

An Overview of the MultiLila Project

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Multilingualism and Multiliteracy: Raising Learning Outcomes in challenging contexts in primary schools across India (May 2016 – April 2020)



Research jointly supported by the ESRC and DFID



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**The languages of
education in multilingual
India: exploring effects in
reading & mathematics
New Delhi, July 2018**

This research

Problem:

Causes of low learning outcomes of primary school children in multilingual India

Context:

Advantages to being bilingual or multilingual in attention and learning skills

Research question:

Why do some children in India not benefit from being bilingual or multilingual to the same degree as children in other contexts?



The focus

- Children in government schools only
- Delhi and Hyderabad: Slum and non-slum areas
- Patna: Town and non-remote rural areas



Aim of the project

Do children who learn through a language which is not a home language achieve less than children whose home and school languages are the same?



Monolingual and multilingual children in government schools, Std IV



Delhi (N= 391)

Hyderabad (N= 461)

Delhi (N= 391)						Hyderabad (N= 461)					
Site		Medium of Instruction		Gender		Site		Medium of Instruction		Gender	
Slum	190	English	312	Girls	193	Slum	243	English	175	Girls	256
Non-slum	201	Hindi	80	Boys	198	Non-slum	218	Telugu	286	Boys	205

Monolingual and multilingual children in government schools, Std IV

Patna (N= 425)					
Site		Medium of Instruction		Gender	
Town	267	Hindi		Girls	255
Non-remote rural	158	Hindi		Boys	170

Age of children in Std IV across the three cities



City	Range (in years)	Mean	SD
Delhi	8-12	8.77	0.63
Hyderabad	7-15	9.58	1.19
Patna	7-15	9.35	1.16

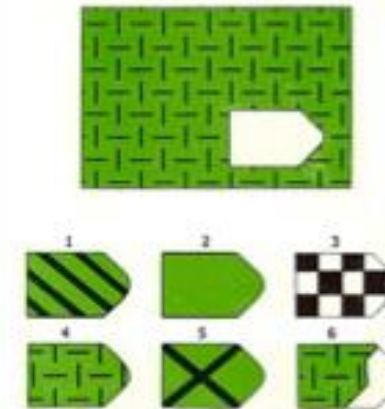
Tasks

- Literacy (Regional language and English)
- Numeracy (Subtraction & Division, word problems)
- Cognitive skills (fluid intelligence, working memory)
- Classroom observations (of English and Math lessons)

शब्द	
नाक	तोता
कूड़ा	
खुश	मैना
मौका	सेब
पीला	
झोला	दिन

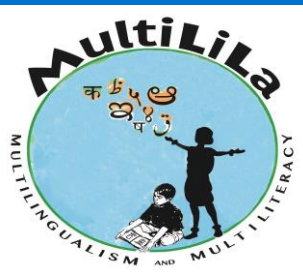
Subtraction	
41 - 13	64 - 48
84 - 49	73 - 36
56 - 37	31 - 13
45 - 18	53 - 24

Raven's progressive matrices



What did we find?

FINDING 1

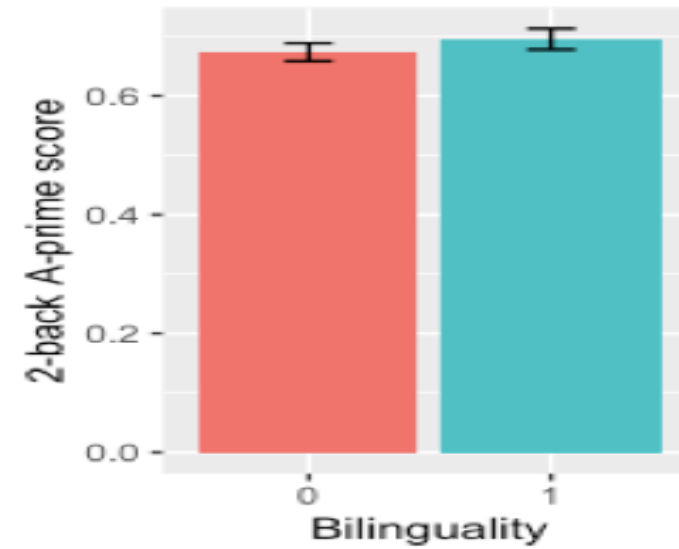
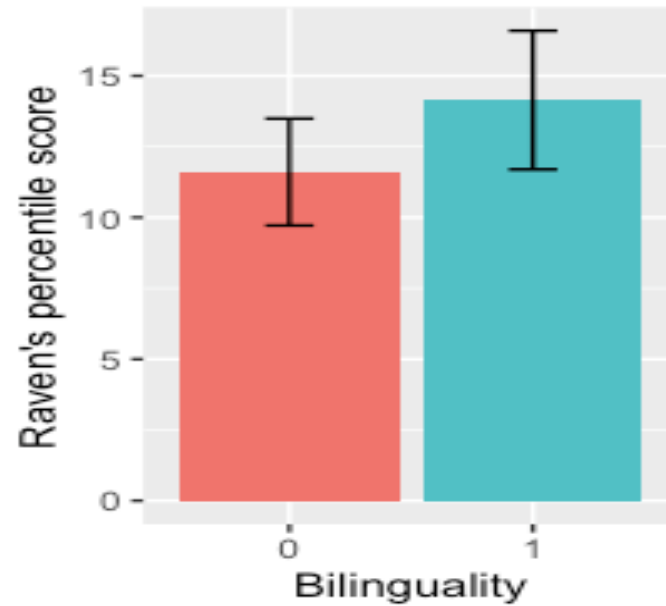
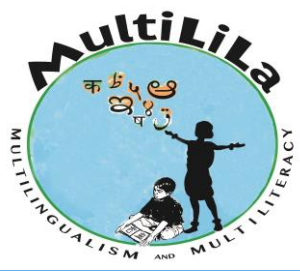


1. The number of languages a child speaks at home and whether any of them are also used at school has an effect on the child's school performance and cognitive skills.





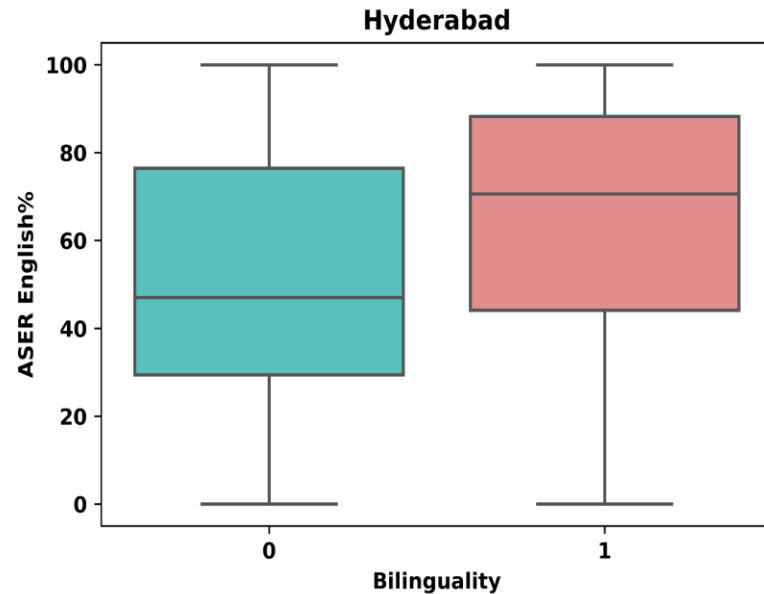
Cognitive tasks



- Children who were multilingual had higher scores in fluid intelligence and working memory.

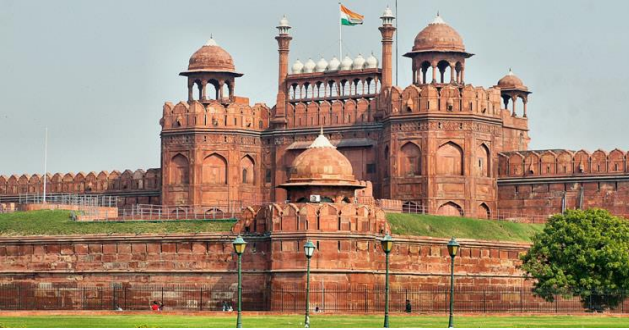


English reading skills



Children who are multilingual at home had higher English literacy scores compared to children in a monolingual home.

-- None of the children had English as one of the home languages

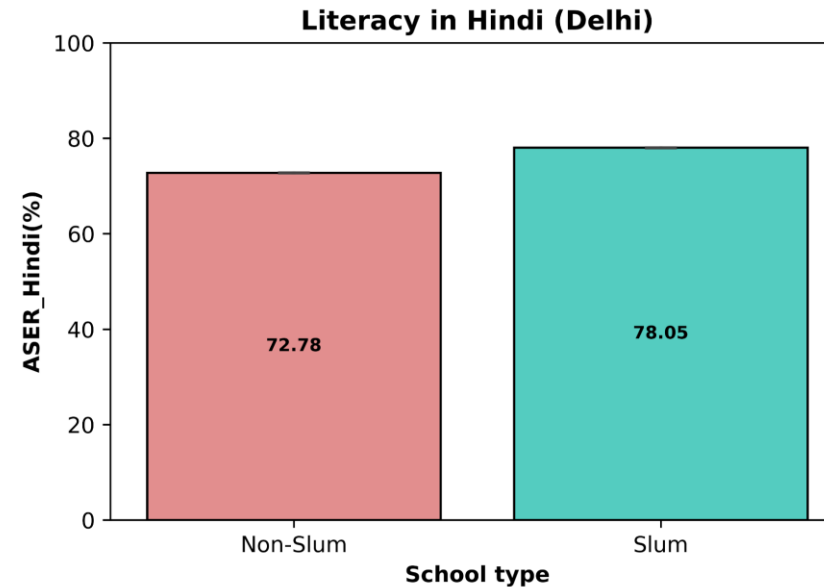
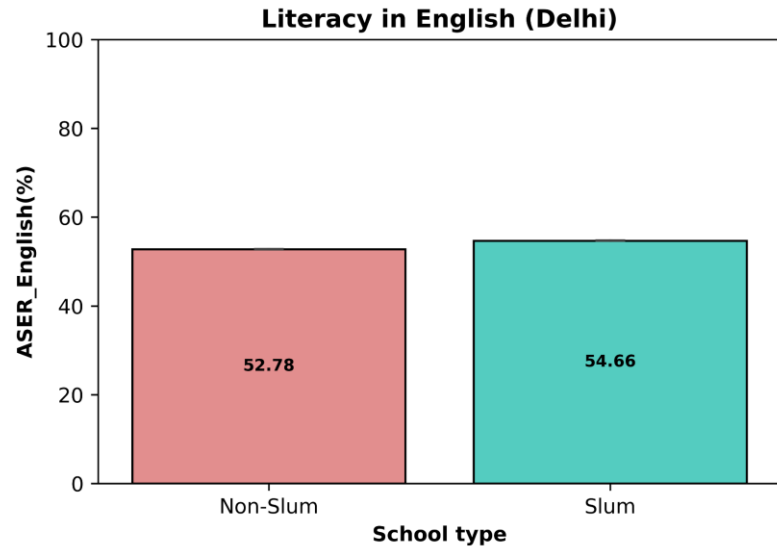


Finding 2

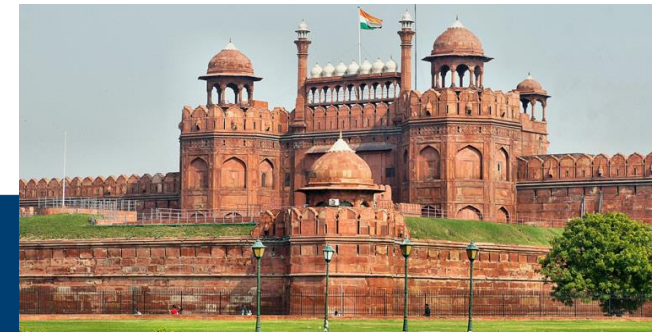
2. Poverty, lack of rich print exposure at home, and migration do not necessarily create cognitive disadvantages.



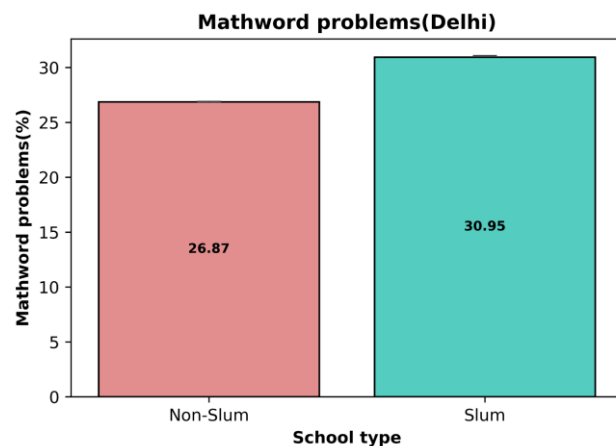
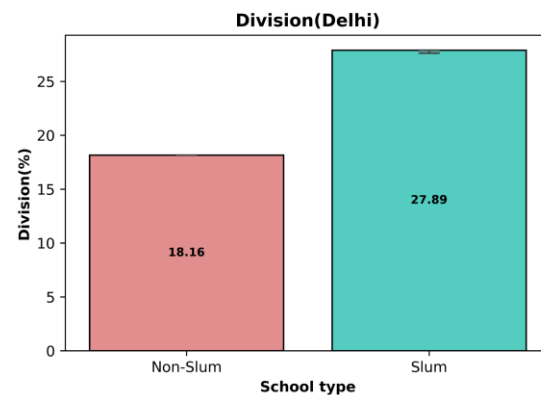
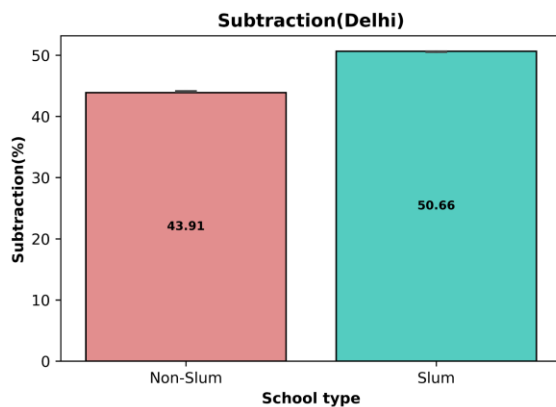
Literacy in English and Hindi



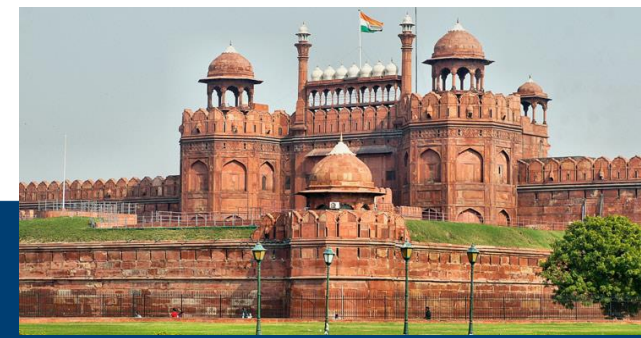
- Children from slum schools have better literacy than children from other schools



Subtraction and Division



- Children from slum schools have better numeracy than children from other schools



Speed and correctness

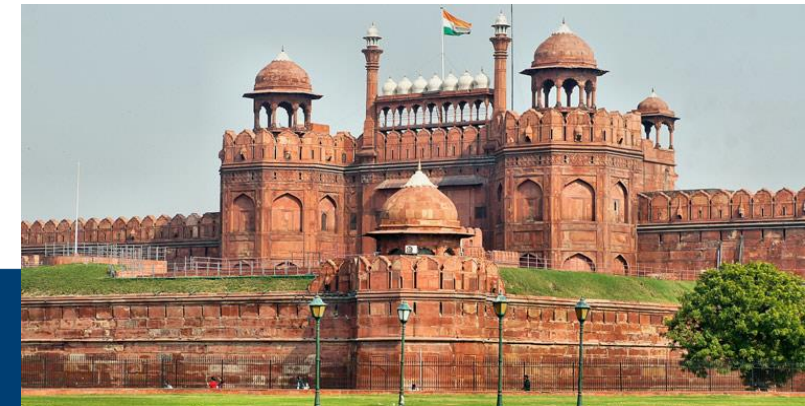


Easy

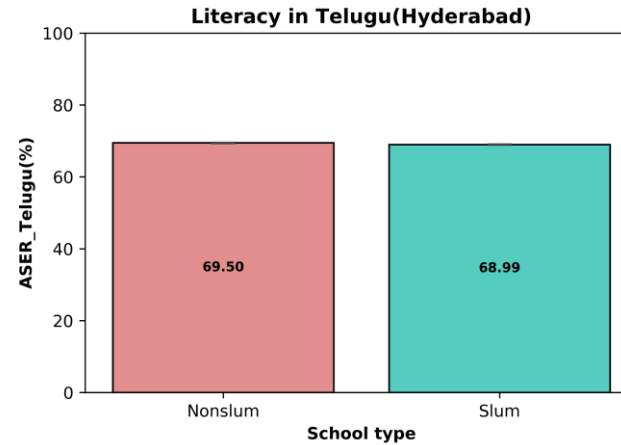
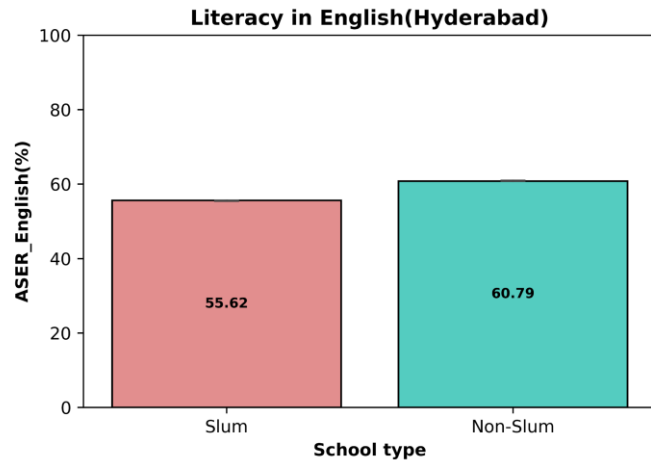


Difficult

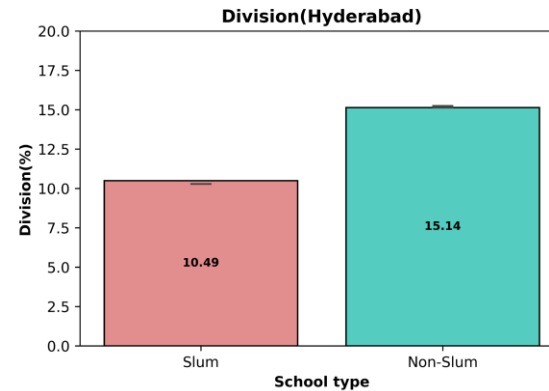
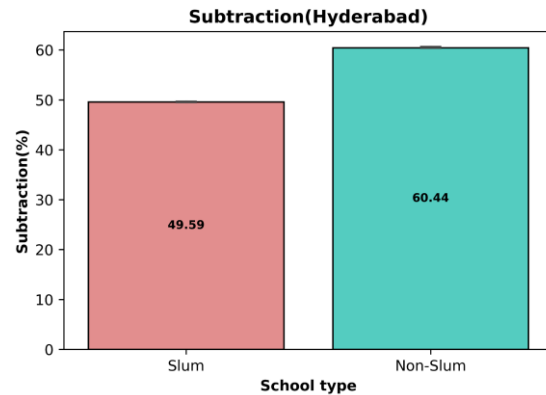
Children from slums performed better than children from non-slum schools



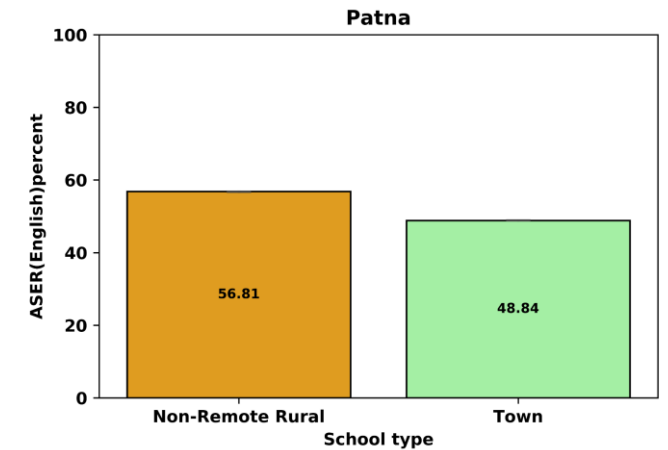
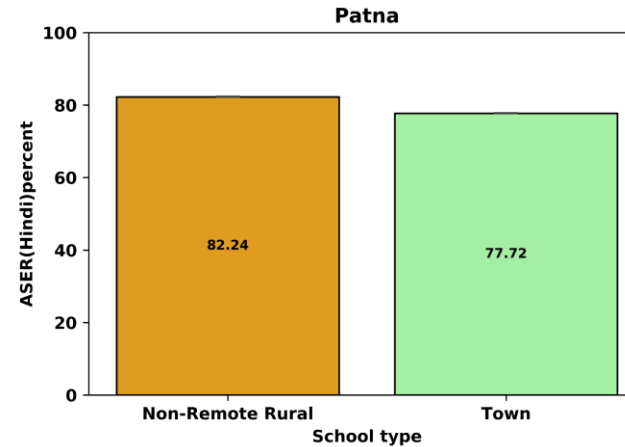
Literacy and Numeracy



- No difference in Telugu literacy.



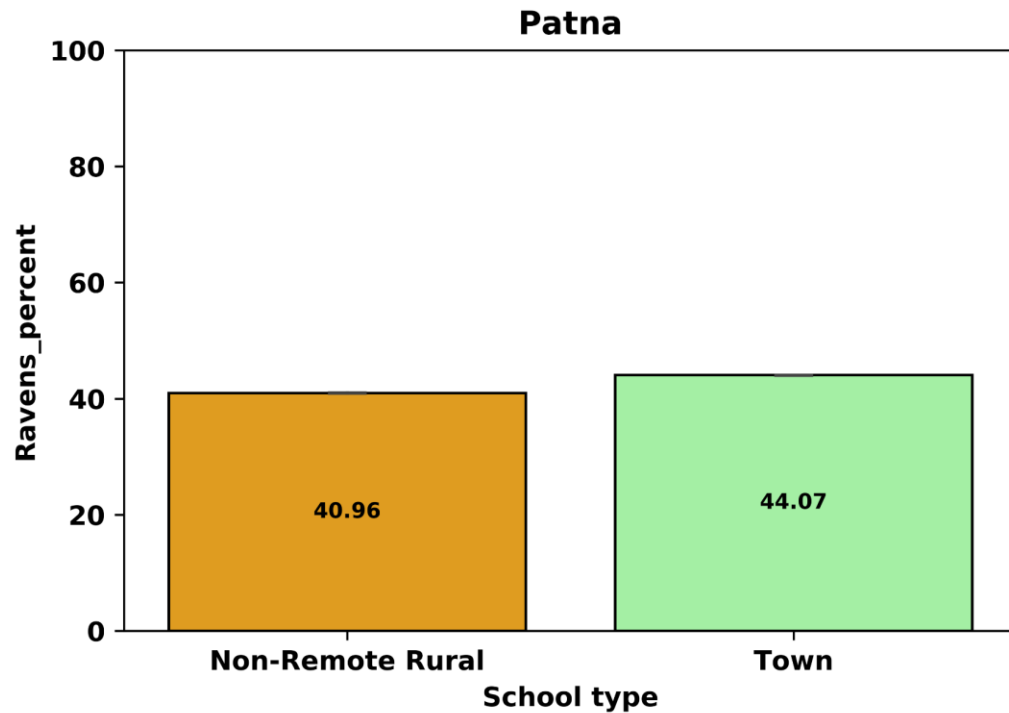
- Children from non-slum perform better than children from slum schools in subtraction and division



Hindi and English literacy in Patna (no EMI available)

- Children from rural areas perform better than children from schools in town.

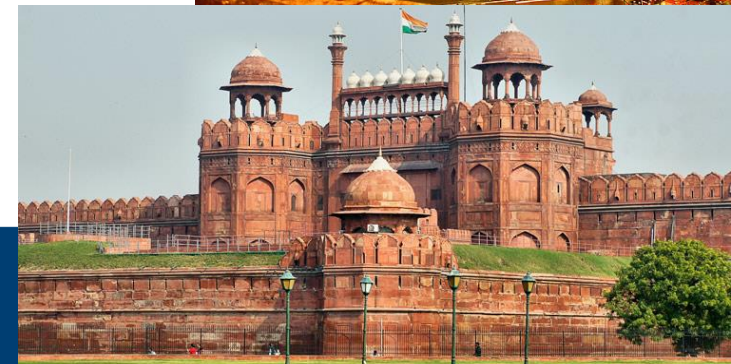
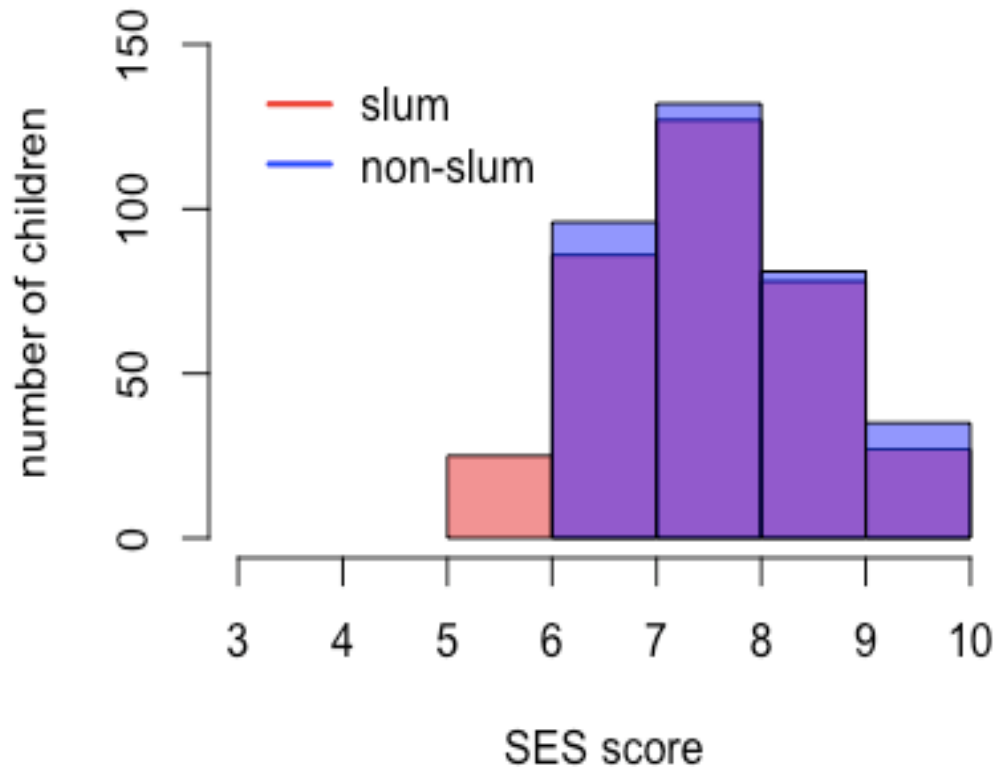
Non-verbal intelligence scores



Children from town perform better than children from rural area.

But the difference between slum and non-slum is NOT clear!

Socioeconomic status of children in slum and non-slum is similar for most of the children





Finding 3

3. Children from Hyderabad showed a strong positive relationship between school and cognitive skills and knowing and using many languages.



One or many languages at home?



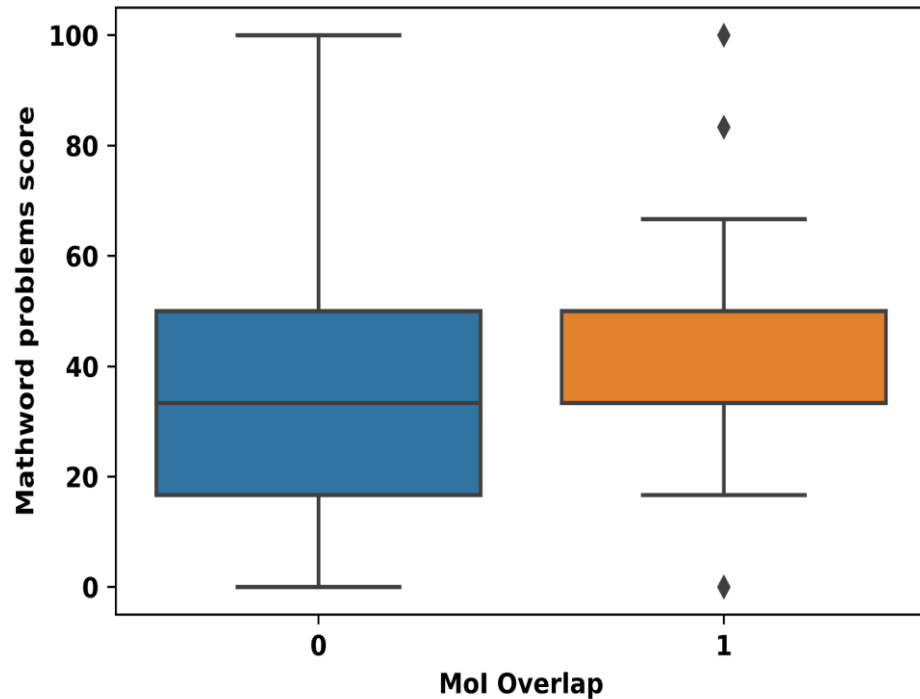
	Delhi (N=391)	Hyderabad (N=461)
+ Multilingual	143 (37%)	209 (45%)
- Multilingual	248 (63%)	252 (54%)

- Higher number of multilinguals in Hyderabad compared to Delhi.

50% of children in Hyderabad had the same school and home language and 39% of children in Delhi.



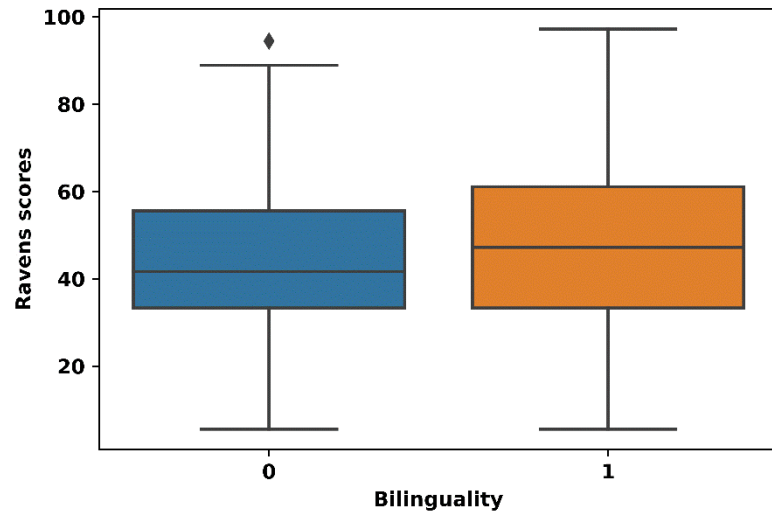
Mathematics: Word problems



Children whose home language and school language matched performed better on math word problems.



Performance on non-verbal intelligence



- Children who were multilingual had higher scores



Finding 4



4. Classroom observations-The teachers in all three sites used multiple languages as an informal strategy to support learning.



Delhi Schools

- 5 English-medium
- 3 Hindi-medium

Hyderabad Schools

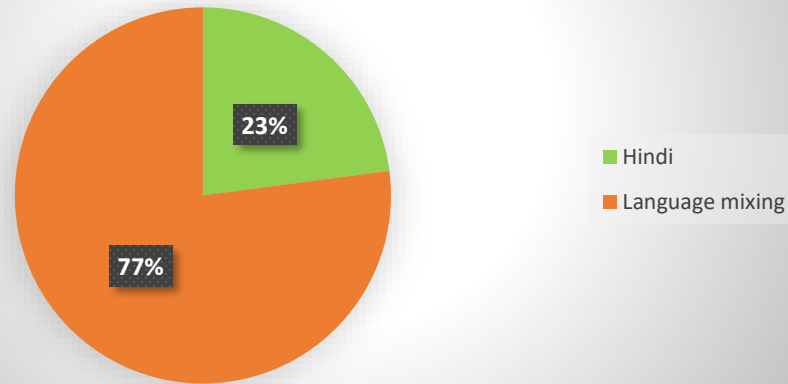
- 7 English-medium
- 13 Telugu-medium

- Data from observations of English Language class and Math class from each of these schools.

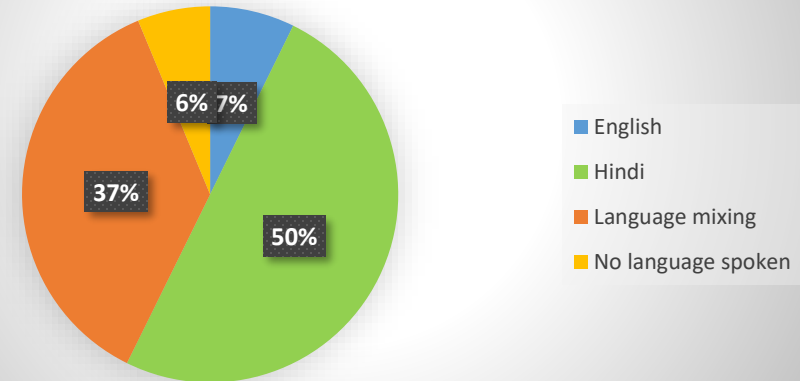
Language mixing by teachers and learners - EMI

Delhi

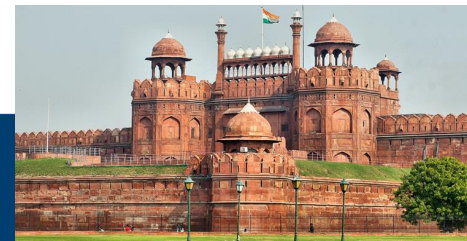
Overall Teacher language use (English medium)



Overall Learner language use (English medium)

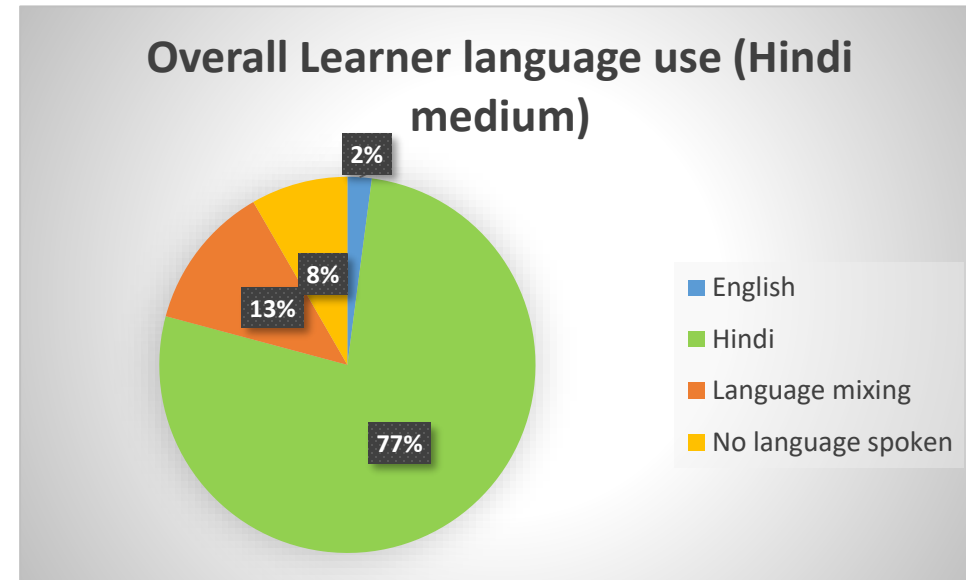
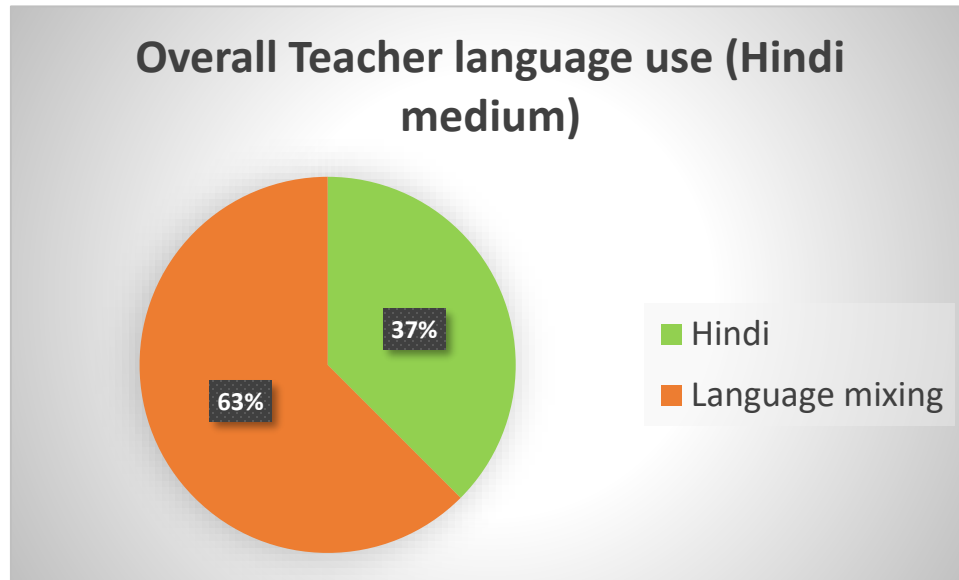


→ Teachers tend to use more language mixing compared to the learners.

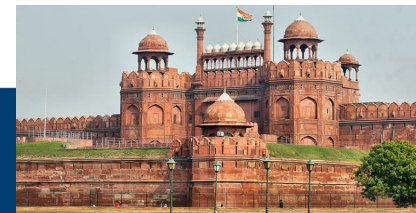


Language mixing by teachers and learners – Hindi-medium

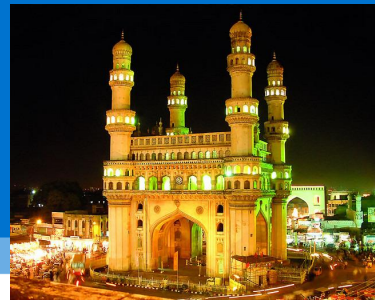
Delhi



- Teachers tend to use more language mixing compared to the learners.
- Language mixing in Hindi-medium schools is significantly less than in English-medium.

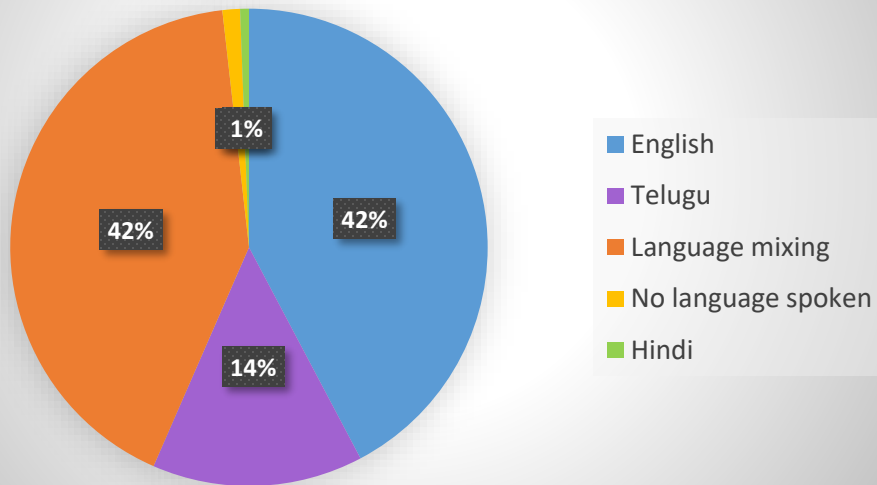


Language mixing by teachers and learners - EMI

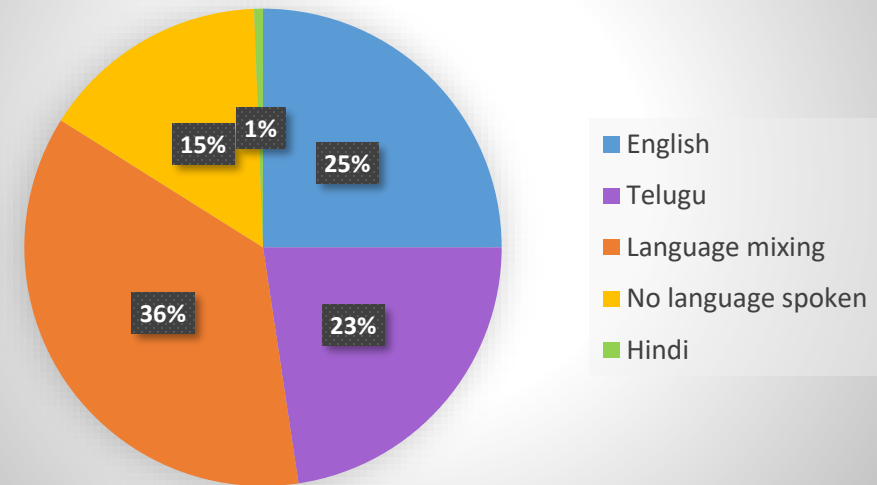


Hyderabad

Overall Teacher language use (English medium)



Overall Learner language use (English medium)

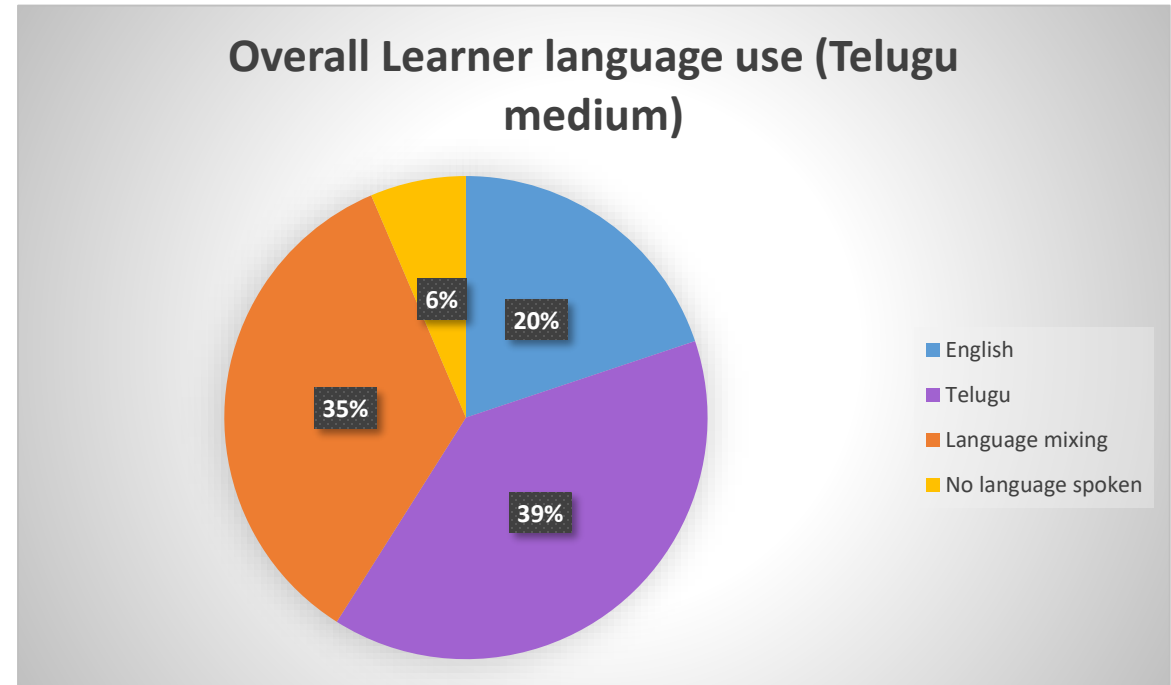
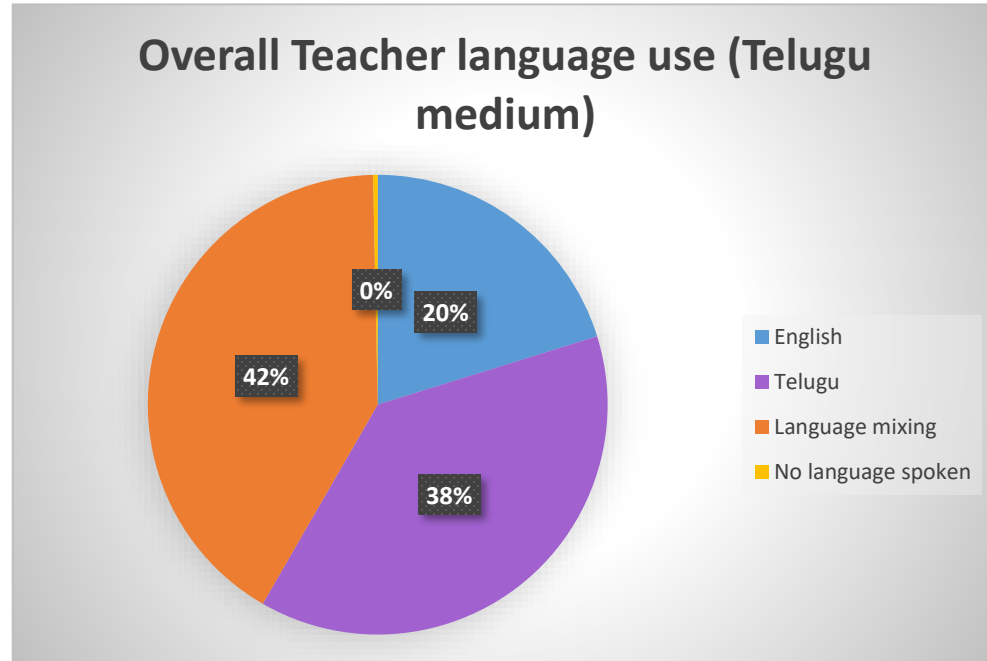


- The difference between language mixing in teacher vs. learner language in Hyderabad is not large.
- Language mixing in EMI in Hyderabad is lower than in EMI in Delhi.

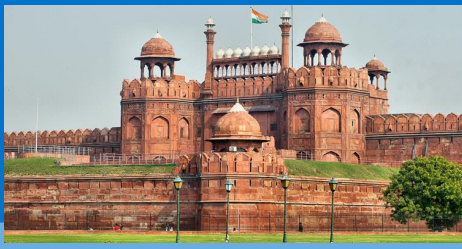
Language mixing by teachers and learners – Telugu-medium



Hyderabad



- Language mixing in EMI schools and in Telugu-medium schools is similar in Hyderabad.



Finding 5

5. The majority of lessons observed were teacher-led and did not encourage children to demonstrate their understanding or skills in a meaningful way.



Observation tool: language input measure

Section 3: Observation of Teacher Activity and Child Response:

[Please write one or more codes, where relevant. For example: A child may be listening and then repeating so in 3.3 insert codes 1 + 3]

Teacher activity codes:

- | | |
|--------------------------------------|--|
| 1= Reading aloud | 9= Problem solving exercises |
| 2= Verbal instruction | 10= Giving oral feedback |
| 3= Telling a story | 11= Experimentation |
| 4= Writing on board | 12= Marking papers/work completed |
| 5= Demonstrating | 13= Taking dictation |
| 6= Asking questions | 14= Off-task |
| 7= Showing/talking about audio/video | 15= Classroom management/discipline |
| 8= Maths exercises | 16= Reviewing or Summarising previous lesson |
| | 88= Other (specify) |

Children's response codes:

- | | |
|------------------------------|-----------------------------|
| 1=Listening | 8= Calculating |
| 2=Individual speaking | 9= Asking for clarification |
| 3= Repeating/choral response | 10= Problem-solving |
| 4= Writing | 11= demonstrating |
| 5= Copying text | 12= Uninvolved |
| 6=Reading | 88= Other (specify) |
| 7=Reading aloud as a class | |

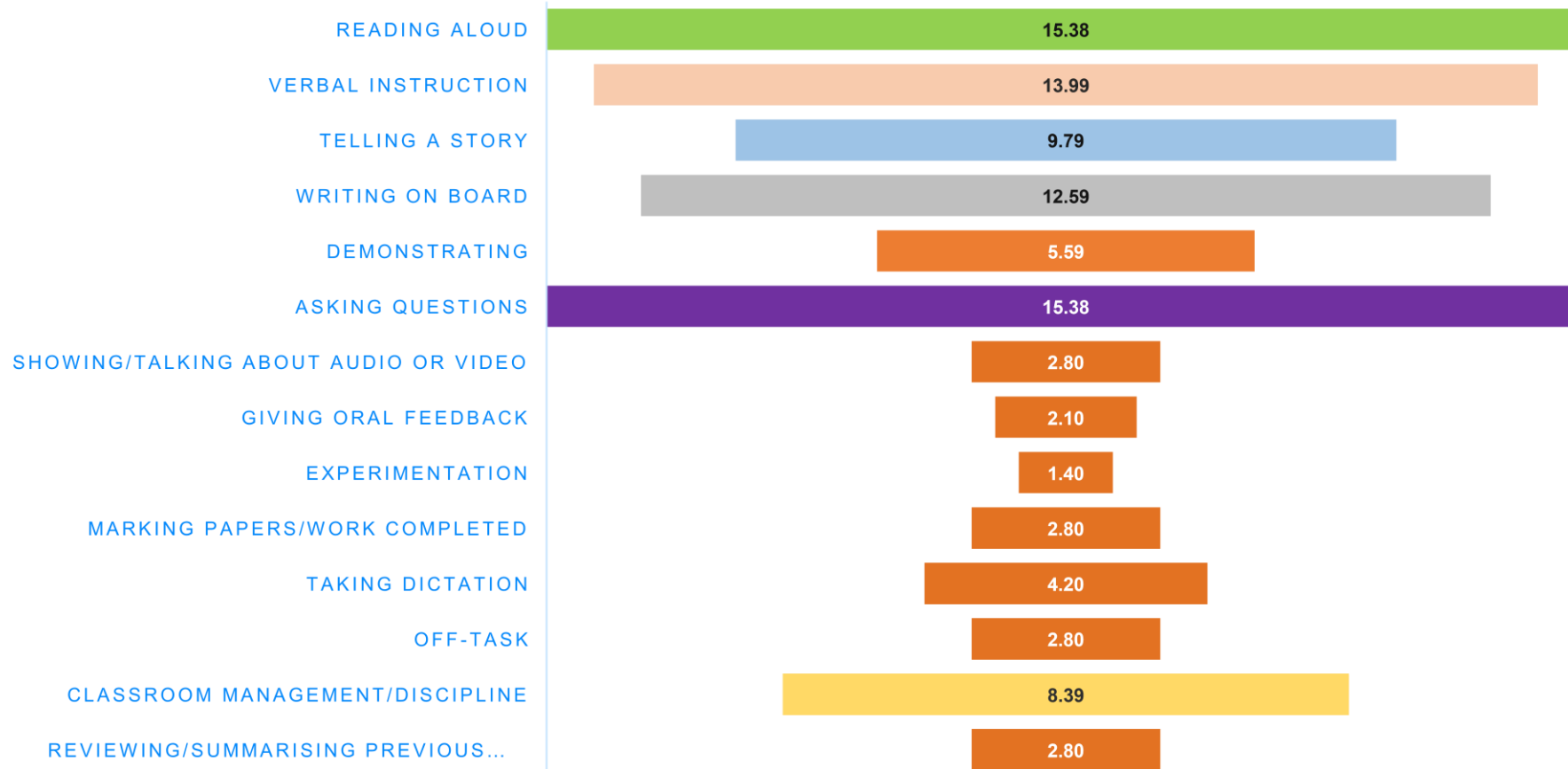
Language Codes

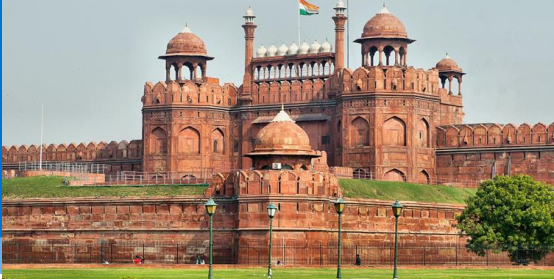
- | | |
|-------------|---------------------|
| 1= Bhojpuri | 7= Telugu |
| 2= Haryanvi | 8= Urdu |
| 3= Hindi | 9= English |
| 4= Magahi | 10= Translanguaging |
| 5= Maithali | 88= Other (specify) |
| 6= Punjab | |

3.1 Teacher activity	T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	T 9	T 10	T 11	T 12	T 13	T 14	T 15	T 16	T 17	T 18	T 19	T 20	T 21	T 22	T 23	T 24	T 25	T 26	T 27	T 28	T 29	T 30
3.2 Languages used																														
3.3 Children's response																														
3.4 Languages used																														

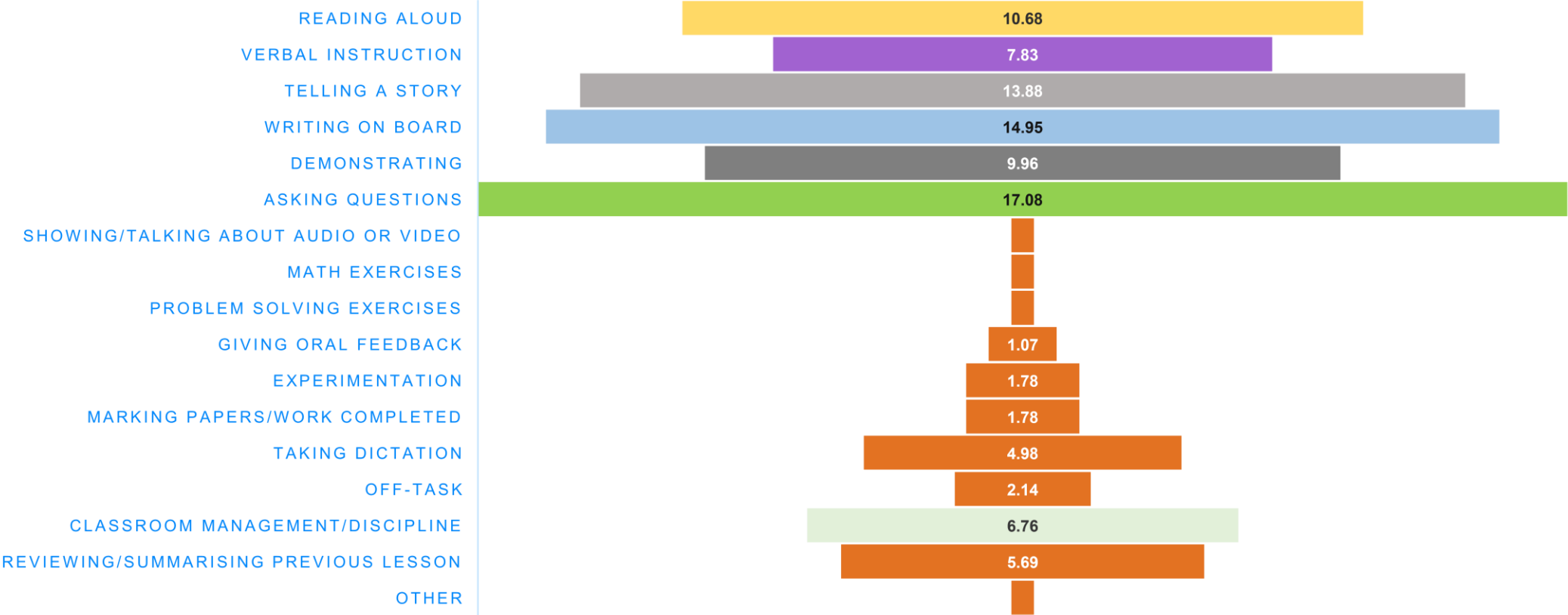


% TEACHER ACTIVITY(ENGLISH MEDIUM)





% TEACHER ACTIVITY(REGIONAL MEDIUM)



Literacy test

అది ఎండాకాలం. రమేష్ వాళ్ళ మామయ్య ఇంటికి బయలుదేరాడు. అతనికి దారిలో దాహం వేసింది. రమేష్ కు చుట్టూ ప్రక్కల ఎక్కడా నీళ్ళు కనిపించలేదు. కొంత దూరములో ఒక కొబ్బరి చెట్టు మీద కోతి కనిపించింది. రమేష్ కు మెరుపులా ఒక ఆలోచన వచ్చింది. వెంటనే ఒక రాయి తీసి దాన్ని బలంగా కోతిపై విసిరాడు. కోతి కూడ కొబ్బరి కాయను తెంపి రమేష్ పైకి తిరిగి విసిరింది. రమేష్ కొబ్బరి కాయను పగలగొట్టి దాని నీళ్ళు తాగి దాహం తీర్చుకున్నాడు. హాయిగా అతని మామయ్య ఇంటికి బయలు దేరాడు.

భవాని బడికి వెళ్ళింది
ఆమెకి దాహం వేసింది
కుండలో నీటిని చూసింది
నీటిలో రాళ్ళను వేసింది.

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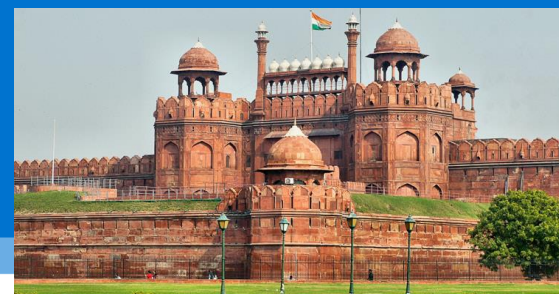
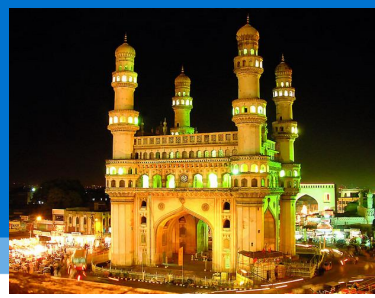
అట ఊడ ఈల
జాతీయ ఓటు
ఒంటె నూది పూలు
నెమలి రూపాయి

English Literacy



Components of ASER (English)	Scores (in %)		
	Delhi	Hyderabad	Patna
Letters	89.92	91.86	85.11
Words	57.05	56.31	53.03
Sentences and text reading	27.62	38.12	32.98
Comprehension questions	12.53	17.46	1.85
Total score	53.69	58.06	51.63

Literacy in the Regional language



Sabhyata Dwar

Components of ASER (Hindi/Telugu)	Scores (in %)		
	Delhi	Hyderabad	Patna
Letters	93.5	74.02	91.92
Words	77.08	68	76.66
Sentences and text reading	60.98	56.71	73.74
Comprehension questions	68.67	-	66.07
Total score	75.33	69.19	79.29

Lessons for the UK

- In the UK there is little understanding of multilingualism; one in six children in schools is multilingual
- Their needs are poorly understood and EAL children don't all show the cognitive benefits of multilingualism
- Teachers and learners are struggling
- Evidence-based advice needed

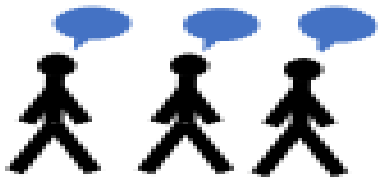
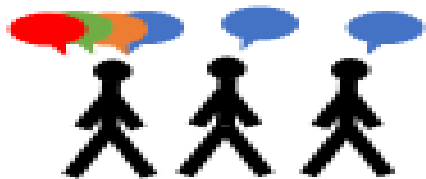


- Multilingualism is an asset
- We need more multilingual teachers in the UK to use more than one language in class

Linguistic diversity: an important lesson for the UK

Measuring diversity

In all the examples below there is linguistic diversity within the same size population ($N=3$), but the nature of linguistic diversity varies.



India's social and linguistic diversity: an important lesson for the UK

- Contextual linguistic diversity is highly relevant to many countries in the Global South, where different languages are used for different purposes and language experience combines oral skills, literacy and different domains of use (formal, informal, associated with the market, the household, the school, the extended family)
 - In these countries, individuals are sensitive to linguistic and cultural diversity without necessarily sharing these languages and cultures with each other!
 - **MultiLila** included a measure of sociolinguistic diversity in the child's immediate environment (school, family, community/neighbourhood)

Measuring sociolinguistic diversity

School context:

Can you think of people you talk to every day at school (apart from friends)?

- a) Person 1 (gender + age+ language) -
- b) Person 2 (gender + age+ language) -
- c) Person 3 (gender + age+ language) –

Family interactions:

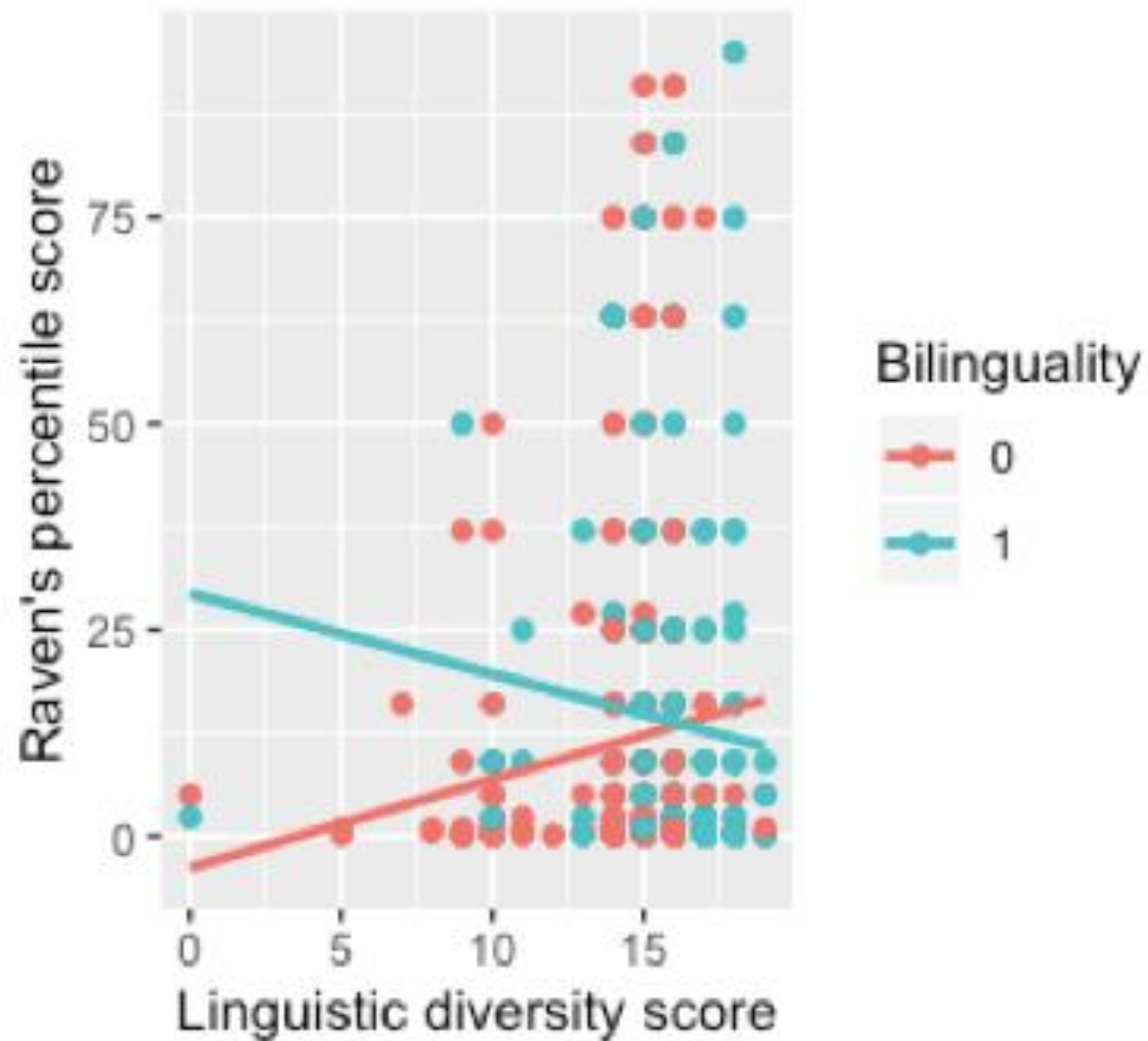
- D2(a). How many members of your family live with you? _____
- D2(b) Can you tell me who they are, and which languages they speak? (Not limited to three- Include all interactions of the child; Include persons other than those mentioned in B2)
- a) Person 1 (gender + age+ language) -
- b) Person 2 (gender + age+ language) -
- c) Person 3 (gender + age+ language) –

Linguistic diversity is an asset for monolinguals!

The higher the linguistic diversity in the monolingual child's environment the better their non-verbal IQ scores

UK parents and educators fear sociolinguistic diversity.

!! Our data illustrate the cognitive benefits of diversity for monolingual children from low SES.



- Encourage **use of home language** in the classroom- improves their learning and development of social value.
- Teachers need training in how to **use multilingual approaches** to teach students (**Multilingual Practices Module in B.Ed. and B.El.Ed programmes**)
- **Using everyday language** to explain mathematics and other academic concepts can aid understanding and learning.
- Encourage to **communicate** their understanding in **their preferred or strongest language(s)**.
- School systems need to recognize the **resilience** that **children from disadvantaged contexts** develop.
- Appropriate **language use** and **effective teaching strategies** are important.
- Teachers can use **storytelling** techniques in **multiple languages**.





Thank you for your attention

and *thanks to*

all children in Delhi, Patna and Hyderabad

British Council India

Local education authorities in each site

ధన్యవాదాలు

धन्यवाद