4) perform at higher levels than their counterparts in Yadgir. In Yadgir, even the second quintile (Q4) performs at less than a 25% accuracy rate.

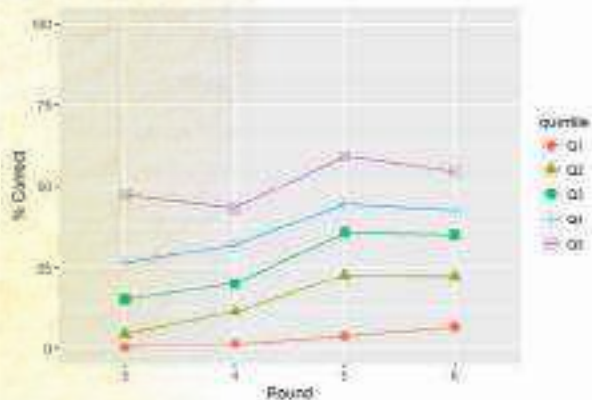


Figure 6.15: Word dictation tasks in Wada

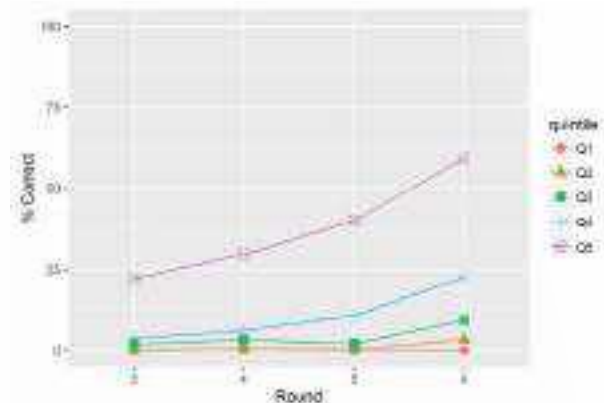


Figure 6.16: Word dictation tasks in Yadgir

While reading and writing are interrelated processes, students generally are able to decode at a higher proficiency than they are able to spell. Hence, we would expect a difference between students' proficiency in reading and spelling Word List 7, which is a challenging word list for most students. Yet, what we see is that the growth in spelling does not keep pace with the growth in reading of words and the gap between the two widens over time.

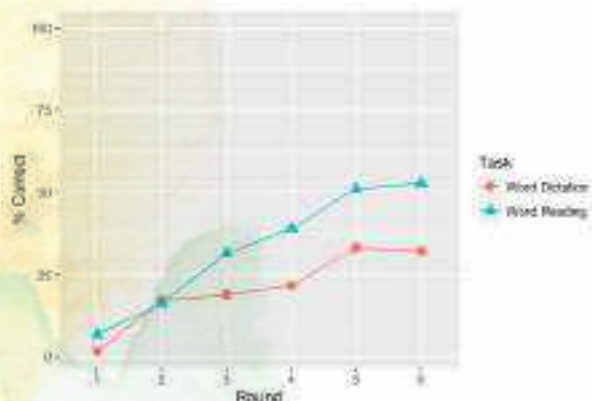


Figure 10.3

Comparison of Word Reading and Dictation in Wada

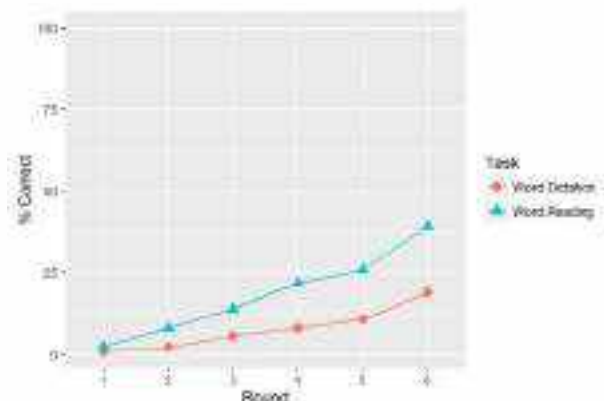


Figure 10.4

Comparison of Word Reading and Dictation in Yadgir

Summary

- Performance in word dictation lags well behind word reading. Those who can read words find it difficult to write them.
- Except for the top quintile in Yadgir, most students struggle to write words.
- The bottom half of the cohort appears to be still learning to write aksharas at the end of Grade 3. They don't have the ability to spell words.

10.3 Prompted Writing (Composition)

10.3.1: Outcomes

The LiRIL battery included an assessment of writing the students in each round. This included assessing different aspects of writing – text length (amount of text written by the child); printing, spelling and punctuation (conventions of writing); ideas and organization; voice (conveying mood, feeling, author’s

personality); and sentence fluency and grammar.

Figure 6.17 shows the growth over the six rounds in the overall free writing performance in Wada. The performance has been low and the rate of growth has also been low. By end of Grade 3 even the top quintile (Q5) has only an average of 50%.

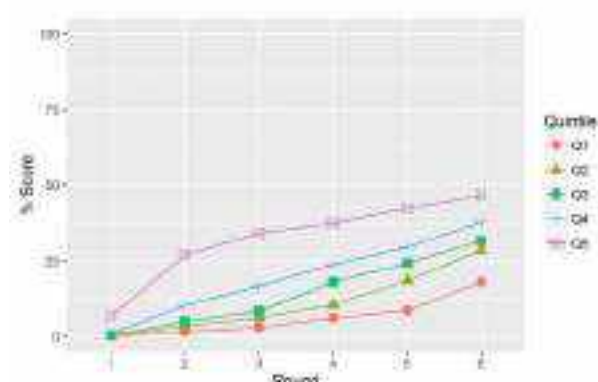


Figure 6.17

Performance in Prompted Writing task in Wada

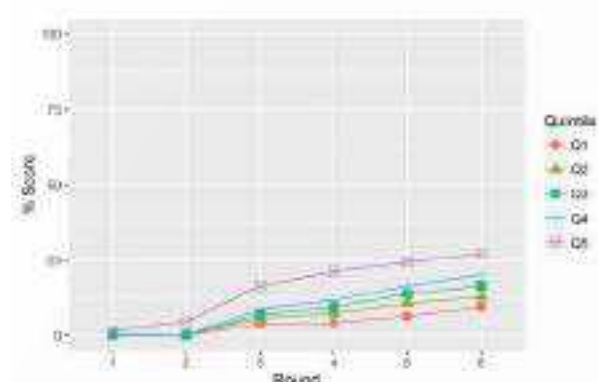


Figure 6.18

Performance in Free Writing task in Yadgir

Figure 6.18 indicates that the performance in prompted writing is even lower in Yadgir with the top quintile (Q5) barely touching 25% at the end of Grade 3

Among the different dimensions or traits assessed on the prompted writing task, performance was lowest in those dimensions that required higher order abilities. For instance if we compare the performance in Voice (higher order) (Tables B18 and B19 in Appendix B) and performance in Text Length (lower order) (Tables B20 and B21 in Appendix B), we can observe that the scores in Voice are much lower (13.08% and 1.59% for the top quintile in Wada and Yadgir respectively) than the scores in Text Length (61.38% and 32.54% for the top quintiles in Wada and Yadgir respectively).

10.3.2: Emergent Writing

While the above paragraphs gives you a quantitative summary of the poor performance in composition and writing, in the following paragraphs we will attempt to give you a qualitative insight on why it is so.

As part of the LiRIL assessments, we gave children one of the two pictures shown here (see Figure 10.5) and asked them to write a story about what they saw. We administered this assessment twice per year, over three years, when the children in our sample were in Grades 1, 2 and 3. Each year, they saw Picture 1 once; and Picture 2 once. We encouraged children to draw if they were reluctant to write. When we couldn't read what a child had written/drawn, we asked the child to tell us what they had written, and we wrote down whatever they said. All this happened in Marathi. We have presented children's original writing in Marathi and a translation of what they wrote in Hindi. Each sample of writing is followed by an explanation.

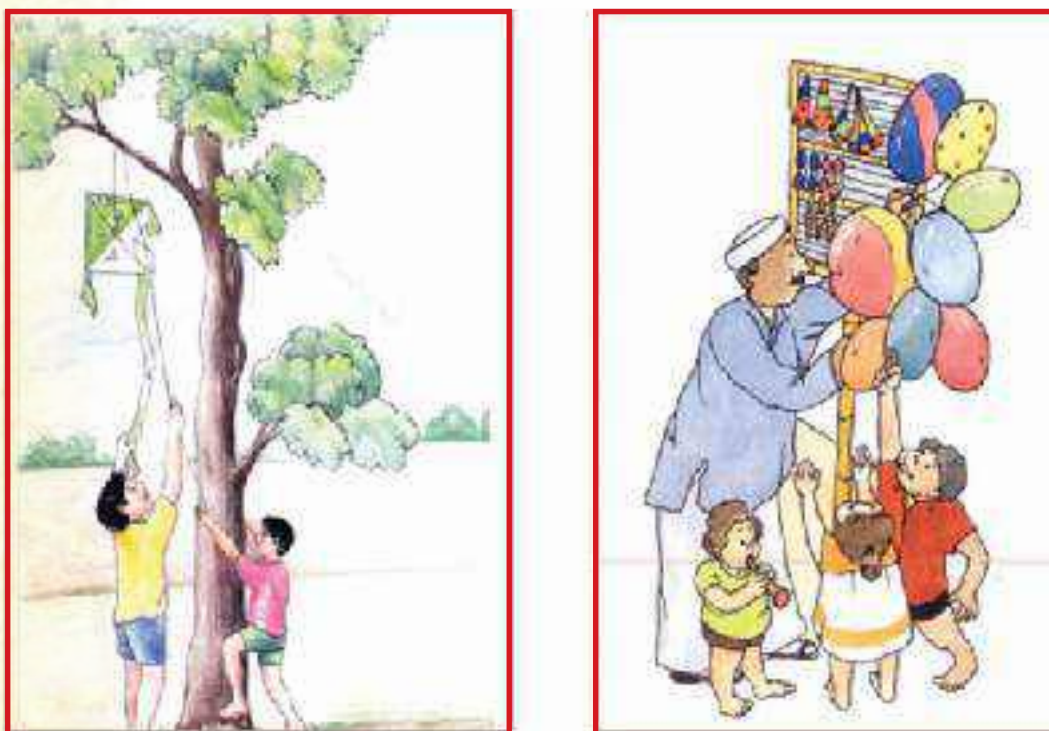


Figure 10.5: Pictures for the Free Writing task

At the earliest phase of writing (see Figure 10.6) the child draws or makes random scribbles. In this case, she has drawn separate shapes that are connected and organized line by line, similar to the way in which we write. The scribbles don't look like letters. The child describes what she has written in minimal phrases, and these link to the picture of the boys flying the kite.



Figure 10.6: Scribbling: Random Shapes

Moving out of the scribbling stage the child starts making letter like shapes (see Figure 10.7). In this picture is like the akshara ल.

The child makes an initial attempt at drawing the tree in the picture she was given. You can see that proportions are not yet like the image being drawn. Orally, the child can describe the picture in brief sentences and phrases. These sentences and phrases accurately describe the picture, but there is not much flow or imagination to the way in which the thoughts are expressed.

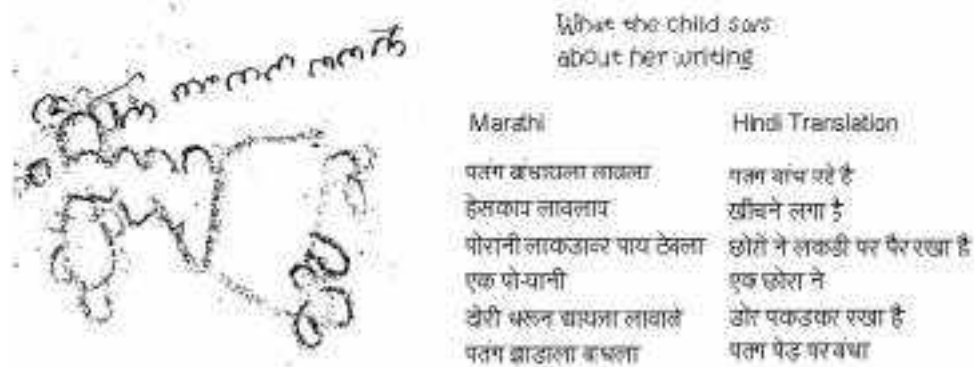


Figure 10.7: Drawing and Scribbling: Letter-like forms

In Figure 10.8 we see that the child starts writing some conventional aksharas and numbers. Some of the aksharas are accurate, some are mirror images and some not yet fully formed. The child's picture now shows some proportion and details. When asked about what she has written the child "reads out" the aksharas and numbers she has written on the page; but some of them are incorrectly recognized.

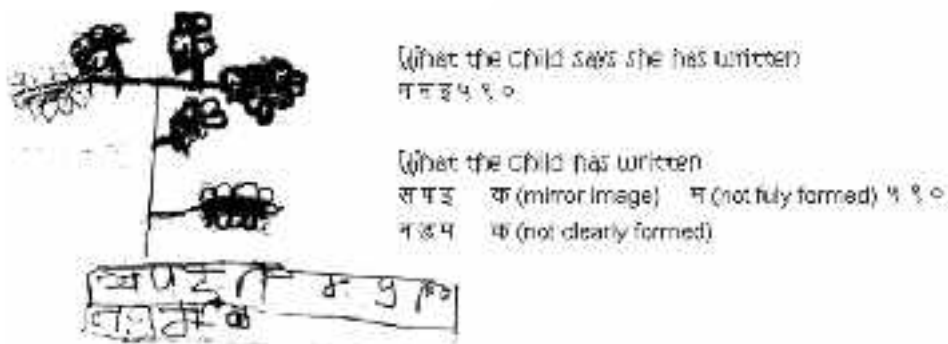


Figure 10.8: Drawing and writing of letters and letter-like forms

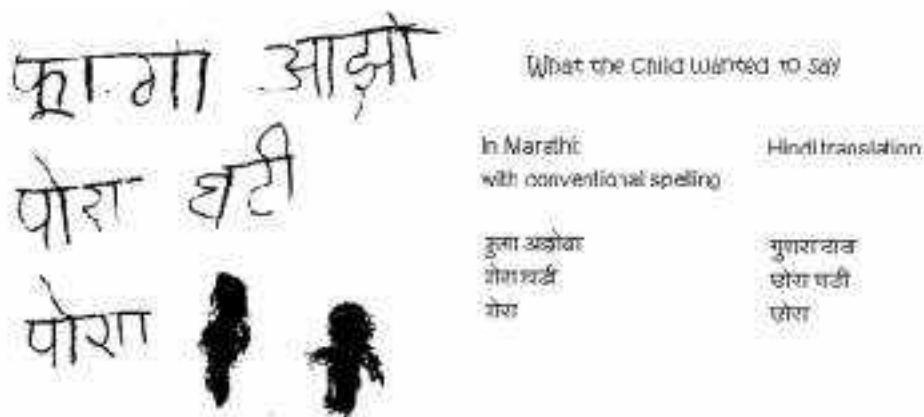


Figure 10.9: Invented spellings

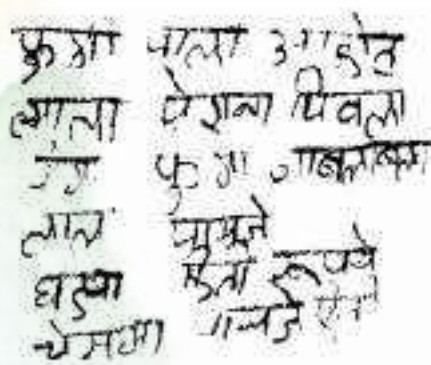
By now, the child has started writing conventional words. She uses invented spelling when she writes (adding extra matraas or leaving out some aksharas). She now uses regular spacing between words.



What the child wanted to say	
In Marathi with conventional spelling	Hindi translation
भऊ झाडावर	भई पेड पर
खेत आहे एक दादा	घर रहा है एक सैबा
सन उडवत आहे	पतंग उड़ा रहा है

Figure 10.10:Conventionally spelled words appear-Sample 1

By this phase, the child's spelling is mostly correct with simple words. She does not yet separate all the words, some are clubbed together. There is no punctuation, so sentences run into each other. The writing is more like informal, quick speech than formal writing. Her picture now has proportion, details and a three dimensional look. Descriptions are brief, but accurate.



What the child wanted to say	
In Marathi with conventional spelling	Hindi translation
कुलवाला बाई (स्वाला) मोरणा विवाह एक मुला, जायला एक मुला ह लात एक मुला पाहेले । कट्याळ फिरी रमचेर बम्मा पाहेले किती?	कुलवा वाला है (उले, छोरो को बीली एक मुलरा, जायन एन मुलरा, लात एन मुलरा पासिन् । कट्टी फेरला रमचेर बम्मा पाहेर। कितना?

Figure 10.11:Conventionally spelled words- Sample 2

The child's spelling continues to be mostly correct with simple words. Matraas are still somewhat difficult for the child. She sometimes uses the wrong matraa or adds or omits an akshara. But, overall, her spelling is more accurate. She uses multiple sentences that start in different ways. Interestingly, she starts experimenting with dialogue in her story. She also plays with sentence structure, putting in questions (although she does not yet use punctuation).

एक फुगेवाला दादा फुगे घेउन आला
मला लाल फुगेवागडे त्याची किंमत काय आहे.
तीस रुपये आहे. मला हिरवा फुगे वागडे आहे.

In Marathi:
with conventional spelling

Hindi translation

एक फुगेवाला दादा फुगे घेउन आला
मला लाल फुगा पाहिजे. त्याची किंमत काय आहे?
तीस रुपये आहे. मला हिरवा फुगा पाहिजे आहे.

एक गुबारा वाला पैसा गुबारा लेवार आया
मुझे लाल गुबारा चाहिए। उसका कीमत कितना है?
तीस रुपये। मुझे हरा गुबारा चाहिए।

Figure 10.12 Conventionally spelled words

The child's spelling is almost entirely conventional, except for words that are spelt a little differently than they sound in informal language (she has confused पाहजि with पायजे). Her sentences vary in length and structure. The child now moves from description to dialogue in her story. She explains what has happened (and builds some context for the reader) and then gives details of the interaction between herself and the balloon seller through dialogue. There is a sense of sequence in the story. With the word मुझे there is a sense of what the writer wants. This gives the story some feeling and voice.

जे आमचे तर पतंग फाटला
अटकला आहे. आता काय
करायचं? अरे, पण पतंग
खुब चरती आहे. अरे पण
ते नर पतंगच आहे. आता काय
करायचं? आणि चढायला
कतील आहे. अरे बापरो
मी नाही चढगा.
हे आपण हेर कुन (खेचून) बघुया.
आणि मुले हेसाकजान खेचरावा.

In Marathi:
with conventional spelling

Hindi translation:

अरे आमचे तर पतंग फाटला
अटकलेला आहे. आता काय
करायचं? अरे, पण पतंग
खुब चरती आहे. अरे पण
ते नर पतंगच आहे. आता काय
करायचं? आणि चढायला
कतील आहे. अरे बापरो
मी नाही चढगा.
हे आपण हेर कुन (खेचून) बघुया.
आणि मुले हेसाकजान खेचरावा.

अरे हमारा पतंग तो पेड़ पर
अटक गया। अभी क्या
करें? अरे! पण पतंग
बहुत चरती है। अरे पतंग
नर पतंग है। अभी क्या
करें? और चढ़ने भी
मुश्किल है। अरे बापरो
मैं नहीं चढ़गा।
हे हाकड़ी वाले बड़े हैं।
और बच्चे खेचरे हैं।

Figure 10.13: The beginning of a story

We can see with this piece of writing that the child's voice comes across strongly. The writing is peppered with exclamations of अरे that really give you a feel of the children's reaction to what has happened. There is a sense of live action as the children observe what has happened (हमारा पतंग तो पेड़ पर अटक गया) and think aloud about what to do (अभी क्या करें), assess the situation (पर पतंग बहुत ऊपर है) and decide the course of action (हम खींचके देखते हैं). From dialogue and the thinking that

forms most of this writing, suddenly, the last sentence moves into a description. We move from hearing a story, to being told a story. This shift shows a maturity in writing. It shows that the writer has a sense that a story is both about what is happening (and getting the reader involved in that through characters' conversation) and how things are described. This writer is now showing an understanding of how stories are written.

10.3.3: How did the “typical” child in the LiRIL sample perform on the prompted writing task?aa

We have very detailed data on children’s writing, after looking at 700+ children’s writing development over three years. What we will present here, to give you a sense of what the child’s writing looks like, are three writing samples. Each sample represents the level of the most number of students at the end of Grade 1, Grade 2 and Grade 3 – the modal value for each assessment point, representing the writing of a “typical” child at this point.

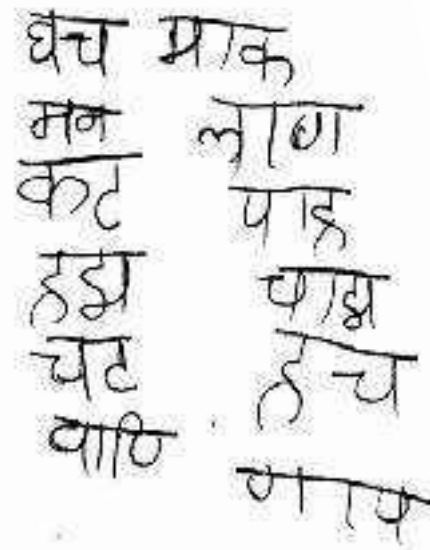
End of Grade 1

It is not possible to translate these words into Hindi, because they are non-meaningful words that the child has written. Except for the word मन (mind), none of these words have meaning

Ideas and Organization: When asked what they have written most children at the end of Grade 1 orally labelled what is in the picture. They were not able to represent these labels in writing.

Voice, Word Choice and Sentence Fluency: Most children wrote non-meaningful words at the end of Grade 1, making it difficult to rate these three dimensions.

Print: Most children are able to form some aksharas and some are able to group these aksharas together to make word-like forms. However, these are not meaningful words.



End of Grade 2

The Hindi translation of this piece (with corrected spellings):

मेरा गुबारा I गुबारा गया I मामी खूब... खेलें I मुझे घर छुपा छुपी पेड झूला घयाका[unknown word]

Ideas and Organization: By the end of Grade 3, most children in Wada were able to describe the picture in sentences. But, even by this age, we don’t see any sequence or organization of ideas. There is no story line in this writing.

Voice: No clear mood or emotion is conveyed in most children’s writing, even by the end of Grade 3.

Word Choice: The vocabulary used is very routine.

There are no interesting words that catch the reader’s attention.



Sentence Fluency: Simple sentences are used. The sentence structure is repetitive and choppy. It does not sound like the rhythm of oral language.

Print: There is a mixture of invented and conventional spelling by the end of Grade 3. Spelling errors that are made are related to matraas or aksharas that sound similar. The child has started separating out sentences with full-stops in most places. Other punctuation marks (e.g., question mark, exclamation mark, quotation marks) are not familiar to most children. When we look at these samples of what “most” children are able to do by the ends of Grade 1, 2 and 3, we see a trend. While we see definite progress in

children’s printing after each year of school, progress in the other traits of writing remain very poor. After three years in school, most children are not able to write a short piece with a simple story line. Their writing does not show feeling. They seem to have a poor vocabulary and do not use interesting words. The sentences are boring and repetitive without much variation.

Why is it that the slow, yet steady progress we see in the child’s printing, is not mirrored in other traits? Let us look at how children are taught writing to answer this question.

10.3.4: How students are taught writing?

It will come as no surprise to any reader of this

guide to hear that teachers taught only the mechanical aspects of writing – how to form *aksharas*, write words with correct spellings, copy sentences from the textbook, and copy correct answers from the blackboard. There is no attention given to children communicating or expressing their thoughts through writing.

When we asked teachers about whether they give children opportunities to write, these were the kind of responses we got:

“No... The capacity for children is only half an hour. Hence, I write down sentences on board.”

“I don't give free writing exercises because they [children] don't know to write much.” “I ask them to write words like 'aai' [mother], 'baba' [father].”

Maharashtra’s Balbharati curriculum was revised in 2013 and contains several suggestions that would include a focus on meaningful writing. For example, “writing about a picture” is one of the kinds of exercises found in the textbook. Here is how we saw teachers using such exercises in the classroom:

Teacher: OK. See now. Which picture is this? Of what is the picture?

Child: Of a house?

Teacher: And what is this picture?

Child: Rabbit

Teacher: See. (Pause) Now this is of a house and (this is) a rabbit... Then, what do we do? About the house. You have to... (long pause) Now you only... name... You just have to write the names here. One after the other. And you have to write well. See the picture and write about it... It [the instruction in the textbook] shouldn't be like that. It should be “see the picture and write its name”.

[Classroom Observation, Wada, Grade 3]

Here, we see that the teacher has modified the exercise from “writing about the picture”, to “write the names of things in the picture”. The reason the teacher gives is that a child in Grade 3 will just not be able to write about the picture.

When the focus is always on “writing correctly”, meaning-making is lost. For example, when teachers introduce new concepts, say of a fruit or an animal,

or a story, young children should be given opportunities to say what they know about it, draw what they think or know it to be like, share their understandings with each other, and so on. Instead, most teaching is focused on “writing correctly”. Here is an example of this common trend. This Grade 3 teacher was teaching children in class about the “सीताफल” (custard apple) fruit that many children may have seen, or eaten.

The children were asked to copy down ‘सी-ता-फ-ल’ from the board.

But Snehal wrote सी – ता – फ – ल’.

She then showed it to the teacher.

Teacher: Write in smaller letters. It’s so big. Write again!

After some time, she looked again at the child’s work, pointed to the second syllable and said, “Make it ता.”

Then, she looked at the third and fourth syllables. She said: “Erase it fully. Write फ/ ल/ ळ.”

[Classroom Observation, Class 3, Wada]

Here we see that the teacher’s focus and feedback is limited only to spelling and handwriting. Discussions about sitaphal, its taste, colour, texture, or whether the student likes it, are far away from what the teacher believes to be possible for a young child. Something that can be so alive in the mind of the child, is rendered into meaningless print the child does not connect with!

Since there is so much emphasis on the Conventions trait (spelling, handwriting, etc.), we would expect that children are fairly good with at least this aspect of writing. But, as we have pointed out in the first Guide of this series (on Decoding), children at both our sites did not do very well even with the mechanical aspects of reading and writing! They were actually poor at writing and spelling words! The first booklet goes into detail about the reasons for this, so we won’t repeat the same information here.

But, it is important to say once more that when the focus is on copy-writing, children are not learning akshara-sound relationships very well. So, even their spelling is quite poor as a result! In classroom after classroom, we saw children copying “words” from the

blackboard incorrectly, for example, writing one syllable underneath the other; or, writing the letters in words from right to left (even though both Marathi and Kannada are written from left to right). Even their copying was poorly done! When we asked them about what they were writing, they usually were not able to tell us much. This indicates to us that they were not thinking about, or understanding what they were writing.

In a few classrooms in Wada, we saw teachers giving children “free writing” time – where they could write about whatever they wanted to. This was a nice change to see. In one of these classrooms, the teacher even had discussions with children—say, about a local festival that they had just celebrated—and then asked them to write about it. We were happy to see this. But, to our disappointment, once the children had written their pieces, the teacher either did not read carefully and give feedback; or, gave feedback about spelling and handwriting. There was no feedback given to these young children about how to improve the quality of their writing in terms of ideas, organization, word-choice, voice or sentence fluency! This could be because the teachers are not aware that young children can be coached on these traits.

Summary

Here are some of the issues we face with teaching children to write in Indian classrooms:

- The focus is only on spelling, handwriting, and copy-writing “correctly”.
- Even these are not taught well.
- Most classrooms don’t provide space for children to write to express and communicate.
- Even in the few classrooms where such opportunities are provided, feedback is absent, or restricted to the “conventions” trait.
- Teachers themselves don’t seem to understand the development of young children’s emergent writing, and don’t know how to coach young children in terms of the other traits of writing.

Teacher Beliefs And Knowledge

In this chapter, we present what has emerged thus far from ongoing analyses of teacher beliefs and knowledge. The analyses of teacher beliefs data from Wada are presented in this chapter. The data from Yadgir mirror these results.

11.1 Teacher Beliefs

In this section of the chapter we discuss what we've learned about teachers' beliefs about the goals and aims of literacy; teachers' notions of desirable content for early literacy; what teachers' believe to be trusted pedagogical methods; beliefs about home languages and their place in instruction vis-à-vis the school

language; notions about the learners' background, aptitude and ability and the influences of these on the potential to become a good reader and; finally, connectedness with the curriculum's aims and methods. Table 11.1 is illustrative of the key beliefs we elaborate upon in this chapter.

Table 11.1
Categories of Teacher Beliefs in Wada, Maharashtra
Teacher Beliefs

Category	Belief
Beliefs about the goals and aims of literacy	1. The aims of early literacy are largely to teach decoding and encoding. These serve as ends in themselves rather than a means to other aims to be achieved. 2. It should also promote "good values". This can be achieved by telling children stories with morals in the early language classroom.
Beliefs about the content of literacy	1. The early literacy curriculum should be structured around the core of decoding and encoding. 2. Meaning making can be reasonably expected in Grade 3 after decoding has been mastered.
Beliefs about pedagogy	1. Rote and repetition are tried and tested, efficient ways to teach and learn language. 2. Lessons for early grade literacy do not require planning.
Beliefs about learners	1. The learners' home languages are seen as "impure" versions of the "pure", standardized school language.

Teacher Beliefs

Category	Belief
Beliefs about the curriculum currently in use in their states	2. Home languages are only to be used in school to make the learner comfortable initially. Their use should be phased out quickly, so that children transition into the school language. 3. Learners who come from disadvantaged backgrounds do not have the wherewithal to become good readers and writers. 4. Only children who have a specific kind of aptitude and are inclined to the subject of reading and writing can become good readers. 5. Some individuals are intelligent and can learn to be good readers and writers; some are not and cannot learn. 1. The aims of the curriculum and its methods of application are unclear.

11.1.1: Beliefs about the Goals and Aims of Literacy

Teachers' beliefs about the goals and aims of literacy are revealing of what they deem to be the purpose of their early literacy curriculum. Many scholars and practitioners would agree that becoming literate includes the attitudes, skills and knowledge to understand what one reads, express oneself, critically examine texts, and examine and understand the intentions of others as expressed in textual forms (Freire & Macedo, 1987; Luke & Freebody, (n.d.); Delpit, 1988). . These skills and attitudes do not necessarily arise at later ages; rather they arise and can be developed in the earliest grades. In contrast, two key beliefs emerged from our teacher cohort: (1) the perceived intrinsic value of decoding and encoding and; (2) the extrinsic merit of literacy for the development of values by telling stories with morals.

Reading and writing accurately

77% of teachers in our sample stated that the main objective of language teaching is for children to learn to read and write accurately. Accuracy here refers to the correct decoding and encoding of *aksharas*. When

asked about the criteria they used to assess students' reading and writing, or the parameters they applied to evaluate their students' progress, over 65% of teachers said they focus exclusively on accuracy (accurate decoding and encoding *aksharas*), pace of reading and prosody (voice modulation, expression, and pronunciation of punctuation marks). The mention of comprehension during assessment was extremely infrequent. Amongst the teachers who did include this criterion, the majority reserved this assessment component for students of the higher grades (after Grade 3).

Parameters for both the teaching and assessment of writing were even fewer. 41% of teachers considered good writing to be accurate writing, presented in neat handwriting with the appropriate punctuation marks.

When asked about what they believed to be effective methods of teaching reading and writing, over 80% of teachers talked exclusively about teaching *aksharas*, sound-symbol correspondences and punctuation mark

instruction. Being able to encode and decode was not described as a means to any other end, but appeared to be viewed as ends in and of themselves. The teachers' responses also revealed their lack of conceptual clarity about the meaning of "aims" in education, or in this case, in early language and literacy teaching. They are, therefore, unable to make a distinction between the content of what is taught and broader purposes that the teaching-learning is trying to achieve.

Teaching good values

While the conflation of means and ends made decoding and encoding in themselves popular choices for the objectives and aims of literacy, there were teachers who spoke in favor of the moral imperative of literacy. Themes of 'good behavior' or '*sanskar*' (tradition/ moral norms) came up repeatedly in our teacher interviews. When elaborating upon the purposes of reading, one teacher said: He [the student] should understand what is written and behave accordingly.... If it doesn't lead to any *sanskar*, reading is not useful. [Wada, Teacher Beliefs Interview, 2016]

Stories were identified by teachers as early literacy's main conduit to the development of values. Over 56% of teachers said they favored moral stories over other genres for children. The link between instilling "good" values and storytelling has deep socio-cultural roots in Indian languages, dating back over many centuries, accessible in our cultural memory through the oft repeated *Jaataka* and *Panchatantra* stories. Formal instruction that develops this cultural penchant for

morality was, Advani (2004) argues, however, cemented in Indian contemporary school language instruction because of the "civilizing" aims of colonial education that privileged moral lessons, as opposed to the development of interpretivist takes on literature.

A morals approach to storytelling, thus, emerges as another trope of "deep structures" that teachers were schooled in during their own years as students. The story, rather than being seen as a path to interaction with good literature, the awakening of familiar emotions, imagination, expression, new ideas, is reduced to the moralistic lesson.

The ways in which teachers said they dealt with stories showed the gaping absence of an understanding of the role of children's literature in early literacy. Over 77% of teachers say they do not read stories aloud. The few that did read stories aloud used newspapers and Whatsapp messages as their sources. Only two teachers mentioned their practice of collaborative reading with children. Only these two teachers of the entire teacher cohort show the children books' pictures, follow the text with their fingers as they read aloud and model processes of reading to their students.

How to read and the rewards of reading (of meaning, identification, adventure and imagination) are, thus, excluded in a paradigm that is mechanistic on the one hand, and moralistic on the other. With so much of the cognitive and affective dimensions of interacting with texts missing, what is it that could see children through the arduous process of learning to read and write?

11.1.2: Literacy Acquisition as a Sequential Process

As previously established, sequential processes govern the ways in which curricula is transacted. While we have seen the Nali Kali curricular structure is itself based on strict sequencing, here we take a look at how the meaning-centric *Balbharati* curriculum is re-appropriated by teachers to follow the sequential method they are familiar with, as opposed to the "new fangled" suggestions of the revised curriculum.

Traditionally, the teaching of literacy in India involved

the introduction of one *akshara* at a time and practicing the sound-symbol correspondence for each *akshara* sequentially as it appears in the *varnamala* and the *barakhadi*. On internalizing entire set of aksharas students were taught to string these together to form words and then later, simple sentences. Students were expected to learn to read words by sequentially decoding each *akshara*. Comprehension was treated as the by-product of learning how to decode/encode accurately and not isolated as an

objective in itself. However, the Maharashtra government's *Balbharati* curriculum, as we have seen, attempts to break this sequential pattern of teaching. It introduces the idea of the whole word, or, the 'analytical phonics' approach to introduce aksharas. With this approach decoding is a derivative process. Students are first presented with a word (meaningful in and of itself) before they are asked to separate this out into its constituent *aksharas* and sounds.

Despite this curricular restructuring to emphasize meaning (at the word level) along with the acquisition of sound and symbol, over 60% of teachers said they still followed the traditional sequential approach to literacy instruction, focusing on building foundational letters-sound knowledge, with comprehension conceived of as a secondary level skill. The following conversations between three different teachers (T) and the interviewing researcher (R) display teacher beliefs that young children (in Grades 1 and 2) are not yet cognitively equipped (or experienced enough) to construct meaning.

T: It is sufficient to focus on meaning only in the Grade 3.

R: Why?

T: [In Grades 1 and 2] the child is young, he does not have enough knowledge so this [*akshara* learning] is sufficient for this age group.

[Wada, Teacher Beliefs Interview]

T: If you talk about reading with comprehension, it is not possible in first and second grade. First and second grade are the years children are getting

acquainted with the letters and [can] remember letter symbols. If we mix that with comprehension, the child might get confused.

[Wada, Teacher Beliefs Interview]

T: [In first and second grades] they won't understand what they are reading.

R: Why won't they understand?

T: They don't know enough (to comprehend).

R: Why do you think they do not know enough?

T: They have not directly seen or experienced a lot of things.

[Wada, Teacher Beliefs Interview]

We can strongly triangulate this belief with our observation of teacher classroom practices (Chapter 5). We notice that almost without exception, teachers structure the early literacy curriculum by starting with the presentation of *moolaksharas* and the *barakhadi*. Once this is complete, they begin to read words. Later they introduce sentences and, still later, passages. Teachers' expectations from students echo this sequential structure. Over 62% of teachers say their end-of-Grade 1 expectations from students are the knowledge of *moolaksharas*, with or without *swarchinhas*. By the end of Grade 2, teachers expect their students to know the sound-symbol correspondence of all the *aksharas* and *swarachinhas* in the *barakhadi* and to be able to read with a sufficient degree of accuracy. The expectation of student comprehension must not present itself for Grades 1 and 2, according to 85% of teachers.

11.1.3: Beliefs about Pedagogy

Rote and repetition

We have highlighted rote and repetition as the teachers' main pedagogical strategy in the classroom across several section of this report, hence will be brief in this section. In response to what methods they would use to respond to student difficulties, an overwhelming 95% of teachers mentioned repetition. Even though teachers identified students' most common difficulties as the deciphering of specific *aksharas* and *jodaksharas* (that require phonemic

blending), no specialized phonics instruction methods were cited as points of redressal. Repetition was the only strategy of remedial work.

Lesson planning

Lesson planning is viewed by the teachers as a formality that they have to fulfil in order to submit lesson plans to their head teacher. The term 'करावच लागते', meaning 'we have to' is frequent in their interviews. 86% of teachers said that but they see the

textbook to aid them in teaching the lesson. Only three teachers said the teachers' handbook is a useful planning aid. Although, on the one hand, there is such a great deal of time devoted to the teaching and learning of *aksharas* in the transaction of the curriculum; on the other hand, teachers do not seem to believe that this instruction requires preparation. Facile repetition means that other ways of approaching akshar

knowledge are not seen as being worth consideration. T: Lesson planning is different for primary and higher grades... In higher grades such as in 8th grade, they have specific lessons... But for primary classes, the lesson plans are just a formality... because, if we think about the first grade, all the children learn are *aksharas*..." [Wada, Teacher Beliefs Interview]

11.1.4: Beliefs about Learners

Pure and Impure Language

Teachers used specific terms to describe children's home languages versus the standard Marathi language throughout their interviews. Some of these responses are documented in Table 11.2. Value judgments and the different status given to these two languages (children's home languages are called 'impure' versions of the 'pure', standard language) are clear.

Teachers (even if they belong to the tribal community) refer to the standard language as 'their own' language or the 'correct language', whereas children's home languages are referred to as the 'language of the villagers' or the 'language of the illiterates', other than being generally clubbed as 'mistakes'. In one particular instance, a teacher referred to the home language's influence on pronunciation as a lisp!

Table 11.2

Words/Phrases Teachers Use to Describe Students' Home Language versus the School Language

Students' Home Languages	Standard Language
- Spoken dialect / बोलीभाषा - Impure language / अशुद्धभाषा - Mistakes / चूक - Lisp / तोतरेपणा - Village language / ग्रामीणभाषा	- Language of the textbook / पुस्तकातीलभाषा - Pure language: शुद्धभाषा - Our (teachers') language / आपलीभाषा - Language of the educated / सुशिक्षितभाषा

Home language as bridge to school language

When asked about their views on the use of home languages in the classroom, teachers unanimously said that using only the standard language with children immediately they begin school is not a good idea. They said children (and at times teachers too) should be allowed to speak in their home languages. The most commonly cited reasons for accepting students' use of their home language was get children comfortable with the alienating school environment or to avoid the burden of multiple languages on the child's limited

mental capacity.

However, acceptance of the home language was decidedly conditional: 96% of teachers are of the view that children should be transitioned from their home languages to the standard language fairly quickly. However, there seems to be lack of either individual clarity or collective consensus about the methodology to be used to introduce standard language in the classroom. While some teachers suggested correction, others suggested mild humiliation as the answer to strategies for transitioning to the school language.

T: If the teacher is local, what he can do is, he can use the spoken dialect first and then slowly start converting [the words into their standard language equivalents]..[we can tell the children] that this is not 'bhingroot', this is a 'fulpakharu'..
[Wada, Teacher Beliefs Interview]

T: If a child speaks in an impure language, everyone laughs at him, he feels ashamed and gradually starts using standard language.
[Wada, Teacher Beliefs Interview]

As is evident, these examples are not indicative of a respect of the children's home languages and in no way take into account the value of expression in this language to the child's identity.

All of the Maharashtra state board textbooks are written in standard Marathi. All the assessments of students are conducted in standard Marathi. Research, however, shows that one of the main reasons for the poor performance of the economically and socially marginalized students is the gap between their school and home environments (Jayaram, 2009).

Students' backgrounds determine their reading ability. Teachers have decidedly low expectations from children of the poor or socially marginalized. We came across many instances in our teacher interviews in which tribal children's abilities and motivations were considered to be lower than those of children from other communities, or, children living in cities. Sometimes teachers attributed tribal children's low performances to the lack of support for school work in their home environment. Rather than attempting to understand the workings of these homes and the non-exposure of parents to formal schooling (i.e. understanding sociological contributing factors to parental non-involvement), teachers put parental non-connectedness to schooling down to lackadaisical attitudes (that is--personal lack of interest on the part of parents).

T: My school is entirely tribal, so they [children] don't have 10% of educational atmosphere...If we give them homework, they do it sometimes or otherwise, they will come back without solving any of the

questions...Parents don't even ask if the child has homework or make him sit and study."
[Wada, Teacher Beliefs Interview]

The educational atmosphere of the home is oft cited by teachers as a reason for children's low academic performance. It has been well established in Western contexts that the home discourses of middle class families are aligned with school discourses, giving children from these backgrounds considerable grounding and familiarity with print and various school processes from the get go (Delpit, 1988; Au, 2002; Heath, 1982). However, for these teachers who work with children from marginalized communities, print aware homes and formally educated parents, who have time to give students continual support at home, are extremely rare, if not a non-entity. This does not, however, deter teachers from citing this as a strong (sometimes insurmountable) challenge.

T: There is lack of knowledge and poor financial conditions... Parents go to work and do not pay any attention to their children: whether the child is studying or not...Here, 90% of the children are like that... As teachers, we can push them to come to the mainstream, by doing some language related activities... But there are some children, who [still] know absolutely nothing about education.
[Wada, Teacher Beliefs Interview]

It is clear from this teacher's perspective that these children are in school, spending a great deal of their lives there, without having any idea about education itself: its purposes, its prospects or its processes. Rather than seeing this as a reason to provide relevance and purpose to these students, the teacher is content to describe it matter-of-factly and leave it at that. For some teachers, home background is not just a matter of poor economics; it is connected to poor genetic. The child's low performance is, thus, not seen as something that can be changed or influenced by the teacher's intervention but is, rather, inevitable.

T: If a parent has [a] good memory... If parents are educated, children are also good, at least we think so...If the parents are uneducated, children lag behind in reading and writing. So there is a role of genetics too.

[Wada, Teacher Beliefs Interview]

Language as an aptitude

A significant proportion of teachers said during their interviews that students' ability to gain mastery in reading and writing was dependent on their aptitude or interest in language. "Language", it must be noted, is seen a subject, rather than as a foundational skill that cuts across learning in content areas. In several of these teachers' minds, becoming a good reader is based on individual proclivities toward the subject.

T: What is everyone's interest? Some students are interested in reading; they will be able to read well. Some children are interested in sports, they will be able to play well....not everyone is interested in reading, so they won't be successful in reading/writing.

[Wada, Teacher Beliefs Interview]

T: No, not everyone can become good readers and writers.

R: Why not?

T: Reading and writing are such domains that as much as the teacher needs to be interested in them, students themselves need to have an interest. Not every student is interested in bookish knowledge...not everyone can focus while reading and writing...so it is not possible for everyone to be perfect in reading/writing.

[Wada, Teacher Beliefs Interview]

The conclusion for the teacher is straightforward. Since all children are not inclined towards reading and writing; all children cannot do it well. Despite the fact that a lot of time is dedicated to learning to read and write in the early grades of schooling, it is also a given that only some students will be interested and, therefore be, good at it. It follows that the onus is not on the teacher to build reading and writing ability for all; rather, those who are so inclined can take it up professionally, while others can pursue professions that do not involve reading and writing (such as drawing, being a sportsman, or being in the army): Someone might want to build a career as a writer but, if my field is entirely different, why will I write? If I want to get into the army, I shall build my physique. I won't have time to read and write, so I will not be a good writer.

[Wada, Teacher Beliefs Interview]

A broader view of reading and writing- as equipping one with life skills through access to information, know-how, knowledge, agency; and to the cultural inheritance of the human being- is apparently not shared by the teachers in our sample. Reading and writing are quoted as significant if one is to become an author. (This take may prompt questions about teachers' own proficiency as readers. We address this in Section 7.8 in Teacher Knowledge: Teachers as Readers.)

Language is for the Intelligent

While some teachers cite inclination, and others cite students' professional goals of being an author, there are yet other teachers who hold that only "bright" children can become good readers and writers. Those who do not perform well with reading and writing are perceived as being less mentally able.

T: Everyone cannot be good at reading/writing because not everyone in the class has the same mental ability. Some children get 30/30 marks and some get 5/30 marks.

[Wada, Teacher Beliefs Interview]

R: Can everyone can be good at reading/writing?

T: No, not everyone can.

R: Why not?

T: It depends on the individual's ability. [Some children], even if they try really hard, will not be able to.

[Wada, Teacher Beliefs Interview]

This kind of belief is likely fueled by superficial interpretations of the "child-centric" rhetoric within education that encourage teachers to understand and cater to the child's needs, interests and aptitudes. Multiple intelligence theories, for example, promote the categorization of 'bodily intelligence', 'linguistic intelligence', 'musical intelligence', Teachers then use these categories to decide what different students in their classes are better or worse at—an unfortunate interpretation of multiple intelligence in the classroom that was perhaps not intended by Gardner (1993). Instead of these theories ensuring more inclusive, integrated approaches to teaching, this type of interpretation may result in the segregation of students based on their perceived abilities.

11.1.5: Beliefs about the Curriculum

In Chapter 5 we described revisions made to the *Balbharati* curriculum in 2013, based on the suggestions of the NCF (2005), and provided numerous instantiations as evidence of teachers using “deep structure” rooted pedagogy despite these changes. In this section we present what some of our teachers had to say about the new curriculum and their understanding of it.

As mentioned in Chapter 5, one of the revisions to the *Balbharati* curriculum was a change in how letters and sounds were introduced. Previously it had been carried out through the synthetic phonics approach (that introduces *aksharas* and then prompts children to put these sounds together to form words). With the 2013 revisions, the analytic phonic approach became a part of the curriculum. The analytic phonics approach presents students with a word (rich in meaning) and then encourages students to break this apart into its constituent sounds.

When asked specifically about this change (in how letters are introduced to students) in the revised versus ‘old’ the curricular material, teachers were not able to discern a difference:

T: The way we introduced *aksharas* to them earlier, we introduce *aksharas* to them now.

R: Right, and the method you use? Is it different from how you were taught *aksharas*?

T: Yes, earlier, there wasn’t any teaching learning material available. Now, we use TLMs (Teaching Learning Materials) to introduce TLMs. That is the only difference

[Wada, Teacher Beliefs Interview]

The only change this teacher was able to discern between her days as a student learning language and the new *Balbharati* curriculum materials’ introduction of language, was the difference in the quantity of TLMs available..

The rationale behind larger changes, too, that encourage student involvement and activity were not found to be relevant by the teachers. Teachers held the decoding instructional purpose as primary. The addition of other activities were regarded as incoherent in the larger scheme of the Grade 1 curricular materials:

T: What they have done [*Balbharati* curricular developers] is that they have directly given [begun with] words and poems. Nothing is expected of the children. They are not expected to memorize the poems. They are not expected to read or write. But they are expected to sing and dance to the tune of the poems. But children cannot read these poems: they cannot read, they cannot write and they do not even know *moolaksharas*.

[Wada, Teacher Beliefs Interview]

This excerpt shows that the teacher does not believe spoken (or sung) language that children can understand and act with, has any role to play in the early literacy curriculum.

Despite the fact that teachers are the sole enactors of the curriculum in the classroom, the philosophy/ purpose behind the content they have to transact has not been discussed with them. The lack of a teacher guidance model in the curricular materials leads to revisions that go unnoticed. Rather than leading to change in the literacy classroom, revisions only perpetuate “deep structures” and create incomprehension when they fail to position the teacher as a knowledgeable and active learner, interpreter and enactor of the curriculum.

11.2 Teacher Knowledge

Lee Shulman and his colleagues categorize teachers' knowledge into three areas: (1) content knowledge (2) pedagogical knowledge and (3) pedagogical content knowledge (Shulman, 1986). Content knowledge is the knowledge about subject matter; pedagogic knowledge is general, overarching knowledge of good pedagogical principles and; pedagogical content knowledge refers to how to teach

concepts specific to a given content area in a manner that best facilitates student learning and engagement. In our literacy research, we chose to focus on collecting data on teachers' content knowledge and pedagogical content knowledge. The teacher knowledge data are still being analyzed, such that only preliminary findings are presented here.

11.2.1: Teachers' Content Knowledge

Teachers were given a 428-word newspaper article on Telengana's separation from Andhra Pradesh. They were asked to read this text and answer questions that sought their responses on a) the main idea b) three explicit question about the text c) the relationship between the title and the text d) the author's perspective. Figure 7.1 shows how teachers in Wada fared on the test.

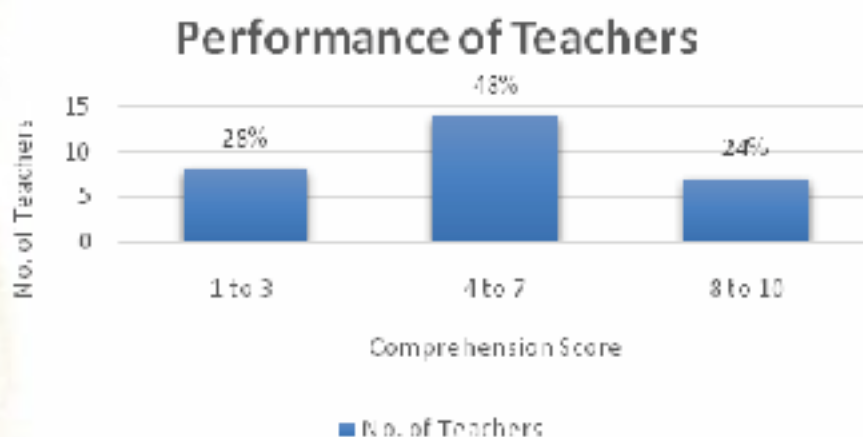


Figure 7.1. Teachers' Comprehension Scores out of a Possible Total Score of 10

Figure 7.1 shows that 28% of teachers scored below 3/10 points, 48% of teachers scored between 4 to 7 points out of 10, and, 24% of teachers scored above 7 points out of a possible total score of 10 on reading comprehension.

The teachers who scored below three points took a longer time to read the passage and had to re-read it numerous times. When responding to question, this group of teachers referred to the text and were unable to respond in their own words. The majority of teachers who scored in the mid-range (4-7) answered questions in their own words but when asked to provide evidence for their responses were generally

not able to find it in the text. Teachers who scored in the top bracket read the text once and referred to the passage again for evidence. All of them responded to questions in their own words.

When we paid closer attention to teacher responses to the kinds of questions we had asked, we found that close to 45% of teachers could not correctly answer one inferential question. The question was – 'Do you think the title is suitable to the passage'. The title of the passage was 'Divorce received from the uninviting Husband'. It was interesting to see that 45% of the teachers could not relate the separation of Telengana from Andhra Pradesh to this metaphor. One of the

teachers said: ‘This does not look right. This [title] is regarding family issues and this [the passage] is political in nature.’”

We investigated who these teachers were and looked at whether qualification correlated to one’s ability to read and make meaning of a newspaper article. We found that only four teachers (out of 29) who were SSC by qualification scored above 7 points, while only two teachers with graduate degrees scored in the range of 1 to 3. This suggests that educational qualifications are somewhat related to teachers’ own ability to read and comprehend passages. These

results reveal alarmingly low content knowledge.

We strongly assume that teachers have to be able to actively interact with the text to teach language. When we compared teachers’ performances in this task with their students’ (on reading passages in the LiRIL battery) it was noted that four teachers from the five best performing schools scored above 7. However, there were teachers who scored above 7 in the worst performing schools too. Thus, at this initial stage of analysis, we can suggest that having strong capabilities in reading may be necessary for teachers, but it may not be sufficient in determining whether this individual is able to relay/ teach content to students well.

11.2.2: Teachers’ Pedagogical Content Knowledge

To assess teacher pedagogical content knowledge, teachers were given a sample of a hypothetical student’s work and were asked to identify the errors, as well as possible reasons behind student difficulties.

Out of the 29 teachers interviewed, only 35% teachers cited content centered reasons for student errors (for example, difficulty with phonemes, difficulty with the concept of conjunct consonants etc.) The remaining teachers (65%) ascribed errors to the child’s lack of interest, lack of attention and poor background as the main factors for their errors. These 65% of teachers also cited children’s home language being different from the standard, school language as a contributing factor.

Both groups of teachers, those who attributed difficulties to the individual student and their background and those who attributed difficulties to content, alarmingly and predictably proposed one main solution to address the students’ difficulties: rote and repetition!

Pedagogical content knowledge that relies on only one method that too one that is non-specific to literacy, can at best be described as a weak base from which to embark on teaching early reading and writing.

One of the significant conclusions that we’re reaching from our teacher knowledge work is that teachers are being provided with general information at a superficial level about child-centered/constructivist pedagogies, but they are not being provided with much specific information on how to teach language and literacy. Pedagogical content knowledge—which Shulman referred to three decades ago as the “missing paradigm”—is still clearly missing from both teacher education programs, as well as the guidance provided by curricular materials.

Socio-cultural and School Influences

In this chapter we present the influence of students' socio-cultural background factors on their overall performance on the LiRIL assessment battery.

As previously mentioned, a deliberate decision was taken to include economically and socially marginalized communities in the states of Karnataka and Maharashtra in our project. The overall student background is representative of marginalized communities and cannot be considered representative of the states' population.

In Chapter 6 we established that there is a significant amount of variation in achievement and presented probable curricular and transactional factors contributing to this. This chapter looks at factors beyond the classroom- of caste, gender, economic status, parental education and home language (section 12.1). Apart from presenting the influences of socio-cultural factors, Section 12.2 gives a preliminary glimpse at school and intervention effects on performance.

12.1 Socio-Cultural Influences

In this section of the chapter we discuss what we've learned about teachers' beliefs about the goals and aims of literacy; teachers' notions of desirable content for early literacy; what teachers' believe to be trusted pedagogical methods; beliefs about home languages and their place in instruction vis-à-vis the school

language; notions about the learners' background, aptitude and ability and the influences of these on the potential to become a good reader and; finally, connectedness with the curriculum's aims and methods. Table 11.1 is illustrative of the key beliefs we elaborate upon in this chapter.

12.1.1: Caste

In Wada, students are drawn from either OBC or one of three tribal groups. The tribal groups (STs) comprise 93.9% of the student cohort. Figure 12.1 shows the performance of these two groups across all rounds. There is a steady significant difference between the performance of the OBC group (higher) and the ST group (lower). A possible reason for this is the tribe's geographical placement in the village community- their establishments are isolated from the village space. Their interactions with other communities and ability to take part in decision making processes of the village are severely restricted. As seen previously (from teacher interviews) and as will be described in the case studies (Chapter 13), print exposure within the ST community and opportunities to engage in

school-related activities at home are minimal, if not negligible. Home and school life for these children are, therefore, disparate.

A note on the boxplots – The upper and lower “hinges” correspond to the first and third quartiles. The upper whisker extends from the hinge to the highest value that is within $1.5 * IQR$ of the hinge, where IQR is the inter-quartile range, or distance between the first and third quartiles. The lower whisker extends from the hinge to the lowest value within $1.5 * IQR$ of the hinge. Data beyond the end of the whiskers are outliers and plotted as points. The median is marked by a horizontal line and the mean is marked by a grey dot.

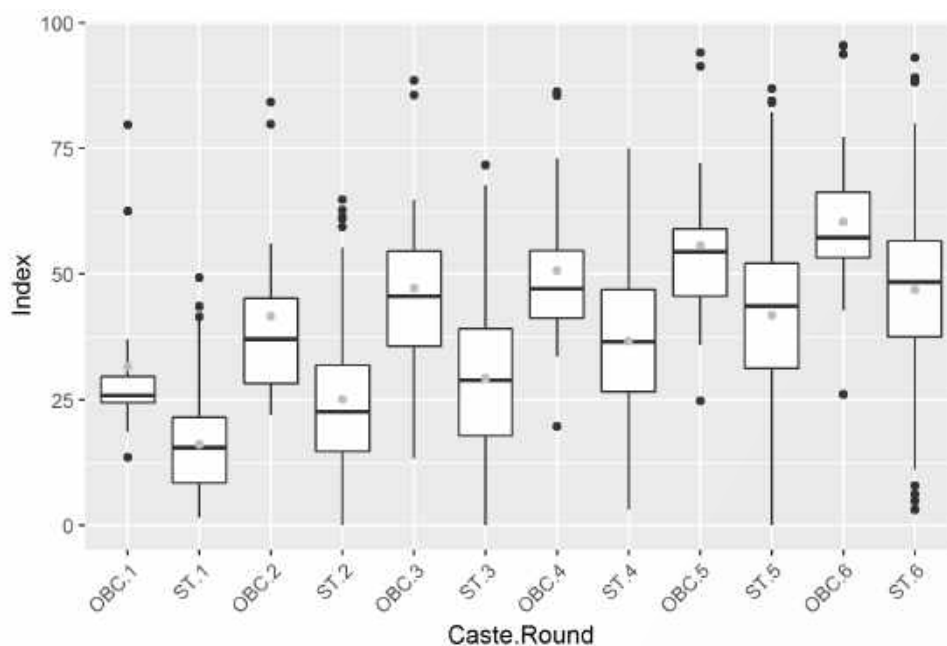


Figure 12.1: Performance across groups in each round in Wada

The significance of the difference in performance across rounds between the groups in Wada is also borne out by an ANOVA analyses (See Table C1 in Appendix C).

In Yadgir the students are drawn from SC, ST, OBCs and Minorities (mostly Muslim) groups. The boxplots below show the performances of students from the communities at the end of Grades 1, 2, and 3. Unlike in Wada, we do not see a significant difference between the groups (see Table C2 in Appendix C). Observations in the community and in the classrooms suggest that the groups live and interact in a more integrated (socially and economically) way in Yadgir as compared to Wada. This could account for some of the differences.

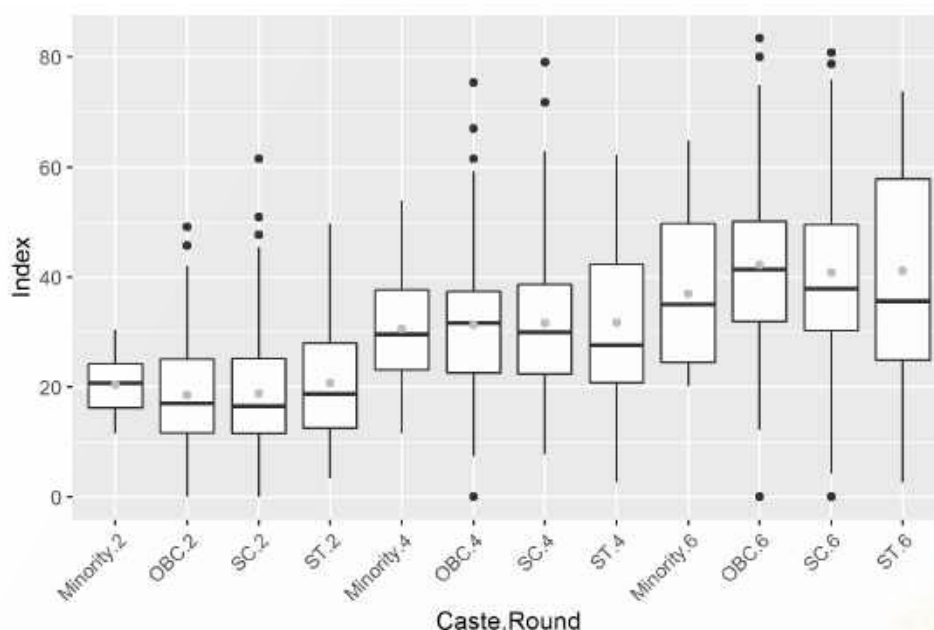


Figure 12.2: Performance across groups rounds two, four and six in Yadgir

12.1.2: Gender

There are no significant differences in performance in either site based on gender (see Tables C3 and C4 in Appendix C). Classroom observations also support similarity in performance between girls and boys. This is, perhaps somewhat surprising since the home lives of boys and girls are very different. In our observations during home visits, while the girls have to take responsibility for running the household and taking care of younger siblings, the boys are generally left to their own devices after school. A possible reason for the lack of difference in performance could be attributed to most boys being sent to private schools and therefore out of our sample.

12.1.3: Economic Status

The project collected information on different proxies that indicate the economic status of the students' home backgrounds. These included information like the size of agricultural land that they own, the house construction and other household assets that they own. Scores were given to each of these data points and these scores were then aggregated and categorized into Very Low, Low, Medium and High Economic Status categories. In both sites there were no students with high economic backgrounds. In Yadgir the majority of students belonged to what we term

medium economic status (61%) with only 7% in the 'very low' category. In Wada most students are from 'low' economic status backgrounds (51%) with a substantial percentage in the very low category (22%).

ANOVA analyses revealed economic status' significance in student performances in Wada, while in Yadgir the difference between the different economic groups are not significant (see Tables C5 and C6 in Appendix C). Figure 12.3 and Figure 12.4 show the distributions

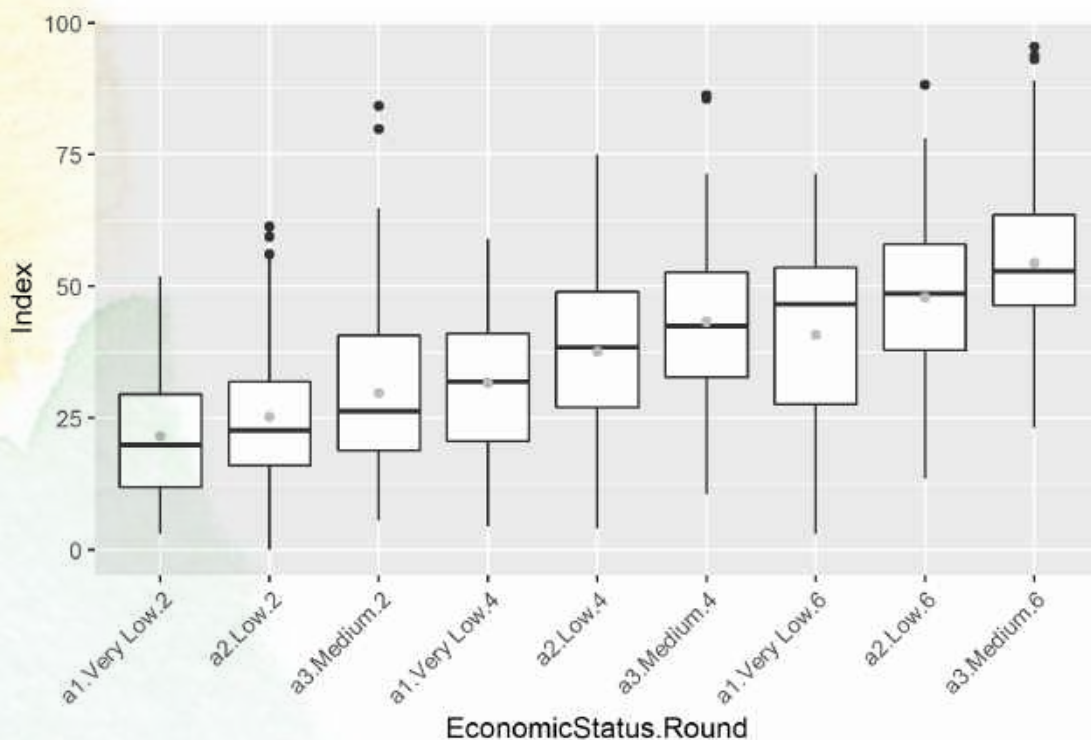


Figure 12.3: Performance difference between economic status groups in rounds two, four and six in Wada

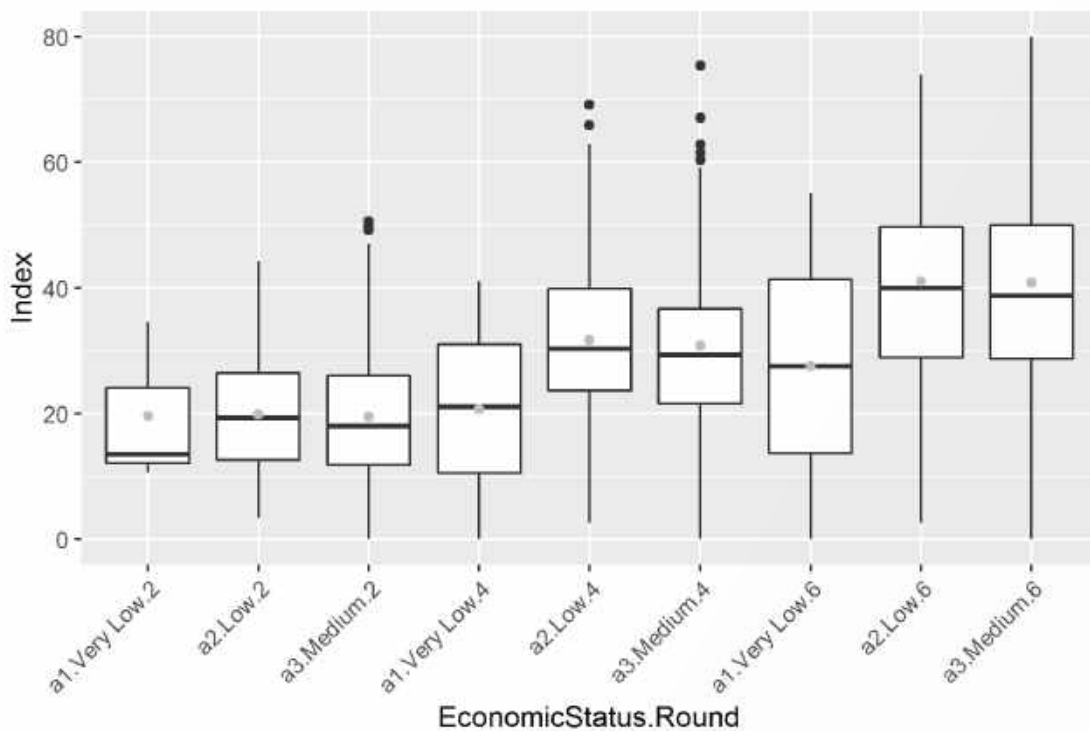


Figure 12.4: Performance difference between economic status groups in rounds two, four and six in Yadgir

12.1.4: Parents' Educational Background

The project collected information about the mothers' and fathers' education. Depending on their level of education an appropriate score was generated and the scores were combined to get an overall educational score for the family. Preliminary ANOVA analyses (see Tables C7 and C8 in Appendix C) indicate that the differences in performance amongst students with different levels of parental education are significant in some rounds but not in others. This part of the analysis is ongoing and needs further investigation before it can be discussed.

12.1.5: Home Language

When choosing students for this study we deliberately selected students for whom the school language was their first language, in order to rule out the complexities of second language acquisition as a contributing factor to students' difficulties. In Wada, all students reported Marathi as their home language, despite variations in the tribal languages spoken at home. In Yadgir, while the large majority of students reported Kannada as their first language, we also had a small cohort of students from the Lambani tribal community who spoke Lambani at home. Unlike the differences between Marathi and other tribal languages in the surrounding areas in Wada, Lambani is significantly different from Kannada and the two languages are not mutually comprehensible. We present differences in student performance here based on whether they spoke Lambani or Kannada.

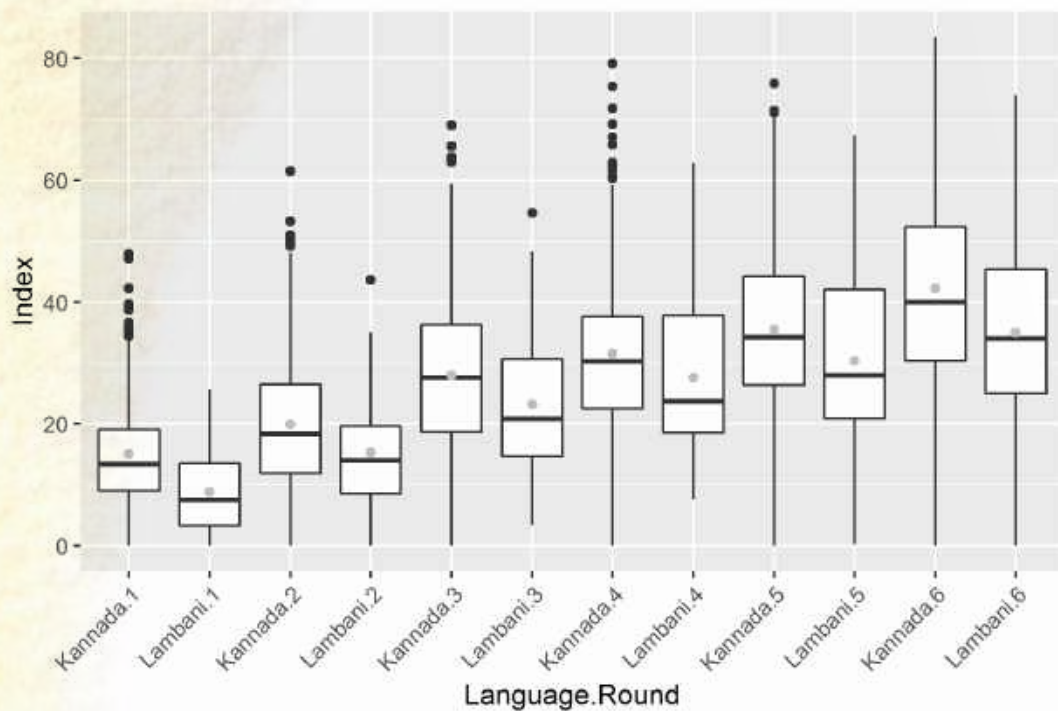


Figure 12.5: Performance difference between language groups in all rounds in Yadgir

Apart from round 4, the difference between Kannada and Lambani speakers are significant, with Kannada speakers displaying higher proficiency. The difference between Kannada and Lambani speakers persist across rounds.

12.2 School and Intervention Influences

12.2.1: Intervention

In Wada our student cohort was divided into groups, with approximately 30% receiving intervention (government school plus morning/ evening classes run by QUEST) and 70% not receiving any additional intervention (only government school). We present a glance at the effect of intervention on overall student performances. More detailed analyses to tease out intervention effect in specific areas of literacy are ongoing.

Table 12.1
Average Index Scores across Round by Intervention in Wada

Intervention	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
No	14.31	22.08	26.92	34.06	38.99	44.60
Yes	23.06	35.20	38.52	45.40	50.99	54.29

Table 12.1 indicates the difference between the average scores of students receiving intervention and those who do not. Students in schools that receive intervention perform better consistently across rounds.

Table 12.2**ANOVA table for intervention in Wada**

Round	df	F	P
1	1	61.61	< .001
2	1	70.57	< .001
3	1	52.09	< .001
4	1	49.75	< .001
5	1	49.20	< .001
6	1	32.10	< .001

This is substantiated by ANOVA analyses for each round. Table 12.2 summarizes analysis results. High F-values and near-zero null hypothesis probabilities indicate very strong positive intervention effect on students' literacy achievement.

12.2.2: School

In our study we worked with one classroom per school. School influences therefore encompass teacher effect, head teacher effect, teacher student ratios, school size, number of teachers, number of classrooms, to name a few established influencing factors. The effect of specific characteristics of school in literacy performances will be explored in later analyses. In this section we present an overview of variation in performances across schools and describe salient characteristics observed in one high performing

and one very poorly performing school in Wada.

During the study we worked with a total of 31 schools in Wada and 22 schools in Yadgir. Figure 12.6 and Figure 12.7 show the distribution of scores in each school in Round 6. The comparison of the distributions across schools indicate clear differences in performances. These differences are very significant and have remained so across the six rounds. (See Table 12.3 and Table 12.4 that summarize the ANOVA analysis for each round.)

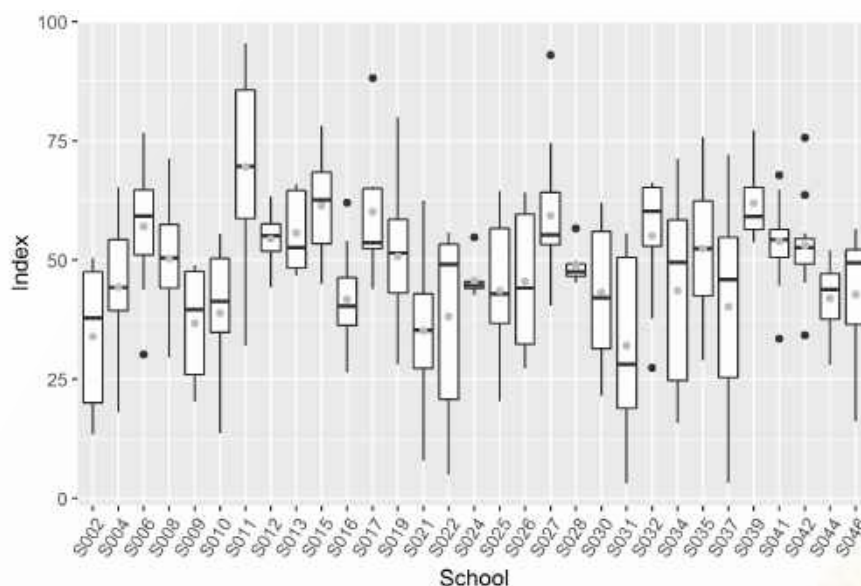


Figure 12.6: Performance difference between schools in round six in Wada

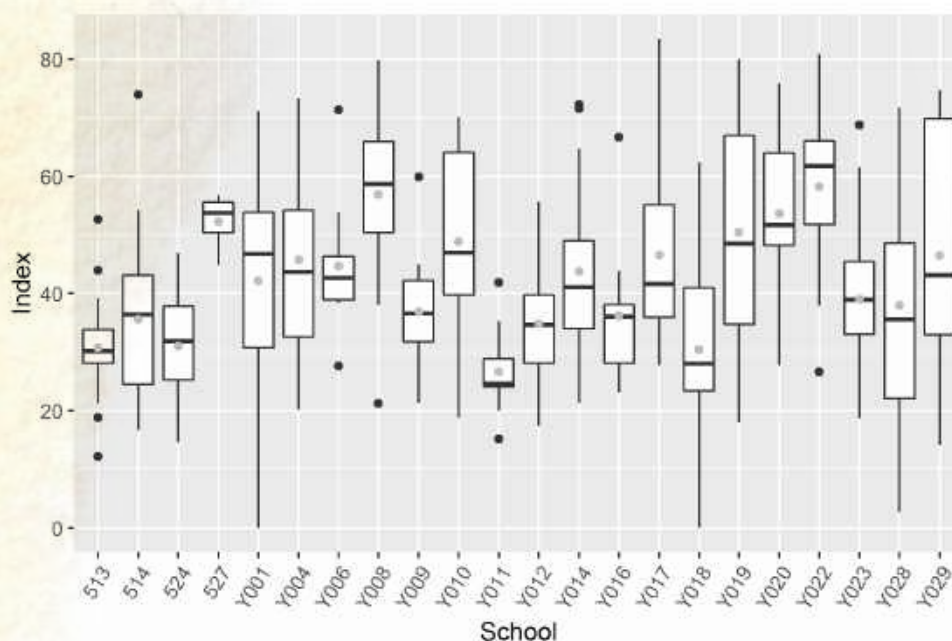


Figure 12.7: Performance difference between schools in round six in Wada

Table 12.3

ANOVA table for schools in Wada

Round	df	F	P
1	30	5.66	< .001
2	30	7.24	< .001
3	30	6.79	< .001
4	30	5.32	< .001
5	30	4.80	< .001
6	30	4.72	< .001

Detailed classroom observations carried out over the three years in all schools will be studied to understand and explain some of these differences. We select two schools here to present a brief understanding of determining characteristic within schools that likely lead to performance variations.

In Wada, as Figure 12.6 shows, schools S15 (with the second highest median score at 63%) and S31 (with the lowest median score at 28%) stand out for their relatively high and poor performances respectively.

S31 was visited three times by our researcher. On all occasions, immediately after the researcher carried out classroom observation, the teacher signed their attendance for the day and left the school. The head

Table 12.4

ANOVA table for schools in Wada

Round	df	F	P
1	21	5.75	< .001
2	21	4.48	< .001
3	21	5.84	< .001
4	21	6.25	< .001
5	21	7.12	< .001
6	21	6.49	< .001

teacher of this school was indifferent about the teacher's intermittent comings and goings and appeared wholly unconcerned about student engagement. Students in this school are often found sitting completely idle for hours on end, neglected without any support or direction from their teachers or head teacher. Students in this school also walk far distances to make it to their classrooms every day. The apathy of their school teachers and the many non-productive hours spent in school is testament to the resulting disinterest and disengagement in school, evident in students' low literacy attainments.

The teacher in S15, on the other hand, was regular and was observed to go out of his way to help students talk about their homes lives. This teacher spent significant

time building relationships with each individual child, asking them about their homes, their daily lives, their expressions (songs, stories etc.). He also ensured that each child was given regular, focused feedback on their work and individualized attention during class.

Given that our study was conducted in highly socio-economically disadvantaged areas, the broad contours of the material conditions and contexts were similar. Yet, certain differences between the relatively better performing and poor performing schools were stark. In better performing schools more thought and care had gone into the maintenance of the surroundings. Poor performing schools were often run down to an extent that no meaningful learning was

possible. Teachers' indifference was not limited to pedagogy but to the overall running of the school.

The differences described here relate to general factors such teacher attendance, attention to students and feedback. These are not language or literacy specific. This could explain why overall performance of all schools is low. What we are describing are the differences between low and very low performing schools. We would argue that in the absence of language and literacy specific pedagogical content knowledge and practices even well intentioned and sincere teachers would be limited in the outcomes that they can achieve.

12.3 Multivariate Analyses

The observations made thus far in this chapter use one-way analysis of variance (ANOVA for a single factor). But do some of these effects change when we combine these factors together? Is there an interaction between these factors that could change our conclusions?

In Wada, caste, education status, economic status, intervention and school influences all have independent effects. Table 12.5 shows the significance of each of these factors in a multivariate model.

Table 12.5
ANOVA for Multiple Factors in Round 6 in Wada

Round	df	F	P
Caste Group	3	6.63	< .001
Education Status	3	5.59	< .001
Economic Status	2	8.79	< .001
Intervention	1	54.68	< .001
School	29	3.25	< .001
Residuals	279	NA	NA

The Table 12.6 shows the ANOVA for multiple factors in Yadgir for Round 6

As Table 12.6 indicates, in Yadgir only parents' education status and the school that a student goes to has a significant influence on student performance. Put together, in Wada all these factors explain 34% of the variation in the student performance (the Adjusted

Table 12.6
ANOVA for Multiple Factors in Round 6 in Yadgir

Round	df	F	P
Category	4	0.8727618	0.480
Home Language	5	1.5291935	0.180
Education Status	3	3.5410888	0.015
Economic Status	2	0.6056769	0.546
School	21	6.8411780	< .001
Residuals	337	NA	NA

R-squared value for this linear model was 0.3417); while in Yadgir this is 26% (the Adjusted R-squared value for this model is 0.2614). This indicates that our models are not very strong as far as predictive models go.

The individual characteristics of the student that lead to variations in performance can perhaps never be fully captured by any mathematical model. Another gap in our current ANOVA model is our conflation of

curricular, teacher and school characteristics; as well as the multifaceted classroom dynamic into one opaque unit of “school”. This model has to be enhanced by looking at each of these factors in detail.

12.4 Summary

In this section we tried to understand the causes of variability in the literacy achievement of the students. We look at individual factors like the caste, home language educational and economic status of the homes of the students and also the role played by the school and additional intervention (in Wada). From these analyses we understand the following:

1. There is no significant difference in performance between caste groups in Yadgir. In Wada the students belonging to the OBC community are performing significantly better than those from ST communities. This difference is narrowing over rounds.
2. The home language differs only in Yadgir. While there were a small number of Urdu, Hindi and Marathi speakers in Yadgir, the only large group other than Kannada was Lambani speakers. In the first round there was a significant difference in the performance of Lambani speakers when compared to Kannada speakers. The Lambani speakers had much lower performance.
3. The educational status of the parents in Wada and Yadgir does have a statistically significant impact on the students’ literacy performance.
4. The economic status of the parents have a very significant impact on their literacy levels in Wada. And this difference has only increased over the rounds. In Yadgir there is no significant difference between students from different economic backgrounds.
5. In Wada, the schools that receive additional intervention have a very significant positive impact on literacy performance of the students.
6. In both Yadgir and Wada the schools have a statistically significant differences between them. The better performing schools have a clear positive impact on the students’ literacy performance.

The sources of variability will be further investigated in greater depth in our ongoing analyses.



Lives In The Margin

In previous chapters, we have tried to provide readers with a broad understanding of the teaching and learning of literacy and the sources of variability in our sample. In this chapter, we bring some of those insights to life through the presentation of case-studies of individual learners at each site.

13.1 Case Study Rationale

The intent of presenting the case-studies is to provide glimpses of academically and socio-economically marginalized children making their way through the early years of reading and writing in government schools. These portraitures bring into clearer focus children whose lives, successes and failure are otherwise reduced to being mere statistics.

Further, they help highlight the complex contexts and meaning-systems in which reading and writing are acquired, bolstering our contention that the acquisition of reading and writing cannot be treated only as the learning of skills, but as socialization into culturally valued practices. The journeys of the case-study children presented in this chapter underscore the idea that language learning needs to have meaning and relevance for the learner. When the “ways with words” (Heath, 1982) at home and at

school are significantly different, conscious effort will need to be made to help build a sense of relevance for learners. The case-studies hopefully illustrate the immense potential that these children bring into the classroom, as well as the almost impossible challenges they face in becoming literate.

Given that children from marginalized and disadvantaged communities face greater challenges in the formal schooling system and processes than children from other strata of society, we decided to study the literacy learning of children from marginalized and disadvantaged circumstances. The sites for studying the acquisition of Marathi and Kannada were, therefore, selected for their relatively low socio-economic demographic, as well as educational underachievement.

13.2 Theoretical Background

The difficulties that children from disadvantaged or underprivileged backgrounds face in school are often attributed to the lack of a “literate environment” at home. As described in Chapter 8, during the course of our study, we frequently came across teachers who held the children’s home environments almost solely responsible for the children’s poor achievement. On the LiRIL project, we do not view the child’s background from a deficiency framework; rather, we believe that these difficulties are more realistically and fruitfully characterized in terms of differences between school / academic expectations and home/ daily life expectations.

Barbara Rogoff (1995/2008) characterizes human development as the changing nature of people’s participation in culturally valued activities. Within such a perspective, literacy learning can be visualized as an individual’s gradual initiation into the activities and roles of literate individuals within a community, and the gradual internalization of these roles and activities till they are mastered by the individuals for use in their own lives. Therefore, a child’s growth as a literate individual is facilitated or constrained by the literacy-related experiences available to them in real-life purposeful interactions within their environments. This concept of literacy as “situated

within multiple contexts of social life" (Purcell-Gates, 1997) or literacy as "situated cognition" (Gee, 2001) has been propounded by multiple thinkers and researchers.

This notion of literacy is referred to as an "ideological model" of literacy (Street, 1984), and contrasts with "autonomous" models of literacy that view literacy as "technologies of the mind", or, as a collection of skills independent from the contexts and purposes within which they are practiced. Autonomous models view literacy as the mere acquisition of skills, independent of context, and believe that this is sufficient to change cognitive and social practices in communities characterized by poverty or inequality. Expectations of such gross emancipation through skill-centric approaches are overly simplistic. Ideological models, on the other hand, situate literacy as rooted in the world-view of the practicing community, therefore necessitating that transformative literacy teaching and learning includes an understanding of the material conditions and social practices that mediate literate practices.

Using ethnographic work conducted with different communities, Shirley Brice Heath (1982), for example, demonstrated that children from three different communities—a white, middle-class community, a white, working-class community, and an African American community—acquired three culturally different forms of literacy. While all were technically "literate", the cultural practices that surrounded children in different communities varied widely, such that children from the middle class arrived at school

with literate practices that were aligned well with school practices. It was little wonder, then, that these children ended up performing better at school as compared to children from the other communities. Moll, Amanti, Neff and Gonzalez (Moll et al., 1992) demonstrated that the "funds of knowledge" that children brought to school from their communities could be invoked successfully in school, to enable students to learn with more confidence and success.

Despite the importance of invoking community-based funds of knowledge in the teaching and learning of literacy, if pedagogical content and content are limited to what is found in the local community, there is a real fear of depriving children of opportunities of acquiring the knowledge and skills valued by mainstream (powerful) society. Well-meant initiatives by those in power, according to the African-American educator, Delpit (1986), do not adequately take into account could end up perpetuating existing hierarchies, as opposed to promoting social mobility. There is value in the teaching of "skills" and "correct ways of reading and writing" to children from non-mainstream backgrounds. In Delpit's words, "...skills are best taught through meaningful communication, best learnt in meaningful contexts... skills [themselves] are a necessary but insufficient aspect of ...minority students' education" (p.184).

In the studies described here, we underscore the importance and relevance of local practices and meaning to children's school learning, even as we advocate equipping children from marginalized communities with the capabilities necessary to thrive in complex societies.

13.3 Selection of the Case-Study Child

During the first two years of piloting, we generated a brief case-study of an academically and socially marginalized child, "Geeta" in Wada, Maharashtra. During the three years of the longitudinal project, we selected one child from each site from each site—Wada and Yadgir—for our case-study. We selected the case-study child in August 2013, approximately three months after the child had entered Grade 1. The criteria for selection of the child included the following considerations:

- (1) Even within the context of the overall marginalization of the communities selected for our study, the case-study child was particularly socio-economically marginalized as well as perceived as academically low-performing by the teacher during the first three months of formal schooling;
- (2) The child was a student of one of the four classrooms per site that we had selected for in-depth observation;
- (3) The child was one of the 24 target students selected for closer observations and interactions;
- (4) At least average attendance at school during non-migrating time in order to study the child in school setting.
- (5) If the family of the child migrated seasonally, they had a pattern of going to nearby places, so that observations on the child could continue.

13.4 Methodology

A case-study, by definition, is a construction of a narrative related to a particular individual or group of individuals. The validity of the narrative is limited to the case in question; it does not presume to be generalizable to other individuals or groups. Yet, it would also be foolish to deny all possibility of generating generalizable knowledge from a case. From an interpretive (as opposed to positivistic) frame of reference, a well-constructed case often offers insights that can be reflected upon in designing educational interventions for other such cases. It is with this assumption of limited generalizability that we construct these cases.

We used largely ethnographic methods for constructing our case-studies. The ethnographer's goal is to provide a thick description and an interpretive-explanatory account of what people do in a setting (such as a classroom, neighborhood, or community), the outcome of their interactions, and the way they understand what they are doing (the meaning interactions have for them). In order to do this the ethnographer carries out systematic, intensive, detailed observations of these behaviors; examining how behaviors and interactions are socially organized and what social rules, interactional expectations, and cultural values underlie these behaviors for extended periods of time.

The case-study used multiple data sources which included

- Detailed observations of the child in various settings—home, school, with peers, and the like;
- Simple shared literacy experiences/activities with child both at home and school;
- Interviews with significant people in child's life—teachers, parents and other significant players.

The child's language and learning were closely

observed. The researcher made a concerted effort to get to know the child's family and community to the extent possible in the time available; as well as to understand the uses of print and oral language in the home and around the child. It is beyond the scope of this paper to present the entire case-studies which can be found in Appendix F5-F7. Here we present brief glimpses of each child and a summary of our learnings from the three case-studies.

13.5 Brief Portraits of the Case Study Children

13.5.1: “Geeta”

As part of the pilot for the LiRIL project, we constructed a small case-study of Geeta (see Appendix F5) a member of the Warli tribe of Palghar district. Geeta was in Grade 4 at the time we observed her, because the pilot project included students from Grades 1-5.

Relative position of Geeta’s family in the community.

Members of Geeta’s community live lives of bonded labor, sometimes pledging lifetimes of work, of even their children, in order to pay back debts to landowners. Geeta’s headmaster describes her family “as the poorest in our village” and this was made evident in school to all by the fact that only Geeta and her brother were not able to bring their own plates to keep in school for the consumption of their midday meals. Geeta’s family seems to have been cast aside, literally and figuratively by the other villagers in Nishet, Wada. In fact her house is located on the extreme end of the village, shrouded in and facing the nearby forest, whereas other houses are integrated into the neighbourhood and community. Both of Geeta’s parents drink and this is oft repeated by her teachers who shake their head in seeming hopelessness while stating this, almost as if this preordains her ability to succeed in school.

Geeta’s day.

At the time of the pilot, Geeta spent the bulk of her day away from school doing chores and taking care of her younger brother. She took a couple of hours out of her schedule of sweeping, washing dishes, bathing, cooking and talking with her mother, to play marbles, daydream and talk to her siblings in expressive, interrogative and informative ways. At home, Geeta’s father often lay in a drunken stupor, while her mother spent most of the day outside, earning a living for the family. Geeta took charge of not just her younger brother, but also of a neighbor. She is positioned as a responsible person within her household fulfilling what would seem like “adult” responsibilities from middle-class perspectives. In school, however she

seems to be torn away from her identity as a contributing family member, by being addressed in didactic ways that clearly position her as a dependent child.

Language in the home and school.

Geeta speaks Warli at home. The medium of instruction in school is Marathi. However, despite her four years in the school space, Geeta’s spoken language remains eighty percent Warli. At home, Geeta and her siblings/peers use oral language for a variety of reasons, but nobody speaks in a didactic manner to her. We saw several instances where Geeta was trying to make sense of the text, but her responses to the teacher’s questions were non-standard, rather than the standard responses that the teacher expects.

Geeta is able to write only her name in Grade 4. She is the only one in her class who cannot sound out the first akshara in a word. She operates in the classroom by loudly and quickly repeating what is said by the students who respond to the teacher’s questions in class. She is not able to follow a story or get to the right page of a book. Furthermore, she seems unfamiliar with some common visual images of children’s stories (she described a balloon as a pot with a wire hanging from it). When Geeta is asked to read a picture book, she talks about each picture as an individual image and does not make connections despite characters being the same across images. It is clear from this that Geeta’s familiarity with text and concepts of print rest on extremely shaky

Print in the home and community.

Geeta’s family does not use print for instrumental purposes, such as reading labels, bills or reading the time. Several literate members of her village community were observed as having basic facility with print for performing various day-to-day functions. For example, the shopkeeper in her vicinity reads the newspaper, read bills, and makes sense of his finances. The head master (HM) in addition to these three uses

of print, also used print for educational purposes and sometimes brought writing tasks home from school. Nobody in Geeta's village used print for recreation, to reinforce oral messages, for social messages and greetings or to jot down notes for memory aids. Geeta was not able to calculate her expenses when she went to shop; she trusted that she would be given the correct amount of change by the shopkeeper foundations.

Participation in school. This discomfort with print was reinforced by Geeta's teacher who consistently ignored her responses to questions, rendering what she said in the classroom null and void, even if she did provide the right answer. An example from classroom observations exemplifies this:

T: What happens when it rains?

G: Shining streaks!

Another C: Lightning.

T: Yes, lightning!

[Class Observation, June 2012]

The invisibility of Geeta's presence in the classroom was reinforced by the teacher; and reciprocated by Geeta. When playing a game of remembering and naming objects in the classroom with the researcher, Geeta could not recall any item in the classroom. However, when talking about home items, Geeta

named many objects, suggesting the relative salience of each space in her imagination.

Home and school knowledges.

Geeta informed the researcher in a confident manner about the layout of her village; about the villages in all directions of her own; about the forest, the river, the distance between different locations, how the map of her village changed in the dry versus the wet season, and so on. At school, she (along with several students) stared in a puzzled manner at a map that the teacher had laid out in school. She requested the teacher for help several times, but was ignored.

Aspirations for Geeta.

The researcher asked the HM in Geeta's school about his aspirations for her; she also repeated the same task with Geeta's classroom teacher; and her mother. The HM felt that Geeta was an honest girl who would be fine later on in life if she found a suitable partner. Her teacher hypothesized that she could have been an active learner if she had learnt the aksharas in Class 2, but appeared to be resigned to accepting her possibilities for academic success as a thing of the past; irrevocable. All that her mother wanted was for her to learn to sign her name. And Geeta herself? She wants to be a policewoman when she grows up!

13.5.2: "Myalli"

Myalli was observed during his first two years in school, when he was in Grades 1 and 2 of a school in Yadgir (see Appendix F6 for the case-study report). Myalli belongs to an SC community and lives in Yadgir in a family of 8, comprising of his grandmother, uncle, aunt, cousin, mother, brother and sister. Myalli's mother left his father, an alcoholic, who had died two months before this observation was carried out of liver disease. Myalli's house was built under a neem tree in the corner of the village. It was noted that his house, unlike the others in the neighbourhood, did not have an electric connection.

Language of the home and school.

The Kannada Myalli speaks at home is very different from the standardized language he is learning in school.

Numerous instances were noted of Myalli bringing in words from home to the school, only to have them replaced by the teacher with a new set of words (as described in Chapter 5). The researcher, when speaking to Myalli's mother, ascertained that words used for common nouns at home and school were indeed very different (see Table 13.1). When asked about this discrepancy and what it may mean, Myalli responded that the words he used at home and at school were different, because at home he spoke in Kannada, while at school, they spoke in English! (He had not realized that he was learning a different dialect of Kannada at school). When questioned, his mother said that while she would not be able to understand her son if he spoke to her using those words, it would be beneficial for him in the long run: he was learning a superior language to hers.

Table 13.1

Comparison of Home and School Words in Myalli's Life

Mother's Words (Home Words)	Words Used in School for Same
Teru	Teru
Rokha	Dhana
Deegi	Deepa
Baggu	Chella
Kelli	Bega
Kothi	Vanara

Myalli's brother, who is elder and goes to school, sees education as the learning of skills that determines one's success in school. He does not, however, find any connection between these skills and his practices or lived reality.

Myalli at home and school.

In discussion with Myalli, outside of the school premises, walking around the outdoor space around his house, it was clear that he had a rich working knowledge of the flora and fauna around him. He knew how gourds grew and their various shapes, excitedly revealed a honeycomb and imagined maddening an eagle and being lifted way. He displayed curiosity, excitement and enthusiasm, using language as a means to support play and other activities.

In school, however, Myalli seems to be slipping through the cracks of the Nali Kali system which was proving to be taxing for a single teacher to successfully manage. Lower order decoding and copy writing took up 90% of Myalli's time in the Nali Kali language classroom. Introduction to the script and continual practice constitutes the backbone of this language curriculum. Myalli could recognize 18 *aksharas* in Round 1 of data collection and, 29 *aksharas* by Round 2 (end of Grade 1). However, Myalli could not blend the *aksharas* while reading words. During reading activities, Myalli did not appear to be looking for meaning because he did not approach sentences as words (meaningful groupings of *aksharas*), instead, he looked at them as individual *aksharas* to be decoded. The meaning making that he so effortlessly displayed out of school, was not invoked during most conversations and interactions at school. Neither was his language.

13.5.3: "Pallavi"

Pallavi lives with her maternal grandparents and her great grandmother in Wada, Maharashtra (see Appendix F7 for the complete case-study report). Her parents are divorced and remarried to different partners. Pallavi's mother comes to visit her from time to time, but it is her grandmother who is her primary caregiver. In the months from May till October-November, she stays in her house in Kasghar and takes care of Pallavi as well as her younger brother. Pallavi's grandmother, too, leaves home and goes to

the brick kiln when the season comes. Therefore, even she is not a constant and reliable adult caregiver for Pallavi.

Pallavi's environment is not as predictable and regular as that experienced by most children in her school, and her routine keeps getting disrupted in small or big ways. Often, Pallavi has no resources to cope with these interruptions. For example, fed up with fights with her husband, Pallavi's grandmother tried to commit suicide in the second year of the study.

Print in the home.

Pallavi is from the Katkari (rat eating) tribe which, in general, is stigmatized and characterized by poor levels of education and literacy achievement, which is also true of Pallavi's pada (hamlet). Pallavi's great-grandmother (GGM) showed none of the literacy-related behaviours of literate adults. While she handled currency notes and money while shopping, she did not look at grocery packets, since most of their food was either home grown or came in unpackaged forms. In the rare case when she did buy packaged goods, the print on it made no sense to her. They did not have a clock and decided when to go to school, go for work, eat, and the like, through guesswork. Pallavi's day consisted of tasks such as fetching water, washing clothes, cooking, making household purchases and gathering firewood, none of which required her to read and write.

The ritual of schooling.

The rituals of schooling are prioritized in Pallavi's household. Both her grandmother and her great-grandmother made it a point to be present and to encourage Pallavi to "study well". They also ensured that Pallavi stayed in her village when her grandparents migrated to brick kilns. When Pallavi was in the third grade, they did migrate with her to a distant brick kiln, but they insisted that Pallavi attend the local school. However, apart from extending their support, they could not participate in any way in her education at school or in the Balbhavan. Pallavi did not receive any input from home with regards to skills associated with reading and writing, or understanding the purposes or functionality of written language. This was essentially a community where print played no part in their daily lives.

Learning at home.

Pallavi has learnt many other things at home, including assuming responsibility and working hard. She routinely helps her great grandmother in many chores. Activities such as these have a purpose and therefore are meaningful for her. They play an important role in defining Pallavi as a member of her family. She sees her grandmother do similar things for the house and has observed their value. The importance & necessity of these actions do not have to be spelled out.

Functions of language in the home.

It became apparent through observations that Pallavi was quite capable of communicating to achieve specific goals within her context at home and at play. She was capable of using language to inform, persuade, bargain and argue with others. In her peer group, more often than not it was her who took the lead in initiating activities and games. Her communication and social skills were developed at least as well as any child her age.

Pallavi at school.

Pallavi was often teased by her peers because she underperformed in school. Pallavi's peers call her 'vedi' (mad) often, especially at the school and the Balbhavan (but, never outside the school, in our observations).

The researcher intervenes!

Pallavi differs from the other case-study children because deliberate efforts were designed to provide her with an early literacy intervention by the research team in Wada.

When she was in Grade 1, the researcher read aloud to her and a small group of her classmates, introducing a few common and simple *aksharas*, had her make words out of given *aksharas*, modelled the writing of sentences suggested by the children, dictated *aksharas*, had her draw pictures and write whatever the children wanted in their own scripts. During this time, Pallavi was sometimes engaged, but usually did not seem present, except physically, in class. She continued to experience problems with focusing on a given task for long.

In Grade 2 Pallavi received one-on-one intervention from the researcher following similar intervention plans for half an hour per day over twenty seven days. The emphasis here lay on fortifying the connections with Pallavi's life wherever possible. However, after a week's gap, when asked to read some *aksharas*, Pallavi seemed to have forgotten all of them. During this period, Pallavi was taken by her grandparents to the brick kiln during their annual migration. When sessions resumed there was a focus on reading stories aloud to Pallavi. Her favorite was *The Why-Why Girl* by

Mahashweta Devi. It is not difficult to guess why she found this story of a girl from a marginalized community with a fiercely independent streak so appealing. At this juncture, Pallavi was uprooted and taken to the brick kiln to live again. It was too far for her to continue in the same school and so an intervention was devised to reach Pallavi remotely, an intervention that was personal, crafted just for her.

Letters were sent to Pallavi from different sources: from child acquaintances in the village, to her previous teacher, to a classmate from school. Pallavi responded with pride and joy at receiving a letter that was “just for her”, and made a fevered attempt to decode. She needed cues to be able to think of responses (“What did the writer say?”, “Did she ask you any questions you want to reply to?”) and help with spelling in order to write back. Without these cues her writing was difficult to decipher and was interspersed with copious repetitions.

Outcomes of a personalized intervention.

By the end of her second year, Pallavi was able to use the structure of the source letter as a cue for the structure of her own letter. She was also able to grasp the intent behind writing and was able to choose her content accordingly. It was clear through her

expression and the general enthusiasm that she found the activity very meaningful and enjoyable.

Pallavi demonstrated many strategies she had learnt. When she could not remember how to write the name of the village, she ran outside to look at it on the school building. She looked at the letter from her correspondent and similarly wrote down the day and the date. When writing long words, she stretched them out orally to identify each sound, in order to write individual *aksharas*.

At the end of two and a half years of intervention, Pallavi has shown herself somewhat capable of communicating to others through writing, and of engaging with texts. She can draw connections between herself and texts and she can write to convey information and ask questions. However, her writing at the end of Grade 3, the outcome of a personalized intervention, is only painstakingly decodable. It may be said that without having an idea of Pallavi and her surroundings, it would be very difficult to understand her writing. As for reading, Pallavi has become capable of reading very short and simple passages with comprehension. However, this still does not equip her for the level of study required by the Grade 4 curriculum.

13.6 Key Findings

The main finding from our case-studies is related to the disjunctures between home and school; and the other, the resulting lack of meaning in the child’s schooling.

13.6.1: Disjuncture in Roles at Home and School

When a child is responsible for the regular functioning of the household and is used to her younger sibling(s) relying on her work and care in order to sustain normal life, as was the case with Geetha, her presence automatically becomes purposeful and meaningful. This same child may be treated in the school as immature, or, as someone who does not have significant contributions to make. Sometimes this treatment is not deliberate—it is, in fact, a rather unquestioned protocol for the teacher to take care of the child and treat him/ her as a dependent, indulging

and pushing him/her into academia accordingly, as he/she grows. However, for a child who is accustomed to taking major responsibilities in a family, including care of siblings and myriad other chores, such treatment could be confusing and disorienting, disregarding the functioning and agency the individual already possesses outside of school.

This sudden transition from what middle-class individuals may consider to be adult-like roles in the home to an entirely middle-class imagination of the

“child” in the classroom, is compounded by the fact that regular life is full of functionality, unlike school tasks. In school, the purpose of what is being done, especially with regards to literacy (reading, writing, and copying) is in no way made clear or relevant to the child. For the child, there is no meaningful end to the letters he/she is being made to continuously trace out. The purpose of becoming literate is lost to the learner’s mind.

Both of these observations on the field call for us to relook both the pedagogy and aims of the literacy

curricula, in order to address the child as an active, constructing thinker who has a great deal of pragmatic responsibility. Working on building this responsibility (as opposed to dismissing it as misfortune or ignoring it completely) for the self, one’s progression and capabilities and contribution to the family and community, while expounding on the concrete uses of print is likely to reinstitute purpose for the child. This requires that literacy be seen as, not a series of processes of skilling and drilling but, rather, as a foundation that can result in the offshoot of an informed and active citizen.

13.6.2: Disjuncture in Language Use at Home and School

Most children experience a shift in the forms and functions of language use when they transition from home to school. At home, language is used for functional, communicative and expressive purposes, while at school the child often encounters language used in decontextualized and abstract forms. The nature and severity of the shift is not the same for all children, though. Second language learners, or speakers of dialects that are not powerful experience the shift more profoundly than do others. Children from homes where language is not often used in abstract or decontextualized ways, experience the shift more profoundly. This was true for all our case-study students.

We found that even when they came in with competent oral language skills from outside of school, and were curious and interested in participating, they were often ignored or dismissed in the classroom.

Often the manner in which they proffered up their response did not fit in with the expected response. Many times, the response did not come in the vocabulary expected in school—the more standardized dialect.

When the curriculum does not provide for oral language development activities, but spends most of the time on decoding instruction; and when decoding instruction is organized according to a logic that dictates the teaching of aksharas first and then swarachinhas, common words, expressions and emotions that a child brings to school are unlikely to find forums of expression. School language as a medium for expression and comprehension can only be recognized by the child when it has familiarity with life. If not, the entire language of its curricula and subjects remain disconnected from the child’s world, leading to a disjuncture between “the word and the world” (Freire& Macedo, 1998).

13.6.3: Shift from being Knowledgeable and Capable to being Incapable

The children we conducted case-studies on were capable, knowledgeable in their own home environments and communities. They not only took on responsibilities, but also carried them out successfully and reliably. They knew their communities, the geography, the biology, the relationships; and they knew how to maneuver successfully to get through their daily lives, and even to care for others. At school,

on the other hand, they’re not just placed as “children” (as described earlier), but also as “incapable students”. None of the three students we observed could be described as disinterested or disengaged in schooling. Other than Geeta’s family, Myalli and Pallavi had families that supported their schooling, even though they were not able to participate meaningfully in it. Yet, despite the desire of their families, and their

own desire to be schooled, they are seen as academically less capable. The words they use are not the ones needed in school; their answers to questions are not the “correct” ones; they take longer than

others to learn to decode and to cope...and the knowledge and capabilities that they have in abundance outside of school are almost never invoked or even acknowledged within the schooling context.

13.6.4: Invoking the “I” in Literacy

Through the laborious and personalized work done with Pallavi, it is evident that the affective foundation is critical to literacy learning, and trumps repetitive rigor. The child’s implicit need to communicate about his/her life thoughts and feelings are psychological cornerstones that the curriculum rarely considers.

Pallavi connected most to a story that featured a protagonist like her. The personalized letters written

addressed to her spurred an interest in reading and writing (of not only the letters but to print she regularly encountered) and moved her to a position where she was motivated to write and construct her own expressive sentences. The intervention with Pallavi shows the potency of the affective dimension: for a child who previously scaled burglar bars and wandered outside at every opportunity when reading and writing activities were going on.

13.7 Implications

The children with whom we worked during these case studies do not represent a negligible percentage of school-goers. Statistics published by large-scale assessment and evaluation reports claim that 65-70% of children in rural areas of India cannot satisfactorily read Grade 2 level texts in Grade 5 (ASER, 2012). While the case-study children we worked with were at the bottom of their classes, neither their difficulty with reading and writing, nor the factors that may have led to this are pertinent solely to them.

When doing field work at both sites, we have heard teachers attribute children’s “failures” to the child’s background a countless number of times. Branding learners or their families as deficient does not go far in improving the child’s motivation to learn. Continuing to develop and facilitate curricula of the kind we have now will not suddenly begin to bridge any of these gaps. Through extensive work with them, we have identified several ideas that could have implications for the design of curricula and teacher education programmes, which we summarize here:

1. The current early literacy curricula do not make an effort to establish relevance for the learner. We

hasten to add that relevance is not related merely to linking the curricula back to the child’s lived realities; it also can, and must, include establishing relevance between current actions and future goals. The curricula neither links meaningfully to the child’s past, nor to the child’s future. In this context, schooling becomes a mere ritual for many children from marginalized communities.

2. This is linked to the idea that affective and cognitive aspects of the curriculum need to be imagined in more powerful ways than merely as “child friendly”. As we have demonstrated, the very nature of “childhood” shifts across communities, such that what is imagined as “child friendly” in middle-class, urban communities may seem empty and facile to children from other communities. How can the child’s motivation, emotions and interest be aroused towards schooling and literacy? This seems to be a crucial question for the educational community to consider.
3. Linking the curricula back to the child’s home language and community-based knowledge appears to be an obvious implication of our work.

But, we would be the first to caution that this principle not be used in a manner that prevents children from marginalized communities from accessing the knowledge of the powerful; as well as powerful knowledge in various disciplines and domains. Knowing the area's geography is different from understanding geography as a discipline. In Vygotsky's terms, while one invokes the child's everyday concepts, the other provides the scientific concepts—it's at the intersection of both that robust conceptual development occurs. Curricular justice for these students will never lie merely in harking back to their community's knowledge bases; this will only serve to further marginalize them in modern-day economies and societies. The curriculum must wisely invoke community-based knowledge in order to move children beyond their everyday understandings of the world.

4. Teacher Education programmes could take on more seriously the work of sensitizing teachers to issues of curricular justice for learners, moving beyond the clichés of child-friendly and joyful learning. Teachers discuss the capabilities of students and their communities in naïve and stereotypical ways that reinforce prejudices of all kinds. Empowering students through formal schooling should be the core around which all other curricular and teacher education efforts should be organized. Sensitizing teachers to their own privileges and biases; and enabling them to observe and respond to their students with both empathy and knowledge are both valuable goals in this regard.

When school education appears to provide little in the way of opportunities to children (who pass through 8-12 years of schooling without being able to read or write fluently), it is not surprising that both parents and children question the relevance of schooling. The children in our case-studies appear to go through schooling only to learn that they cannot do a number of things. To enable school to become relevant for all children and their lives, concerned stake-holders in children's lives and schooling—parents, teachers and administrators—need to meet and discuss how to establish this relevance. The institution of the School Management Committees (SMCs) were conceived with this agenda. However, this structure clearly gives the teacher/ school the upper hand in power dynamics, often reducing the discussion in these meetings to a force field of ascribing culpability and responsibility for children's failures. Sounder mechanisms for involving communities, parents and children in formal schooling efforts, therefore, need to be conceived of and implemented in more robust ways, in order to find meaningful pathways or the marginalized child, now living a partitioned existence.



Conclusions and Implications

The LiRIL project was done over a five year time-span—with two years spent on piloting and three years on the longitudinal project. It had the ambitious goal of mapping out the teaching and learning of literacy in Marathi and Kannada. The project was located in two socioeconomically disadvantaged sites in each state—Wada and Yadgir. An endeavor of this kind and scale has not been undertaken before in India. Although we have data and a general level of awareness about the low learning of students across India (ASER), this has not been theorized or studied in sufficient detail and depth. The LiRIL project is different from large-scale assessments in that its primary objective was not to describe the

performance-levels of students, but to describe the acquisition of literacy across the early years of formal schooling in these two languages. Since literacy is not acquired in a vacuum, the project also sought to describe the contexts in which literacy is acquired (or not) within these two sites. Thus, the project collected and analyzed data not just on children, but on teachers, on curricular materials, on teaching-learning transactions within the classroom, and even a little on children's lives beyond the school walls. We refrain from discussing our findings in detail at this point, due to the ongoing nature of the analyses. At the same time, we would like to pause and ask: What have we learned from this effort?

14.1 Summary of Key Learnings

Our primary finding is that the story of how children acquire literacy is a complex and multifaceted one. We summarize some of the main points here:

1. In keeping with what is widely known, we found that students at both sites are not very successful at learning to read and write in Kannada and Marathi in the two sites studied.
2. The major goal and aim of early literacy instruction appeared to be (from our curricular analyses, classroom observations and teacher interviews) the teaching-and-learning of *aksharas* to the exclusion of many higher-order skills, values and capabilities, such as, establishing a relevance for literacy in learners' minds, comprehension, writing for expression or communication, developing a love for literature, and so on. Scholars speak of at least four roles that students should be enabled to take vi-a-vis texts: as code-breakers, meaning makers, text users and text critics (Luke & Freebody, n.d.). At least three of these four goals do not get much curricular attention. Even though the majority of instructional time is spent on teaching students to decode, the results, even of this effort, is less than remarkable, in terms of enabling student performance

3. The common assumption related to teaching Indic scripts to students is that several of these scripts are so regular and transparent that merely providing repeated practice at the *akshara* level is sufficient for a child to gain mastery in reading and writing. Further, it is assumed that this process takes about a year-and-a-half, such that most curriculum designers move past *akshara* presentation and practice by the second half of second grade. Our study contradicts these assumptions. We found that the scripts we studied were complex and took substantial time for students to learn. The *moolaksharas*, *swarachinhas* and *jodaksharas* of Marathi and Kannada are both extensive and complex for young learners. Even by the end of Grade 3, and despite considerable instructional time spent on these, many students had not acquired fluency with the scripts. *Swarachinhas* and *jodaksharas*, in particular, presented significant challenges. Our findings echo those of Nag (2007) who has flagged the same concerns. In this context,

we should expect to spend far more years during elementary schooling reviewing and revisiting akshara knowledge.

4. Our findings suggest that teachers lack knowledge of strategies to build comfort with the script beyond rote and repetition. Sounds are rarely emphasized while establishing sound-symbol relationships; and students are not encouraged to become active word-solvers. Decoding is sequential, effortful, and oftentimes, students decode *akshara* by *akshara* without blending words. Unsurprisingly, *akshara* knowledge is highly predictive of word- and passage-decoding skills; reading comprehension is also partially determined by students' ability to decode (decoding is a necessary, but not a sufficient skill for comprehension). Therefore, this is an area that requires attention—not in terms of spending more time on decoding in classrooms, but in terms of teaching better strategies, and providing more opportunities to revisit and strengthen decoding skills over the first four to five years at least, of formal schooling.

5. Most students have purportedly attended *anganwadis* prior to coming to Grade 1 at both our sites. Yet, many students arrived in Grade 1 without many Concepts of Print, suggesting that their interactions with print during the pre-primary grades were minimal. This points to a need for explicit attention to establishing Concepts of Print during (at least) the first year of schooling. It also suggests that the emergent and early literacy curriculum in *anganwadis* be strengthened.

6. While we were not able to establish phonological awareness at the phoneme level as significant to decoding, we wonder whether this is an artifact of imperfect methodology intersecting with the nature of alpha-syllabic scripts that may require more awareness at the syllabic level, as compared to the phonemic. Syllabic segmentation was an important predictor of decoding in our preliminary analysis.

7. Distinct phases of word reading were discernible in our data. These are being investigated more fully.

8. It is assumed by many teachers that once children are comfortable with the script, comprehension is

automatic (at least, in the child's first language). We did not find this to be the case. Students in our sample—even relatively good decoders—could not comprehend well. We asked a variety of questions and found to our distress that students could not comprehend even the more explicit aspects of passages. Their ability to infer, make connections, retell and sequence, were even worse—all capabilities that students with good comprehension use effortlessly (Duke & Pearson, 2002).

9. The teaching of literacy plays a large part in these results. Classroom observations revealed that teachers in both Wada and Yadgir often taught reading and writing without attention to meaning-making. When decoding is the focus of instruction, curriculum designers inevitably tend to use words that are not in the oral vocabulary of young children, with the explicit focus being on practicing the *aksharas* taught. Students in these districts (who speak different dialects than the one favored by the curriculum) are not able to use their oral languages in the classroom. Passage reading also proceeds largely through mechanical rote-and-repetition methods. We noticed teachers occasionally trying to connect passages to students' lives outside of school. We also noticed teachers "explaining" the passage sentence-by-sentence to the students. Put together, these strategies are ineffective in enabling students to become proficient at comprehension. For effortless comprehension to happen, they would need far more—for example, exposure to a wider variety of texts and reasons for reading, modeling of comprehension strategies (e.g., predicting, inferring, summarizing, etc.), as well as an expectation that they would be held accountable for independent interpretations of text and meaning-making.

10. The only kinds of writing we were able to observe were copy-writing and dictation. Students spent an inordinate amount of time in copy-writing *aksharas*, words, and even entire passages from their activity cards/textbooks into their exercise books. Writing for expression or communication was not modeled or supported in these classrooms. It was clear that teachers lacked an awareness about emergent writing, invented spelling, or guided writing. Higher order

writing was not on anyone's horizons as a valuable goal for younger students.

11. There is a great deal of variability that we found in our data—both within and across sites. Within sites, students in the top three quintiles in Wada, and the top two quintiles in Yadgir showed growth over time on various sub-tests of the LiRIL battery, as well as in classroom observations. Their growth was steeper in lower-order skills than in higher-order skills.

12. Many students in the top quintile arrived in Grade 1 with relatively strong *akshara* recognition skills and Concepts of Print. Many students in the bottom quintiles were not able to reach the same levels of achievement over three years of formal schooling, that students in the top quintile came in with. We were not able to establish any quantitative differences between the different quintiles in terms of socioeconomic variables. Qualitative probing revealed that students in the top quintile often had either a literate (and available) parent, or an older sibling, or an older-sibling-like figure who attended school and could model and tutor the younger student.

13. Performance differences amongst quintiles were greater for lower-order than for higher-order skills. Only half of the students in the top quintile in Wada, and one-third of the students in the top quintile in Yadgir were able to comprehend a grade-level passage with at least 50% proficiency at the end of Grade 3, suggesting that even the “high achievers” of these sites were not necessarily proficient readers and writers, but were competent decoders, for the most part.

14. There are clear school-level differences in achievement, that is, students in some schools outperform students in other schools. We are still investigating these school-level differences. At first glance, we can identify several factors that appear to contribute to these differences. These include general pedagogical factors, such as attendance and availability of teachers, attention to individual students, and assessment and feedback practices. Even teachers in the relatively better performing schools in our sample did not display knowledge of aspects specific to early language and literacy. This

could explain why the overall performance of students in our sample was quite low. We need to probe the SES-context of these schools and the incoming achievement of students at each school before reaching more grounded and validated conclusions about school-level differences.

15. Several background factors appear to impact school achievement—such as, caste-background, parental education, home language and economic status. Some of these factors have greater impact on student achievement in Wada than in Yadgir. The reasons for this also require further reflection.

16. Site-level differences were stark. Students in Wada outperformed students in Yadgir on almost all sub-tests of the battery. We say this with caution, because the two batteries were constructed in two different languages—each with its own script and contextual variability. As such, the assessment batteries may not be identical; yet, they were designed in broadly comparable ways. Even giving leeway for some measurement error, and linguistic differences, the performance differences were still large between the two sites. The top and bottom quintiles at both sites appeared to perform similarly across various tasks, suggesting that the differences shown by the middle three quintiles were more attributable to instructional variations, than to aspects of the script alone. That said, Kannada script is more complex than Marathi—and may require greater time to acquire. Even so, the difficulties were more than script related. Students in Yadgir had more difficulties with generating and understanding narratives even in oral comprehension tasks that are currently being analyzed. Sources of the site-level variability appear to lie, at least in part, in curricular differences. Nali Kali, a seemingly more progressive, child-friendly curriculum than the more traditional, text-book like curriculum in use in Wada, was less effective in promoting student literacy. Large class sizes, complex grouping arrangements that give teachers little time per student, and an almost exclusive focus on the progressive presentation of *aksharas* in contexts that do not invoke the child's oral language or comprehension, might contribute to low student learning in Yadgir.

17. The most marginalized students (as seen in case-studies) at both sites experienced a sharp disjuncture between home and school in terms of roles and responsibilities, the forms and functions of language use, and in participation-structures that excluded them. If one of the purposes of formal schooling is to empower individuals, then schooling for

these learners appears to be working in the reverse way—it takes away the sense of power they come into Grade 1 with. Their words and their language, their sense of being capable and successful individuals (in their lives outside of school) are weakened, even while not much else that is strong or positive is substituted in its place.

14.2 Implications

Our work has implications for policy-makers, curriculum designers, teachers and teacher educators. An indicative (not comprehensive) set of implications are listed here:

14.2.1: Teacher Education

Our findings suggest that there is a broad lack of awareness of the attitudes, knowledge and skills that teachers need in order to successfully teach early literacy. The general assumption that it takes very little to know how to teach young children to read and write is called into question by dismal performances across the nation. Learning to teach early literacy involves familiarity with various knowledge-bases

ranging from sociological, linguistic, psychological, literary, and the like—that go far beyond the general pedagogical strategies being currently taught in teacher education programmes. An urgent need to equip teachers with a sound knowledge-based related to the teaching of early literacy is a clear implication of the findings of our work.

14.2.2: Curriculum Design

1. The findings of the LiRIL project challenge curriculum designers to broaden their understanding of the scope and aims of early language and literacy instruction. Ideally, a curriculum for early literacy should include attention to various aspects of a comprehensive literacy model—for example, opportunities to engage with and develop children’s oral language, facilitate script acquisition, provide multiple and rich opportunities for meaning-making, for relating texts to their lives beyond the classroom, and for writing for expression, meaning and communication. Our findings show that currently, the curriculum is not working to support

students’ literacy development in a comprehensive manner; but, rather, focuses largely on script acquisition activities.

2. Even when it comes to script acquisition, the curriculum could consider a more prolonged exposure, with opportunities for students to re-visit aksharas even in later grades of elementary school. Finally, our findings also suggest that designers of curricular materials and programs need to take teacher-learning into account, and build meaningful ways for teachers to understand the curriculum, or to understand changes/revisions to the curriculum.

14.2.3: Pedagogy and Assessment

1. Teachers need to be equipped with a vision for pedagogy that goes beyond rote and repetition. While

there is definitely a place for repeated consolidation of skills in the early literacy classroom, this cannot be the

only, or the main method, for teaching.

2. Several scholars have invoked the power of talk in early language and literacy classrooms. Talk that provides opportunities for meaning-making, extends understanding, models rich vocabulary, and so on, should be a key pedagogical method that is used to build early language and literacy.

3. Modeling of strategies (decoding, comprehension, writing, etc.) is another. Focusing on making visible the processes used by proficient readers and writers, rather than focusing only on products is the principle underlying strategy instruction.

4. Teachers need to be sensitized to the life-worlds of the most marginalized students in their classrooms and be enabled to find ways to support these students in their classrooms. The understandings required for this go beyond what is offered to teachers through the discourses of “child-friendly” and “joyful” learning.

5. The relatively better performing teachers were attentive to individual students and provided quick and specific feedback to them. The need for ongoing formative assessments in the early language and literacy classroom is thus, another implication of our work.

14.2.4: Policy-Making

Our work points to the urgent need for coherent policies to be formulated at national and state levels to support early language and literacy learning.

At present, we have too few of these. The National Policy on Education that is being currently drafted for our country pays no attention to issues related to early literacy. In fact, the word “literacy” appears in this document largely in relation to adult-literacy programmes; while the early years are talked about in terms of “language development”—which excludes an explicit focus on or consideration of issues related to

early literacy. This is a serious omission and mistake in a country where most students cannot read or write, despite being in schools! The Ministry for Human Resource Development (MHRD) produced a policy on early literacy and mathematics—*Padhe Bharat Badhe Bharat* (2014). This needs to be followed-up through national and state-level consultations, elaborated and expanded upon, revised and re-envisioned. It is clear that as a nation, we have not yet fully understood the need for policies to support early language and literacy, and are only just beginning the conversation.

14.3: Challenges and Limitations

Despite the breadth and scope of this project, it is not without its set of limitations. Some of these are related to not being able to do what we wished to well enough; others are limitations of how we have conceptualized and designed this project. A few of these are listed here:

1. Our own inability to stretch the longitudinal study to students of Grades 4 and 5. When we had initially conceptualized this project, we had thought that we would get approval and funding for it in two phases—Grades 1-3; and Grades 4-5. However, after two years of piloting and three years of longitudinal data collection, the team was exhausted and unable to consider embarking on a Phase 2. Upon reviewing our findings, we know that the acquisition of literacy has just begun for many learners in our sample, and

following them into the upper primary grades would have provided useful insights, especially into the growth of higher order skills.

2. While we have rich classroom-level data, our community-level data are relatively sparse and not as rich as they could have been. The three case-studies are our main source of data at this level; in retrospect, we wish we had conceptualized a stronger socio-cultural angle to our data collection methods. In particular, we wish we had probed more closely into

differences between the languages of the communities versus the classroom. Other community-based factors could also have been examined.

3. Likewise, school-level data (outside of classrooms) could also have been a greater focus.

4. Designing and administering a battery of this depth in two different languages has been a huge challenge and a source of errors. We suspect that the batteries need to undergo one final round of revision before they are ready for publication—despite the numerous, pain-staking rounds of revisions that the team has already undertaken.

5. We struggled constantly and continue to struggle

with locating able statistical help with our complex data set. One reason why better growth models have not been presented here is the lack of appropriate statistical support.

6. The objective of this project was to map the terrain in terms of understanding the status quo in teaching and learning literacy. This was not an intervention study. We therefore kept away from even small interventions that could have made a difference, except with one of our case-study children. The impact of specific interventions—example, instruction with specific comprehension strategies, establishing relevance of literacy, exposure to early print awareness activities—could have been explored by a different design.

Glossary

Akshara:

The consolidated syllabic unit that is the basis of words in Indic scripts. This typically consists of the symbol for a consonant sound + any attached secondary vowel diacritic. For example, ली.

Moolakshara:

The akshara (described above) can be segmented phonemically into the base consonant sound + the secondary vowel diacritic. The base consonant sound of the akshara is referred to here as the “moolakshara”. Moolaksharas also include the primary symbols for vocalic sounds (swaras) that are included in the varnamala.

Swarchinha:

Secondary vowel diacritics, also referred to as mastras, gunitas, etc. in different Indian languages.

Jodakshara:

Symbols for conjunct consonant sounds, also referred to as vattaksharas, samyuktaksharas in different Indian languages. . For example, ल्प.

Sajatiya Jodakshara: Jodaksharas where the conjunct consonants represent the same sound.

Vijatiya Jodakshara:

Jodaksharas where the conjunct consonants represent two different sounds.

Barakhadi:

A series of aksharas that contain the same consonants but 12 different secondary vowel diacritics, usually recited in a specific order. For example:

ललाललिलुलूलैलैलोलौलंलः

Varnamala:

The entire set of moolaksharas in Marathi or Kannada.

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Appendices

Appendix A: Home Background Tables & Figures

Table A1
Economic Status

Site	Economic Status	Frequency	Percentage
Wada	Very Low	76	22.16
Wada	Low	175	51.02
Wada	Medium	92	26.82
Yadgir	Very Low	7	1.79
Yadgir	Low	147	37.50
Yadgir	Medium	238	60.71

Table A2
Caste Distribution

Site	Community	Frequency	Percentage
Wada	Category1	0	0.00
Wada	Minority	0	0.00
Wada	OBC	19	5.52
Wada	Other	1	0.29
Wada	SC	1	0.29
Wada	ST	323	93.90
Yadgir	Category1	65	16.67
Yadgir	Minority	18	4.62
Yadgir	OBC	131	33.59
Yadgir	Other	0	0.00
Yadgir	SC	122	31.28
Yadgir	ST	54	13.85

Table A3
Mothers Occupation

Site	Community	Frequency	Percentage
Wada	Agri.Labour	91	27.16
Wada	Agri.SelfEmpl.	109	32.54
Wada	Expired	0	0.00
Wada	Housewife	66	19.70
Wada	NonAgri.Labour	51	15.22
Wada	NonAgri.SelfEmpl.	8	2.39
Wada	Salaried	10	2.99
Yadgir	Agri.Labour	192	49.23
Yadgir	Agri.SelfEmpl.	98	25.13
Yadgir	Expired	2	0.51
Yadgir	Housewife	48	12.31
Yadgir	NonAgri.Labour	14	3.59
Yadgir	NonAgri.SelfEmpl.	29	7.44
Yadgir	Salaried	7	1.79

Table A4
Fathers Occupation

Site	Community	Frequency	Percentage
Wada	Agri.Labour	97	29.04
Wada	Agri.SelfEmpl.	119	35.63
Wada	Expired	0	0.00
Wada	NonAgri.Labour	82	24.55
Wada	NonAgri.SelfEmpl.	12	3.59
Wada	Salaried	23	6.89
Wada	Unemployed	1	0.30
Yadgir	Agri.Labour	35	8.95
Yadgir	Agri.SelfEmpl.	126	32.23
Yadgir	Expired	13	3.32
Yadgir	NonAgri.Labour	43	11.00
Yadgir	NonAgri.SelfEmpl.	167	42.71
Yadgir	Salaried	2	0.51
Yadgir	Unemployed	5	1.28

Table A5
Mothers Education

Site	Highest Education	Frequency	Percentage
Wada	NoSchooling	181	52.77
Wada	BelowPrimary	31	9.04
Wada	Primary	31	9.04
Wada	UpperPrimary	79	23.03
Wada	Secondary	20	5.83
Wada	Undergraduate	1	0.29
Yadgir	NoSchooling	312	80.21
Yadgir	BelowPrimary	8	2.06
Yadgir	Primary	31	7.97
Yadgir	UpperPrimary	0	0.00
Yadgir	Secondary	33	8.48
Yadgir	Undergraduate	5	1.29

Table A6
Fathers Education

Site	Highest Education	Frequency	Percentage
Wada	NoSchooling	117	34.11
Wada	BelowPrimary	26	7.58
Wada	Primary	18	5.25
Wada	UpperPrimary	127	37.03
Wada	Secondary	34	9.91
Wada	Undergrad.	21	6.12
Wada	Postgrad.	0	0.00
Wada	ProfessionalDeg.	0	0.00
Yadgir	NoSchooling	235	61.84
Yadgir	BelowPrimary	15	3.95
Yadgir	Primary	49	12.89
Yadgir	UpperPrimary	0	0.00
Yadgir	Secondary	62	16.32
Yadgir	Undergrad.	15	3.95
Yadgir	Postgrad.	3	0.79
Yadgir	ProfessionalDeg.	1	0.26

Appendix B: The Learning of Literacy Tables and Figures

Appendix A: Home Background Tables and Figures

Table B1
Wada: Phonemic Blending

Round	N	mean	sd	median	mode	min	max
Round 1	364	0	1	0	0	0	10
Round 2	346	0	1	0	0	0	10
Round 3	368	0	1	0	0	0	10
Round 4	334	1	1	0	0	0	10
Round 5	359	1	2	0	0	0	10
Round 6	343	1	2	0	0	0	10

Appendix B: The Learning of Literacy Tables and Figures

Appendix A: Home Background Tables and Figures

Table B2

Yadgir: Phonemic Blending

Round	N	mean	sd	median	mode	min	max
Round 1	394	0	1	0	0	0	4
Round 2	361	0	1	0	0	0	4
Round 3	347	0	1	0	0	0	6
Round 4	366	0	1	0	0	0	10
Round 5	372	1	1	0	0	0	6
Round 6	376	1	2	0	0	0	10

Table B3

Wada: Phonemic Segmentation

Round	N	mean	sd	median	mode	min	max
Round 1	364	0	1	0	0	0	10
Round 2	346	0	1	0	0	0	10
Round 3	368	0	1	0	0	0	10
Round 4	334	0	1	0	0	0	10
Round 5	359	0	2	0	0	0	10
Round 6	343	0	2	0	0	0	10

Table B4

Yadgir: Phonemic Segmentation

Round	N	mean	sd	median	mode	min	max
Round 1	394	0	0	0	0	0	6
Round 2	361	0	0	0	0	0	1
Round 3	347	0	0	0	0	0	0
Round 4	366	0	0	0	0	0	8
Round 5	372	0	0	0	0	0	9
Round 6	376	0	1	0	0	0	10

Table B5**Wada: Syllable Segmentation**

Round	N	mean	sd	median	mode	min	max
Round 1	364	5	4	6	0	0	10
Round 2	346	6	4	8	10	0	10
Round 3	368	6	3	7	9	0	10
Round 4	334	7	3	8	9	0	10
Round 5	359	7	3	8	9	0	10
Round 6	343	8	3	9	10	0	10

Table B6**Yadgir: Syllable Segmentation**

Round	N	mean	sd	median	mode	min	max
Round 1	394	5	3	5	0	0	10
Round 2	361	6	3	7	10	0	10
Round 3	347	7	3	8	10	0	10
Round 4	366	8	3	10	10	0	10
Round 5	372	9	2	10	10	0	10
Round 6	376	9	1	10	10	0	10

Table B7**ANOVA table for Word Reading by Segmenters in Wada**

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
segmenters	1	30950.06	30950.0613	44.08347	0
Residuals	341	239408.79	702.0786	NA	NA

Table B8**ANOVA table for Word Reading by Segmenters in Yadgir**

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
segmenters	1	13644	13653.6	13.141	0.0003
Residuals	374	388294	1038.2	NA	NA

Table B9

Proportion of students in Yadgir who recognize aksharas by end of Grade 3

Unit number	Timeline (When Introduced)	Kannada letters	Sound of the letter
Pre learning activities	June		
COMMON CONSONANTS			
1	July	ರಗಸದಲ	R G SDA
2	July	ಜವಮಬನ	JVMBN
3	August	ಪಯುಡಟಚ	PYUD'T'CH
4	August	ಲಷಕುಗುಕ	LSH' EEOKK
5	September	ಎಫಞತಳ	EE'IAATL'
6	September	ಓಜೆಹಕ	O'AUHSH
7	Oct	ಐಮುಣಭಬ	AIRUN'CHHO
SWARACHINHAS			
8	Nov	(ಁ) 64%	aa – vowel sign
9	Nov	(ಃ) 60%	I
10	Dec	(ಌ) 59%	Ee
11	Dec	(ಁ) 61%	U
12	Jan	(ಌ) 58%	Oo
13	Jan	(ಃ) 53%	E
14	Feb	(ಌ) 48%	e'
ASPIRATED CONSONANTS			
15	Feb	ಧಧಢಭ	DH'DH'BH
16	Mar	ತಠಢಢುಖ	TH'GH'PHJHKH
17	Mar	ಅಂಃಃಞ	UMAHAKN'YN'
SWARACHINHA - PART 2			
1	June	ಐ (ಃ) 45%	Ai
2	July	ಒ (ಃ) 38%	O
3	July	ಓ (ಃ) 41%	o'
4	August	ಔ (ಃ) 42%	au
5	August	ಋ (ಃ) 24%	Ri
6	Sept	Intro of jodaksharas starts here and continues on till March of the next year.	

Key: 90-100% 80-90% 70-80% 60-70% 50-60% 40-50% 30-40% 20-30%

Table B10**Table for Linear Regression model with word reading as dependent variable in Wada**

Parameter	Estimate	SE	<i>t</i>	<i>P</i>
Intercept	-11.61	3.19	-3.64	< .001
Moolakshara	0.32	0.06	5.45	< .001
Swarachinhas	0.59	0.05	12.06	< .001
Jodaksharas	0.21	0.03	7.17	< .001

Adjusted R-squared: 0.8229, p-value: < .001

Table B11**Table for Linear Regression model with word reading as dependent variable in Yadgir**

Parameter	Estimate	SE	<i>t</i>	<i>P</i>
Intercept	-2.03	1.79	-1.14	.256
Moolakshara	0.13	0.03	4.07	< .001
Swarachinhas	0.49	0.03	18.17	< .001
Jodaksharas	0.35	0.02	15.37	< .001

Adjusted R-squared: 0.8936, p-value: < .001

Table B12**Table for Linear Regression model with passage decoding as dependent variable in Wada**

Parameter	Estimate	SE	<i>t</i>	<i>P</i>
Intercept	-18.50	6.19	-2.99	.003
Moolakshara	0.38	0.11	3.27	.001
Swarachinhas	0.85	0.09	8.99	< .001
Jodaksharas	0.14	0.06	2.41	.016

Table B13**Table for Linear Regression model with passage decoding as dependent variable in Yadgir**

Parameter	Estimate	SE	<i>t</i>	<i>P</i>
Intercept	1.37	3.62	0.38	.706
Moolakshara	-0.13	0.06	-2.07	.039
Swarachinhas	0.64	0.05	11.72	< .001
Jodaksharas	0.45	0.05	9.77	< .001

Table B14

Proportion of students (in %) who are at a given level of Passage Decoding in Wada

Round	L0	L1	L2	L3	L4	L5	L6	L7	L8	L9
1	96	2	1	0	0	0	0	0	0	0
2	75	14	9	1	1	0	0	0	0	0
3	64	13	17	3	1	1	1	0	0	0
4	43	24	24	4	3	1	1	0	1	0
5	42	11	32	9	2	1	1	1	1	1
6	28	15	31	11	8	2	3	0	1	1

Table B15

Proportion of students (in %) who are at a given level of Passage Decoding in Yadgir

Round	L0	L1	L2	L3	L4	L5	L6	L7	L8	L9
1	99	1	0	0	0	0	0	0	0	0
2	99	1	0	0	0	0	0	0	0	0
3	90	5	4	1	0	0	0	0	0	0
4	88	7	3	2	0	0	0	0	0	0
5	75	12	7	3	2	0	0	0	0	0
6	72	8	8	5	3	1	2	0	1	1

Table B16

Performance in akshara dictation by each quintile for the 6 rounds (mean % scores) in Wada

Quintile	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Q1	6.76	6.96	22.81	36.55	41.50	50.56
Q2	18.09	27.83	52.92	54.26	63.79	65.87
Q3	28.53	47.83	60.45	65.31	71.04	70.15
Q4	46.76	64.20	68.15	69.18	75.31	73.49
Q5	69.13	76.52	78.64	76.77	81.21	81.54

Table B17**Performance in akshara dictation by each quintile for the 6 rounds (mean % scores) in Yadgir**

Quintile	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Q1	5.00	6.11	15.24	15.47	24.26	27.30
Q2	7.92	16.81	32.10	24.35	32.58	33.39
Q3	9.59	25.62	37.42	33.03	39.85	44.39
Q4	23.52	40.00	51.31	39.52	45.00	47.50
Q5	46.99	72.47	72.71	60.62	56.41	69.37

Table B18**Performance in Free Writing (Voice) for the 6 rounds (mean % scores) in Wada**

Quintile	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Q1	0.00	0.0	0.00	0.00	0.83	0.93
Q2	0.00	0.0	0.00	0.00	1.52	3.97
Q3	0.00	0.0	0.00	0.78	2.99	7.46
Q4	0.00	0.0	0.77	4.92	5.47	9.52
Q5	0.72	8.7	10.61	6.92	9.85	13.08

Table B19**Performance in Free Writing (Voice) for the 6 rounds (mean % scores) in Yadgir**

Quintile	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Q1	0	0	0	0.00	0.00	0.00
Q2	0	0	0	0.00	0.00	0.00
Q3	0	0	0	0.00	0.77	1.52
Q4	0	0	0	0.00	0.86	0.83
Q5	0	0	0	4.62	3.91	1.59

Table B20

Performance in Free Writing (Text Length) for the 6 rounds (mean % scores) in Wada

Quintile	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Q1	0.00	1.30	2.34	5.82	8.92	24.63
Q2	0.07	2.54	3.62	7.95	19.77	39.84
Q3	0.37	3.62	4.25	17.19	29.18	39.55
Q4	0.96	7.17	13.38	27.30	35.23	53.57
Q5	7.39	35.87	38.56	43.38	48.18	61.38

Table B21

Performance in Free Writing (Text Length) for the 6 rounds (mean % scores) in Yadgir

Quintile	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Q1	0.07	0.00	2.30	4.45	4.10	8.65
Q2	0.07	0.07	3.39	5.32	6.45	11.53
Q3	0.07	0.07	3.94	7.73	7.77	15.00
Q4	0.28	0.21	4.51	8.63	9.48	20.50
Q5	0.96	5.68	11.93	20.08	18.44	32.54

Appendix C: Socio-Cultural and School Influences: Tables and Figures

Table C1

Summary of ANOVA on caste groups in each round in Wada

Round	df	F	p
1	1	35.82	< .001
2	1	19.31	< .001
3	1	24.47	< .001
4	1	16.49	< .001
5	1	12.99	< .001
6	1	13.21	< .001

Table C2

Summary of ANOVA on caste groups in each round in Yadgir

Round	df	F	p
1	3	0.43	.734
2	3	0.53	.664
3	3	0.34	.794
4	3	0.04	.991
5	3	0.90	.443
6	3	0.59	.622

Table C3

Summary of ANOVA on
con gender in each round in Wada

Round	<i>df</i>	<i>F</i>	<i>p</i>
1	1	0.07	.796
2	1	0.10	.750
3	1	0.18	.675
4	1	1.36	.244
5	1	0.96	.329
6	1	0.01	.941

Table C4

Summary of ANOVA on
gender in each round in Yadgir

Round	<i>df</i>	<i>F</i>	<i>p</i>
1	1	3.35	.068
2	1	2.19	.140
3	1	0.22	.636
4	1	0.27	.604
5	1	0.20	.659
6	1	0.06	.807

Table C5

Summary of ANOVA on Economic
Status in rounds two, four and six in Wada

Round	<i>df</i>	<i>F</i>	<i>p</i>
2	2	8.97	< .001
4	2	12.11	< .001
6	2	14.15	< .001

Table C6

Summary of ANOVA on Economic
Status in rounds two, four and six in Yadgir

Round	<i>df</i>	<i>F</i>	<i>p</i>
2	2	0.51	.601
4	2	0.95	.386
6	2	0.22	.801

Table C7

Summary of ANOVA on
Educational Status in all rounds in Wada

Round	<i>df</i>	<i>F</i>	<i>p</i>
1	3	3.60	.014
2	3	4.12	.007
3	3	4.46	.004
4	3	3.00	.031
5	3	5.16	.002
6	3	4.66	.003

Table C8

Summary of ANOVA on
Educational Status in all rounds in Yadgir

Round	<i>df</i>	<i>F</i>	<i>p</i>
1	3	4.45	.004
2	3	2.85	.037
3	3	1.53	.208
4	3	1.50	.213
5	3	1.64	.179
6	3	2.85	.037



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