



Multilingualism and Multiliteracy: Raising Learning Outcomes in Challenging Contexts in Primary Schools across India

MultiLiLa

Project overview of a study on multilingualism, literacy, numeracy and cognition in Delhi, Hyderabad and Patna (2016–20)



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MultiLiLa project team

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Outline of the MultiLiLa project



The Multilingualism and Multiliteracy (MultiLiLa) project was a four-year research study (2016–20) funded by the Economic and Social Research Council and the Department for International Development (ESRC-DfID), UK. Its aim was to identify whether or not children who learn through the medium of a language which is not the same as their home languages have different levels of learning outcomes than those children whose home and school languages are the same. In a linguistically highly diverse country, like India, it is obvious that millions of children are at a disadvantage in this respect: there are only 22 'scheduled' languages which receive financial support from the government to be used as mediums of instruction and a total of 462 languages spoken in the country (Simons & Fennig, 2018). Education in a minority language needs to rely on funding from trusts, foundations or individuals. One study from 2011 calculated that there are only 31 mediums of instruction in use across the country, reduced from over 67 in the 1970s (Meganathan, 2011).

According to the National Education Policy (NEP) document released for public comment in May 2019, mother-tongue education is a priority for all children, while English is expected to be offered in schools as a subject taught in a high-quality manner to reduce social inequalities and provide access to English for all. In reality, NEP recognizes the shortfall in resources

to implement this approach, which includes the lower quality of 'vernacular'-medium textbooks, the low provision for linguistic minorities across schools and the difficulties teachers face to undertake a 'bilingual approach' in the classroom (p. 80). In reality, several state governments (Andhra Pradesh, Telangana, Karnataka, Punjab and West Bengal) have already implemented English-medium instruction (EMI) in government schools, most often without the necessary resources and investment in teacher potential (Rao, 2019; The Telegraph, 2019; D'Souza, 2019; Aman, 2018; Hindustan Times, 2018).

Children speaking minority languages are often familiar with the regional language, either because the regional language is used along with other languages spoken in the home or because of its predominant use in the community. The MultiLiLa project sought to capture inequalities created for children in government schools because of a monolingual imposition of a medium of instruction, which may be English or a regional language. Alongside language inequalities, the project considered gender differences and socioeconomic disadvantages created by further distinctions between children in slum and non-slum urban sites, namely Delhi and Hyderabad, as well as town compared to non-remote rural areas in Patna. The age of the children in Standard (Std) IV and Std V was also taken into account because a proportion of



overage children in each school year was attested in all three sites.

The school skills assessed in MultiLiLa include **basic literacy and numeracy tasks**, developed by ASER (www.asercentre.org/; Pratham 2014, 2017). Literacy was assessed in English and regional languages, while numeracy skills included subtraction and division from the mathematical operations included in the relevant ASER tool. **Reading comprehension** was also assessed with comprehension questions on the short ASER tool story the children were asked to read. In terms of oral language, we tested children's ability to comprehend and retell a **narrative** based on pictures presented on the computer screen while listening to the story in the school language. Children had to retell the story they had listened to in their preferred language (home or school) and had to answer a number of comprehension questions that monitored how well they understood the story. The stories were from the Multilingual Assessment Instrument for Narratives (MAIN; www.leibniz-zas.de/de/publications/schriftenreihe/zaspil/zaspil-56/main-start/?&L=1; Gagarina et al., 2012, 2019). They were slightly culturally adapted to make them accessible to children in India. The

narratives were adapted to Hindi and Telugu, and children were presented with the narrative in the school language (Hindi, Telugu or English) in all sites.

Mathematical reasoning skills were tested with word problems and a meta-mathematics test. Word problems were appropriate for Std IV children and were adapted from examples provided by the Trends in International Mathematics and Science Study (TIMSS; <https://www.iea.nl/studies/iea/timss>). Children's ability to critically analyse mathematical problems solved by another student incorrectly was assessed with the meta-mathematics task originally developed by Panda et al. (2011) in a longitudinal project in Odisha and Andhra Pradesh. The children were required to identify and explain errors made in computing addition, subtraction and multiplication, which asks children not only to follow an algorithm to reach the solution but to reflect on mathematical logic involved in solving mathematical problems.

The project also sought to understand whether children who use more than one language in the home or children who live in linguistically highly diverse environments have better **cognitive skills** than children in monolingual or less diverse contexts. To this end, MultiLiLa included tasks



measuring non-verbal intelligence, complex working memory, inhibition and semantic fluency. With the exception of semantic fluency, which was tested in English and the regional language, the other three tasks were non-verbal, so level of proficiency in any language was not a prerequisite to perform the tasks. Raven's Coloured Progressive Matrices (CPM) (Raven, Raven & Court, 1998) was the test used for non-verbal intelligence, the N-back (2-back) task for working memory and updating, the Flanker task to test inhibition, and finally a semantic fluency task to test a combination of lexical ability and cognitive control.

Examples of the Raven's and of the N-back tasks respectively are presented in Figure 1 below:

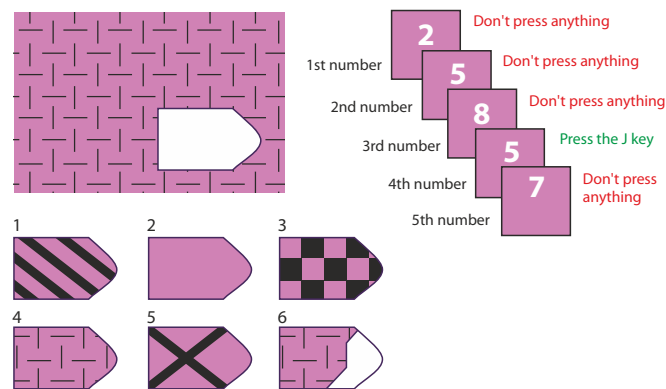


Figure 1: Examples of the Raven's and N-back test items

An example of the Flanker task is presented below. The child has to press a key on the computer keyboard to indicate the direction the middle fish is looking. In some trials, all fish look towards the same direction and this is why this is called the 'no conflict' condition. In other trials, the fish surrounding the middle fish look towards a different direction from the middle fish and this is why this is called the 'conflict' condition. The 'conflict' condition is more challenging than the 'no conflict' condition because children have to inhibit the direction the surrounding fish are looking when they press the button for the direction the middle fish is looking (see Figure 2).

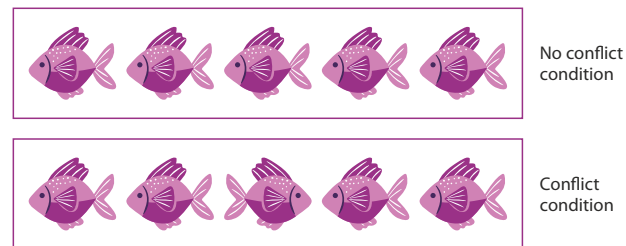


Figure 2: Examples of Flanker task



Field visit to school in Delhi

We also administered two semantic fluency tasks which asked children to name as many entities belonging to each of the following two semantic categories as they could within one minute:

- (i) living entities (e.g. animals for the home language and vegetables for the school language)
- (ii) non-living entities (e.g. household items for the home language and school objects for the school language).

Many children could find words in the school language, but naming the living and non-living entities in their home language was more difficult, which may be because each language is being used for a different domain (e.g. home language for household items, school language for school objects). Sometimes loanwords from English were used in the children's answers, which were counted as correct because English loanwords are very frequently used in India.

Finally, MutliLiLa used a number of **questionnaires and surveys** with the aim to elicit background information that could then be used to evaluate the findings from the direct assessments of literacy, numeracy and cognitive tasks outlined above. Specifically, we used a demographics, language, socioeconomic status and sociolinguistic diversity child questionnaire that involved an adaptation of a **child questionnaire** used in previous studies (Rothou & Tsimpli, 2017; Kaltza et al., 2019) and was included in a published study on some of the MultiLiLa children (Tsimpli et al., 2020). Furthermore, we adapted questionnaires for **teachers and head teachers** from the Young Lives project in India (<https://www.younglives.org.uk/content/india-school-survey>). The adaptation involved adding questions on teaching practices and languages used in the classroom as well as attitudes to language mixing and multilingualism. Finally, we used a **classroom observation tool** which was adapted from a British

Council tool. The adaptation involved adding a time-locked record of languages used in a five-minute period within a 30-minute class observation.

The project ran in **Delhi, Patna and Hyderabad**, collecting data from children in Stds IV and V. The design of the study included comparing urban areas (Delhi and Hyderabad) with **town and non-remote rural areas** in Patna, while urban children are further divided into those attending schools in **slum and non-slum areas**. We recruited children from government schools only because our aim was to better understand the interaction of lower socioeconomic status, location, medium of instruction and school or teaching resources with children's school, language and cognitive development. Focusing on government schools also allows us to present our findings in the light of policy recommendations that state governments and education authorities in different sites may wish to consider in the near future.

A variety of quantitative and qualitative data was collected over a period of four years. The data includes children's performance in the 14 different tasks of literacy, numeracy, oral

language, verbal reasoning and cognitive tasks mentioned above. In addition, we collected data from the surveys and questionnaires used for teacher and head teacher interviews. In total, 728 children from Delhi and Hyderabad were tested at two points in the same calendar year, namely when the children were attending Std IV and Std V respectively, in order to capture a short longitudinal perspective of the children's development. In Patna, 907 children – of whom half were attending Std IV and half Std V – were recruited and tested with the same battery of tasks. Although testing in Patna was carried out in parallel for Std IV and Std V, and as a result the data from Std V is not from the same children as in Std IV, a developmental picture based on the findings from the two consecutive school years can still be drawn for the Patna learners. The participating schools from Delhi and Hyderabad differed in the official/stated medium of instruction. Specifically, we collected data from children attending EMI and Hindi-medium schools in Delhi as well as EMI and Telugu-medium schools in Hyderabad. Patna schools had only Hindi as the official medium of instruction. English was taught as a curriculum subject in all schools in Patna and in the schools



in Delhi and Hyderabad that did not have English as the medium of instruction. We therefore assessed English literacy across all schools regardless of medium of instruction.

The project team has already published

academic journal articles and is preparing more for publication in the near future. A short list of published papers can be found here:

Tsimplici I.M., Mukhopadhyay, L., Treffers-Daller, J., Alladi, S., Marinis, T., Panda, M., Balasubramanian, A. & Sinha, P. (2019). 'Multilingualism and Multiliteracy in Primary Education in India: A discussion of some methodological challenges of an interdisciplinary research project.' *Research in Comparative and International Education*, Vol.14 (1): 54–76.

Tsimplici, I., Vogelzang, M., Balasubramanian, A., Alladi, S., Reddy, A., Panda, M. & Marinis, T. (2020). 'Linguistic diversity, multilingualism and cognitive skills: A study of disadvantaged children in India.' *Languages*, 5: 10.

Mukhopadhyay, L. (in press). 'Translanguaging in primary level ESL classroom in India: An exploratory study.' *International Journal of English Language Teaching*.

In what follows, we present the major findings and recommendations with relevance to different groups of stakeholders, namely **policy makers, parents and teachers/teacher educators**.



Findings and recommendations for policy makers

2.1 Medium of instruction

The project confirms previous studies showing an advantage for learners who are being educated in primary school years in a language known from home or from the immediate community. When it comes to English as a medium of instruction, our findings robustly show that this is an obstacle to learning for young children from a low socioeconomic background because they often have limited or no literacy support in the home in any language. English is not used as one of the home languages in any of the learners' households; therefore, oral familiarity with English was

also non-existent in any of the schoolchildren in the project. It is therefore unsurprising that English literacy scores are overall lower than literacy scores in Hindi or Telugu. Importantly, the most evident difference between regional languages and English is the children's performance in reading comprehension: reading comprehension in English ranges from minimal to very poor, in contrast to reading comprehension in the regional languages, which is good.



2.2 English is an obstacle to teaching because teachers cannot adequately support and maintain English in the classroom.

The project ran classroom observations in all participating schools. These observations show that *language mixing* between English and Hindi, English and Telugu or English, Hindi and Telugu is a common feature of all classrooms observed in Delhi and Hyderabad. Therefore, there is a strong discrepancy between the official, single medium of instruction and

the inevitable reality of the multilingual classroom in each of the English-medium, Hindi-medium or Telugu-medium schools. *In EMI schools, language mixing was significantly more frequent than in regional language schools.* Patna schools were all Hindi-medium and showed the least amount of language mixing between Hindi and English.

2.3 There are clear differences between schools in different cities

There are significant differences between states and cities in the implementation of English as a medium of instruction. In Delhi, English language classes and mathematics classes in EMI schools were mostly delivered through code-switching (language mixing) between Hindi and English, with English never used as the sole medium of instruction. Hyderabad classrooms

in EMI schools show some use of English alone, both by the teachers and by the learners. *Education authorities need to carefully reconsider imposing EMI in primary schools because literacy, numeracy and academic language skills can be best developed in a language that both teachers and learners are familiar with.*

2.4 Teachers' familiarity with English needs to be secured before teachers are asked to teach in English

Teachers' level of familiarity with English and confidence in teaching in English as the medium of instruction differ widely across states and individual teachers. Most teachers in Delhi schools were not themselves educated in EMI schools, while around half

of the teachers in Hyderabad schools were themselves educated in EMI schools. *Teacher allocation to EMI schools needs to take into account the teachers' qualifications in English.*



2.5 Multilingual practices in teaching and learning are natural and need to be supported because teachers and learners are multilingual

Language mixing in classrooms should be accepted, developed and adopted across early primary school years to ensure children can build on multiple language resources in order to develop good reading comprehension as an essential skill for learning across school subjects and for concept understanding. *It is essential to provide teachers with training on how to*

successfully integrate multilingual methods when preparing, organizing and structuring lessons so that languages are switched at particular points of lesson delivery and classroom activities. This can lead to better monitoring of the amount of language input in less familiar languages and improving comprehension levels.

2.6 Poverty, lack of rich print exposure in the home and migration do not necessarily create disadvantages in learning IF schools support children effectively

Children living in slum areas in Delhi either did not differ from or in some cases outperformed children living in non-slum areas. The slum/non-slum distinction did not seem to lead to significant differences in most data from the Hyderabad children. In Patna, there were no differences in Hindi literacy skills between children in non-remote rural areas and

children in the town areas. Education authorities should invest further in disadvantaged children who lack parental support in literacy and numeracy. *Educating disadvantaged groups in a language they do not understand may lead to a proliferation of illiterate and innumerate citizens.*



2.7 There is development of skills from Std IV to Std V although learning levels may be lower than expected for the grade level

Our findings show that, overall, girls and boys in slum and non-slum areas and regardless of medium of instruction improve in literacy, numeracy and cognitive tasks from Std IV to Std V. Development and learning are attested across children, although the starting point is low in many cases and the learning outcomes in Std V are not always at a grade-appropriate level. This finding indicates that despite

several disadvantages these children face at home and at school, they are capable of learning. *It is therefore essential that education policy invests in the potential of these children by supporting multilingual practices in lesson delivery, including in their home languages too, for improved concept understanding and text comprehension skills.*

2.8 State governments need to urgently acknowledge the shortcomings of blindly imposing English as medium of instruction on learners

If not, these learners will be deprived of developing sufficient levels of literacy, numeracy and academic language in preparation for secondary school education. MutliLiLa findings have important implications for curricular and pedagogic reforms and for teacher education curricula. Our assessments of school skills (literacy, reading comprehension) and language abilities (narratives and semantic fluency) in English revealed lower performance than the

assessments in Hindi or Telugu, even when these regional languages were not the first language or one of the home languages for some of the children. As an example, we note that only 90 out of 1,520 children attending Std IV or Std V in EMI schools in Delhi and Hyderabad attempted to use English to retell a picture-based story after listening to that same story in English.



2.9 English should be taught and supported from Std I as a subject

Only in late primary/early secondary school should English become an option as a medium of instruction. Pupils need to develop basic literacy and numeracy skills, but crucially, above all, they need to learn how to learn. *When good learning skills are established in a*

language children know, they can transfer these skills to develop academic English in secondary school, after having already acquired a good level of proficiency in English in primary school.

2.10 Teacher training is urgently required

Teachers need training to develop the necessary skills to a) deliver lessons in a structured and interactive way using their already available multilingual methods and resources, and b) teach children strategies of

improving listening and reading comprehension skills. Both sets of skills will improve levels of teaching and raise learning outcomes across subjects.

2.10 Multilingualism is good for learners

Children coming from households *where more than one language is spoken* show cognitive benefits in complex working memory and intelligence. This

finding holds across schools and is true for both Delhi and Hyderabad children.

2.11 Sociolinguistic diversity is good for learners

Children *speaking one language in the home* but growing up in sociolinguistically diverse communities, homes and schools have better intelligence scores.

Social diversity and linguistic diversity are beneficial for children who grow up in households where one language is mainly used.



Parents

3.1 School language (medium of instruction)

Children learn better and faster if they know the school language well, either when it is used in their home or when it is used in the community. Even if the language of the home is not the same as the regional language, children are more familiar with the regional language than with English. In our project, the children who were educated in EMI schools had many problems using or understanding the school language (English)

compared to children who were educated in regional language schools. Having English as the language of instruction at primary school prevents children from learning how to read and understand in all school subjects. *Children need to learn to read and write, count and solve problems in a language they understand well.*

3.2 Only when good knowledge of English has developed should children attend EMI schools

English should be taught from Std I and throughout primary school years as a language subject. English should not be used as the school language in primary school because many parents find it difficult to help children with their homework and learning and teachers do not speak good English themselves.

English can be the school language in secondary school when children already have good knowledge of the language and good learning skills and can continue their studies without support outside the school.



3.3 The purpose of learning to read is to be able to learn from your reading

It is therefore essential for children to understand what they are reading. Children in Delhi, Hyderabad and Patna were good at reading aloud words or sentences in Hindi or Telugu and in English, but they were not as good at understanding what they were reading. This

was most difficult for English and easier for Hindi for children in Patna and Delhi. Children need to learn how to read for understanding and parents can *help children by asking them about what children learned at school every day.*

3.4 In India, the most natural and effective way of learning in class involves being able to use more than one language

We found that teachers mix languages because they want to help children learn English; teachers also feel more comfortable speaking Hindi or Telugu in the classroom. Mathematics and English language classes always include Hindi or Telugu mixed with English, even in EMI schools. It is unnatural and problematic for

teachers and children to use only English in the classroom. This is why very often they use a limited amount of English mixed with the regional language. *Using home languages in the classroom helps children understand what the lesson is about and what they do not understand from the content of the lesson.*



Teachers and teacher educators

4.1 English as medium of instruction is an obstacle to learning for young children coming from a low socioeconomic background, with limited or no literacy support in the home in any language

As English is not used as one of the home languages in any of the learners' households in the project, oral familiarity with English was also non-existent in any of

the schoolchildren. Our findings show that English literacy scores were lower than Hindi and Telugu literacy scores.

4.2 Reading comprehension is essential for learning across school subjects

The purpose of learning to read is to learn across subjects of the curriculum, and for that it is essential for children to understand what they are reading. Children in Delhi, Hyderabad and Patna were good at reading aloud words or sentences in Hindi or Telugu and in English, but were poor in understanding what they were reading. This was most difficult for English texts, where comprehension was two per cent in Patna

(where English is taught as a subject only) and below 15 per cent even for children in EMI schools in Delhi and Hyderabad. Reading comprehension in Hindi and Telugu was strikingly better. Hyderabad children performed better in English than Delhi children, which is consistent with another finding of our project showing that the use of English in Delhi classrooms is minimal compared to in Hyderabad. Reading



comprehension was challenging for all children, and particularly for children whose home languages were different from the language used as a medium of instruction.

Teachers have to be trained to teach strategies of reading comprehension. Reading comprehension is a skill that needs to be taught. Even if learners are

learning to read in their home language, reading comprehension needs to develop as a set of strategies. When developed sufficiently, learners will be able to transfer these strategies to reading in other languages and to reading for comprehension across school subjects.

4.3 School language – home language – learning to read

Hindi literacy scores in Patna and Delhi were found to be better than Telugu literacy scores in Hyderabad. This is partly because very few children in Delhi and Patna schools do not speak Hindi in the home, while quite a few children in Hyderabad schools do not speak

Telugu in the home. Teachers need to be aware of children speaking minority languages in the classroom and encourage them to use them for developing concept understanding in the regional language.

4.4 Teachers' level of familiarity with English and confidence in teaching in English as a medium of instruction differ widely across Delhi, Hyderabad and Patna

This finding also explains the overarching result from classroom observations showing that language mixing was higher in EMI than in regional language schools

and that Delhi teachers mixed languages more than Hyderabad teachers.



4.5 Multilingual practices in teaching and learning are natural and effective because teachers and learners are multilingual

Our findings show that teachers mix languages during the teaching of mathematics or English language classes. Language mixing is higher in EMI schools compared to regional language schools and motivated by the teachers' wish to explain concepts better to learners. Many teachers do not feel confident using only English in lessons. *We recommend that language mixing in classrooms should be accepted, developed and*

adopted across early primary school years to ensure that multiple language resources support children to develop comprehension and critical skills during learning and concept understanding. However, teachers need to be trained to integrate multilingual methods of teaching by preparing, organizing and structuring teaching materials so that languages will be switched at particular points of lesson delivery and classroom activities.

4.6 Multilingualism is good for the learners

Children coming from households where more than one language is used show cognitive benefits in complex working memory and intelligence. This finding is across schools and is true for both Delhi and Hyderabad children. Therefore, children from minority

language backgrounds who do not speak the regional language are equipped with good cognitive skills to catch up with their peers if *teachers give them time, support and special attention in the first few months of schooling.*



4.7 Numeracy and mathematical reasoning

Basic numeracy was better for subtraction than for division. Ability in division was very low across pupils in Stds IV and V. Solving *word problems* in mathematics was also challenging across children. However, word problems that included visual information that children needed to process (tables, figures, scales) were considerably more difficult than those based

exclusively on language and numbers. This finding was across Patna, Hyderabad and Delhi schools and shows that children are not trained in visually presented mathematical reasoning tasks. *Teachers should focus on word problems and balance their presentation across visual and language-based cues.*

4.8 Poverty, lack of rich print exposure in the home and migration do not necessarily create disadvantages in learning *IF* teachers and schools support children effectively

Children living in slum areas in Delhi either did not differ from or in some cases outperformed children living in non-slum areas. The slum/non-slum distinction did not seem to lead to significant differences in most data from the Hyderabad children. In Patna, there were no differences in Hindi literacy skills between children in non-remote rural areas and children in the town areas. These findings show that children from challenging home contexts with limited or no support from parents can and will benefit from

good and dedicated teacher support and appropriate school resources. Teaching these children requires a higher commitment from teachers because disadvantaged children's learning and development depend mostly, if not exclusively, on schooling. With this in mind, teachers should be aware that *educating disadvantaged groups in a language they do not understand will lead to a proliferation of illiterate and innumerate citizens.*



4.9 Teacher training

Two major findings from the project are relevant as recommendations for areas in which teachers would benefit considerably from training. The first has to do with the finding that teachers mix languages in class spontaneously and naturally and do so more when they are expected to teach in English (EMI schools). Although using more than one language is natural for multilingual teachers and learners, *multilingual lesson delivery requires organization, lesson planning and scaffolding so that language use will be associated with*

specific activities and teacher–learner or peer interaction. The second finding has to do with pupils' low reading comprehension scores, which are related to limited critical thinking or questioning of textbook content for better understanding. Training teachers on how to *focus on strategies for reading comprehension* will improve learners' performance across subjects and encourage more teacher–pupil interaction. Teachers will then be better able to monitor learners' understanding and development.



Limitations and future challenges

The MultiLiLa project was multifaceted. It aimed to examine whether a match or mismatch between the child's home language(s) and the school language affects learning outcomes while at the same time taking into account other factors that can affect a child's performance in basic school skills and more advanced problem-solving and reasoning skills. Specifically, socioeconomic status, school site, urban vs rural location and differences between two urban sites (Delhi and Hyderabad) were considered when evaluating learning outcomes in the project's tasks. At the same time, factors such as age, gender, bilingualism in the home, language distance between the regional language and the home language of the child as well as the child's cognitive abilities were considered as factors characterising the individual child learner, which could, in addition, interact with the

child's learning outcomes. The strongest case of mismatch between school and home language is in the case of English, which was a language that none of the participants used at home. The development of English literacy and reading comprehension was therefore an indication of the challenges faced by children in government schools. Somewhat unsurprisingly, reading (decoding) English words and sentences was not a serious challenge for any of the child groups, even those in Patna, where English was only taught as a subject in the school. The greatest challenge was in reading comprehension across the three sites. In order to evaluate the contribution of English as an unfamiliar/foreign language to this poor performance in comprehension we need to take into account how children perform in reading comprehension in the regional language. The



comparison between Hindi and English in reading comprehension is striking: reading comprehension in Hindi is similar to decoding skills which are very good in both Patna and Delhi, with better overall performance in Delhi children. On the other hand, English decoding skills are far better than reading comprehension skills in both sites, with improved scores in Std V reaching less than 20 per cent accuracy in Delhi and around five per cent in Patna. *These results clearly show an important disadvantage created by English and its repercussions for learning through English as a medium of instruction. Oral (listening) comprehension in Hindi was very good, and in fact better than reading comprehension in the same language.*

When comparing reading comprehension in English vs Telugu, however, the situation is different. Children in Hyderabad were unable to respond to reading comprehension questions in Telugu, indicating that their problem with this higher-level literacy skill was more generally a problem with reading comprehension and lack of the relevant strategies. It should be pointed out that in Hyderabad schools, many of the children did not have Telugu as their home language and as such they were different from Delhi children who all had good knowledge of Hindi from home. Overall lower reading skills were thus expected in Hyderabad because of the larger number of minority language children who had limited

exposure to Telugu at home. In English, children in Hyderabad showed low reading comprehension skills, as in the other sites too, but compared to Delhi scores, Hyderabad children also performed lower in Std V (under 20 per cent). The lower English skills of Hyderabad children in reading comprehension compared to Delhi children are surprising given that English input in Hyderabad classrooms is greater than in Delhi, as shown by the classroom observations carried out during the project. It is therefore more likely that the emphasis on reading development in the two cities differs, with decoding skills being prioritized in both cities but comprehension strategies lacking from Hyderabad more than from Delhi schools. Further research into teaching methodologies, teacher training and interventions focusing on reading comprehension skills are essential for this picture to improve in the near future.

Further research into successful interventions exploiting multilingual practices, already attested in Delhi and Hyderabad classroom observations, in a scaffolded and structured way during lesson delivery is essential to ensure better use of teachers' and learners' language resources. The notion of a monolingual medium of instruction seems to be flawed in multilingual India. Further research on the development of multilingual materials for teaching and assessment is essential for improving learners' comprehension skills, for reducing inequalities in





Field visit to a school near Delhi

assessment and for working towards the abolition of the *double divide* that Mohanty has so eloquently presented in his work and particularly his 2020 monograph. Finally, teacher training to improve the teaching of reading comprehension strategies building on home and school languages is crucial for raising learning outcomes. Pre-service and in-service teachers would benefit hugely from a compulsory

training programme run by state governments with the support of NGOs and foundations endorsing multilingualism for better learning trajectories and outcomes in primary schoolchildren. Such an investment could increase the student potential in secondary and tertiary education too and level socioeconomic and gender inequalities across the country.

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