What Makes an Effective MLE Programme?

A review of MLE Programme in Dungarpur, Rajasthan implemented by

Language and Learning Foundation

Contents

Glossary of Terms

ASER: Annual Status of Education Reports

DL: Dominant Language

ELL: Early Language and Literacy

L1: First Language / Familiar Language/ Home Language/ Mother Tongue of Children

L2: School Language / Second Language / Unfamiliar Language of Children

LLF: Language and Learning Foundation

LOI: Language of Instruction

MGML: Multi-grade, Multi-Level

MOI: Medium of Instruction

MLE: Multilingual Education

MTB MLE: Mother Tongue-Based Multilingual Education

NDL: Non-Dominant Language

NEP: National Education Policy

TLM: Teaching Learning Material

TPR: Total Physical Response

SC: Scheduled Castes

ST: Scheduled Tribes

Acknowledgment

We want to express our gratitude to the Language and Learning Foundation, Delhi, for providing us with the invaluable opportunity to conduct this research study. We are truly honoured to have been entrusted with this challenging and rewarding task. Special thanks go to Dr Dhir Jhingran for entrusting us with this important task of research. His guidance and belief in our capabilities have been invaluable throughout the process.

We sincerely appreciate the dedicated members of the Language and Learning Foundation (LLF) team who have been by our side, offering continuous support and ensuring our safety and comfort. Ms Smriti Mishra, Mr Virendra Kumar, Mr Ramavtar Gujar, and the entire Rajasthan program team have played a vital role in the success of this research study.

Additionally, we would like to express our gratitude to Mr Aravind Vaishnav and Mr Lohit Joshi, the field enumerators, and Ms Akanksha Tyagi, the research assistant, for their commitment and dedication during the data collection phase.

We are also deeply appreciative of Ms Indra Latta, CDEO – Dungarpur, Mr Laxman Kumar Damor, CBEO – Simalwada, and Mr Narendra L Bhatt, CBEO – Sagwada, for generously sparing their time to interact with our research team and providing valuable insights.

We thank the members of our research advisory Group- Dr. Cynthia Groff and Dr. Shailaja Menon - for their active contribution at every step of this research study. We also thank Dr Mahendra Kumar Mishra for contributing his ideas and insights to this research.

Lastly, we extend our heartfelt appreciation to all the teachers and children who graciously opened a part of their lives to us, allowing us to glimpse into their classrooms and learning experiences. Their cooperation and willingness to share their stories enriched our understanding and made this research endeavour meaningful.

We are truly indebted to all the individuals and organizations for their invaluable contributions, which have been instrumental in the success of this research study.

Aparna Dixit

Abha Jeurkar

List of Table and Figure

TABLES

FIGURES

Executive Summary

The Language and Learning Foundation (LLF) has implemented a Multilingual Education (MLE) program called 'Ajuvaroo' in 40 schools in the Dungarpur district of Rajasthan since 2019. This MLE-based Early Language and Literacy (ELL) program designed and implemented by LLF aims to develop basic reading, writing, speaking, and listening comprehension skills in L2 (Hindi) while building oral expression and higher-order thinking in children in their primary language (L1), Wagdi. The use of L1 in the classroom for an extended period can improve children's confidence, self-esteem, comprehension, higher-order thinking, communication, and expression, according to the program's main idea.

This study aims to examine how the program's theoretical principles and inputs on MLE–based early language and literacy instruction are reflected in classroom practices. This study was conducted in a selected sample of intervention and comparison schools to explore various aspects of LLF's MLE intervention in Dungarpur. The research objectives included examining curricular and pedagogic practices used by teachers, beliefs of teachers regarding MLE and ELL, language use by students and teachers inside classrooms, and engagement of students with curriculum, materials, and pedagogic practices.

The study indicates that teachers in intervention schools used a wider range of curricular and pedagogic practices to support MLE – based ELL instruction. This includes encouraging oral expression in L1 in grades 1 and 2, and subsequently in L2. The study also found that teachers in intervention schools held more positive beliefs regarding the use of L1 in the classroom and were more likely to use L1 to facilitate learning. Additionally, it shows that students in intervention schools used and engaged more with curriculum materials and pedagogic practices than in comparison schools.

The study shows that in the intervention schools, about 79% of the students are 'on-task' compared to the comparison schools, where about 61% are 'on-task' on average. The quality of engagement of students with classroom tasks is better in intervention schools than in comparison schools. The study shows that teacher belief about the direct correlation between higher-order thinking and language instruction and development is 28 times higher in intervention schools as compared to control schools. Also, it shows that teacher belief about benefits of a balanced literacy approach in L2 classrooms is 23 times higher in intervention schools as against the comparison i assume you mean comparison schools by control schools.

75% of teachers in intervention schools expressed in their interviews that the improvement in the availability of teaching-learning material in their classroom has been one of the most significant impacts of the program. The study also shows that in comparison schools, there is no explicit teaching of the second language, i.e. Hindi. In contrast, the teachers in intervention schools use Total Physical

Response (TPR) activities to introduce Hindi vocabulary to students daily. About 10 minutes are spent on TPR activities each day in intervention schools.

Wagdi (children's familiar language) is most frequently spoken language (50% of the time) in the intervention schools, followed by mixed language (30%) and then Hindi (15%). However, in the comparison schools, the use of Hindi dominates (53% of the time), followed by mixed language (21%), and then Wagdi (14%).

Overall, the study suggests that LLF's MLE – based ELL program shows a good translation of theoretical practices into the classroom and has positively impacted teachers' beliefs and practices as well as student engagement. However, training teachers on the principles of early language and literacy seems like a key area where the programme has a scope for improvement. Structured and meaningful use of L1 in the classroom has emerged as one of the effective strategies for supporting the development of basic language skills and higher-order thinking.

Overall, the study suggests that LLF's MLE – based ELL program shows a good translation of theoretical practices into the classroom and has positively impacted... teachers' beliefs and practices as well as student engagement. However, training teachers on the principles of early language and literacy seems like a key area where the programme has a scope for improvement. Structured and meaningful use of L1 in the classroom has emerged as one of the effective strategies for supporting the development of basic language skills and higher-order thinking.

Chapter 1
Introduction

Language and Learning Foundation's (LLF) multilingual education (MLE) program called **'Ajuvaroo (light)'** has been implemented in 40 schools in the Dungarpur district of Rajasthan since the year 2019. Most children speak a language called Wagdi and its dialects. They have little or no understanding of Hindi—the medium of instruction—when they first join grade 1. The MLE-based early language and literacy (ELL) program designed and implemented by LLF aims to bridge this language divide by legitimising and systematising the use of Wagdi, in addition to Hindi, in the curriculum and the pedagogy of language learning. While encouraging spoken use in children's L1, the program aims to build oral expression and higher-order thinking of children in their L1, and develop basic reading, writing, speaking, and listening comprehension skills in L2 (Hindi).

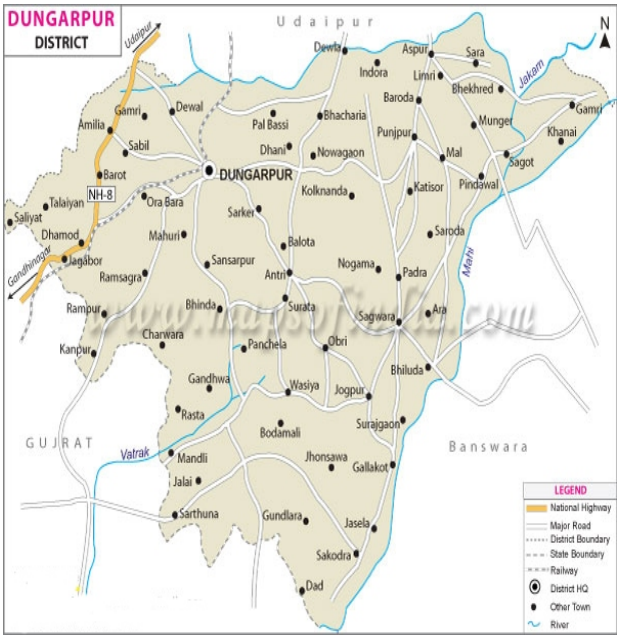
The main idea behind the MLE-based intervention used in schools by LLF is to show that strategic and systematic use of a child's primary language (L1) in the classroom for an extended period can improve their confidence, self-esteem, comprehension, higher-order thinking, communication, and expression. Additionally, by providing support for learning the school's language (L2), children will develop stronger thinking and reasoning skills in their primary language and learn to understand, speak, read, and write in the second language. This study focuses on how one can incorporate the principles and approaches of using children's primary language in early language and literacy learning in classroom practices rather than examining any correlation between the intervention and student outcomes.

What is the 'Ajuvaroo' Approach?

In the Ajuvaroo approach, children's unfamiliar language, Hindi (L2), is used as MoI with extensive and strategic use of Wagdi (L1) in the oral domain.

There is extensive and strategic oral use of children's L1 throughout primary education. Children can use L1 for understanding new concepts, all higher-order thinking and reasoning tasks, and for oral expression in the initial grades. Effective strategies for teaching and learning a second language are used in the initial grades, including explicit teaching of L2 vocabulary and using L1 for scaffolding learning of L2. There is an appropriate and balanced use of L1 and L2 in the classroom. There cannot be any formula for the extent of use of L1 and L2 at any given time; the teacher will have to be guided by the children's level of understanding and ability to speak in L2 to decide how the use of these languages can be adjusted. 'Mixing' languages for fluent expression is a part of the learning process.

Dungarpur at a Glance



- Dungarpur is a district in western India, with a **93.6% rural** and 6.4% urban population.
- **Wagdi is the primary language** spoken in the region--at home, in the community, and the marketplace.
- Based on social and geographical factors, **Wagdi has various varieties and proximity** to languages such as Gujarati, Hindi, Mewari, or Malawi.
- **Hindi is the official Medium of Instruction** in schools; it is also the language of the textbooks.
- Wagdi and Hindi share many linguistic similarities since they belong to the same **Indo-Aryan language family.**
- Wagdi **does not have a consider using 'native script'** the Devanagari script can be used to write Wagdi. Very little to no written material in Wagdi has been published.
- All the children in a classroom come from **similar language backgrounds,** i.e. they speak one of the different variants of Wagdi.
- When they enter school, Wagdi-speaking children have **very little to no knowledge of Hindi.**
- Children have **limited exposure to Hindi outside school.** Parental literacy levels are low; thus, children do not receive much language and literacy learning support at home in Hindi.
- Most teachers can speak or understand Wagdi.
- Teachers have a generally positive view of using Wagdi in classrooms. However, **Wagdi is not considered appropriate for formal education** and cannot be used as MOI at once.

Lay of the Land

One of the main areas in Wagad is Sagwada. Sagwada's name derives from the extensive teak cultivation there. Sagwada is a medium-sized town by itself. While tribal people dominate majority of the region, the metropolitan regions have a mixed population of Hindus, Jains, and Bohras. Sagwada has a thriving trading community. However, beyond five to seven km, there is little indication of urbanisation or even the most basic amenities. One can spot a single house, occasionally two houses perched atop single house, occasionally two houses atop modest hills. Houses are rarely seen on slopes. Around the house, people sow maize and chickpeas, barely enough for the family. Most families rear sheep and goats. These hilly areas mean that population density is low, and thus, most animals stay indoors as there is a constant fear of foxes and leopards. Everywhere you look, cacti of all kinds are present. Cactus is used to create fences and borders all around the house, hills, and mountains. A variety of acacia is found wherever there is no cactus. Many locals claim that the widespread acacia has ruined the soil. While Simalwada is the same geographically, it is not a major trade centre like Sagwada.

Migration and Socioeconomic Shifts in the Wagad Region

The Wagad region, on the southern border of Rajasthan, encompasses a vast hilly belt where approximately 95% of the population resides in rural areas. The majority, constituting 71% of the population, are Wagdi-speaking tribals. Despite being near to important commercial cities in Gujarat and Rajasthan, the region suffers from limited resources, opportunities, and means of income. Consequently, migration has become prevalent, impacting the local economy, culture, politics, and government system in complex ways.

Migration primarily involves youth, earning men, and even women from certain families seeking seasonal work elsewhere. Those who remain behind often engage in small businesses such as running grocery stores or providing services like tailoring and motor repairing. Within the households, there are children ranging from 3-4 years to 14-15 years, elderly men and women, and men who choose not to or are unable to seek work outside the village.

This migration pattern has profound implications for the social fabric and dynamics of the Wagad region. The absence of certain family members disrupts the traditional familial support system while the remaining individuals shoulder responsibilities and maintain the community's functioning. The impact on education, healthcare, and the well-being of the vulnerable population left behind is an evident concern.

Key Strategies and Principles of the 'Ajuvaroo' Approach

Some of the key strategies and principles used in the 'Ajuvaroo' approach are listed below:

1. The 'Ajuvaroo' approach to multilingual education may not be qualified specifically as an MLE model; more appropriately, it is a strategic approach to bring in students' L1 in teaching-learning processes systematic and formally in the early years of learning; while maintaining synergy with already existing state curriculum and assessment routines.

2. Children's home language (L1) is used formally in the classroom and as a resource for learning additional languages and content in other subjects. The teacher would herself use, allow, and encourage children to respond in their L1, use their L1s in group discussions, read-aloud or tell stories in both L1 and L2, explain difficult words and concepts using L1, etc. Children's home language is used extensively in the initial grades (at least 1-2) across subjects for explaining any difficult concept or new information, higher-order thinking, reasoning, analysis, creative expression, and meaning-making.

3. Mixed-language usage or 'translanguaging' is encouraged in the classroom. Languages are not taught and learned in watertight compartments. This approach is based on the concept of multilingual habitus' (Benson), which acknowledges the presence of multiple linguistic resources in multilingual children. It does not label their language proficiencies as deficient when measured against monolingual ideas of language purity or native speaker competence.

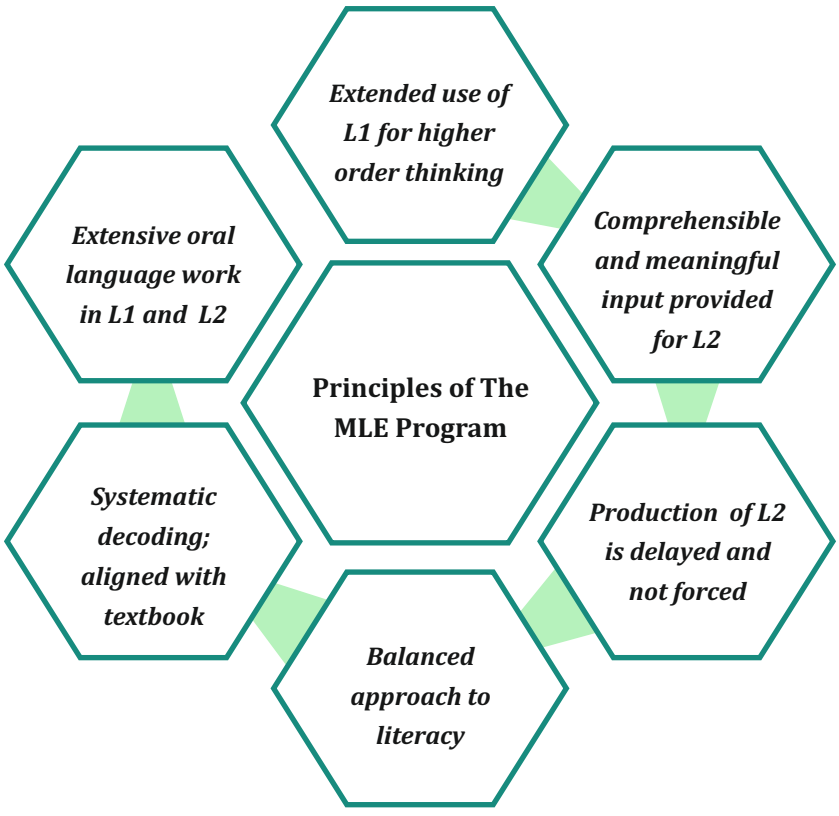


Figure 1: Principles of the MLE Programme

4. Children learn new languages (L2) using their strong or familiar language (L1) as a scaffolding. Sound principles of L2 acquisition are used by providing ample comprehensible input (Krashen). Production of L2 by children can be delayed; the "silent period" is respected, where children's receptive skills in L2 are present but productive skills are not yet fully developed. Thus, learning outcomes in L2 may be delayed; and not forced.

5. An MLE classroom reflects tolerance and mutual respect for all children's languages and cultures. Only one language does not remain dominant. A multilingual approach also needs to be multicultural where children's cultures and experiences are brought into the classroom to build new knowledge using them, which may not be represented in the textbooks in a planned manner.

6. A multilingual approach to teaching-learning is used across the curriculum where any complex text, concept or higher-order thinking and reasoning work is carried out using the children's strong or home language. Similarly, the use of L1 as a scaffold is encouraged across all grades in elementary schools; and is not just limited to early 2-3 years of learning.

7. Since this approach caters to language and literacy learning in the early years of a child's school life, it incorporates effective and appropriate methods of early language and literacy teaching.

Setting the Stage: Establishing the Research Context

The data collection took place from July to October 2022, coinciding with the beginning of the school year, also known as Vidyapravesh. This period, for most Grade 1 students marks their first experience of formal schooling. The programme acknowledges this transition's significance and its potential challenges. Researchers closely monitored and documented the students' engagement, adaptation, and progress throughout the initial phase.

During this period, the instructional design in intervention schools placed greater importance on nurturing children's home language with methodical but limited use of Hindi. Given the significance of maintaining cultural and linguistic connections, the programme encouraged activities that promoted listening and speaking in the children's home languages. This approach aimed to create a strong foundation for language development and enhanced communication abilities, creating a fear-free classroom environment.

As the weeks progress, the programme gradually introduces Hindi as the school language. The intent is to expose the students to a broader linguistic context while respecting their initial familiarity with their mother tongue. By gradually incorporating Hindi, the programme seeks to build L2 proficiency on the strong foundation of seamless communication in L1 and intends to tap into the higher-order thinking abilities of the children.

When these strategies translate into action, the language use and choice in classrooms follow a progression throughout an academic session.

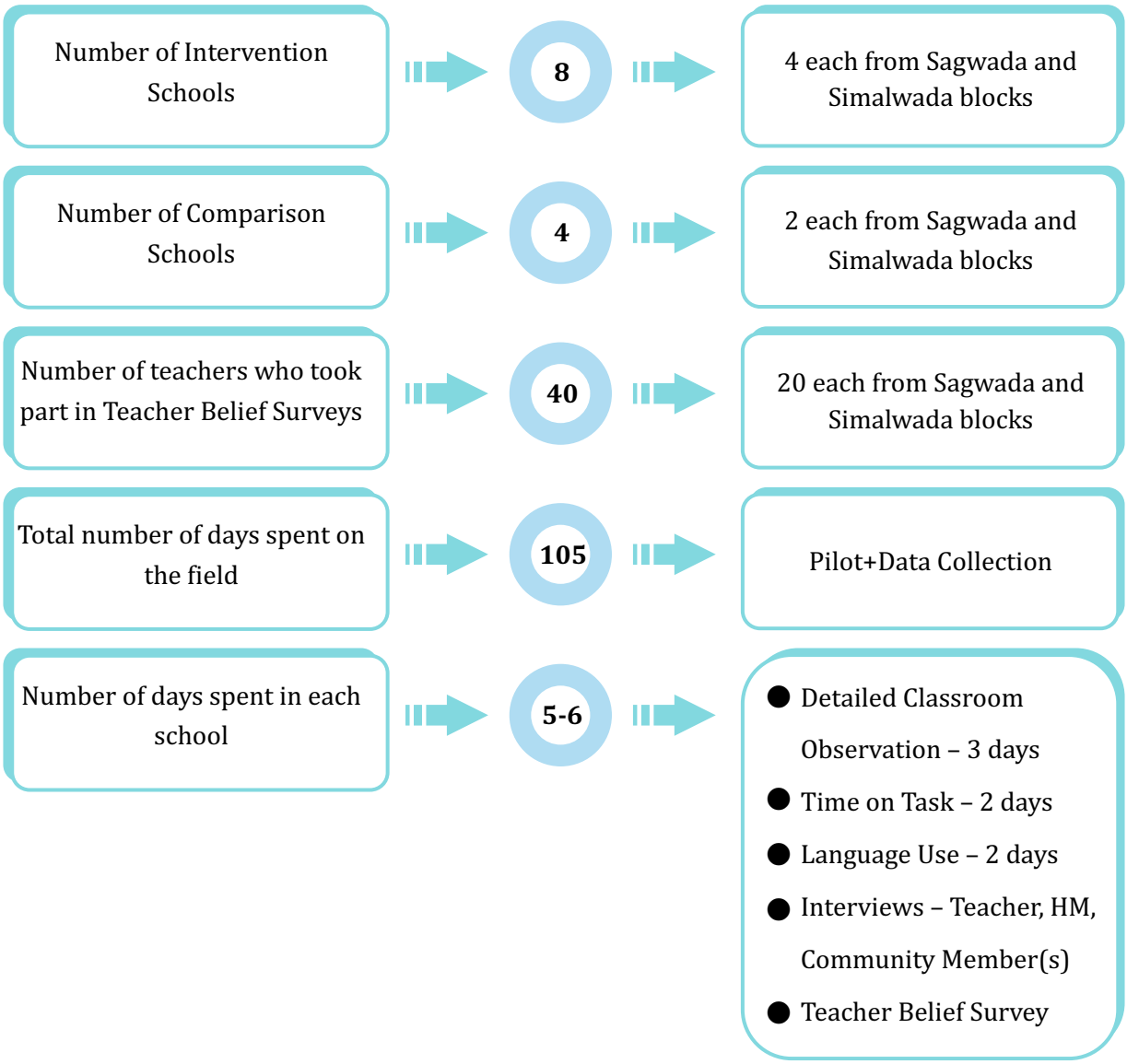
Use of Languages in Grades 1 and 2	12 weeks at the beginning of the academic session (Vidyapravesh Phase)	Week 13 onwards
Use of Wagadi in classroom by teacher	1. For everyday conversations classroom transactions 2. Expressions of all kinds	1. For understanding new and /or difficult concepts 2. Open ended questions, higher-order thinking tasks, for discussion that involve higher cognitive functions. For example - categorization, compare and contrast, drawing inferences and conclusions,
Use of Hindi in classroom by teacher	1. To expand Hindi vocabulary 2. To understand basic Hindi sentence structures and attempt to use newly acquired vocabulary in simple sentences.	1. Close ended or straightforward questions 2. To be used after explanation in Wagdi 3. Discussion on simple topics, always supported by Wagadi expression. *There won't be any pressure on students to use Hindi

Objectives of the Research

This research aims to probe into various aspects of LLF's MLE intervention (Ajuvaroo) in Dungarpur to understand how and to what extent the theoretical principles and program inputs on MLE-based early language and literacy instruction have translated into practice. The study took place in a selected sample of all the intervention schools and a set of comparison schools to examine:

1. the curricular and pedagogic practices used by teachers
2. beliefs of teachers regarding MLE and ELL
3. Language use by students and teachers inside classrooms
4. engagement of students with curriculum, materials and pedagogic practices.

Research Activities at a Glance



Chapter 2
Theoretical Perspectives

Issue of ITM and Hindi as MoI

Multilingualism, a lived reality in India, is hierarchical. A double divide characterises it — one between the elitist language of power (English) and the major regional languages, and; the other; between the regional languages and the dominated ones (non-standard variants of regional languages, tribal languages) (Mohanty, 2010). The act of assigning certain languages constitutional status in India, such as Hindi being named the official language of the Union and English being designated as an associate official language at the national level, as well as recognising 22 state majority or regionally dominant languages (including Hindi) at the state level, is unfair to other languages, including indigenous, tribal, and minority (ITM) languages. (Mohanty, 2019). Most languages, especially ITM languages, are at the bottom of the power structure. "It has been estimated that 40%, or 2.3 billion of the world's people, still lack access to instruction in a language they speak or understand (Walter & Benson 2012)." According to the World Bank (2005), 50% of the world's out-of-school live in communities where the language of the school is different from the language of the home. It is estimated that 25% of primary school children in India face a moderate to severe learning disadvantage owing to the difference between the home language and the official language or medium of instruction used at school (Jhingran, 2009). This disadvantage is alarming when we know that providing instruction in learners' home languages or mother tongues (L1s) has the potential to improve educational access, quality, and equity, particularly for groups that have been socially marginalised (UNESCO 2010, 2013). In Dungarpur, almost all the children speak Wagdi at home, even though the language has some degree of social and regional variation. Linguistically, Wagdi (L1) has considerable overlap with Hindi (L2). Scoping studies have shown that children have limited exposure to Hindi outside of school, there is a low level of parental literacy, and most teachers know children's L1s. In general, at the level of educational administration, there is a low level of acceptance for Wagdi and its variants to be used as formal media of instruction immediately.

Language Divide and MLE

In a country where multilingualism is an ordinary reality, multilingual education might not appear like a tough ask. However, a language divide within educational spaces and society between languages complicates the issue. Bilingual and multilingual education practices, research, and theories offer diverse approaches that can effectively incorporate multiple languages, including children's home languages, into the teaching and learning process. One branch of research in MLE is rooted in an understanding of multilingual education in-what can be termed - monolingual societies. At the same time, the other branch takes its roots in understanding the power-laden and hierarchical nature of MLE in already multilingual societies. Both offer certain points of view and solutions to the pedagogical challenges of MLE. The following two definitions are most relevant in terms of the MLE situation in Dungarpur.

"At its most basic level, the term multilingual education refers to the use of two (or more) languages of instruction at some point in a student's school career. The languages are used to teach subject matter content rather than just the language itself" (Cummins, 2008).

Pedagogically, the term refers to the purposeful and systematic use of learners' strongest languages for literacy and learning, accompanied by the explicit teaching of new languages, with the aim of creating learners that speak, read and write multiple languages (García 2009).

One way of acknowledging and incorporating this understanding of MLE into educational spaces is to clearly distinguish between the mother tongue (MT) or the home/surrounding language of the child (L1) and the medium of instruction (MoI) in the school. However, it has been proposed that a distinction between dominant and non-dominant languages (DLs and NDLs) indicates their relative status in society and education (Benson, 2013). In the case of this research study, students are speakers of the Wagdi language (L1 and NDL), one of the non-dominant languages in the state of Rajasthan. The formal medium of instruction is Hindi (L2 and DL) in schools, which is a dominant language-not only in Rajasthan but in a considerably large part of the country. The differentiation between NDL and DL highlights the hierarchical positioning of languages within society and education and identifies the types of languages present in learners' linguistic repertoires. However, there is a need to address the issue of second language (L2) learning. Specifically, it is crucial to differentiate between an L2 that is commonly used and heard within the learners' community or region and one that is numerically secondary but foreign to most learners, meaning it is not used for everyday communication (Benson, 2013). Benson argues that this distinction should inform all aspects of language education, including curriculum standards, teaching methodologies, and teacher training. LLF conducted a study to understand the **Situation Analysis of Government Schools** in the Simalwada block of Dungarpur in October 2018. This study showed that:

- oral expression of children in grades 1, 2, and 3 in both Wagdi and Hindi, as observed in the tasks given to them, was quite poor.
- Children in grade 3 could read a given text in Hindi, but without any understanding; only 5% of the comprehension questions were answered correctly.
- Children's writing ability in grade 3 was found to be very low; they were able to correctly write only about 2% of the narrated sentences.
- Children use the Wagdi language to communicate at home and in the village; their exposure to Hindi occurs almost exclusively in school.

These findings ascertain an educational disadvantage for Wagdi-speaking children and substantiate the position of Hindi, which, as Benson puts it, is numerically secondary but foreign to most learners. L1-based MLE can be particularly effective for members of non-dominant groups in contexts where intersecting social and economic disadvantages related to poverty, geography, ethnicity, religion, gender, and other factors conspire to keep children out of school or make it extremely difficult for them to succeed (Ball 2010).

LLF's intervention programme addressed these issues to a great extent in how the programme is conceptualised and structured. An MLE intervention classroom is meant to demonstrate tolerance and mutual respect for all children's languages and cultures. Only one language does not remain dominant. A multilingual approach needs to be multicultural as well, where children's cultures and experiences are brought into the classroom to build new knowledge using them, which may not be represented in the textbooks in a planned manner. Considering these factors, the MLE approach chosen in the 'Ajuvaroo' project of Dungarpur is one where L2 is the formal medium of instruction in the classroom, and children's L1s are used extensively and systematically in the oral domain for an extended period of time.

Approaches/Models of Bi/Multilingual Education

Mother-Tongue Medium of Instruction The Teaching-Learning program happens entirely in children's L1.
Bilingual Education Use of two languages as media of instruction in which minority and majority language children are taught in both minority and majority languages.
Mother-Tongue based Bilingual Education Children's L1 is used as the primary medium of instruction for the whole of primary school while L2 is introduced as a subject of study in itself to prepare students for eventual transition to some academic subjects in L2.
Transitional Bilingual Education (Bridging) Program has planned a transition from one language of instruction to another. 'Early exit' models usually involve L2 instruction after only 2 or 3 years in school, whereas 'Late exit' models switch to L2 instruction after a child has become fully fluent academically in L1.
Maintenance Bi/Multilingual Education (Additive Bi/Multilingual Education) After L2 has been introduced, both (or all) chosen languages are media of instruction. L1 instruction continues, often as subject of study, to ensure ongoing support for children to become academically proficient in L1.

Table 1: Approaches/Models of Bi/Multilingual Education

Different educational models use various approaches for teaching multiple languages to children. These models differ in how much the child's first language (L1) is incorporated into the curriculum and at what point and pace additional languages are introduced. At one end of the spectrum is the "submersion" model, where the child is taught entirely in a language that is entirely unfamiliar to them. At the other end is mother-tongue-based instruction, where mother-tongue is their familiar L1 throughout their schooling. The other programs fall somewhere in between and involve the use of multiple languages as a means of instruction to varying degrees.

Approximately 200 empirical studies carried out during the past 40 or so years have reported a positive association between additive bilingualism and students' linguistic, cognitive or academic growth. The most consistent findings are that bilinguals show a more developed awareness of the structure and functions of language itself (metalinguistic abilities) and that they have advantages in learning additional languages (Cummins, 2008).

The linguistic situations in the country are intricate, and a uniform method of utilising children's languages is unsuitable. Different strategies are required for incorporating children's native languages in education, depending on the sociolinguistic context of a particular area. The subsequent section outlines some significant sociolinguistic factors that influence the selection of an MLE (Multilingual Education) model and provides further details about the regional factors in the Dungarpur area that have affected the design of the Ajuvaroo program by LLF.

Research has shown that the mother tongue-based multilingual education (MTB MLE) models, with instruction in children's L1 for the initial 6-8 years of schooling and subsequent addition of L2 as an additional medium of instruction, are the most effective MLE are in terms of resulting balanced multilingualism and academic performance of children. Therefore, research insights strongly encourage the continuation of L1 as the medium of instruction until children achieve cognitive academic language proficiency, such that these skills are transferred easily to L2 eventually.

The choice of which MLE model (or approach) is chosen to be implemented in a particular school depends on a variety of factors, including the type of sociolinguistic situation of the school, availability of resources, attitudes of stakeholders towards L1 and L2, political agendas and will, costs, teacher training, standardised testing regimes, and so on. Sociolinguistic situations in Indian classrooms are particularly diverse and complex, which heavily influences the MLE approach that can be chosen to fit the given context.

Typology of various socio-linguistic situations that may be present in multilingual classrooms is given in Figure 2.

Dimensions to determine Classroom Language Situation	Typology of Language Situation in Classrooms
• Home/First Language of Children • Understanding of School language (MOI) • Language background of teacher • Language used in classroom for instruction • Two or more first languages in the same classroom	**Type I:** Student speak a regional **language that has some similarity** with the school language. **Type II:** Most students have a limited or no understanding of the school language at entry in grade I AND almost **all students have the same MT** (or first language) AND the **teacher understands/speaks the children's language** **Type III:** Most students have a limited understanding of the school language at entry in grade I AND almost **all students have the same MT** (or first language) AND the **teacher does not understand/speak the children's language** **TypeIV:** Some/most students have a limited understanding of the school language AND **students belong to 2 or more language groups.** The teacher understands/speaks one of the children's languages

Figure 2: Typology of Sociolinguistic Situations Present in Multilingual Classrooms

Rajasthan's primary education system, encompassing grades 1-5, faces a significant challenge regarding the medium of instruction. While the state is home to several languages due to its diverse cultural and sociolinguistic fabric, the primary schools predominantly use Hindi as the medium of instruction. This use of Hindi as MOI poses a significant disadvantage, particularly for children in remote areas, including Adivasi children. A significant percentage of primary teachers have working knowledge of the Wagdi language. However, teachers are expected to facilitate early assimilation of as many children as possible into the Hindi language. This expectation stems from the necessity of aligning with the prescribed language of instruction. The emphasis on Hindi proficiency aims to ensure that students can effectively engage with the curriculum and navigate future educational opportunities conducted in Hindi.

Dungarpur's sociolinguistic context can be fit into the Type II of the above typology of sociolinguistic situations.

MLE and the common denominator of ELL

When Hindi, a dominant language (DL), is used as a medium of instruction, some other academic and pedagogic choices come along. For instance, DL is used as MoI without explicitly teaching it as a second language. There might be some unintentional and unsystematic use of L1 (often an NDL) in the formal educational spaces; however, the whole language and literacy experience is geared toward monolingualism and proficiency in DL for all intended educational purposes. This monolingual focus is mainly because testing of reading/writing and assessing content are done only in DL. Benson enumerates some of the indicators of multilingual habitus necessary to attain basic levels of early language and literacy (ELL) as follows:

- Teaching initial literacy in NDL/L1
- Building strong literacy and learning foundation in NDL/L1 and home culture(s)
- Using NDL/L1 as the primary medium of instruction for academic content, particularly in early grades and for new concepts
- Teaching DL(s) as subject(s) at developmentally appropriate levels with appropriate methods and a focus on meaning
- Planning a curriculum that systematically and holistically teaches language, literacy, and content in all languages
- Developing metalinguistic awareness
- Assessing mainly in NDL or bilingually
- Aiming for bi-/multilingualism based on NDL/L1

These indicators tell us that any MLE habitus needs to be built on the strong foundation of sound ELL practice. In this context, the MLE approach to multilingual education by the MLE intervention programme may not be specifically qualified as an MLE model; more appropriately, it is a strategic approach that brings together insights from various MLE models to bring in students' L1 in teaching-learning processes systematically and formally in the early years of language learning, while maintaining synergy with already existing state curriculum and assessment routines.

Strategies and Principles of the Ajuvaroo Approach

Some of the key strategies and principles used in the 'Ajuvaroo' approach are listed below.

1. **Amalgamation of MLE Practices**: The 'Ajuvaroo' approach to multilingual education may not be qualified specifically as an MLE model; more appropriately, it is a strategic approach that brings together insights from various MLE models to bring in students' L1 in teaching-learning processes in a systematic and formal manner in the early years of learning, while maintaining synergy with already existing state curriculum and assessment routines.

2. **Children's home languages (L1) are used formally in the classroom** and are used as resources for learning additional languages and content in other subjects. The teacher would herself use, allow and encourage children to respond in their L1, use their L1s in group discussions, read-aloud or tell stories in both L1 and L2, explain difficult words and concepts using L1, etc. Children's home

.

language is used extensively in the initial grades (at least 1-2) across subjects for explaining any difficult concept or new information, higher-order thinking, reasoning, analysis, creative expression, and meaning-making. For phonological awareness and decoding activities familiar Wagdi words and expressions are used systematically in the initial stages of the instructional design.

3. **Mixed-language usage, or 'translanguaging,' is encouraged** in the classroom (Garcia, 2014). Languages are not taught and learned in watertight compartments. This approach is based on the concept of 'multilingual habitus' (Benson, 2013), which acknowledges the presence of multiple linguistic resources in multilingual children and does not label their language proficiencies as deficient when measured against monolingual ideas of language purity or native speaker competence.

4. **Children learn new languages (L2) by using their strong or familiar language (L1)** as a scaffold. Sound principles of L2 acquisition are used by providing ample comprehensible input (Krashen, 2015). Production of L2 by children can be delayed; the "silent period" is respected, where children's receptive skills in L2 are present but productive skills are not yet fully developed. Thus, learning outcomes in L2 may be delayed and not forced.

5. An MLE classroom reflects **tolerance and mutual respect for all children's languages** and cultures. Only one language does not remain dominant. A multilingual approach needs to be multicultural as well, where children's cultures and experiences are brought into the classroom to build new knowledge using them, which may not be represented in the textbooks in a planned manner.

6. A **multilingual approach for teaching-learning is used across the curriculum**, including language, environmental science, and mathematics periods, where any difficult text or concept or higher-order thinking and reasoning work is carried out using children's strong or home language. Similarly, the use of L1 as a scaffold is encouraged across all grades in elementary schools and is not just limited to the early 2-3 years of learning.

7. **Balanced Literacy Approach for Learning L1 and L2:** Since this approach caters to learning language and literacy in the early years of a child's school life, it incorporates effective and appropriate methods of early language and literacy teaching. This approach prescribes the 'Balanced Literacy Approach; which recommends equal attention to oral language work, decoding, reading, and writing. The curriculum and materials are designed to provide equal opportunities for oral language development as well as learning decoding skills. Classroom discussions involving higher-order thinking skills are integrated with ample opportunities for reading—read aloud, shared reading, guided reading, and independent reading by children .

Chapter 3
Methodology and Research Design

Tasks and Timelines

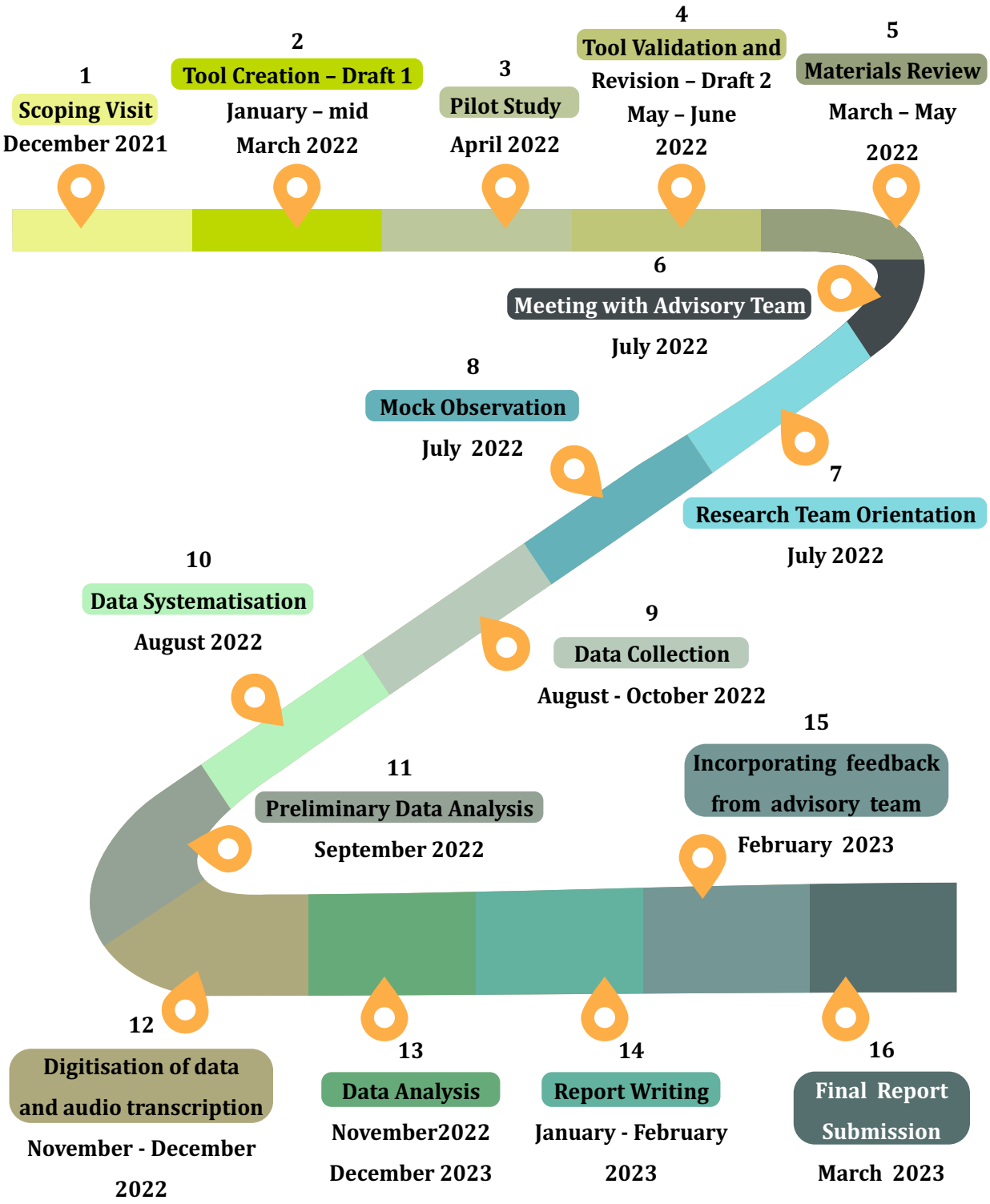


Figure 3: Tasks and Timelines

Scoping Visit

The research activities started with a scoping visit to Dungarpur in December 2021. The main objectives of this visit were to observe classroom teaching and programme implementation and to get a sense of the intervention by LLF. Classroom observations were done in 3 schools in Simalwada Block and two schools in Sagwada Block. Meetings and rapport building with the field facilitators, principals, teachers, and programme officers? were other agenda items of this scoping visit. This visit also helped the research team understand the harsh terrain of the region and possible logistical challenges that might arise while designing and conducting the research activities.

This initial step in our research process was dedicated to creating a thorough and well-supported understanding of the school system in Dungarpur. We aimed to gain insight into the various components that make up the school system, such as the educational policies and curricula, the infrastructure and resources available, and the quality of education being provided. Additionally, we recognised the importance of understanding the socio-economic and cultural factors that greatly influence the school system in Dungarpur. These factors, such as the high migration percentage, cultural beliefs and practices, and access to resources, played a crucial role in shaping our understanding of school education in general and language learning in particular. By gaining a comprehensive understanding of the school system and these influencing factors, we approached our research with a more informed and nuanced perspective and designed the fundamental components of our research study accordingly.

A Glimpse into the Everyday Life of a Dungarpur Primary School

A typical primary school in Rajasthan for grades 1-5 is characterised by simple infrastructure and limited resources. Primary schools can be identified from a distance by their pleasant pink exteriors. The school usually consists of two classrooms, accommodating all the students. With such limited space, teachers often need to manage multiple grade levels simultaneously, posing a challenge for individualised attention. Grades 1 and 2 and grades 4 and 5 are always seated together. Students from grade 3 join either group based on subject, enrollment in each class, availability of teachers, and so on. Each school makes these decisions to accommodate its constraints.

The school also includes a small room designated for the principal, serving as an administrative space. Additionally, a kitchen room is primarily used for cooking mid-day meals for the students. However, due to space constraints, this room doubles as a storage area for cooking supplies and utensils.

Sociological and Linguistic Profile of the Research Team

This research team was comprised mainly of upper-caste, middle-class members. In a five-member team, three (two research coordinators and one research assistant) were women. All three are fluent speakers of Hindi and English and had working knowledge of one or two other Indian languages.

Both the men, who were field enumerators, knew Hindi very well and have moderate comprehension of written and spoken English. Conversational knowledge of Wagdi was deemed necessary for the position of field enumerator (two positions mentioned above). The following three criteria were determined for the selection process:

1. Some knowledge of primary education space in India was considered in favour of the candidates.
2. Any experience in data collection was considered in favour of the candidates and desirable.
3. Basic ICT know-how was also considered desirable, though optional.

Due to the remote location of schools and other logistical factors, about 3-4 eligible women candidates from Rajasthan (but not residents of Dungarpur) could not join the team. About 3-4 local male resident candidates could not join the research team as they could not fulfil either of the two necessary criteria. The two field enumerators who did join the team were both men. One of the enumerators, a Wagdi speaker and an upper-caste, middle-class individual, is a resident of Simalwada block, and he doesn't belong to the Adivasi community. The other field enumerator, a native of Rajasthan's Alwar region, knew Wagdi as he had worked extensively in the Dungarpur region. Both field enumerators have worked with various educational NGOs (LLF being one of them) in the region and possess a considerable understanding of the primary education space and preliminary experience in data collection.

Research Design

The current research utilises a convergent parallel design, which involves gathering both quantitative and qualitative data simultaneously and then combining the information to comprehensively understand the research topic. The advantage of this approach is that the strengths of one type of data can compensate for the weaknesses of the other, leading to a complete understanding of the problem being studied.

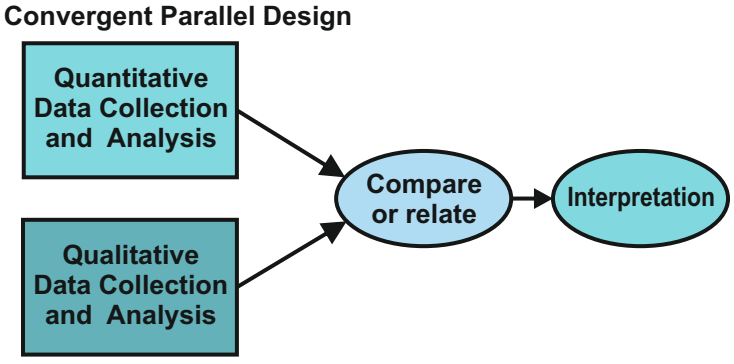


Figure 4: Models of Mixed-Methods Research Design (Cresswell, 2012)

Navigating the Complexity: Insights into Designing an Effective Research Study

A post-COVID research study

Conducting research in the aftermath of the COVID-19 pandemic presented challenges. 2022-23 was the first academic session that began as per the expected timeline. It also meant that children were returning to physical school space after interruptions that spanned over two years. The context had undergone significant shifts, making establishing a stable baseline for comparison difficult.

Timeline of data collection

Gathering data at the start of the academic year means that language instruction intentionally emphasises Wagdi during this period. In addition, students might still be adjusting to new teaching methods or curricula. This limitation could affect the accuracy and representativeness of the data collected, as it might not reflect the students' full language proficiency over time.

Phases of implementation

Not capturing all phases of the intervention program hinders a comprehensive understanding of its effectiveness. Different stages of implementation may have distinct challenges and outcomes, which could be missed without continuous data collection throughout the entire process. This limitation might limit the ability to assess the long-term impact and identify factors influencing success or failure.

Student Assessments

Looming fear and uncertainty surrounding Covid-19 breakouts resulted in insufficient data on student assessments. Baseline tests provide a starting point for comparison, while endline tests help assess the progress made by the students. The absence of these tests makes it difficult to determine the program's effectiveness and limits the ability to comprehend the lasting impact of the intervention. Due to the shifting timelines of the school and programme calendars, a decision was made to exclude direct student assessment as part of the research study.

Reliance on point-in-time observations

Relying on point-in-time observations limits the depth and breadth of the data collected. It may not capture the nuances of the students' language learning progression over a period of time. Longitudinal observations provide more comprehensive insights into students' development, including identifying patterns, individual differences, and potential factors influencing their language acquisition.

Subjectivity of researcher observations

Researcher observations are inherently subjective and can introduce biases into the data collected. Different researchers may interpret and document classroom dynamics and student behaviours differently, potentially impacting the reliability and validity of the findings. The subjectivity of researcher observations was acknowledged and mitigated by employing multiple observers, clear observation protocols, and periodic inter-rater reliability checks.

Hermeneutics of classroom observations

The presence of a researcher in the classroom can change the natural flow of teaching and learning. Students and teachers might behave differently or feel conscious due to the researcher's presence, leading to altered behaviours and potentially affecting the validity of the data collected. Efforts were taken to minimise the researcher's influence and establish a comfortable and non-disruptive research environment to obtain more authentic and reliable observations.

Research Questions

The key hypothesis on which LLF's MLE-based intervention is designed and implemented in schools can be summarised as follows:

If children's home language (L1) is used strategically and systematically in the oral domain for an extended period of time to strengthen children's confidence, self-esteem, comprehension, higher order thinking, communication, and expression, along with providing methodical support for the school's language (L2) acquisition, children will develop sound higher order thinking and reasoning skills in L1 and also learn to understand, speak, read and write in simple L2.

As discussed in the introductory paragraph, it is outside the scope of the study to establish a correlation between the MLE-based inputs provided to the early-grade language learning classrooms and student outcomes that indicate and support the learning of L1 and L2. Instead, this study intends to focus on qualitative insights into how the principles and approaches of systematic inclusion of children's languages into early language and literacy learning reflect in classroom practice.

Understanding the nature of LLF's MLE intervention

1. What is the nature of the design and implementation of the MLE-based language learning pilot guided by LLF?
2. What are some of the key principles that guide this MLE intervention?

Language and pedagogic practices of teachers

3. How do the principles of the MLE program and instructional design reflect in classroom practices?
4. How are teachers facilitating the principles of ELL and MLE in classrooms?
    a. To what extent are teachers able to implement all aspects of instructional design?
        i. In what ways are teachers adapting the recommended instructional design in their contexts?
    b. What pedagogic practices are teachers using for language and literacy learning?
    c. What is the nature of the interaction between teachers and students?

I. What is the nature of language use (L1, L2, or translanguaging) between teachers and students?

ii. What was the character and purpose of teacher talk and student talk?

Student Engagement and Language Outcomes

5. How do students engage with language and literacy learning processes?

   a. What is the distribution of time spent on various learning activities?
   b. How are they engaging with materials such as workbooks, big books, posters, TLMs, environmental print, and other oral resources in L1 and L2?

6. What are children's proficiencies in L1 and L2 for reading, comprehension, speaking, and writing at appropriate grades?

Teacher Beliefs about MLE

7. What are the teachers' opinions regarding LLF's MLE intervention?
8. What are the kinds of beliefs teachers hold about:

   a. children
   b. L1 and L2
   c. multilingual education
   d. language and literacy pedagogy

Tool Creation

The following tools were created for this study:

1. The Language Use Mapping tool aimed to track and analyse the use of different languages in the L2 classroom. Wagdi, Hindi, and mixed-language use were tracked and observed.

2. Audio recordings were collected during the classroom interaction to capture samples of language and speech patterns, some specific activities like Big Book sessions, TPR activities, and the general proceedings of the class.

3. Time on task is the tool that captures the amount of time a student is actively engaged in a specific task or activity and the time spent off-task.

4. The Classroom observation tool was a detailed tool and was further divided into

a. When class is not in session (for the classroom literacy environment),

b. When class is in session (for General Pedagogic Practices and Literacy and Language Practices - Detailed/descriptive)

c. Post-session (for General Pedagogic Practices and Literacy and Language Practices - rating and comments)

5. Teacher Surveys were included as a method of gathering information about a teacher's beliefs and practices regarding:

a. Balanced Literacy Approach
b. Multilingual Education
c. L2 pedagogy/ time to introduce L2
d. Use of L1
e. Common Underlying Proficiency
f. Higher -order Thinking
g. Beliefs about children and their background

6. Teacher Belief and Practice Interviews were extensively recorded to gather information from teachers about their beliefs, practices, and experiences in relation to teaching and learning L2 in multilingual contexts.

7. Interviews with the LLF Team helped gather information about the ideation, design and implementation of the programme, including material design and capacity-building of teachers.

8. A review of various sources related to the Dungarpur's Ajuvaroo MLE program led to gathering information through reading, analysing, and synthesising different sources of information, such as the summary of studies, approach paper, theory of change, etc.

9. Interviews with non-school stakeholders are a method of gathering information from people outside the school system who may have an impact on or be impacted by LLF's intervention programme.

10. Observation of teacher training programs is a method of gathering information by observing and recording the actions and interactions of teachers and trainers in capacity-building sessions in both blocks.

Research Tools and Expected Data Collection

Sl. No.	Name of the tool	Expected data (captured in intervention and comparison schools)
1	Language Use Mapping	% of teacher talk and student talk
		purposes for which the Teacher used various languages (codes in the tool)
		purposes for which Student used various languages (codes in the tool) % of time Hindi, Wagdi, and mixed-language was used
2	Audio records	Verbatim transcripts (along with translations) of small sections of the classroom records to illustrate various types of language use, as observed using the language use tool
		Qualitative responses from the Teacher to be analyzed thematically
3	Time on task	% time of students off-task % time of students on-task
		ratio of time spent by students on various different tasks
		Distribution of children on-task and off-task with respect to variables- teacher's language and pedagogic activity
4	Classroom observations	Qualitative observations (thematically analyzed) on how students are participating in various activities, as well as how they are engaging with the learning materials
5	Classroom observation	Basic information on PTR, attendance etc
		Ratings for classroom environment and literacy environment
		Qualitative descriptions of classroom and literacy environment
		Ratings given to various aspects of teacher practice (for the themes of oral language development, L2 pedagogy, comprehension, decoding, reading, writing, higher-order thinking, inclusion etc)
		Record of various strategies, activities, practices used by the teacher in each of the above themes
		Time spent by the teacher on each of the above themes
		Detailed qualitative notes (to be analyzed thematically) on ELL and MLE pedagogy

6	Teacher Belief and Practice Interviews	Likert scale responses to the vignettes
		Qualitative responses to the questions- to be analyzed thematically
7	Teacher Surveys	Likert- scale ratings on a survey questionnaire of around 30-40 items
8	Interviews with LLF Team	Qualitative data (analyzed thematically)
9	Review of various sources related to the Dungarpur's Ajuvaroo MLE program	Qualitative data (analyzed thematically)
10	Interviews of non-school stakeholders	Qualitative data (analyzed thematically)
11	Observation of teacher training programs	Qualitative data (analyzed thematically)

Table 2: Details of Research Tools and Expected Data Collection

The following standardised tools were referred to during the tool creation process

1. Baker Rodrigo Ocumpaugh Monitoring Protocol (BROMP) 2.0 for ToT
https://learninganalytics.upenn.edu/ryanbaker/bromp.html

2. LiRIL Study for Detailed Classroom Observation
https://www.tatatrusts.org/article/inside/literacy-research-in-indian-languages

3. LLF's ToT tools

4. ELLCO (Early Language and Literacy Classroom Observation) K-3 tool?
https://brookespublishing.com/product/ellco-k-3/

Data collection tool, sampling technique and sample chosen to administer each tool

No.	Data collection tool	Sampling technique	No of Schools Intervention Schools: (IS) Comparison Schools: (CS)
1	Classroom Observation Formats: 1. General Literacy Environment - rating and comment 2. Detailed during classroom 3. Post-session - rating and comments	Stratified Random Sampling Equal number of schools from two blocks Grades 1-2	8 IS 4 CS
2	Time-on-task	Stratified Random Sampling Equal number of schools from two blocks Grades 1-2	8 IS 4 CS
3	Language use	Stratified Random Sampling Equal number of schools from two blocks Grades 1-2	8 IS 4 CS
4	Teacher belief interview schedule	All language teachers for grades 1-2	8 IS 4 CS
5	Teacher Belief Survey	Language teachers	40
6	Material and Curriculum Analysis	-	-
7	Interview schedule for LLF's program team	Field staff in Dungarpur + Staff members/leadership team in Delhi	-
8	Audio recordings - classrooms	1 hour per sample school	8 hrs of classroom instruction

Table 3: Data Collection and Sampling Technique

Pilot Study

The pilot study for this project involved two intervention schools and two control schools. We met four teachers during the pilot study and could observe their classrooms closely. One of the key changes made during the pilot phase was adding one more control school, which allowed for a more robust comparison of the results. Further, the number of days allocated for the pilot study was increased to collect and analyse the data more efficiently.

The pilot study's classroom observation component was also revised to better align with the research objectives. This revision included using a more specific analytical framework, which was cross-checked with the preliminary data analysis to ensure its validity.

In order to further strengthen the research, input was also sought from experts in qualitative analysis, who provided valuable insights on potential challenges that may arise during the interview process. These inputs were considered and incorporated into the final revision of the tools. Overall, the pilot phase provided valuable insights that will inform the design and implementation of the entire study.

Teacher Belief Surveys and Teacher Interviews provided relevant data, which was used to distil the tools further to capture exact data points during the data collection phase.

Material Review

During this period, many parallel activities were conducted to gather information and materials related to the research. A desk review was conducted to explore various sources of information, such as reports, summaries of earlier studies, and other relevant publications. We also examined teacher guidebooks, which provided insight into the LLF's instructional routine, curriculum, teaching methods, and assessment practices used in the intervention schools. Furthermore, we analysed children's literature created by LLF, an important aspect of their intervention as it enables classrooms to be print-rich and resourceful. These resourceful classrooms are crucial for meaningful foundational literacy practices. Additionally, we examined Teaching Learning Materials (TLM) created by LLF, which are a vital component of their intervention, as they help to supplement and enhance the teaching and learning process. All these activities were conducted simultaneously to comprehensively understand the programme and its components. By conducting these parallel activities, we gained a more holistic understanding of the Dungarpur project and the factors that influence it.

Material Review

No	Material	Description	Language	Quantity	Comment	
					Design and Content	Pedagogic and Implementation
1	Teacher Guides	Guide for teachers to understand basic concepts of multilingual education and various aspects of early language and literacy learning including oral language development, reading, writing, and decoding	Hindi	2	The main sections are devoted towards the 4-block model of ELL, and its implementation in the classroom. 2 sections focus on MLE principles of the intervention programme. Other sections focus on other academic aspects like classroom management, wait time, and facilitating activities.	Teacher training exercises are driven by using teacher guides as the main instrument. Training sessions focus on explaining the contents of the teacher guide and facilitating sessions on other academic parts that support widening teacher knowledge and skill regarding ELL.
2	Teacher Posters	Pedagogic support tool for teachers that gives a snapshot of 90 minute language lesson plan and other pedagogical techniques	Hindi Wagdi	6	Provide a structured instructional routine and quick explanation of pedagogic practices.	Posters were displayed or hung on the wall next to blackboards. Some posters were destroyed because of rain, and teachers created their own handwritten or printed versions.
3	Story-Poem Booklet (nani kahe kahani)	Compilation of local stories, songs, poems, and riddles	Hindi Wagdi	1	Two sections based on poems and local/folk tales. Both sections are further divided into Hindi and Wagdi literature.	Teachers are encouraged to refer to the booklet to engage students at the beginning of the class. Daily lesson plan provided by field facilitators often refer to or indicate the literature from the booklet.

No	Material	Description	Language	Quantity	Comment	
					Design and Content	Pedagogic and Implementation
4	Big Books	Large-sized story books with big illustrations to support print awareness and listening comprehension	Hindi Wagdi	16	Colourful, contextual, and graded.	Students are drawn to colourful illustrations and contextual plots and characters. Teachers sometimes find it difficult to read colloquial Wagdi words. Some of the reading routines (for example - shared or guided reading) using BB require more attention and translation from academic standpoint to practice.
5	Poem Charts	Charts with famous local poems, supported with illustrations	Hindi Wagdi	5	Big fonts, attractive layouts.	Teachers use these poems and charts to kickstart the activities of the day on many occasions. Most students of grade 2 and up know these poems by heart. Students also sing it on their own during free time in school, while walking back to home. Many parents also know the poems by heart and appreciate the fact that children like these poems.
6	Picture Charts	Charts with pictures and illustrations depicting local landscapes and activities, to support picture reading and other oral	NA	8	Big picture posters depicting scenes from children's surroundings. Pictures are detailed to provide many	Teachers use posters to drive oral language development activities. A balance between open and close-ended questions is

No	Material	Description	Language	Quantity	Comment	
					Design and Content	Pedagogic and Implementation
		language activities			discussion points and higher-order inquiries.	needed. MGML nature of classrooms sometimes makes it difficult to have discussions rooted in higher-order thinking abilities.
7	Reading Cards	Graded reading lessons	Hindi	10+5	Easy to handle, age/LO appropriate content	Could not observe in use as data collection was done at the beginning of the academic year
8	Student Workbooks	Workbooks given to individual students to support learning of decoding and structured reading and writing	Hindi (some Wagdi words)	6	Designed to be an integral part of decoding instruction and teaching reading and writing.	Usually is the last activity of the 90 min. instructional routine
9	Letter Cards	Cards with individual *varnas, aksharas*	Hindi	66	Number and combinations of varnas and aksharas have been decided thoughtfully. At a given point, more than 5 students can do a similar activity.	Could not observe in use as data collection was done at the beginning of the academic year Effective and meaningful use was observed during pilots study
10	Grids	Grid of *varnas* and *aksharas* to support decoding activities	Hindi	15	Number and combinations of varnas and aksharas have been decided thoughtfully. At given point, more than 5 students can do a similar activity.	Could not observe in use as data collection was done at the beginning of the academic year Effective and meaningful use was observed during pilots study
11	Story Books	Picture books by various different publishers to build a classroom library	Hindi	176	Stories range in length, plot complexity, and number of characters.	Could not observe in use as data collection was done at the beginning of the academic year

Table 4: Material Review

Chapter 4
Data Analysis and Insights

This research aims to probe into various aspects of LLF's MLE intervention in Dungarpur to understand how and to what extent the theoretical principles and program inputs on MLE-based early language and literacy instruction have translated into practice. The study aimed to examine various aspects of program outcomes, particularly:

(I) the curricular and pedagogic practices used by teachers

(II) language use by students and teachers inside classrooms

(III) beliefs of teachers regarding MLE and ELL

(IV) engagement of students with curriculum, materials, and pedagogic practices.

This chapter provides a detailed overview of insights gained from data analysis on all of these aspects of the program.

1. CURRICULAR AND PEDAGOGIC PRACTICES USED BY TEACHERS

Data on teacher's curricular and pedagogic practices was collected using a variety of tools, including the structured classroom observation tool, researcher ratings of schools using a rubric, and teacher practice interviews.

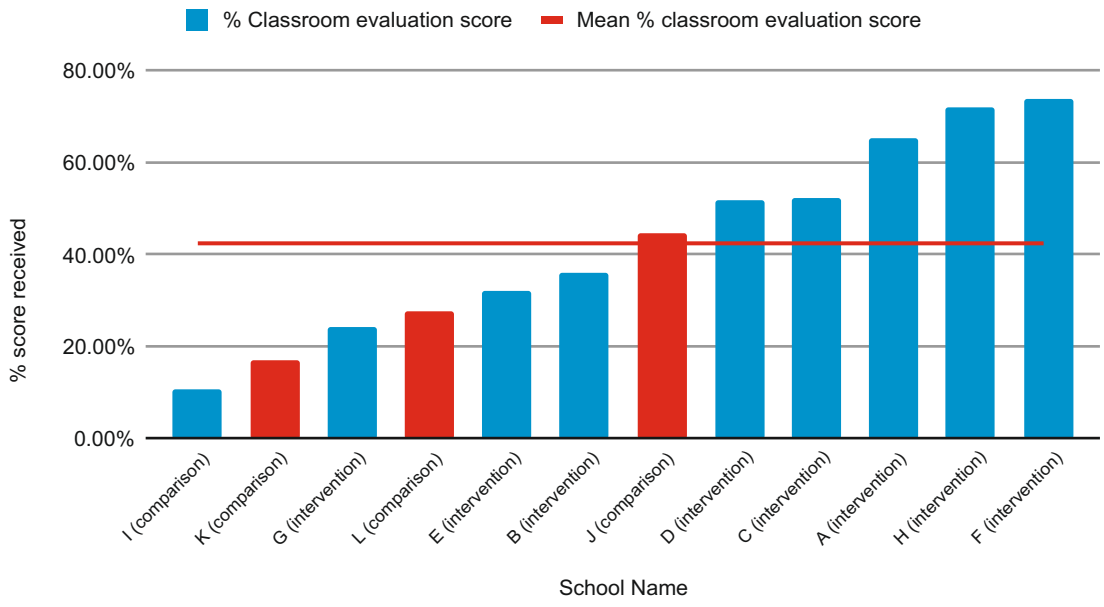


Figure 5: Classroom evaluation scores of intervention and comparison schools

Fig. 5 shows the scores received by the language teachers in the given schools on the quality of the classroom environment and language and literacy instruction. These schools were scored by the researchers using an assessment rubric that included parameters related to general and literacy-related classroom environments, general pedagogic practices of the teacher, and literacy specific pedagogic practices of the teacher. The scores given by the researchers to these classrooms were added up and converted into a % format. Fig. 5 shows that only the intervention schools (D, C, A, H, and F) were scored at more than 50% by the researchers observing the early-grade classrooms. All the comparison schools, on the other hand, were rated at less than 50% by the researchers. However, it is worth noting that 3 out of the 8 intervention schools in the sample (B, E, and G) also fared poorly on these ratings.

From the given graph most intervention schools seemed to have done better than the comparison schools on their scores on the classroom evaluation rubric. 3 out of 4 comparison schools lie in the lowest two quartiles, and 5 out of 6 schools in the top two quartiles belong to the intervention category.

The cumulative ratings given by the researchers can be further disaggregated into i) ratings given on structural factors, and ii) ratings given on the quality of language and literacy instruction.

Researcher ratings for structural factors

A definite aspect of improvement in intervention schools as compared to comparison schools seems to have been in classroom-related structural factors including the overall classroom infrastructure and classroom environment, and the availability of print material, children's books, and teaching learning materials. On average, intervention classrooms were better resourced and maintained.

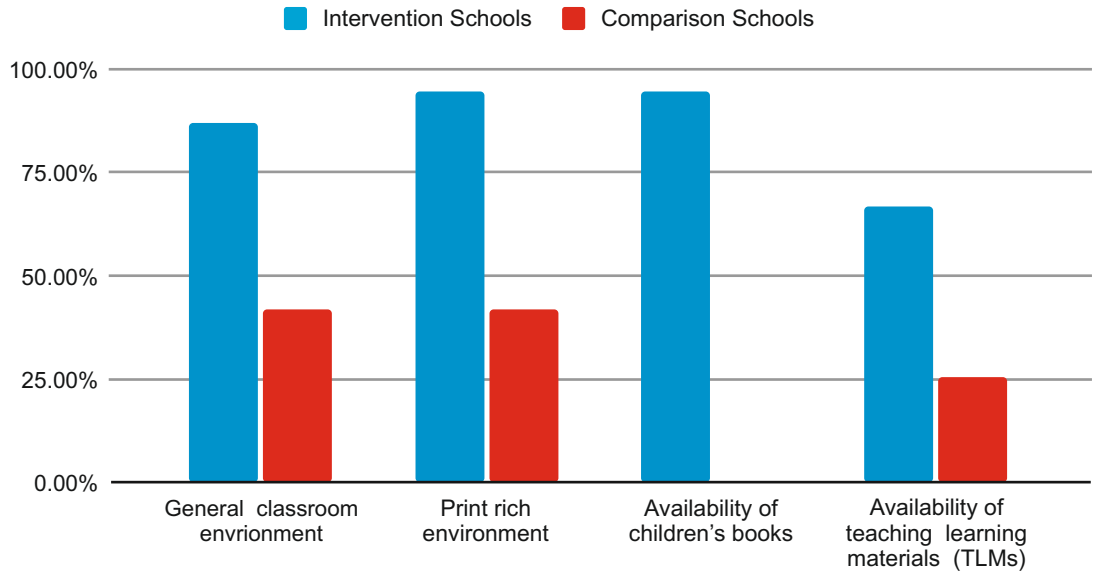


Figure 6: Scores on structural factors in classrooms

The graph shows that close to 90% of schools had a print-rich environment (comparison schools fare poorly at 33%) and more than 80% of them had a generally conducive learning environment (cleanliness, light, room, etc.) (comparison schools at 41%). It was seen that in almost all the intervention classrooms, there are specified corners for reading and to do some writing work. These classrooms have a display board to showcase children's work as well as children's name cards pasted on the wall. All the displays are maintained at children's eye level. One can also find labels stuck over common objects such as the window, blackboard, door, cupboard, and so on. Small quotes, phrases, and sentences are displayed for children to learn from this environmental print.

75% of teachers in intervention schools expressed in their interviews that the improvement in the availability of teaching learning material in their classroom has been one of the most significant impacts of the LLF program.

Intervention schools fared moderately well in item of the availability of children's books (58%), and teaching learning material (66%). These classrooms are provided with teaching learning material, often supplied by LLF, including Big Books, varna cards, varna grids, picture charts, poem charts and story books. However, one could not see a lot of evidence for the children's books being regularly used by the children. Even though these books were hung on a wall or stacked in a corner, most of the time they were used by the teacher for conducting read-aloud activities. Not a lot of independent handling or reading of books by children was observed. However, there is a small chance that independent reading activities were conducted on days other than the ones when the researchers conducted classroom visits. Another factor that may have affected the frequency of independent reading, like many other aspects of the program, is that the data was collected immediately after the COVID-19 school closures at the beginning of the new academic year. Teachers may have focused more on getting students to feel more comfortable and getting them up to speed with the previous year's instruction than on independent reading activities.

The picture was quite the opposite in comparison schools. These classrooms did not stock any children's books at all. Some teaching learning material, such as jodo gyan rangometry kits, picture and word cards, activity-based learning kits, etc., was available but was mostly locked away in cupboards. One could see that some standard store-bought varnamala charts and other posters were stuck on the walls. There was not a lot of evidence of the teacher engaging with the print material in teaching learning activities. Only one out of the four teachers in the comparison schools made their can write as teaching-learning material and used the classroom print effectively during instruction.

Researcher ratings for language and literacy instruction

The schools were also rated specifically for how well the teachers did on various aspects of language and literacy teaching, such as teaching decoding, oral language activities, etc., as well as general pedagogical aspects such as student inclusion, contextualising the material to children's lives, etc. (Fig. 7) shows that intervention schools were rated higher than comparison schools in almost all aspects of general as well as literacy-related pedagogic practices.

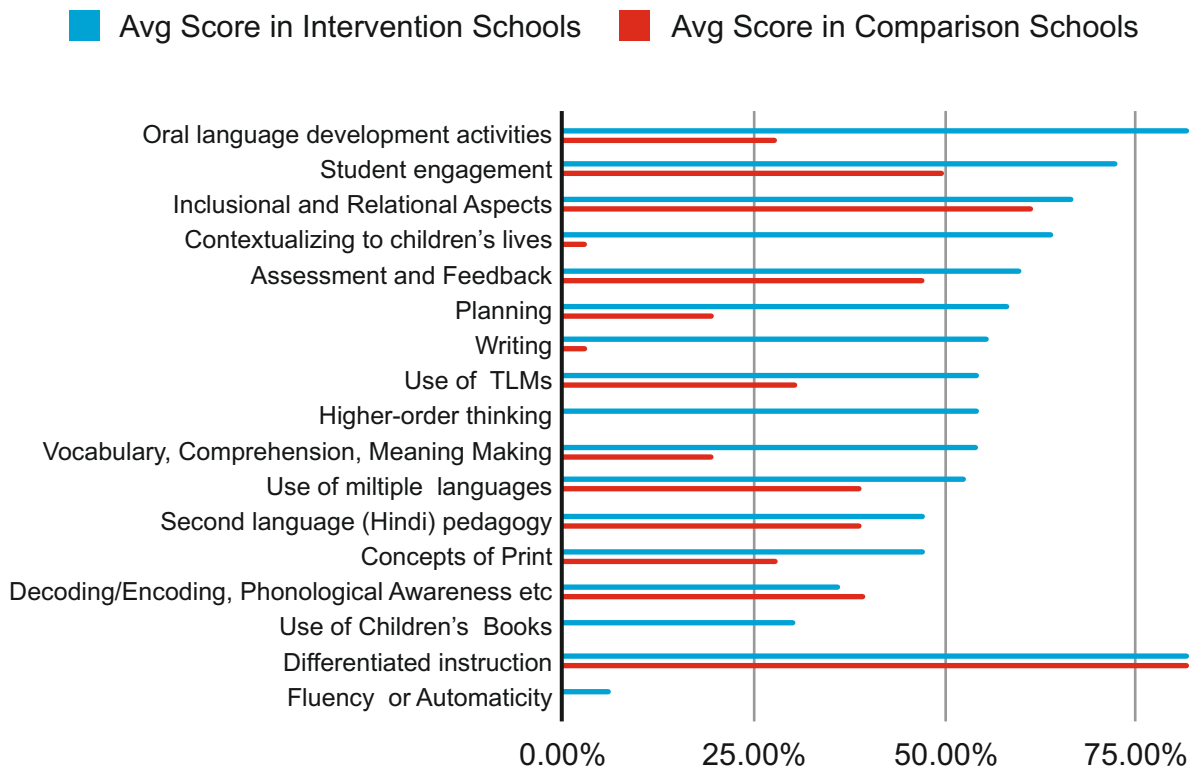


Figure 7: Topic-wise classroom evaluation scores

Aspects of language and literacy instruction where the intervention schools fared well are: oral language development activities (82%), ensuring student engagement (72%), inclusion and relational aspects (66%), contextualising instruction with children's lived realities (63%), regular assessments and feedback (60%), planning lessons (58%), and use of TLMs (54%). However, intervention schools were rated poorly by the researchers on aspects like reading fluency and automaticity instruction (6%), differentiated instruction for different grades or learning groups (29%), and decoding/encoding instruction (36%).

Comparison schools, on the whole, fared poorly as compared to the intervention schools. However, they were rated relatively better on aspects such as inclusion and relational aspects (61%), student engagement (50%), and decoding and encoding instruction (38%). These schools fared poorly on aspects like the use of children's books (0%), fluency/automaticity instruction (0%), higher-order thinking instruction (0%), and contextualising instruction to children's lives (3%).

In intervention schools, a number of different teaching learning activities were conducted that tackled different language and literacy learning competencies- including speaking, reading, writing, and comprehension. In intervention schools, key activities conducted in class were- reading Big Books, Total Physical Response activities for building second language vocabulary, singing poems and songs, describing picture charts, and drawing and colouring (including emergent writing activities). See (Fig. 8). In contrast, the range of activities conducted in comparison schools is much narrower, limited to decoding activities, working with the textbook, picture talk, and singing poems and songs. See (Fig. 9).

Range and diversity of teaching learning activities conducted by teachers in the intervention schools was much higher in intervention schools than in comparison schools.

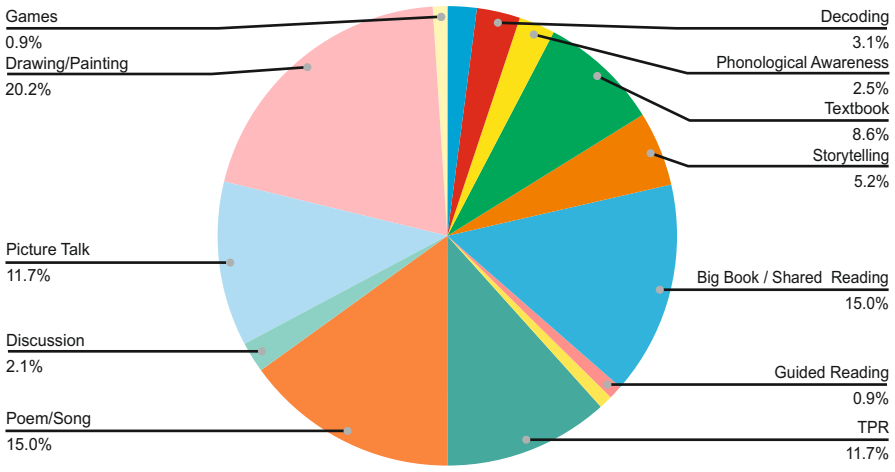


Figure 8: Intervention Schools

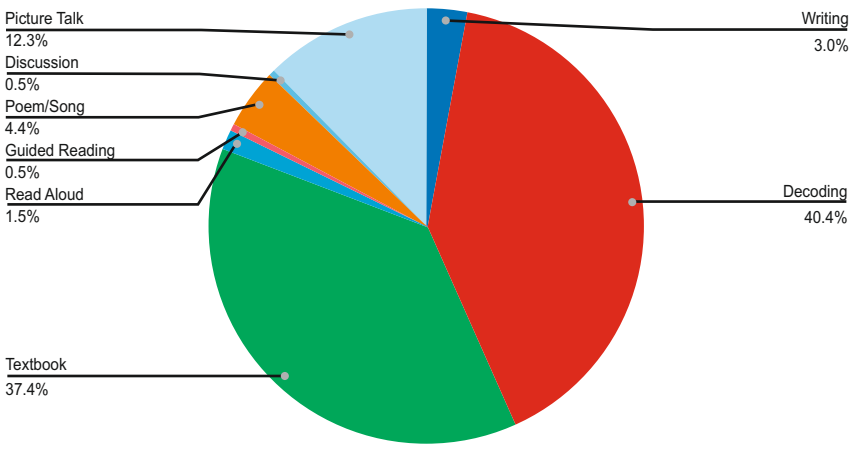


Figure 9: Comparison Schools

A holistic and balanced approach to literacy and language teaching in the early grades demands that classroom instruction focuses adequately on building children's competence in decoding/encoding, oral language and their ability to read with comprehension. In a multilingual context, it is also important that the teacher works on building children's vocabulary and their oral competence in the second language in the early primary grades. LLF's teacher guide for the Ajuvaroo program has comprehensive guidance on how the teacher can design classroom activities spanning these different types of language competence. Data was gathered during classroom observations on how much time the teachers spent conducting these various categories of activities; in both intervention and comparison schools. This data, when compared with the guidance provided in the LLF teacher guide on how much time the teacher should ideally spend on each of these categories of activities during the first trimester of the school year, shows the following pattern, as seen in Fig 10.

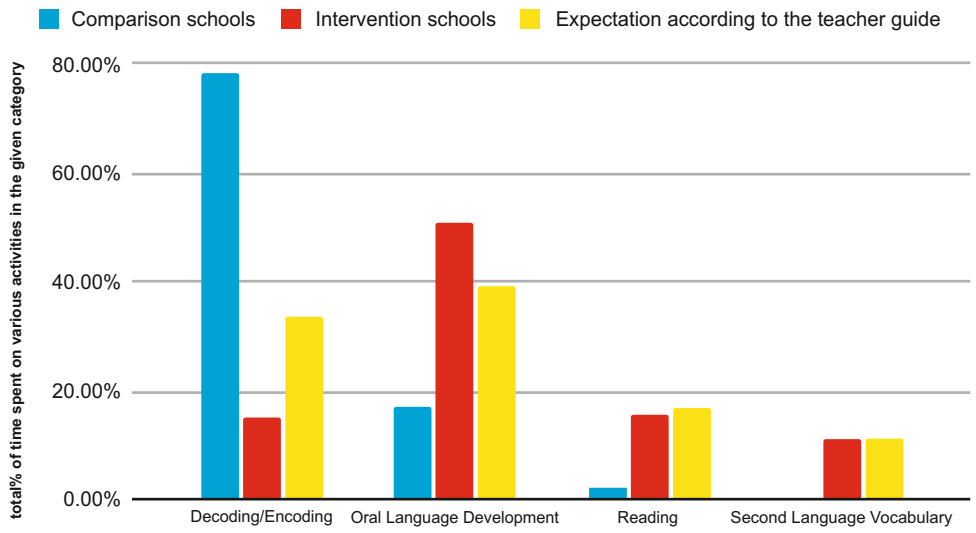


Figure 10: Aspect of language and literacy teaching

One can see that, in comparison schools, teachers spent a disproportionately large percentage of classroom time on conducting decoding/encoding activities (78% of instruction time). Teachers, in comparison schools, spent a small amount of time on oral language activities (16% of instruction time). Teachers, in comparison schools, spent almost no time on meaningful reading activities (2% of instruction time) and absolutely no time on building children's second language vocabulary (0% of instruction time).

In intervention schools, teachers spent adequate time (10% of instruction time) on reading and activities to build students' second language vocabulary (primarily through total physical response activities). Teachers, however, spent less than ideal time (15% of instruction time) on decoding/encoding activities and more time (50% of instruction time) on oral language activities than what was recommended in the teacher guide. It is worth noting that the research was conducted in the first couple of months of schools reopening after a long shutdown during the Covid-19 pandemic. The presence of pandemic meant that the enrollment in schools was in flux during this period, and teachers spent more time on oral language activities to make children feel comfortable than decoding/encoding activities that can be more challenging.

Oral language development:

In intervention schools, a significant proportion of classroom time was spent conducting oral language activities. These activities often engaged many children; and saw a higher level of activity and enthusiasm among students. Except for one comparison school, all the comparison schools were observed to have almost entirely neglected this aspect of language learning.

There was a palpable sense that in intervention schools students expressed their thoughts and feelings more freely and participated in discussions more often, as compared to comparison schools.

Some of the oral language activities that were commonly observed in the intervention schools were: poems/songs, picture talk, and discussion around read-aloud/ shared reading exercises. Some oral language exercises that were used less frequently in the intervention schools were: oral games, open discussions (for example, in the context of activities like circle time), and opportunities for children to tell stories or anecdotes from their lives.

There is also a lot of scope for expanding the repertoire of songs and poems, as the teachers were seen to rely on a limited set of songs frequently.

Decoding:

In all the comparison schools in the sample, language instruction was centred around teaching and learning of decoding and the teachers spent about 80% of the classroom time for this purpose. However, in 3 out of 4 comparison schools, no systematic decoding instruction was seen; instruction in these schools was largely based on rote and repetition.

In one comparison school, the teacher followed systematic lesson plans and used a set of TLMs that he had made himself to teach children various steps involved in learning to decode that included: varna recognition, blending, reinforcement of varnas previously known stroke order for writing the varna, practice of writing the varnas using different media, and so on. No work on phonological awareness was observed in comparison schools.

In most intervention schools, during data collection, teachers were seen to work on developing phonological awareness as the first step in decoding instruction. Phonological awareness activities included aurally separating different phonemes in a word and separating different words in a sentence. However, in two intervention schools, no phonological awareness activities were observed. In three other intervention schools, teachers struggled with appropriately conducting phonological awareness activities. In particular, there seemed to have been some confusion around whether

possessive nouns in Hindi (का, की, के, etc.) are counted as separate words or not. When teachers were asked about the rationale for conducting phonological awareness activities, there was an overall lack of clarity in their answers.

Intervention schools spent only about half of the recommended time on decoding instruction. Except for two schools, not a lot of other work on decoding apart from phonological awareness was seen to be done.

A couple of different factors may have been responsible for this.

- As mentioned earlier in the report, data for this research was collected at the beginning of the academic year that followed a long period of Covid 19 related school closures. So children were returning to their schools after a long break. This led to the teachers focusing on more engaging oral language activities over decoding work.

- It was also seen that teachers in almost all the schools could not successfully manage to conduct differentiated instruction for learners of different grades in the same classroom. In all of the schools in the sample, students from grades 1 and 2 (and occasionally, grade 3) sat together in the same class. In the intervention schools, ability-based groups, group A and group B, were made instead of age-based grades. Group A students consisted of those who were at a preliminary stage of language/literacy competence, and Group B students consisted of those with a higher level of competence in language/literacy, including, for example, those who could identify or write many aksharas.

- However, in comparison and intervention schools, the teaching and learning instruction was often not tailored to the needs of students with different learning levels. Researchers spotted only two instances where the teachers could conduct meaningful, parallel classroom instruction for grades 1 and 2 (or Groups A and B in the case of intervention schools). However, the teachers continued to conduct whole-class activities targeted towards grade 1/GroupA beginner-level students. Thus, students with some command over decoding did not receive much support to advance their knowledge.

- Another reason why decoding instruction was sidelined may have been related to where the decoding activities were placed in the daily lesson plans. In the schedule provided to the intervention school teachers, decoding activities were placed at the end of the 90 minute class duration; for the last 30 minutes. It was seen that teachers often did not manage to conduct the class for the entire duration. Most teachers taught the language class for an average period of 60 minutes, thus, not managing to conduct decoding activities placed at the end of the class.

Reading:

In addition to learning how to decode, students in their early years need exposure to connected and meaningful texts. Depending on the level of a student's reading competence, the teacher may lead the reading activities through reading a text aloud, conducting a shared reading activity often using a Big Book, or conducting guided reading sessions using books tailored to every child's reading level. However, no such reading activities were observed in the comparison schools. In the intervention schools, LLF has provided each school with several different Big Books in both Hindi and Wagdi. Teachers in almost all the intervention schools used these Big Books to engage students in meaningful reading experiences. Reading Big Books was an activity that was particularly enjoyed by students, and teachers reported it as being one of the most engaging for students.

The teachers were seen to be using Big Books strategies that resembled reading aloud and shared reading. In a few classrooms, the teacher used a pointer to underline words as they read the book aloud, encouraging students to voice out words familiar to them, following the principles of shared reading. In many classrooms, the Big Book was used for reading aloud, as the teacher read out from the book that was facing away from the students, pausing occasionally to generate discussion. Most teachers in the intervention schools used the Big Books to introduce to students concepts of print such as text directionality, title, name of the author, and so on. No work on the introduction to the concepts of print was seen to be done in comparison schools.

These read-aloud sessions generated a lot of discussion, often as teachers asked students many open and close-ended questions through the process. The discussion was largely conducted in Wagdi. Close-ended questions are lower order questions that can either be rhetorical; or be answered in one or a few or yes/no type of questions. These questions, although useful, are mostly used to reinforce lower-order cognitive skills such as factual recall, repetition, memorization, and so on. Open-ended questions, on the other hand, require students to use their higher-order thinking skills and give more elaborate answers. Thus, it is recommended that the language teacher use a balance of both types of questions while conducting classroom activities, for example, during a read-aloud.

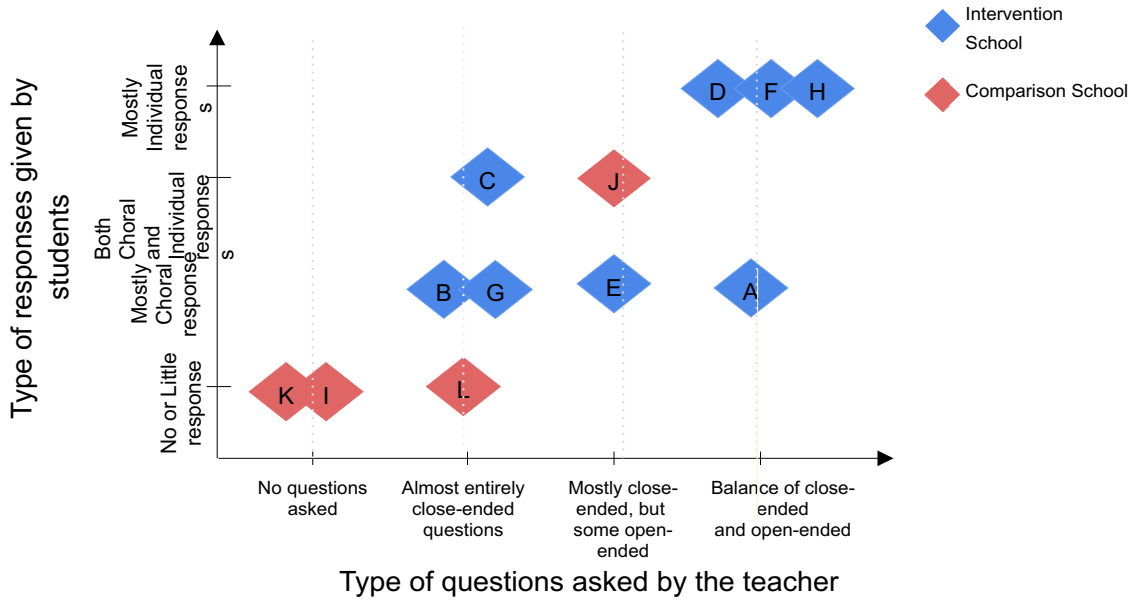


Figure 11: Questions and Responses in Classroom

Fig. 11 shows that there was a fair degree of variability observed among the intervention schools as well as across intervention and comparison schools in the types of questions that were asked by the teachers and the nature of responses given by the students. Data shows that teachers were able to facilitate higher-order thinking effectively in only 3 out of 8 intervention schools in the sample, and no teacher in the comparison schools could meet the standard.

All the intervention schools were provided with a detailed list of open and close-ended questions by the LLF team in their weekly lesson plans. However, it was seen that 50% of teachers in the intervention schools in the sample could not effectively ask open-ended questions. It was also instructive for the researchers to focus on the types of responses the students gave to these questions. It was seen that, in some cases, some teachers in intervention schools merely mechanically asked the questions that were provided to them by the LLF team; but did not wait for students' answers or gave the answers to these questions by themselves, which were then chorally repeated by the students afterwards. However, intervention schools, on average, have performed better than comparison schools on this count, since, with the exception of one school, in all the other comparison schools, either the teacher asked no questions or only close-ended questions were asked, followed by little response from the students.

Table 5 shows some illustrative open-ended questions that teachers asked during shared reading.

घर कैसे बनाते हैं?
महुआ के पेड़ पर क्या लगता है?
आगे क्या होगा?
यहाँ क्यों आयी होगी?, अगर तैरना नहीं आता तो क्या होता?
गीता वापस कैसे आएगी?
बारात में क्या खाते हो?
इस किताब का क्या नाम हो सकता हैं? क्या आप बकरियों को चराने ले जाते हैं? आपके परिवार में बकरियों की देखभाल कौन करता है?
आप घर में कौन–कौन से काम करते हैं?
क्या होगा अगर बारिश नहीं आएगी तो?
क्या होगा अगर हवा नहीं चलेगी तो?

Table 5: Open-ended questions asked during shared reading.

However, it was seen that in both intervention and comparison schools, guided reading and independent reading were not given much focus. There were a couple of instances of independent reading that were observed; however, they were driven by the students and seemed to not have been included in the lesson plans by the teacher systematically.

In every classroom, there were a handful of students who had sufficient mastery over decoding that they could have been engaged in guided reading exercises by the teacher. But, except for some incidental sessions, guided reading activities were also not seen to be conducted systematically.

Researchers could not observe any systematic work done to improve the fluency and automaticity of students' reading competence, especially in the case of those students in the multi-grade and multi-level classroom who had sufficient command over decoding letters and words.

In many intervention schools, teachers were asked to create word walls in their classrooms to facilitate logographic reading of words by the students; however, the word wall was not seen to be used very often.

Writing:

Most writing activities observed during the data collection period in intervention schools were emergent writing activities. The preference for writing activities was seen because the research was conducted at the beginning of the school year, and for most students in grade 1, this was their first time in the school and grade 2 students had joined the school after a long hiatus driven by Covid 19 related school shutdowns. These emergent writing exercises involved matching similar patterns, joining dots, colouring letters and so on, using the workbook 'Khushi' provided to all intervention schools by LLF. In addition to the workbook-led exercises, teachers also encouraged children to draw- at times, these drawing activities were purposely connected to the oral language development conducted on the same day. For example, students were encouraged to draw characters from the story they had just heard in class. These kinds of emergent drawing exercises would have likely helped students begin to draw the link between listening, reading and writing and helped them understand that writing is an exercise of expression of thought. In contrast, in most comparison schools, writing activities involved the repeated practice of scribing letters of the alphabet in their notebooks.

However, just like in the case of other aspects of language and literacy teaching like decoding and reading, grade 2 students who were already familiar with some degree of encoding were not given specific writing instruction at their level, in the intervention schools.

Even though workbooks and the lesson plans provided by the LLF made provisions for writing practice for grade 2 students, researchers observed only two instances where the teacher was successfully able to provide differentiated writing exercises for grade 1 and 2 students in the intervention schools.

The differential instruction in comparison schools had a different flavour. Since the writing instruction in these schools was limited to the repeated practice of writing letters of the alphabet, many teachers referred to students' notebooks to mark which letters they had practised writing already and assigned 'the next few letters' for their writing practice. In both intervention and comparison schools, researchers observed neither any text dictation activities nor any compositional or higher-order writing activities.

Second language pedagogy

In comparison schools, no explicit teaching of the second language, Hindi, was observed. However, in Intervention schools, teaching a second language is an implicit part of the instructional design.

In these schools, teachers spoke in Hindi for about 50% of the classroom time. Teachers translated Hindi words into Wagdi; when they realised that students had not understood them, in an ad hoc manner. In the intervention schools, teachers were guided by the LLF to use total physical response (TPR) activities to introduce Hindi vocabulary to students. Every weekly lesson plan contained about four verbs and four nouns in Hindi to be introduced to the students in TPR format. The teacher was expected to act out these words (in case of verbs) or point to the objects (in case of nouns), and students followed these actions after the teacher while repeating those words. On average, most intervention school spent ten minutes on the TPR activities. In 2 of the 8 intervention schools in the sample, TPR activities were not conducted. These activities were moderately engaging, with 60-75% of students meaningfully engaged in them on average. In intervention schools, teachers' use of Hindi was the highest during TPR activities. Even as the TPR activities provided a useful opportunity for explicit and systematic second language instruction, teachers slightly struggled to conduct these activities effectively and engage all the children. At times, some teachers called on only a few students to do TPR actions; and did not include the entire class.

2. LANGUAGE USE BY STUDENTS AND TEACHERS INSIDE CLASSROOMS

Data around language used in the classroom by students and the teacher was collected using the language use mapping tool and selective classroom audio recordings.

Extent of teacher talk and student talk

Data shows that in intervention schools, communication between the teacher and students is fairly bidirectional. On the contrary, in comparison schools, teacher talk dominates student talk.

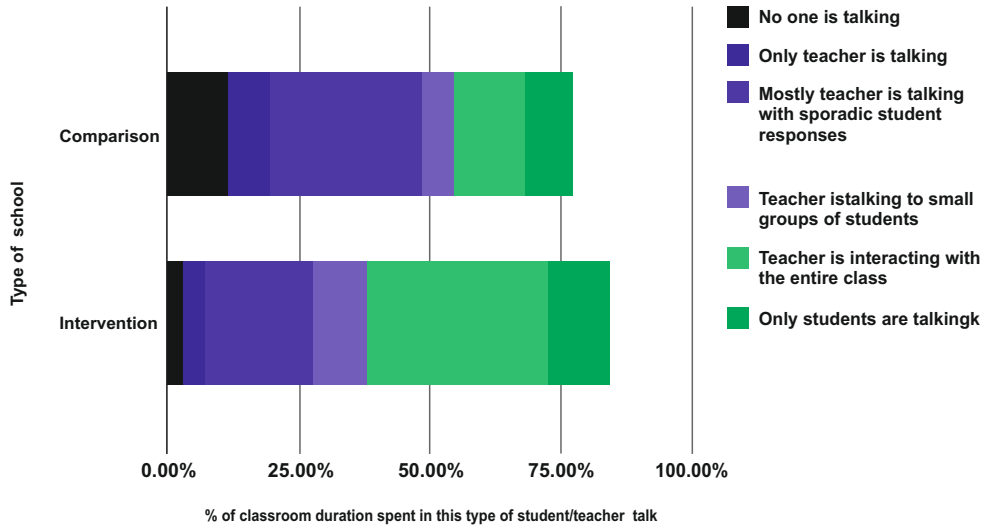


Figure 12: Teacher talk and student talk

Fig 12 shows that in comparison schools, the most commonly observed pattern is when 'mostly the teacher is talking with sporadic student responses' (30% of times), followed by 'teacher is talking to small groups of students' (13%). In intervention schools, most frequently, the 'teacher is interacting with the entire class (that includes responses from students)' (35%), followed by the times when 'mostly the teacher is talking with sporadic student responses' (20%).

Extent of Wagdi and Mixed language use in classrooms

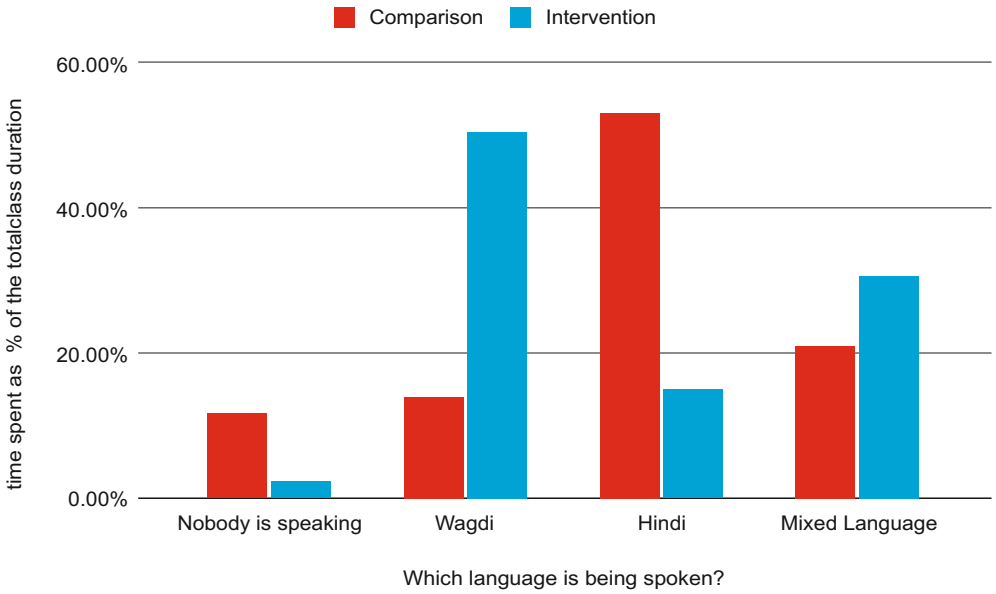


Figure 13: Language Use

Data on language use in the given classrooms in the sample was collected using a specific data collection instrument that recorded the nature and purpose of language used by the teacher at the interval of every two minutes.

In intervention schools, the use of Wagdi and mixed language is much higher as compared to their use in comparison schools. In comparison schools, Hindi seems to be used far more than either Wagdi or mixed language.

Fig 13 shows that, in intervention schools, Wagdi is spoken the most frequently (50% of the time), followed by mixed language (30%) and then Hindi (15%). In comparison schools, use of Hindi dominates (53%), followed by mixed language (21%) and then Wagdi (14%).

Purpose of language use

Analysis of the purpose for which different languages were used by students and the teacher shows the following pattern in Fig 14 and 15.

Figure 14 and 15: Purpose of language use

	Most frequent purpose for which students used Hindi	Most frequent purpose for which students used Wagdi	Most frequent purpose for which students used Mixed Language
Intervention Schools	Poems or songs Actively answering close-ended questions Conversations during an activity	Actively answering close-ended questions Informal conversations Conversations during an activity	Actively answering open-ended questions Participating in an activity/repeating after the teacher Actively answering close-ended questions
Comparison Schools	Participation in activities Passively answering close-ended questions	Informal conversations Conversations during an activity	Actively answering close-ended questions Informal conversations

	Most frequent purpose for which the teacher used Hindi	Most frequent purpose for which the teacher used Wagdi	Most frequent purpose for which the teacher used Mixed Language
Intervention Schools	Asking questions Pedagogic instruction Giving permission	Giving information Asking questions Pedagogic instruction Preparing for an activity Reading aloud Poem or songs Conducting discussion	Asking questions Giving instruction
Comparison Schools	Pedagogic instruction Classroom management	Pedagogic instruction Coaching/Scaffolding	Asking questions

In almost all the schools, there was not a lot of evidence that teachers had planned for mixed language use. The use of mixed language, in most instances, seemed organic and ad-hoc. In comparison schools, teachers showed no signs of planning for mixed language use. Among the intervention schools, 25 % (2 out of 8) of the teachers showed no evidence for planning for mixed language use; and in the remaining schools, there was a low-to-moderate degree of planning.

Table 6 shows the variety of purposes for which the teachers used mixed language.

Purposes of Wagdi/Mixed language use	
Connect to children's contexts/prior knowledge	1. शिक्षकः तमारे हाल रुपी है, की नै रूपी है। बच्चेः हां, मारे रूपी है। हाल थकी चावल बणिंगा। 2. शिक्षकः हा, हिनु रुकडू दिकाशी रियु है? बच्चाः आम शिक्षकः आम कणे कणे खाड़ है? बच्चाः मई मई, मारे घेरे आबा मते कईक कैरी लागी ही। 3. शिक्षकः आय थाई ने जाये है? बच्चाः मेणीयु उडीने जाये है। शिक्षकः आपड़े गेरे आपड़े मम्मी पापा कुणे मेणीयु उड़ीने गीय ही? बच्चाः हां जई, हाल रूपवा जई। बच्चा २ः हां, मार मम्मी उड़ीने गई ती। 4. शिक्षकः तमे कारे पड़या हो? बच्चा १ः मु ते मार आगणा माय स काल परसो निसो पडी गियो। बच्चा २ः मु पाणी माय पडी गियो। बच्चा ३ः मार पोग फिसली गियो ने मु पडी गियो। बच्चा ४ः मु नाली माय पडी गियो अतो।
Facilitate higher-order thinking	1. शिक्षकः रुकडू नी वी तो हू थाएगा? बच्चा १ः रुकडू नी वी तो कैरी नी मलिंगा। बच्चा २ः साइलो नी आवेगा। शिक्षकः वायरु नी साले तो हू थाएगा? बच्चा ३ः वायरु नी वाजेगा तो अमी मरी जंगा। बच्चा ४ः वायरु नी सालेगा तो सकल नी उड़ी सकेंगा। शिक्षकः कईक साटा पड़ी जइंगा तो हू थाएगा? बच्चा ५ः पाणी वदार थाई जायेगा तो संपल पाणी हाते तणाई जायेंगा। बच्चा ६ः पाणी वदार आएगा तो कतला बाणणें आवी जाइंगा। 2. शिक्षकः रोड ने वेसी हिडते हुए हु थाए ? बच्चाः गाडी आवीन लगाडी जाए। शिक्षकः मु एक दाड़ो जाई रई अति। मु आमनी उबी अति। मन खबर नई बाइक वारो आवी गियो। पसे मन अडाडी दिवी। बच्चाः मरी जवाए। शिक्षकः मरीस जवाए के कोए ओर भी थाए ?

Establish rapport	1. शिक्षकः हार्दिक बुल बेटा, बुलु पड़ेगा। आ जीम बुली रिय है के एम्, स्कूल आवेगा बराबर तू बुल। हु है आय कुणे कुटतू नति, है न? 2. शिक्षकः ओर बुलवु है, आय मेडम किये खाई जाये। कुटे क एवु कई नी। घबरावु नति, आपड़े भी बुलवु है।
Give procedural instructions	1. शिक्षकः आपड़े ताली वजाड़ता आवे क नी आवे? 2. शिक्षकः एक एक बताडोगा। 3. शिक्षकः बिजु बोलंगा। ताली वजीडीने बुलंगा। जिम बुलाये एम् बुलबु है, ताली वजाडीने। 4. शिक्षकः गणिन वताड़। 5. शिक्षकः पासू बोलो।
Classroom management	1. शिक्षकः काउड़ी तन नी दिकातु है। आय, मोरे आवी जा। काउड़ी ने मोरे क दो। काउड़ी आय, आवी जा। किमके या मुटा थए है। अणे होडे आवी जा। 2. शिक्षकः मैं जिसको पूछता हूँ वही बोलेगा, मु जिने पुसूंगा इस बोलेगा। 3. शिक्षकः इधर खड़े रहो। पीछे जाओ। 4. शिक्षकः सब मेरी तरफ देखो। 5. शिक्षकः कोण हमजी गियू?
Classroom management	1. बच्चाः सोहम किताब पढ़ती है। शिक्षकः पढ़ती नहीं, पढता है, सोहम एक सुरो है। पढता है एम् बोलो। सुरी आवेगा तो पढ़ती है एम् आवेगा। 2. शिक्षकः गणो। सोहम एक, किताब दो, पढता तीन, है चार। शिक्षकः कटली आवाज? बच्चे (एक साथ): चार.. शिक्षकः हाँ। पेले वाला माय कटली आवाज अति?
Introduce L2 vocabulary (words/phrases/sentences)	बच्चे (एक साथ): तीन.. शिक्षकः अणा माय कटली आवाज ही? बच्चे (एक साथ): चार.. शिक्षकः अणा माय कम है की ज्यादा है? 1. शिक्षकः कितने हैं? बच्चे (सब साथ): तीन 2. ढाही को हिंदी में क्या कहते हैं दृ गाय" / "बिलाड़ी का और क्या नाम है? "सकली का?" / गेर, नी आपड़े हिंदी माय हु कई? 3. शिक्षकः देखो, इसको क्या कहते हैं? (Does an action) बैठना। क्या कहते हैं? बच्चेः बैठना। 4. शिक्षकः ये कमर हैं। मैंने कमर पे हाथ रखा हैं। (points to a part of his body) कहाँ हाथ रखा हैं? बच्चेः कमर पे। शिक्षकः अब कमर को हिलाओ। बच्चेः giggle as they move their waist शिक्षकः अब मैं कमर को हिला रहा हूँ।

Table 6: Variety of purposes for which mixed language was used by the teachers.

Patterns of mixed language use

Selective use of classroom audio recordings was made to capture some illustrative examples of patterns of mixed language used by the teacher and students.

The most frequent form of mixed language use by the teacher that was observed was the translation of an L2 sentence into L1 or vice versa; the translation of L2 sentences into L1 seemed to be more frequent than the other way around. Similarly, translation of L1 words into L2 was also a fairly common practice, when the teachers often made children practise reciting some of the key vocabulary words in both languages. However, intra-sentential mixing of languages was observed less frequently, and mixing of the grammar of two languages was rarely observed.

This pattern may have stemmed from teachers' beliefs around mixed language use and purity of languages. Elsewhere in the report, we have described teachers' belief in the need for correcting a child if she is seen to be mixing L1 and L2.

Pattern of mixed language use	Frequency of this pattern of language use	Example
L1 sentence followed by a translation into L2 or L2 sentence followed by L1	Very frequent	1. शिक्षकः लिखवू है, लिखना है। 2. शिक्षकः यदि वो रोटा तो माँ दुखी हो जाती, हैं ने? अगर आपड़े भी कुणक रुवो, इन मम्मी दुखी थाय की नी थाय? ऐसे ही उस बछड़े को रोते देख कर उसकी मम्मी दुखी हो जाती थी। 3.
Translation of words from Wagdi to Hindi or Hindi to Wagdi	Very frequent	1. ढाही को हिंदी में क्या कहते हैं दृ गाय" 2. "बिलाड़ी का और क्या नाम है?"सकली का?" 3. शिक्षकः गेर, नी आपड़े हिंदी माय हु कई? 4. शिक्षकः नावड़ा ने हिंदी माय हु कंगा? 5. शिक्षकय चिड़िया बोलते हैं इस को. क्या बोलते हैं? बच्चे (सब साथ): चिड़ियौ शिक्षकः हाँ, चिड़िया
Teacher speaks in L2/L1 and children respond in L1/L2 L1 words in a largely L2	Frequent	1. शिक्षकः चित्र में घोडा क्या कर रहा है? विद्यार्थीः लारी खीसीन लईने आवे है। शिक्षकः हां, आ जी लारीने खीसीन लई ने आवे है। अगी लारीने आपड़ी रथ केवंगा। हूँ केवंगा? विद्यार्थीः रथ 2. T: कौन झूल रही है? S: खली T: हाँ गिलहरी, खली 3. शिक्षकः आ हू है? विद्यार्थीः बिल्ली। शिक्षकः आ हू है? विद्यार्थीः कुत्ता

sentence or L2 words in a largely L1 sentence Combined L1 and L2	Infrequent	1. पाकु कैसे बनता है? 2. कोई बात नही। रुकडू बनाओ। 3. फिर बिल्ली ने सकली को क्या कहाँ? 4. शिक्षकः चित्र में क्या दिख रहा है? विद्यार्थीः बाकरु शिक्षकः बाकरु को बकरी भी कहते है. शिक्षकः तमारे गेर बकरी है?
Grammar	Quite rare	1. तमे हू रखोगा? (आप क्या रखोगे?) 2. शिक्षकः गिलहरी ने वांदरा नी पूछ हिसवो है। एम हमजी ने हिसवा लागी। हिसवो हिसवो (झूला झूलने की प्रक्रिया का वागड़ी शब्द हिन्दी झूलो की तरह)

Table 7: Patterns of mixed language use

3. BELIEFS OF TEACHERS REGARDING MULTILINGUAL EDUCATION AND EARLY LANGUAGE AND LITERACY PEDAGOGY

Data on teacher beliefs was gathered through the use of teacher belief survey questionnaires and teacher belief interviews. Data for the survey was gathered from 40 teachers—20 of them from LLF's intervention schools and the remaining 20 from comparison schools. This sample also included all 12 schools (8 intervention and 4 comparison) that made up the core sample of the research. Teacher belief interviews were conducted for the 12 schools (8 intervention and 4 comparison) in the research sample.

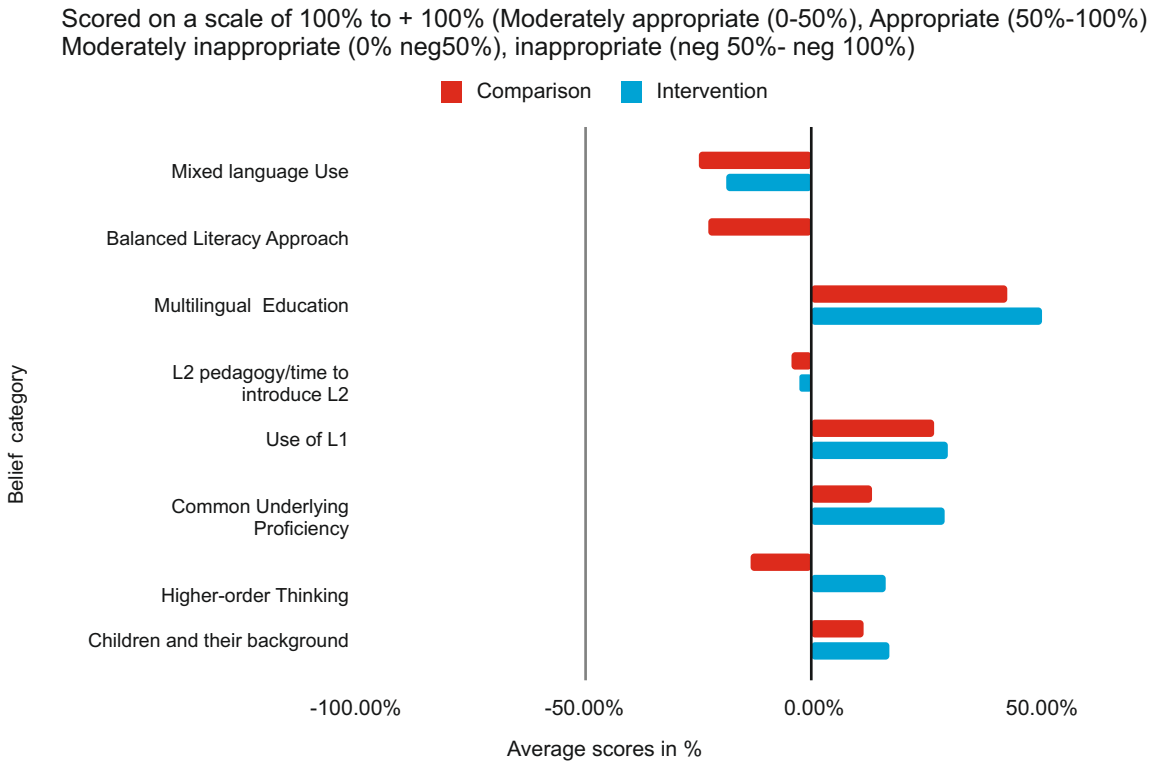


Figure 15: Teacher belief survey scores

Survey responses from the teachers were then scored by the researchers on their degree of appropriateness, based on established best principles of early language and literacy pedagogy as well as multilingual education. Total scores were interpreted as moderately appropriate/inappropriate or appropriate/inappropriate, as specified in the table below. These interpretative labels are not strictly based on research evidence; but are labelled as such only for ease of interpretation.

Overall observation of the scores suggests that all teachers; from both intervention and comparison schools, have somewhere between moderately appropriate and moderately inappropriate beliefs on various aspects of ELL and MLE. One can also observe that in each category, there is not a significant difference in the appropriateness of beliefs of intervention teachers from those of comparison teachers. Thus, the program overall does not seem to have led to deep shifts in teacher beliefs. However, in certain kinds of beliefs, intervention and comparison teachers differ- for example, beliefs around higher order thinking, balanced literacy approach, and common underlying proficiency.

One can also observe that teachers from both intervention and comparison schools have moderately positive views around multilingual education and the use of children's L1 in classrooms. Teacher interviews shed light on why teachers favour MLE and use children's home language in the class.

"We have to use Wagdi in class. These children do not understand Hindi when they enter school. So, we just cannot use Hindi in class." A comparison school teacher

However, teachers expressed some concern about using Wagdi in textbooks and other TLMs, since the presence of different variants of Wagdi in the region causes some confusion in the class when the textual material uses words from a variant that children, or at times teachers, are unfamiliar with.

"In the beginning, I did not understand some words [on the TLMs]. Then I realised this is the word they use in Simalwada [another block]. Children were confused too; we had to tell them that there are many words for the same thing in Wagdi." An intervention school teacher

When teachers were probed in the interviews on how long they think they should continue using Wagdi in class, their responses ranged from six months to five years. The majority of teachers (75%) interviewed said they think that children gain basic conversational proficiency by grade 2 and academic level proficiency by grade 3. These beliefs are not grounded in systematic observation or student assessments. Emerging data from around the world shows that the most likely age for a child to acquire basic interpersonal communicative proficiency in a second language is by grade 5. it takes further three years to acquire academic proficiency in the language. Thus, it is likely that by teachers' heuristic estimates, they may stop or reduce the use of Wagdi far earlier than the time it takes most children to develop their proficiency in Hindi.

Views around mixed language use, surprisingly, were not as positive. 93% of teachers, in both comparison and intervention schools, expressed agreement with the prompt that said "If a child is mixing different languages while speaking (for example, Wagdi and Hindi), it is the teacher's job to correct them".

Thus, there still seems to be an understanding that these two languages must be kept distinct and not mixed. However, as the previous section of this report on mixed language use shows, patterns of mixed language use that teachers use frequently are to translate words from one language to another, or to follow a sentence with its translation in another language. However, it was quite infrequent to observe teachers mixing languages at an intra-sentential level- using words or phrases of one language into a sentence that mostly follows another language. This infrequency seems to suggest that teachers perhaps think it is okay to use mixed language in a manner of translation of words or sentences, but they are less comfortable with the idea of fluidly shifting between the two languages at an intra-sentential level. However, more research is required to further probe into teachers' belief and practice of mixed language use.

All the teachers that were interviewed can be said to have a 'deficit view' towards children coming from Wagdi and Adivasi background. They enumerated a number of challenges that children's socio-economic and cultural backgrounds pose in the process of their learning. However, there seems to have been a fair degree of acceptance that by using Wagdi in the classroom, children's self-esteem can improve.

Around 40% of teachers in comparison schools and 10% of teachers in intervention schools, in their response to the belief survey, expressed the opinion that "Adivasi children's culture is very different and, thus not very relevant to school learning."

Opinion seems to be split among teachers on whether all children in their class can become good readers and writers. About 40% of teachers in comparison schools and 35% of teachers in intervention schools believe that "some children are born with a special ability which helps them learn a second language". A striking correlation was observed between a teacher's belief in all children's ability to become fully proficient in literacy and the teacher's good performance in class. Other teachers, who did not believe in every child's ability to become good readers and writers, also performed poorly in class and did not include all children in pedagogical processes. They often blamed students' irregular attendance, poverty, lack of parental attention or resources for their inability to learn. Some teachers also seemed to have rationalised their belief by thinking that not every student in class needs to become a good reader or a writer, as some children can instead be good in music or sports.

On average, teachers in intervention schools seem to hold more appropriate beliefs around principles of language and literacy teaching in the early years. In comparison schools, the overwhelming strategy employed by the teachers for teaching literacy is through rote and repetition, as opposed to a variety of activities targeting different learning competencies in intervention schools.

Even as the teachers in the intervention schools seemed to have incorporated activities suggested by LLF in their teaching routines, many of their core beliefs seemed to have not undergone the necessary transformation. This partial response poses a risk of relapse by the teachers into their old ways of teaching and learning after the program period concludes.

To take an example, the order in which varnas are supposed to be taught to children according to the recommendations made in the new state curriculum starts with घ, र, च, ल and so on, as opposed to old ways of teaching varnamala starting from अ, आ, ई. Teachers cite this as an example of a key shift in their teaching-learning; however, no teacher could explain the rationale behind this change of order. Their belief in a sequential mode of literacy acquisition seems to have been unchanged, with varnas to be taught first, followed by maatras, and then words and then sentences. About 55% of teachers in comparison schools and 64% of teachers in intervention schools agree with the survey item starting "Correct order for teaching how to write is to first learn to write varnas, then matras, aksharas, then words and sentences".

Another key inference that we draw from the belief surveys and interviews is that there is a gap in teachers' understanding of the objectives behind conducting various teaching-learning activities.

Even as the teachers in the intervention schools are conducting various teaching-learning activities, there seems to be a general lack of clarity around the rationale behind their use and their role in building particular competencies related to language and literacy learning. For example, in all the

intervention schools, Big Books are appreciated by the teachers as one of the most engaging TLMs given to them by LLF. Teachers have praised these books for the quality of pictures and engaging stories. These books are seen to hold children's interest and curiosity. However, when they were asked about the role of Big Books in literacy learning, most drew a blank. On the same note, when teachers were given the survey prompt "In early grades, the teacher should not use story books to teach children reading because children at that level are not able to read large texts of that kind', more than half of them (51%) agreed to it across both comparison and intervention groups.

This sense of confusion seems to pertain to several activities, including, for example, those for building phonological awareness and oral language development. When teachers were asked about the rationale for conducting oral language activities, no one (from either comparison or intervention schools) mentioned the aspect of building higher order thinking skills in children.

About 41% of comparison school teachers and 27% of intervention school teachers said that they agree with the survey prompt "In lower grades, the teacher should focus on lower-order thinking skills (such as answering yes/no questions), and shift to higher-order thinking skills (such as creative thinking) in higher grades". Similarly, teachers were not able to immediately connect TPR activities to build L2 vocabulary in many instances.

There also seems to be a fair bit of contradiction in teachers' beliefs around the best way of teaching L2 to children. On the one hand, an overwhelming majority of teachers (75% in comparison schools and 77% in intervention schools) agree with the survey prompt, "The best way to learn Hindi is if everyone in school is made to converse only in Hindi". On the other hand, almost a similar percentage of teachers also seem to agree that "if children have a better grasp of their mother tongue, it will help them in learning other languages as well".

The former belief that complete immersion in Hindi is the best way to learn it follows from a monolingual paradigm that prioritises maximum exposure to L2. However, the latter belief stems from a more multilingual understanding of language learning that capitalises on learner's "common underlying proficiencies" - meaning their ability to use their knowledge of the language in L1 to learn L2 and treats the use of L1 in the process of L2 acquisition as an asset and not as a hindrance. But, it seems that teachers may not have had much opportunity to think through these contradictory ideas, reflect upon their practice and arrive at a coherent understanding of language acquisition that stems from their reflexive practice.

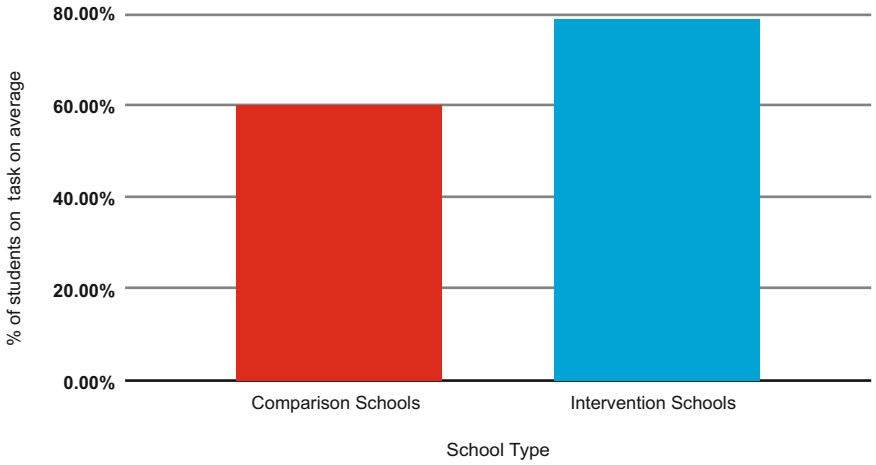
This gap in teachers' understanding of the rationale behind conducting various activities could possibly be traced to gaps in teacher capacity building programs. Observations of these capacity building programs as well as interviews with relevant personnel in LLF conducting them showed that there is scope for improving the quality of these training programs and for increasing their duration. In many of these in-service training programs, the focus was seen to be on demonstrating various teaching-learning activities and giving teachers opportunities to repeat them after the demonstration by facilitators. However, there was very little discussion on the theoretical principles of early language and literacy pedagogy, where these activities fit in the larger scheme, and what role they play in developing children's language and literacy skills. On occasion, the trainers themselves seemed to have made errors in demonstrating particular activities.

This absence of quality discussion underscores the need for thorough training of the programme personnel, field facilitators and program coordinators on principles of multilingual education and early language and literacy teaching. Some programme team members also suggested dedicating the first six months of the program to thoroughly train the staff and, later, the teachers before beginning to implement the program in schools. Field program managers responded to this suggestion by pointing out that the lack of exposure as well as reserved social behaviour of teachers, especially those from Adivasi communities, poses significant challenges in conducting rich discussions in the training sessions.

4. ENGAGEMENT OF STUDENTS WITH CURRICULUM, MATERIALS AND PEDAGOGIC PRACTICES

Data on student engagement was gathered using the 'time on task' tool and through detailed classroom observation formats.

Time on task



When time-on-task data is plotted for individual schools (see Fig 17), one can notice a fair degree of variability across schools in both intervention and comparison schools.

Figure 16: Proportion of students 'on task'

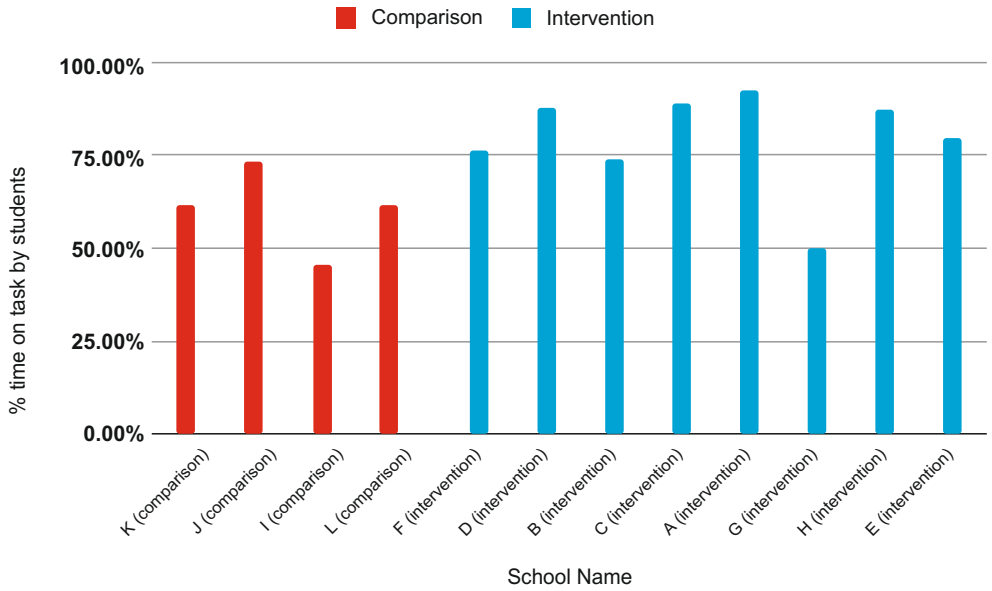


Figure 17: Time on task for individual schools

The time-on-task data collected during classroom observations shows that in the intervention schools, about 79% of the students are 'on-task' as compared to the comparison schools, where about 61% of students are 'on-task' on average (see Fig. 16).

Intervention schools fare better than comparison schools on time-on-task? but only by a small degree. Teachers, in their interviews, have expressed their opinion that one of the largest impacts of the LLF program they have seen on children is their level of active engagement with classroom activities. Teachers in the intervention schools seem to appreciate the variety of activities provided to them that are interesting and engaging for children. Also they express having observed a noticeable change in student participation, saying that students have become more vocal and expressive in class since they have started following the guidelines given to them by the LLF program.

In three out of eight intervention schools in the sample, researchers observed that the teacher subtly paid more attention to boys in the class than girls. For example, boys were called on to answer questions more than the girls, or encouraged more than girls or if girls seemed hesitant to participate in activities such as TPR, they were not motivated enough. Students in three out of four comparison schools were seen to be mostly distracted or passively engaged with classroom instruction. In about 50% of the intervention schools, the teacher ensured that she engaged with and included all the students in class systematically; in the remaining half of the intervention schools, either the level of participation was lacklustre or only a few students participated a lot more than the others.

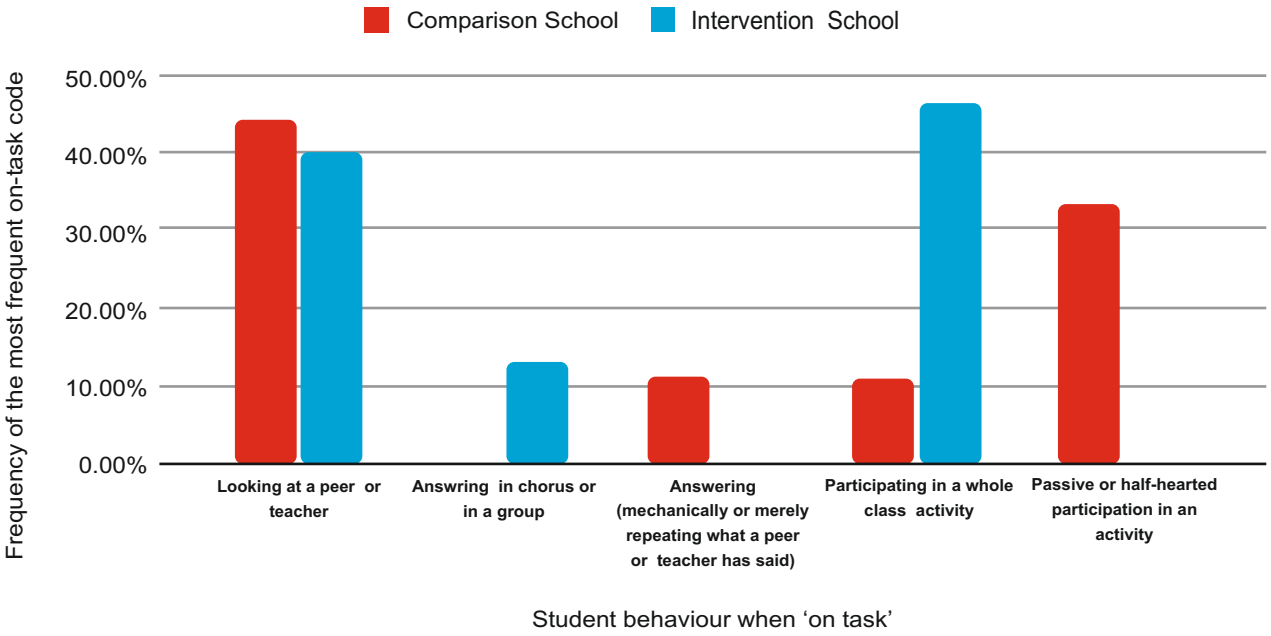


Figure 18: Most frequent on-task codes across comparison and intervention schools

When the 'time-on-task' data is analysed further, one can see that student participation across intervention and comparison schools differs. In the intervention schools, students participate in whole class activities for the most part, followed by looking at a peer or the teacher and answering in chorus. In comparison schools, studnts are looking at a peer or the teacher or passively or half-heartedly

participating in an activity, than mechanically answering or repeating what someone else has said and participating in a whole class activity. Thus it seems that the quality of students' engagement with classroom tasks seems to be better in intervention schools than in comparison schools. However, in the intervention schools, student engagement seems to be below expected levels in certain categories, such as participation in small group activities and answering individually.

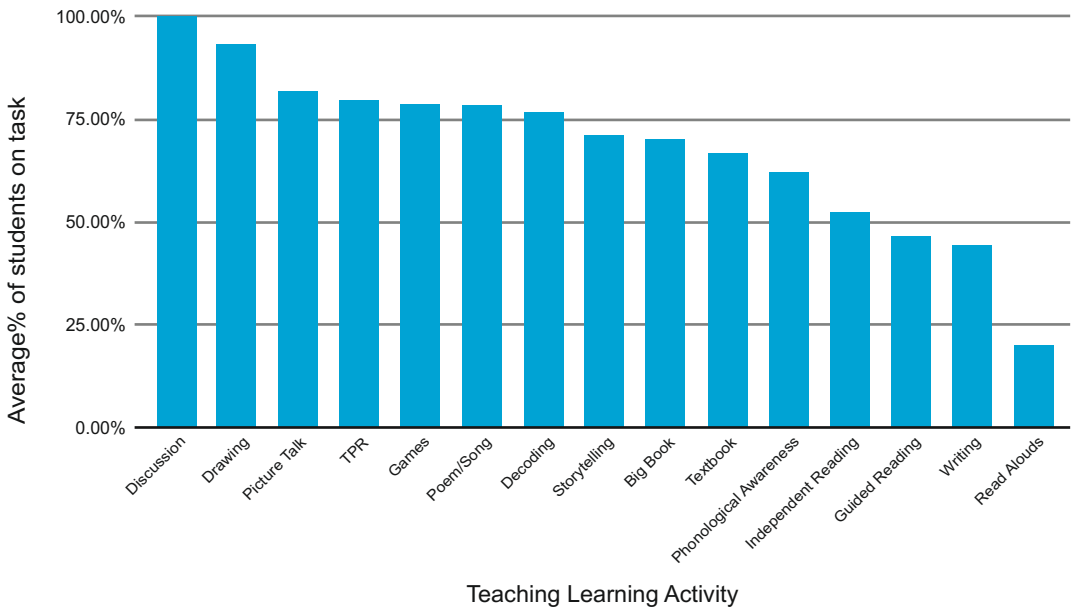


Figure 19: Activity-wise student engagement with a task

Fig. 19 shows that activities such as discussions, drawing, picture talk, TPR (Total Physical Response), Games, and Poems/Songs facilitated a greater degree of student engagement as compared to activities such as read-aloud, writing, guided and independent reading, and phonological awareness that could not engage students adequately.

Correlation between the number of students on task and the language used in the class

Some inferential statistics were run on the collected data to determine whether there seems to be any statistically significant relationship between the extent of Wagdi or mixed language used in the classroom by the teacher and the level of student engagement with tasks.

Null Hypothesis: The extent of Wagdi and mixed language used by the Teacher in the classroom (across both intervention and comparison schools) does not impact the number of students on task.
Alternative Hypothesis: Increase in Wagdi and mixed language used by the Teacher in the classroom (across both intervention and comparison schools) increases the number of students on task.

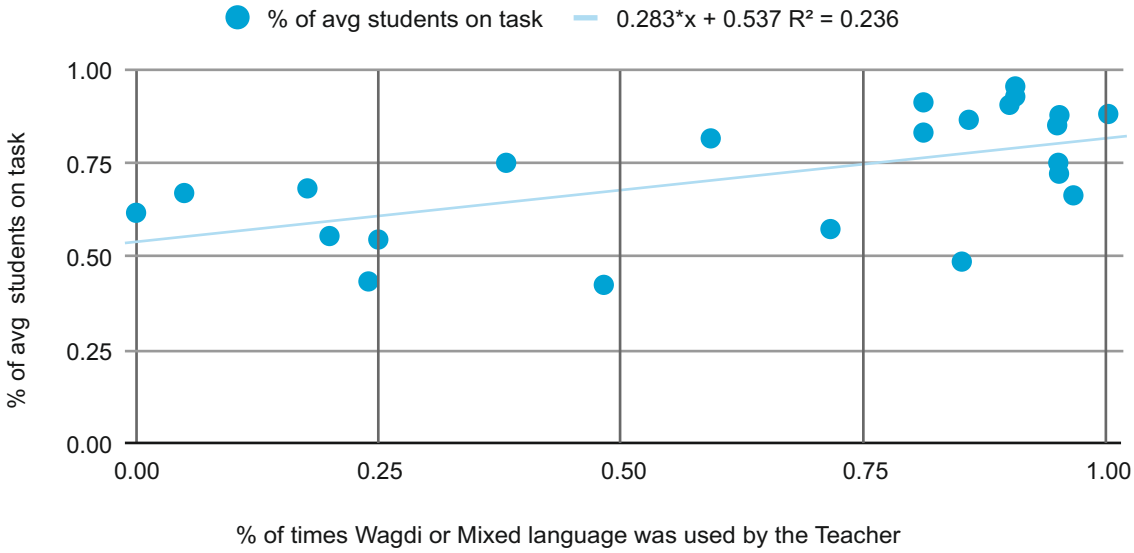


Figure 20: Relationship between the extent of Wagdi/mixed language used by the teacher and average student engagement in class

Fig. 20 shows that there seems to be a positive relationship between the extent of Wagdi/mixed language used in the class and the extent of student engagement, as shown in the average % of students on task, with a low degree of goodness of fit (R2=0.326). However, the low value of R2 is to be expected since this is classroom-level data on social behaviour. When linear correlation statistics are run on the given data, it gives rise to Pearson's coefficient (r) as 0.57, which indicates a moderately strong correlation between the two variables. Results of the student t-test show the p-value to be 0.21, implying that the sample data is not statistically very significant and thus indicating the need for further research to strengthen the analysis.

Thus, preliminary analysis shows that there is a likelihood that the degree of student engagement in the classroom increases when the extent of Wagdi or mixed language use in class increases. However, further research is needed with a much larger sample to test this more rigorously.

Chapter 5
Insights and Recommendations

The major insights of the study:

1. The effectiveness and impact of an MLE program heavily rely on the pedagogical choices and practices that comprise the foundation of Early Language and Literacy (ELL).
2. The implementation of an intervention like 'Ajuvaroo' necessitates an open and meaningful dialogue with system leaders and various stakeholders. This collaborative approach enables a shared understanding and ownership of the program, enhancing its effectiveness and sustainability.
3. Many elements, such as sound pedagogical design, community engagement, and a comprehensive capacity-building program for teachers, bring about changes and revisions in classroom teaching-learning processes.
4. Students expressed their thoughts and feelings more freely and participated in discussions more often in intervention schools as compared to comparison schools.
5. In 75% of intervention schools, moderate evidence is seen for teachers planning for mixed language use. In most instances, the use of mixed language seemed organic and as per the classroom communication needs. In comparison schools, teachers showed no signs of planning for mixed language use.
6. A key inference drawn from the belief surveys and interviews conducted with the teachers at intervention schools is that there is a gap in teachers' understanding of the objectives behind conducting various teaching-learning activities and the pedagogic rationale behind some of them.
7. Data shows that teachers could facilitate higher-order thinking effectively in only 3 out of 8 intervention schools in the sample, and no teacher in the comparison schools could meet the standard.
8. Even though workbooks and the lesson plans provided by the LLF had made provisions for writing practice for Grade 2 students, researchers observed only two instances where the teacher successfully provided differentiated writing exercises for Grade 1 and 2 students in the intervention schools.

Some Recommendations:

1. The programme needs to include systematic work done to improve the fluency and automaticity in students' reading competence, especially in the multi-grade and multi-level classrooms with sufficient command over decoding letters and words.
2. Even as the teachers in the intervention schools seemed to have incorporated activities suggested by LLF in their teaching routines, many of their own beliefs seemed to have not undergone the necessary transformation. This poses a risk of relapse by the teachers into their old ways of teaching and learning after the programme period concludes.
3. There is a scope for improving the quality of teacher's capacity-building/training programmes and increasing their duration. Professional development sessions should include in-depth discussions on the theoretical underpinnings of instructional strategies, emphasising the cognitive and linguistic development they promote.
4. To enhance program's effectiveness it is crucial to focus on orienting school heads, particularly in primary schools with only two teachers. It is evident that if school heads have a deeper and more hands-on engagement with the intervention, it will contribute to their pedagogic understanding of new teaching methods and foster a stronger sense of ownership towards student learning outcomes.

"Effective multilingual education practices recognize the importance of mother tongue enabling students to develop a strong foundation in their first language while acquiring proficiency in additional languages."
(Jimenez-Castellanos, Zuniga, 2019)

"Adivasi and underprivileged students' proficiency in their mother tongues should be recognized and sopported through multilingual education, as it enhances their self-esteem, motivation, and cognitive development, ultimately leading to improved learning outcomes." (Mohanty, 2016)

The effectiveness of multilingual education lies in its acknowledgement of the significance of the mother tongue in facilitating Early Language and Literacy (ELL) instruction. It emphasises working on first language proficiency while simultaneously acquiring additional languages by leveraging the strong foundation of the first language. Ajuvaroo acknowledges and supports students' proficiency in their mother tongues and supports them through multilingual education. By embracing their mother tongues, multilingual education boosts their self-esteem, motivation, and cognitive development, which in turn leads to enhanced learning outcomes. Recognising the value of their linguistic and cultural heritage, multilingual education empowers these students to engage actively in their education, fostering a positive sense of identity and promoting academic success. Multilingual education equips Adivasi and underprivileged students with the tools they need to excel academically and beyond by providing a nurturing and inclusive learning environment.

This chapter delves into the comprehensive field observations and data analysis conducted to gain insights into the Multilingual Education (MLE) programme. One of the key findings is that the effectiveness and impact of an MLE programme heavily rely on the pedagogical choices and practices that comprise the foundation of Early Language and Literacy (ELL). A strong foundation of ELL pedagogy is crucial for ensuring the reach and engagement of a well-designed MLE program. Furthermore, implementing an intervention like Ajuvaroo necessitates an open and meaningful dialogue with system leaders and various stakeholders. This collaborative approach enables a shared understanding and ownership of the program, enhancing its effectiveness and sustainability. Many elements (sound pedagogical design, community engagement, and a comprehensive capacity-building program for teachers) bring about changes and revisions in classroom teaching-learning processes.

The discussion in this chapter begins by addressing the core aspects of teaching-learning processes, like language use and language development activities, in light of the MLE context. It then expands outward, exploring other facets of the programme, such as teacher training, content creation, team building, etc. The chapter highlights the interconnectedness of various components within the MLE programme through this comprehensive approach and emphasizes the need for an integrated approach to multilingual education.

By considering the broader context and engagement of the relevant stakeholders, it aims to bring together the learnings of this research study as well as the intervention programme.

Overall, this chapter provides valuable insights into the importance of strong pedagogical foundations, community engagement, and capacity-building programs in successfully implementing of an MLE programme.

Personable Classrooms

Classrooms are sanctuaries for learning and exploring, providing a safe and nurturing environment where students can grow intellectually, emotionally, and socially. These spaces serve as a haven where students can freely express themselves, ask questions, and engage in active discussions without fear of judgment.

Multiple and thorough classroom observations have led to a palpable sense that in intervention schools, students expressed their thoughts and feelings more freely and participated in discussions more often, as compared to comparison schools.

In intervention schools, the classroom environment was notably more welcoming and accommodating for students due to the utilization of their home language. A considerable amount of classroom time in these schools was dedicated to conducting oral language activities. These activities not only engaged many students but also fostered a higher level of activity and enthusiasm among them. Except for one comparison school, the other schools largely disregarded this crucial aspect of language learning.

In intervention schools, there was a tangible feeling that students felt more at ease expressing their thoughts and emotions, and they actively participated in discussions more frequently compared to students in comparison schools. Several oral language activities were commonly observed in the intervention schools, such as reciting poems and songs, engaging in picture discussions, and participating in conversations related to shared reading exercises. While some oral language activities, like oral games, open discussions during circle time, and opportunities for students to share personal stories or anecdotes, were used less frequently in intervention schools, they still played a role in facilitating a more personable and interactive classroom environment.

A Closer Look at the Issues of Inclusion

Inclusive and equitable education of students in early grades is crucial for their overall development. A

supportive environment that acknowledges and values diversity and differences within schools is a desirable condition and a right of children. By incorporating culturally responsive teaching strategies, providing bilingual resources, and promoting language-rich activities, we can ensure that all students feel included and supported in their learning journey, regardless of their language and social backgrounds. Inclusion fosters a sense of belonging, enhances communication skills, and lays the foundation for academic success and positive social interactions among students.

Data analysis tells us that the comparison schools were rated relatively better on aspects such as inclusion and relational aspects (61%), student engagement (50%), and decoding and encoding instruction (38%).

The notion of inclusion in comparison schools may sometimes be misleading as it inadvertently perpetuates a sense of equality among students. However, this perception fails to acknowledge the underlying systemic apathy that affects all students indiscriminately. By treating students as a collective entity, the illusion of equitable opportunities is created, masking the reality of inadequate treatment and support provided to each individual. It is important to recognize that this issue extends beyond a mere lack of inclusivity and points to a broader problem rooted in systemic indifference. On the contrary, intervention classrooms have a display board to showcase children's work as well as children's name cards pasted on the wall. All the displays are maintained at children's eye level. Such a display board creates a concrete reference for children and their personalities to get identity and representation in the formal education.

The instructional routine of Ajuvaroo encourages structured yet comfortable mingling of students. In addition, a mixture of individual and group tasks provides an opportunity for teachers to make the classroom more inclusive.

Overall, the intentional and methodical use of students' language in intervention schools created an atmosphere where students felt comfortable and encouraged to engage actively in oral language activities. In addition, children in intervention schools have a space for their identities and leveraging group dynamics for effective learning are another important features of the programme. This approach contributed to a more inclusive and participatory learning experience for the students.

Languages in Classroom

Wagdi is used and heard commonly in school premises, both in intervention and comparison schools. Almost all communication takes place in Wagdi. In some upper primary schools, the occasional use of Hindi is seen. However, the use of Wagdi or mixed language within the classroom is where the difference between intervention and comparison school stands out. The issue of language use in the classroom needs to be seen in the context of the intentional and structured use of Wagdi in the classroom.

In intervention schools the use of Wagdi and mixed language is much higher as compared to their use in comparison schools. In comparison schools, Hindi seems to be used far more than either Wagdi or mixed language. The preliminary analysis shows that there is a likelihood that the degree of student engagement in the classroom increases when the extent of Wagdi or mixed language use in class increases. However, further research with a much larger sample is needed to test this more rigorously.

The deliberate integration of building blocks of early language development for the second language, such as creating phonological awareness, utilizing total physical response, building contextualised L2 vocabulary, and employing various instructional strategies for reading, is notable in the multigrade, multilingual context of grades 1 and 2. By implementing these approaches, the programme promotes a comprehensive language learning experience that supports students' linguistic development and cultural understanding. The intentional use of Wagdi or mixed language as an important feature in intervention schools acknowledges the value of students' home languages and fosters a sense of belonging and identity. This approach empowers students by recognizing and utilizing their existing language skills while providing them the tools to expand their linguistic repertoire, ultimately facilitating their success in a diverse and interconnected world.

In 75% of intervention schools, moderate evidence is seen for teachers having planned for mixed language use. In most instances, the use of mixed language seemed organic but ad-hoc. In comparison schools, teachers showed no signs of planning for mixed language use.

Two approaches can be taken to enhance the "intentional and structured" use of Wagdi and mixed language. Firstly, there is a need to cultivate stronger and more reflective teaching practices, with field facilitators playing a more prominent role in guiding teachers. This would involve providing support and guidance to ensure that teachers plan and implement language use strategies effectively. Secondly, the capacity-building process should address these issues more comprehensively, focusing on the importance of intentional language use and providing teachers with the necessary knowledge and skills to incorporate it into their classroom practices.

The subsequent section delves into a comprehensive discussion on the capacity-building of teachers, which should also incorporate the topic of premeditated language use. This addition will shed light on the significance of intentional and structured language use in the classroom, particularly focusing on the utilization of Wagdi and mixed language, providing teachers with the necessary guidance and strategies to effectively plan and implement deliberate language use. By addressing these aspects, the use of Wagdi and mixed language can be strengthened and better aligned with the objectives of language development in the classroom.

Teachers as Agents of Change

Early literacy and language development are crucial anchors for students' overall education. Primary school teachers are entrusted with laying a strong groundwork for students' future academic success by focusing on these foundational skills. Teachers, as agents of change, are responsible for creating a literacy-rich environment, employing evidence-based instructional strategies, and providing learning experiences to meet the diverse needs of their students.

A key inference that we draw from the belief surveys and interviews is that there is a gap in teachers' understanding of the objectives behind conducting various teaching-learning activities.

This study delved into the efforts made by the LLF to enhance the capacity of teachers. The research team had an opportunity to observe these capacity-building sessions. LLF invests considerable resources in teacher training exercises. These training sessions heavily relied on teacher guides as a primary instructional tool. As a result, significant changes have been observed within classrooms, with a shift towards more student-centred and engaging environments that incorporate various activities that form the basis for the intended multilingual instruction, with activities such as the use of Oral Language Development (OLD) drills, Big Books (BB), and Total Physical Response (TPR) activities.

The findings of this study highlight a critical area for improvement in the LLF's teacher capacity-building programmes. It is evident that while the LLF has successfully introduced new instructional strategies and fostered more interactive classrooms, teachers lack a deep understanding of the interconnectedness between classroom transactions and the cognitive linguistic development of students. A shift in teachers' mindsets and widened knowledge base are much-needed to address this issue.

To address this gap, future capacity-building programmes should prioritize the challenge of mindset change among teachers. A mere focus on the provision of skills may not be sufficient. It is essential to cultivate a deeper understanding among teachers regarding the theoretical foundations and pedagogical reasoning behind the implemented activities. Implementing such a change requires a comprehensive approach that integrates ongoing professional development opportunities, collaborative learning communities, and reflective practices.

Data shows that teachers could facilitate higher-order thinking effectively in only 3 out of 8 intervention schools in the sample, and no teacher in the comparison schools could meet the standard.

However, about 41% of comparison school teachers and 27% of intervention school teachers said that they agree with the survey prompt: "In lower grades, the teacher should focus on lower-order thinking skills (such as answering yes/no questions); and shift to higher-order thinking skills (such as creative thinking) in higher grades".

Professional development sessions should include in-depth discussions on the theoretical underpinnings of instructional strategies, emphasizing the cognitive and linguistic development they promote. It is necessary that teachers, through these training sessions and their classroom transactions, realise the fact that higher-order thinking is a function of early language development. Similar observations are found in the case of various oral language development activities and their relation to building L2 vocabulary.

Collaborative learning communities can serve as platforms for teachers to share their experiences, exchange ideas, and collectively explore the objectives and rationales behind the various activities employed in the classroom. Encouraging reflective practices, such as journaling or action research, will enable teachers to critically evaluate their instructional approaches, identify areas for improvement, and make informed adjustments.

While we fully acknowledge that the task of mindset change coupled with knowledge and skill development may be arduous and time-consuming, it is essential to realise the full potential of the LLF's MLE programme. By prioritizing these objectives and incorporating them into the design and implementation of professional development initiatives, the LLF can ensure that teachers comprehend the interconnectedness between classroom transactions and students' cognitive-linguistic development, thereby enhancing the overall effectiveness of the MLE programme.

System Leaders and Other Stakeholders

Education officers from various levels have collaborated with the LLF team, actively sharing classroom observations and insights from field visits. LLF team provides regular and systematic reports on student learning. To enhance program's effectiveness it is crucial to focus on orienting school heads, particularly in primary schools with only two teachers. It is evident that if school heads have a deeper and more hands-on engagement with the intervention, it will contribute to their pedagogic understanding of new teaching methods and foster a stronger sense of ownership towards student learning outcomes. While we observed a formal interaction of this nature in the Simalwada block, it is recommended that such engagements become a prominent and regular feature of the programme to ensure sustained impact and improvement.

For instance, conducting orientation sessions for school heads can involve providing detailed insights into the program's objectives, showcasing successful classroom practices, and engaging them in discussions on effective pedagogical strategies. Additionally, school heads can participate in collaborative workshops where they exchange ideas, share challenges, and jointly develop action plans to address the specific learning needs of their schools. Such initiatives will foster a supportive ecosystem where school leaders actively champion the program's goals and drive positive changes in teaching and learning practices.

References:

Ball, J. (2010). Enhancing learning of children from diverse language backgrounds: Mother tongue based bilingual or multilingual education in early childhood and early primary school years

Benson, C. (2013). Language Issues in Comparative Education Inclusive Teaching and Learning in Non-Dominant Languages and Cultures. Towards Adopting a Multilingual Habitus in Educational Development. DOI:10.1007/978-94-6209-218-1_16

Cummins, J. (2008). Introduction to volume 5: Bilingual education. In J. Cummins & N. Hornberger (Eds.), Encyclopedia of language and education. New York: Springer. Early Literacy and Multilingual Education in South Asia (Tech.). (2019). https://www.unicef.org/rosa/media/3036/file/Early literacy and multilingual education inSouth Asia.pdf

Garcia, O. (2009). Bilingual education in the 21st century: A global perspective. Malden, MA: Blackwell.

Garcia, O. (2014). Language Brokering and Translanguaging in School. Language arts, 91, 386. Jhingran, D. (2009). Hundreds of Home Languages in the Country and many in most Classrooms: Coping with Diversity in Primary Education in India. In: Skutnabb-Kangas, T., Phillipson, R., Mohanty, A. & Panda, M. (2009). Social Justice through Multilingual Education. Multilingual Matters. \\https://doi.org/10.21832/9781847691910

Jimenez-Castellanos, O., & Zúñiga, C. L. (2019). Multilingual education: Concepts, policies, and practices in diverse contexts. Springer. Krashen, S. D., & Terrell, T. D. (1995). The natural approach: Language acquisition in the classroom. New York: Phoenix.

Mohanty, A (2019). Language policy in education in India in Kirkpatrick, A.F., & Liddicoat, A.J. The Routledge International Handbook of Language Education Policy in Asia. Mohanty, A. (2010). Languages, inequality, and marginalisation: Implications of the double divide in Indian multilingualism. International Journal of the Sociology of Language. 2010. z 10.1515/ijsl.2010.042.

Mohanty, A. K. (2016). Multilingualism and education in India: Language policy, ideology, and practice. Springer.

UNESCO. (2010). International conference on language, education and the millennium development goals (MDGs). November 9–11, 2010, Bangkok.

http://www.seame.or g/LanguageMDGConference2010/.

UNESCO. (2013). Mother tongue-based multilingual education: Lessons learned from a decade of research and practice. Asia-Pacific Multilingual Education Working Group. Bangkok: UNESCO. http: //une sdoc. unesco.org /images/00 23/00 2318/ 23186 5E.pdf.

Walter, S., Benson, C. (2012). Language policy and medium of instruction in formal education. In B. Spolsky (Ed.), The Cambridge handbook of language policy (pp. 278–300). Cambridge: Cambridge University Press.


abcdefghijklmn

GREAT EASTERN
CSR FOUNDATION