
Impact Study

KITE E-Language Lab

End-line Study Report

RIESI and ITfC

10th April 2023



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Project Title : Impact Study of KITE E-Language Lab (End-line Study)

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Date: 10 April, 2023

1. Executive Summary

E-Language Lab (ELL) is a part of the E³ English program developed by Kerala Infrastructure and Technology for Education (KITE) for promoting language proficiency in government and aided schools across Kerala. ELL has four levels for students from classes 1 to 8 (each level corresponding to two grades). Each level contains stories for the learners to read and listen to along with several developmental activities like answering comprehension questions, vocabulary-based activities, grammar-based activities, fluency activities, etc. Each learner can work on the ELL at their level and pace either individually or with the help of the teacher. The activities are enjoyable, game-like, and competency-based, and assessment is an integral part of the language lab activities. Inaugurated in March 2022, the project completed one year of implementation in 2022-2023.

The impact assessment study of ELL, conducted jointly by the Regional Institute of English South India (RIESI) and IT for Change aimed to understand the implementation of ELL, and identify specific possibilities for its strengthening . The end line study had the following research questions:

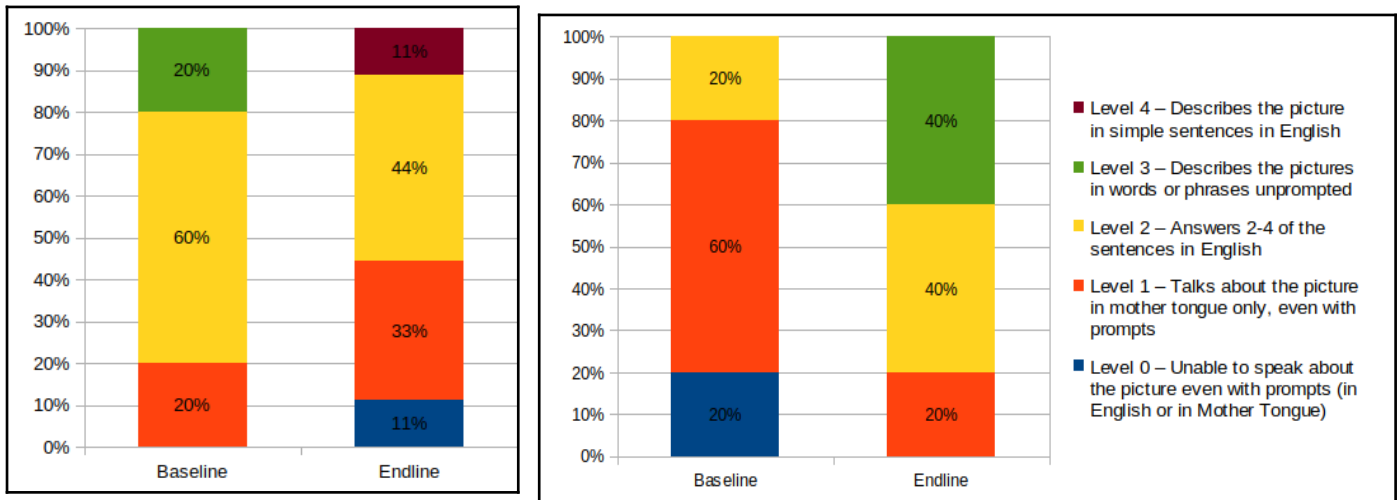
1. What is the status of students' abilities in Listening, Speaking, Reading and Writing in English?
2. What is the status of implementation of the ELL program in schools across Kerala?
3. What are the perceptions of teachers, relating to the training/ preparation, implementation and support for ELL implementation?
4. What are good practices that have helped ELL integrate into classroom teaching?

Members from RIESI and IT for Change, visited **Kasargod, Ernakulam and Kollam** between 13th February to 3rd March 2023, for conducting the end line study, and interacted with **494 participants including students** (from Grades 3, 5 and 7), **teachers and HMs across 18 schools**. 3 of these were control schools (where ELL was not implemented). A free and open-source software called *Xerte* was used for digitising the student interaction tools and data collection was done digitally using an open-source suite of tools called *ODK*, like in the baseline study.

1.1 Findings

By and large, students' performance levels in the end line have shown a significant improvement vis-à-vis their baseline performance, particularly for listening skills, the ability to read images and writing skills. They were more confident while answering the questions and in most cases needed little to no encouragement to answer. The use of audio and video elements, interactive activities, and simulations seem to have enhanced the learning experience of students - which is also reflected

in students' increased interest levels as reported by teachers. It was also found that regularity in the implementation of ELL translated to greater improvements in students' language proficiency levels, as seen in the graphic.



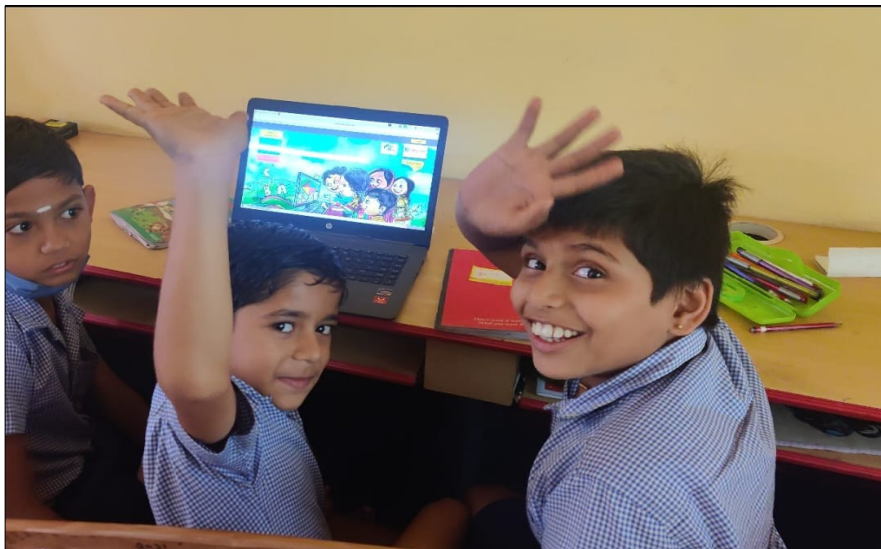
Graphic: Improvement in students' performance levels in ability to read images and speaking skills between control school (left) and high-frequency ELL school S6 (right) for Class 3 in Kollam

Although the inadequate technology infrastructure in schools and uneven implementation came up as major challenges, the strength of ELL was found to be in its interesting storytelling-based pedagogy, innovative implementation strategies developed by teachers, and a robust system for providing support and feedback to teachers and schools. By providing supplementing instruction in English communication skills, which has had a positive impact on student abilities, the ELL was found to be extremely relevant. Implementing the ELL could be a priority to further strengthen the public education system and encourage students from private schools to shift to the public education system, which could have important implications for reducing inequity and stratification.

1.2 Recommendations

The study finds that there is scope to revise the methodologies for the adoption and integration of ELL into classroom teaching. A set of comprehensive guidelines and FAQs can help teachers visualise the implementation of ELL and its integration with ELT better. Orientation/ training of all stakeholders has also been recommended to ensure clarity on the objectives of ELL, and subsequently, efficient implementation. The need for a comprehensive continuous professional development plan for teachers which focuses on ELL-specific training, and improving their language proficiency and understanding of content and pedagogy, has been highlighted in the

report. The study recommends that along with creating professional learning communities for teachers, they be provided continuous academic and technological support to build their comfort level, confidence and expertise in using ELL. For the coming years, the study emphasizes the need for a decentralised resource creation process. ELL should be envisioned as a curated repository of stories that are multilevel, multilingual and span multiple themes and contexts within (and outside) Kerala, to cater to young and adult learners alike. The research team is in the process of developing a document on proposed models of implementation that can potentially counter the hindering factors to ELL identified in this study.



Students from a school in Kollam using KITE E-Language Lab

2. Introduction

The Kerala Infrastructure and Technology for Education (KITE), a part of the Department of General Education, Government of Kerala, has developed an E-Language Lab (ELL) for promoting English language proficiency. Regional Institute of English, South India (RIESI) and IT for Change, Bangalore have designed and conducted an impact study of the KITE ELL program. The aim of the study has been to understand and strengthen the ELL through collaborative research leveraging the English Language Teaching Expertise of RIESI and the Techno-pedagogical Expertise including in ELT of IT for Change.

The study aims to understand the implementation of the program and to assess the way forward, by studying the content, transaction, and technological aspects of the ELL program. The endline study report also assesses the impact of the ELL program on students' language proficiency levels, based providing a comparative analysis of the baseline and endline study data.

2.1 Background

Kerala is one of the most densely populated states of India and has a literacy rate comparable to many developed nations of the world at 94%. Government-run schools offer Malayalam, English, Kannada and/ or Tamil as the medium of instruction. Kerala has achieved impressive results in terms of access, enrollment, retention, and completion, as well as in various achievement surveys. Kerala is therefore well-placed to think about the next generation of educational reforms towards equity and quality, and design the required road map.

The discourse-oriented approach followed in Kerala with respect to language teaching means that language is not viewed as a set of disconnected text, but rather, a set of linguistic discourses such as stories, songs, conversations, diary entries, descriptions, etc. E-learning is believed to provide autonomous learning opportunities for learners. Computer-Assisted Language Learning (CALL) can be beneficial for practising each specialized skill (Listening / Speaking / Reading / Writing) and providing learners with meaningful exposure to the English language.

A student-centric approach can not only foster linguistic sensitivity and improve language-production skills, but it can also improve the learners' receptive skills. Keeping these perspectives in mind, KITE developed and launched the ELL for enriching the English language proficiency of students by making use of Computer lab facilities in schools, harnessing the power of free and open digital technologies.

About the ELL Program

E-Language Lab (ELL) was developed with the aim of enhancing the English language proficiency of all students in Classes 1 to 8 by using appropriate technology solutions to empower teachers to support learners continuously. The program was developed through participatory processes involving multiple stakeholders like teachers, students, academic experts and a technology team. ELL has been created to provide students with opportunities to enhance their listening, speaking, reading, writing, pronunciation, grammar, and vocabulary through the use of 'stories'. The ELL has four levels of interventions for students from classes 1 to 8 (level 1 is for classes 1 and 2, level 2 for 3 and 4, level 3 for classes 5 and 6, and level 4 for classes 7 and 8). At each level, the learner

can listen, read stories, and do several language development and assessment activities like answering comprehension questions, vocabulary-based activities, grammar-based activities, fluency activities, pronunciation activities, picture comprehension, creative expressions, writing, and recording audio or videos for self-assessment. The teacher can monitor the language development activities where the learner's work is supervised and feedback provided. Each learner can work on ELL at their own pace and level, and do the activities individually, in a group, or with the teacher. The activities are game-like, and competency-based, with assessment being an integral part. The project was inaugurated in March 2022 and was implemented in government and government-aided schools from June 2022. The academic session 2022-2023 marked the first year of the ELL program in Kerala.

2.2 Objectives of impact assessment study

The impact assessment study of KITE's E-Language Lab is aimed at understanding the implementation of the ELL project, as well as identifying specific possibilities for strengthening it. The research consisted of base-line, mid-line, and end-line studies to assess program impact. The [baseline study](#), conducted in August 2022, helped identify baseline language proficiency levels among students. The [midline study](#) was virtually conducted in December-January 2023, with data collection through questionnaires, focus group discussions and individual interactions. The endline study conducted between February and March 2023 assessed students' English proficiency levels, and teachers' perspectives towards ELL.

The endline study was guided by the following research questions:

1. What is the status of students' abilities in Listening, Speaking, Reading and Writing in English?
2. What is the status of implementation of the ELL program in schools across Kerala?
3. What are the perceptions of teachers, relating to the training/ preparation, implementation and support for ELL implementation?
4. What are good practices that have helped ELL integrate into classroom teaching?

2.3 Scope of the endline study

The scope of the endline study included:

1. Collecting data on students' proficiency in the English language
2. Examining the teachers' perspectives on the implementation of ELL as a supplementary and complementary learning tool for their English classroom
3. Understanding the needs, constraints and challenges faced by teachers, schools and by KITE functionaries
4. Identifying areas that may require a review/ redesign, if any, and providing recommendations for modifications that may be required.

3. Study Methodology

3.1 Endline Study Design

A Quasi-Experimental Design was used for the endline study. The objective was to collect data on students’ language proficiency levels which can be measured, compared and analysed against the baseline values for both Experimental (which implemented the ELL program) and Control schools (which did not implement the ELL program).

The study plan and tools were designed to understand the context, inputs, processes, and outputs of the ELL program, using a multi-method, multi-audience approach to collecting qualitative and quantitative data. A seven-member research team, comprising members from RIESI and IT for Change conducted in-person interactions with various stakeholders from the 3 baseline districts (Kasargod, Ernakulam and Kollam). Some preliminary discussions were held with the District Coordinators from the three districts (Ernakulam, Kasargod and Kollam) along with the Senior Consultant from the KITE State office, to communicate the requirements of the study.

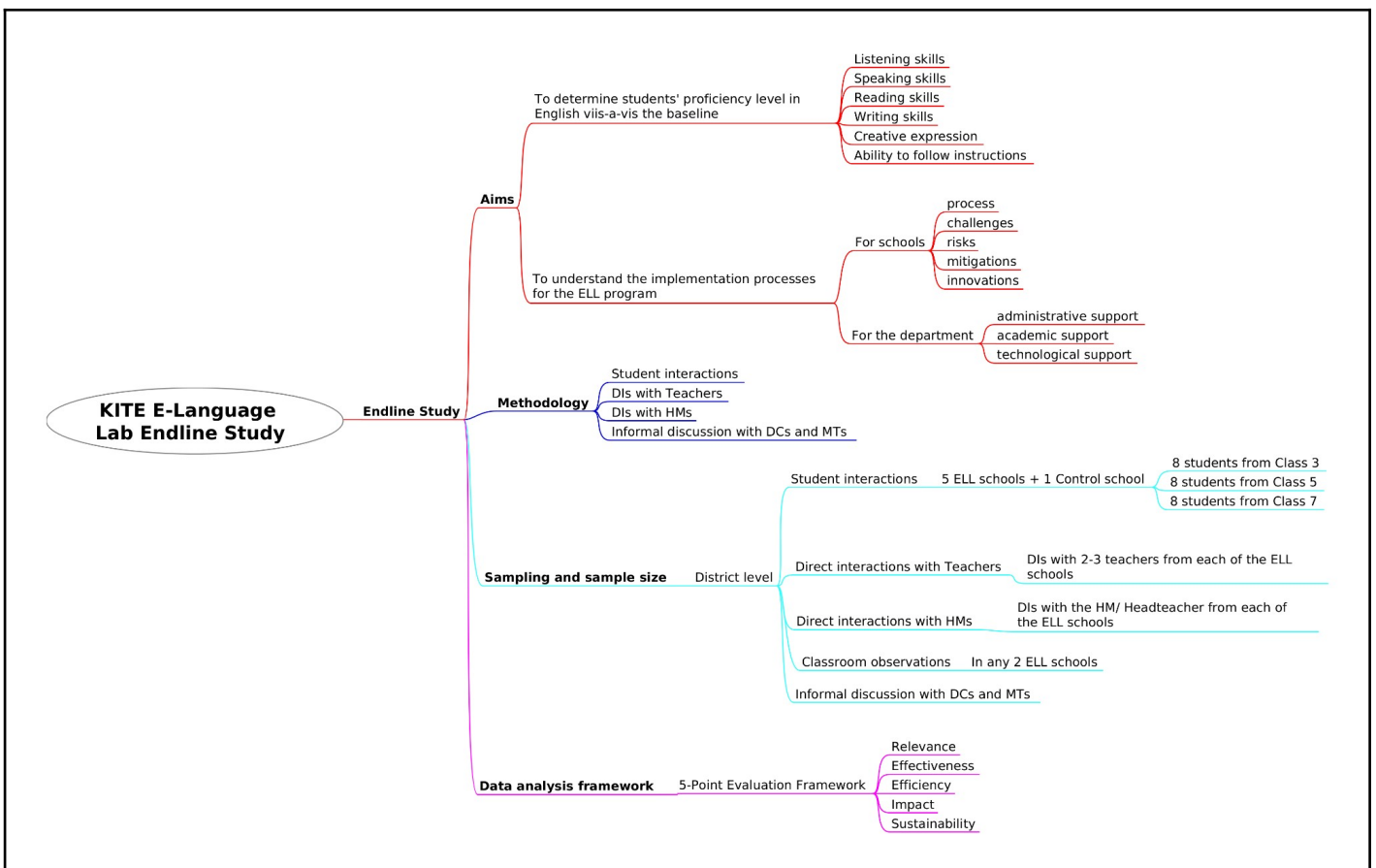


Figure 1: ELL Endline study design and methodology

3.2 Sampling

Out of the 12 schools included per district in the baseline study, 6 schools were identified by KITE District Offices from each of the three districts, namely Kasargod, Ernakulam and Kollam for the endline - 5 were implementing ELL, while the 6th was the control school, not having implemented ELL during the academic year. A total of 18 schools thus were considered for the study. The selection of schools was done to include different types of schools (in terms of school size/student strength, management type - government and government-aided and urban/rural locations). Classes 3, 5 and 7 from each school were selected for the study, as in the baseline study. The sample size was 8 students per class, per school - including the 5 students that participated in the baseline study, as well as 3 additional students selected by randomly generated roll numbers. Thus, a total of **439** students were selected from Grades 3, 5 and 7 from each of the 18 schools. For teacher interactions, at least 2 English teachers teaching classes 3, 5 or 7 and implementing ELL were selected. The sample size for teachers across the 15 schools implementing ELL was **40**. The team also interacted with **15** HMs. Through this process, the most significant changes in terms of knowledge, skills, practices, and attitudes of the stakeholders, as well as some interim outcomes of the program were captured. The details of the sample distribution are explained below. Classroom observations were also conducted at 2 schools implementing ELL, one in Kasargod and another in Kollam.

Research team (3 members per district) 6 schools (5 intervention + 1 control per district)			
Stakeholder	Data Collection Mode	Sample	Comment
HMs/ Headteachers	Individual interaction	15	1 HM/ Headteacher per school per district
Teachers	Individual interaction	40	2-3 Teachers per school per district
Students	Individual interaction	439	8 students X 3 classes per school per district
Total participants		494	

Table 1: Sample distribution of different stakeholders for the endline study in each of the districts

3.3 Study Activities

The major activities planned under the endline study were:

1. Reviewing the content used in the E-Language Lab at various levels
2. Reviewing program documents and records, and having interactions with the program team to understand the objectives, implementation process, and outcomes of the program
3. Developing specific evaluation questions informed by the program's activities and expected outcomes
4. Developing suitable assessment tools that can aid in capturing necessary data elements
5. Designing and carrying out questionnaires to collect quantitative and qualitative data pertaining to different aspects of the program
6. Conducting *orientation training* for members of the research team including discussions on endline design, study methods, tools, and strategies for data collection (sampling, ethics and procedures)
7. Content review of the stories in ELL, Conducting on-site visits, classroom observations, group discussions and individual interactions with select stakeholders to gather required data (qualitative).
8. Analysing the data collected and sharing insights derived from it with the program team.
9. Submitting a detailed report in which good practices are highlighted and improvements are suggested.

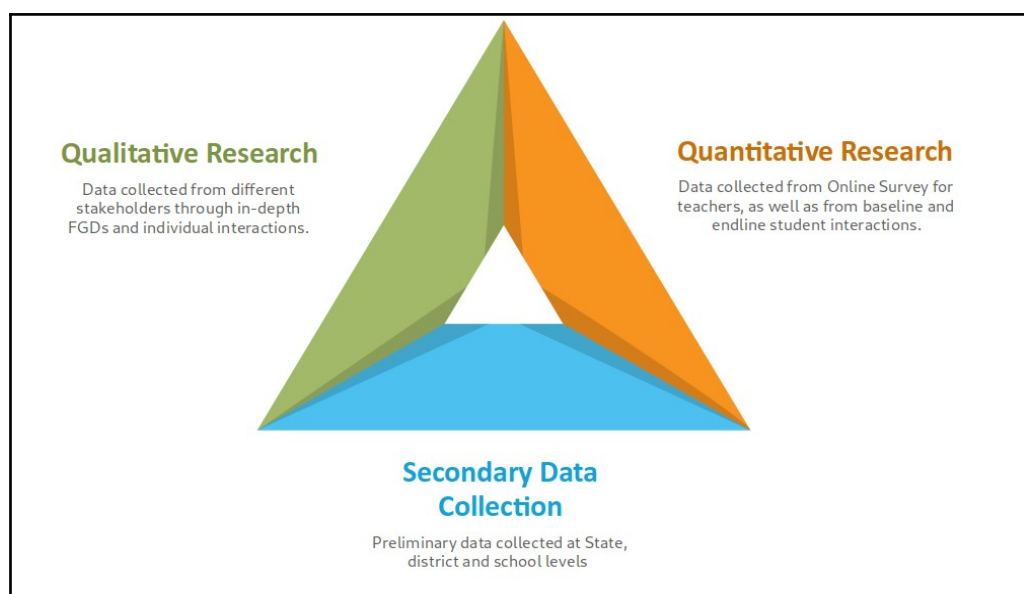


Figure 2: Triangulation Research Design of Impact Assessment Study

3.4 Data Collection Tools for Endline Study

Specifically for this *endline* study, the following tools were created and administered:

3.4.1 Student Interaction Tool

The objective here was to understand the language competencies of students at the time of the endline study. The relative change in these competencies between baseline and endline, in the intervention and control schools, was meant to provide important inputs on the effectiveness of the ELL implementation. The questions were used to assess skills such as listening, speaking, reading, and writing, as well as creative expression and the ability to follow instructions among students, based on pre-designed rubrics. The tool was then digitised using a Free and Open Source Software (FOSS) called ‘Xerte’. Data collection was done digitally and uploaded to a central aggregate platform using the FOSS phone app ‘ODK Collect’ for the rubrics corresponding to different ability/ competency levels for each of the skills assessed. This was conducted face-to-face for each student.

3.4.2 Teacher Interaction Tool

The questions asked in these interactions focused on teachers’ opinions on ELL several months into the implementation, challenges faced, suggestions as well as additional support required if any. These were conducted individually for 2-3 teachers per school, from each of the three districts covered in the baseline study (Kasargod, Ernakulam & Kollam).

3.4.3 HM Interaction Tool

The questions asked in these interactions focused on the ongoing ELL implementation, the support provided to teachers and other aspects that can help determine the status of implementation in the schools from the perspectives of HMs. These were conducted individually for 10 HMs across each of the three districts covered in the baseline study (Kasargod, Ernakulam & Kollam). Headteachers that are acting-HMs for their schools were also considered for this tool.

3.4.4 Classroom Observations

Classroom observations of ELL sessions were conducted in two schools to understand the strategies used by teachers to integrate ELL into classroom teaching, their ability to connect ELL content with the curriculum and their comfort with ELL as a digital tool.

3.4.5 Informal Discussion with District Coordinators and Master Trainers

These discussions were conducted individually for Ernakulam, Kasargod and Kollam and focused on research teams' observations from the field, the role of DCs and MTs in ELL implementation, existing monitoring processes, challenges faced and suggestions to improve ELL and its implementation going forward.

3.5 Limitations of the endline study

A quasi-experimental design was used since the districts for the baseline (and for the endline) study were identified along with the respective schools as experimental/ implementation and control schools at the baseline study stage, leading to a non-random distribution of control and implementation schools. However, students in these schools were selected based on randomly generated roll numbers.

Since the research team was unable to visit all 14 districts, the interaction results, and especially the classroom observations, may not be generalizable to the whole of Kerala. However, three districts selected for the study are from northern, central and southern parts of the state, to give some spatial spread.

The student and teacher interaction tools were implemented individually for each participant in a face-to-face manner by either the facilitators from the research team or KITE master trainers from each district during the baseline study. Since the teacher and HM interaction tools relied on semi-structured note-taking by different facilitators, some possible variations in reporting are possible.

During the baseline, some of the schools were covered by teachers teaching in those schools,

however during the endline, the entire study was conducted by the research team.

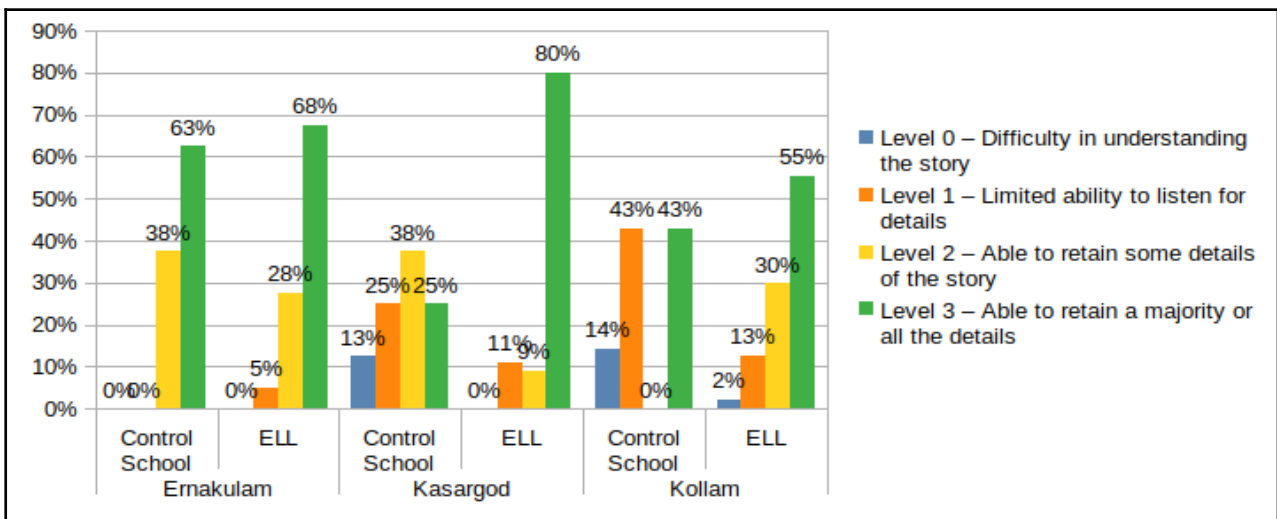
4. Key Findings

4.1 From interactions with students

By comparing the baseline and endline data from the student interactions, it is evident that there has been a notable improvement for almost all the learning indicators in the implementation schools, across all 3 districts, across the three classes. From the interactions with teachers and HMs, it was noted that the implementation of ELL in schools was uneven. Thus, for a more accurate analysis, class and rubric-specific charts were also generated for schools with a higher frequency of implementation (conducting at least 1 ELL session a week), since these would better serve the purpose of comparing intervention schools with control schools. The class-wise findings from the endline study are as follows:

4.1.1 Class 3

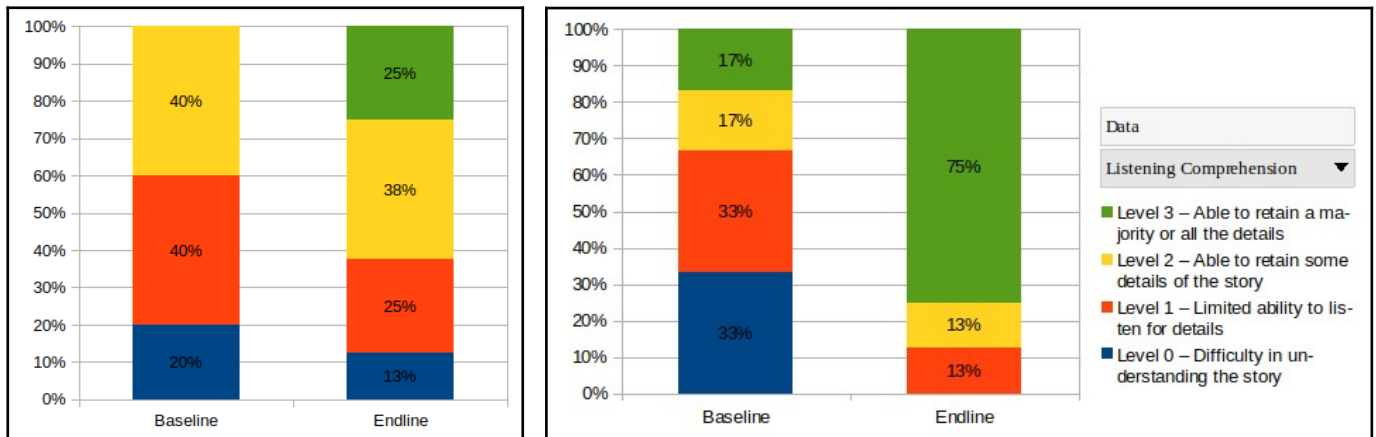
At the district level, Kasargod has the most number of students (80%) with listening skills at Level 3, i.e. they are able to retain a majority or all of the details from the audio discourse. Students from schools in both Kasargod and Kollam have shown a significant increase in the number of students that are able to retain a majority or all of the details.



Graphic 1: Distribution of students' listening skills across levels between control and ELL-implementing schools across the 3 districts for class 3 in the endline

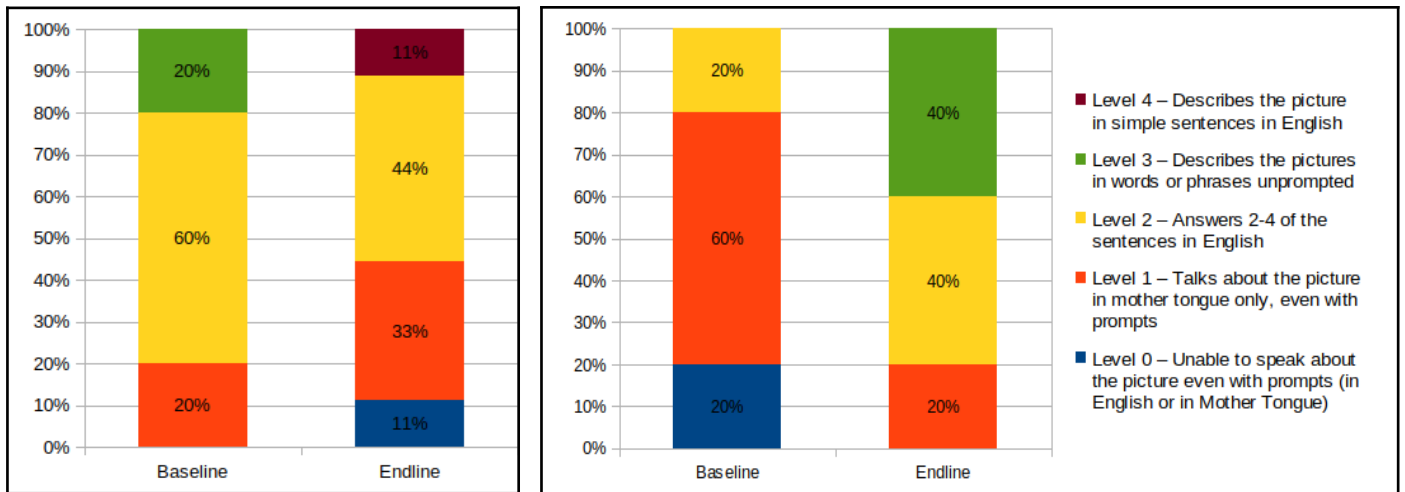
In terms of their reading skills, more students from the ELL-implementing schools in Kasargod and

Kollam can read the text fluently without any hesitation or mistakes than the students in the control schools for the two districts. The increase in students' average performance levels (baseline versus endline) was higher in schools implementing ELL at least once a week than schools implementing ELL once a month or once in two months. For example, school **S3** in Kasargod where ELL is implemented at least once a week for class 3, the students able to retain a majority or all details from the audio discourse went from 17% to 75% (Graphic 2). Additionally, all students at level 0 (33%) were able to progress to levels 1 and above.



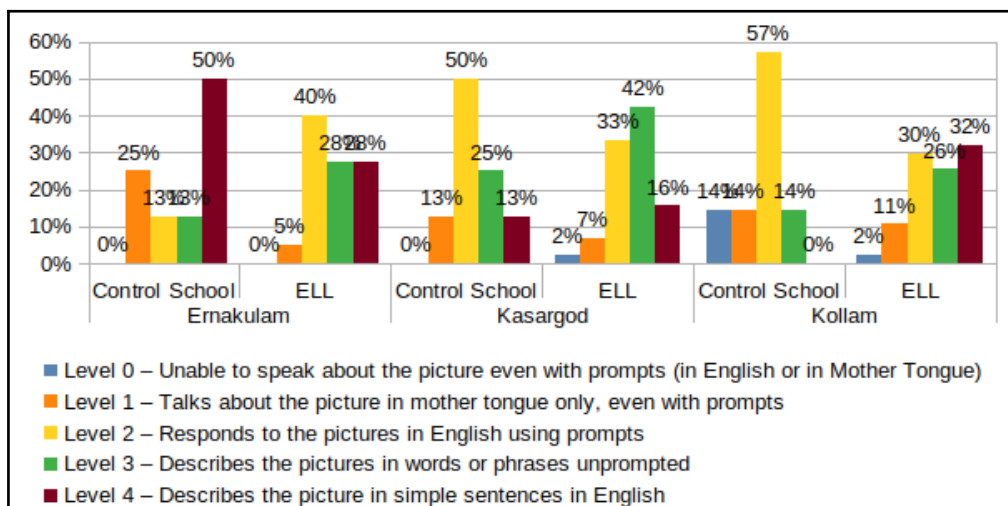
Graphic 2: Improvement in students' performance levels in listening comprehension between control school (left) and high-frequency ELL school S3 (right) for Class 3 in Kasargod

Similarly, (in Graphic 3) though 11% of students from the control school in Kollam moved to level 4 in the endline, the overall improvement in students' performance levels was higher in the endline for school S6.



Graphic 3: Improvement in students' performance levels in ability to read images and speaking skills between control school (left) and high-frequency ELL school S6 (right) for Class 3 in Kollam

In Graphic 4, although students from the control school in Ernakulam have fared better in their speaking skills and ability to read images, the number of students at Levels 0 and 1 (i.e. who are unable to speak about the picture in English, even with prompts) are higher in all 3 control schools at 25%, 13% and 43% for Ernakulam, Kasargod and Kollam respectively.

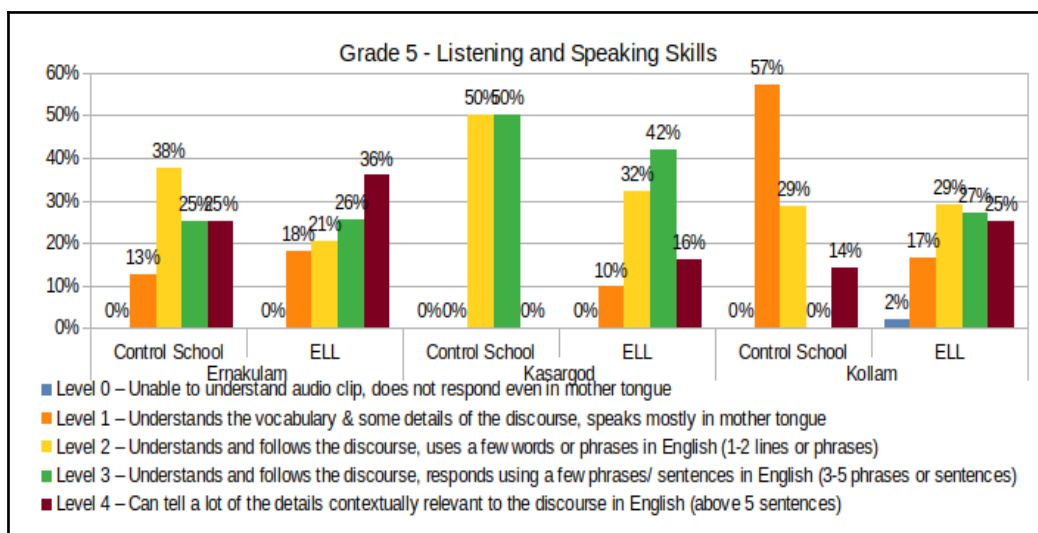


Graphic 4: Level-wise distribution of students based on their performance in reading images and speaking skills in the endline between control and ELL-implementing schools across the 3 districts for class 3

More students from ELL-implementing schools than control schools are able to write 1-4 contextually relevant sentences. This distinction is highest for Kollam where 32% of students from ELL schools are at level 5 versus 0% in the control school. Similarly, in their ability to follow instructions, students from ELL schools fared better than their counterparts in control schools, especially in Kasargod (36%) and Kollam (32%) with more students being able to understand all instructions in English and respond using appropriate words, phrases or sentences in English. A complete list of tables and figures is provided in Annexure A.

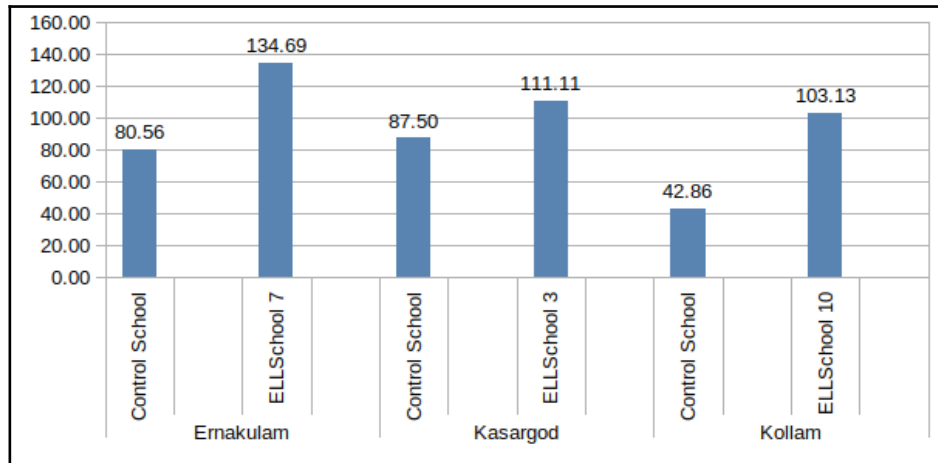
4.1.2 Class 5

Students from schools implementing ELL across the three districts were found to have better listening and speaking skills than their counterparts in control schools, as evidenced by greater numbers of students being able to speak about multiple contextually relevant details related to the discourse at 36%, 16% and 25% for Ernakulam, Kasargod and Kollam respectively.



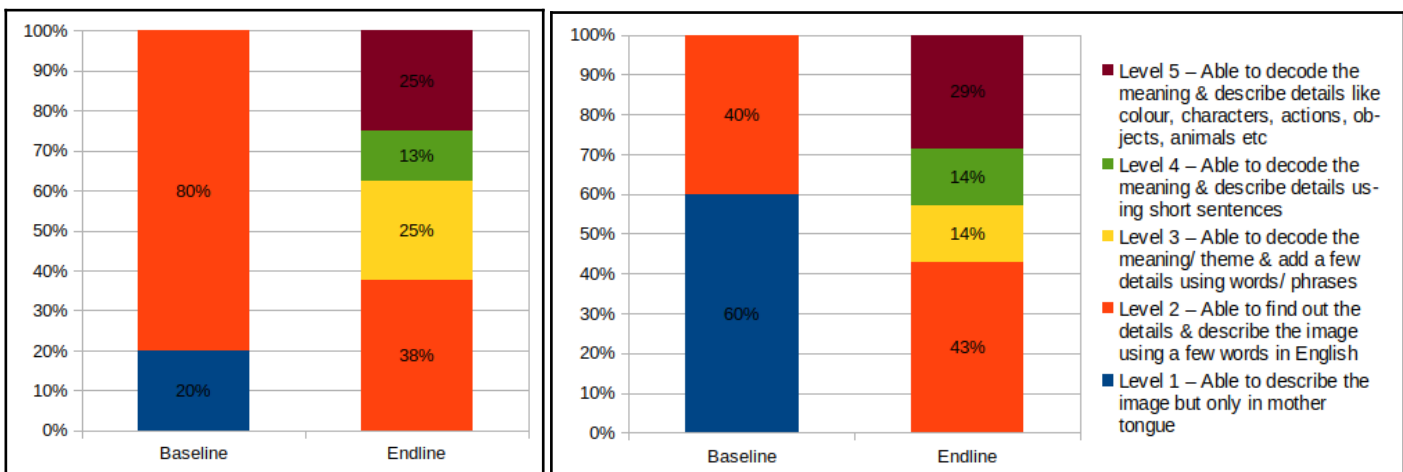
Graphic 5: Level-wise distribution of students based on their performance in speaking skills and ability to read images between control and ELL-implementing schools across the 3 districts for class 5

Greater numbers of students from ELL-implementing schools across the three districts were found to be at Level 2 i.e. able to use a proper sequencing of ideas, vivid descriptions of events, setting, dialogues or characterisation, and sustain the conversation with the proper sequence of exchanges.



Graphic 6: Percentage improvement from baseline to endline in students' performance in reading images and speaking skills between control and ELL-implementing schools across the 3 districts for class 5

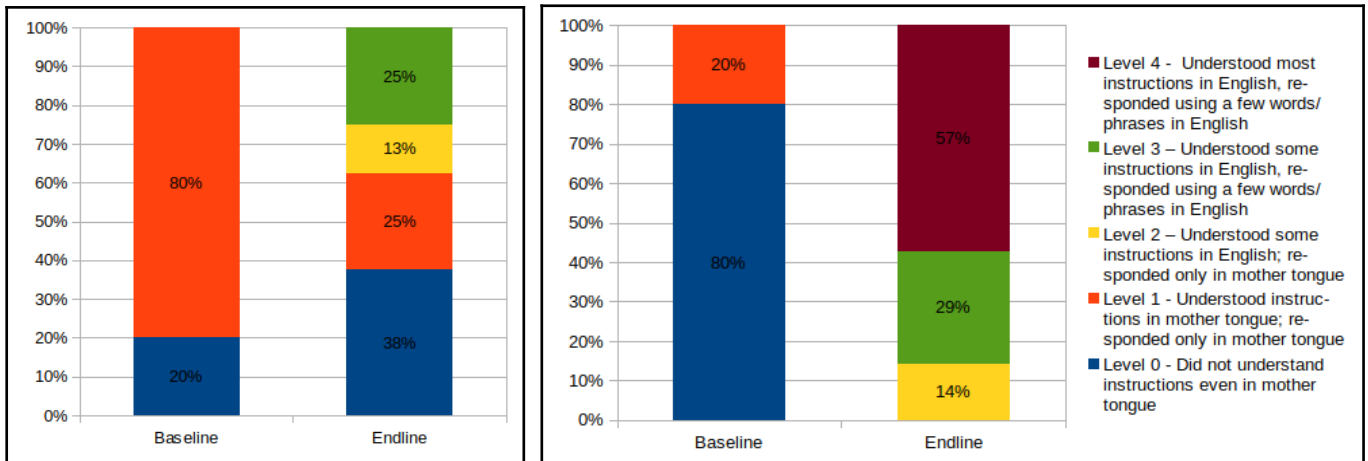
In the ability to read images and speaking skills (Graphic 6), students' performance was found to have improved by a significant margin between baseline and endline for ELL-implementing schools, with schools in Kasargod having the highest margin of improvement at 134.69%. More students from the ELL schools were able to describe the image shown using several details, as compared to students from the control schools. In fact, almost half the students (51%) in class 5 in ELL schools in Ernakulam are at this level of proficiency (Level 5).



Graphic 7: Improvement in students' performance levels in reading comprehension between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam

In schools where ELL implementation was higher students' performance in reading comprehension

improved significantly in the endline, as depicted in Graphic 7. From 60% of students at level 0 in the baseline, all students from school S7 in Ernakulam moved to Level 1 or above in the endline. In terms of writing skills, none of the students from the control schools could write at Level 5 in the endline i.e. writing some sentences relevant to the context for both questions and using correct spelling, capitalisation and punctuation, while 15%, 16% and 13% of students from ELL schools in Ernakulam, Kasargod and Kollam could do so.

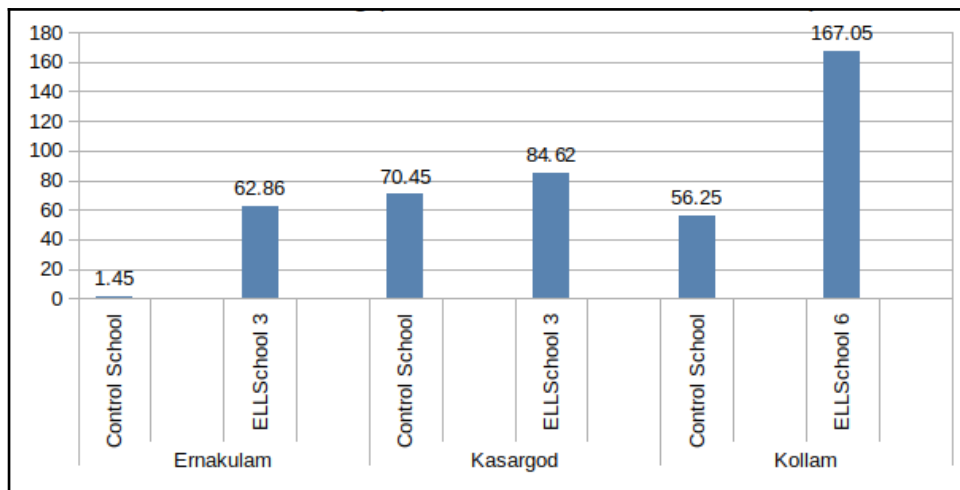


Graphic 8: Improvement in students' performance levels in ability to follow instructions between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam

School S7 from Ernakulam was found to have performed better in the endline than the control school for all learning indicators. Graphic 8 shows that the percentage of students who were unable to understand the instructions in English has gone down significantly in S7 as compared to the control school. When asked about the ELL content 86% of respondents expressed that they like the stories, while 89% found the stories easy. The complete list of tables and figures can be found in the annexure.

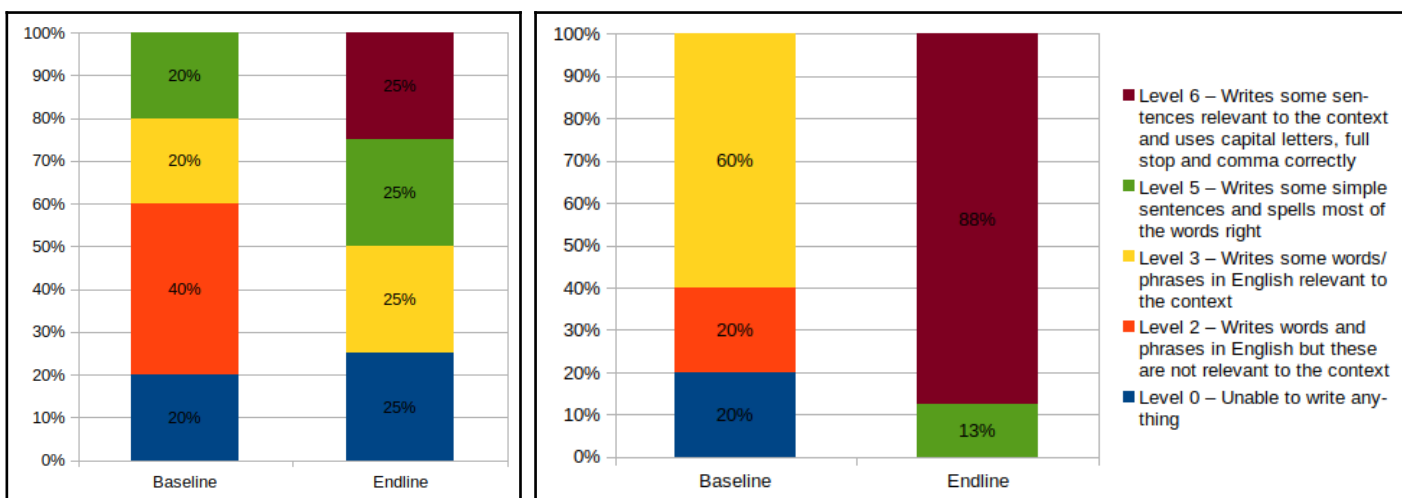
4.1.3 Class 7

Overall, students from class 7 seem to have shown improvement in language proficiency levels in almost all rubrics. In all three districts, listening and speaking skills in students from ELL schools have shown a notable improvement since the baseline, with the highest percentage improvement seen in Kollam (128.57%) followed by Ernakulam (76.25%) and Kasargod (66.67%).



Graphic 9: Percentage improvement in students' performance in writing skills between control and ELL-implementing schools across the 3 districts for class 7

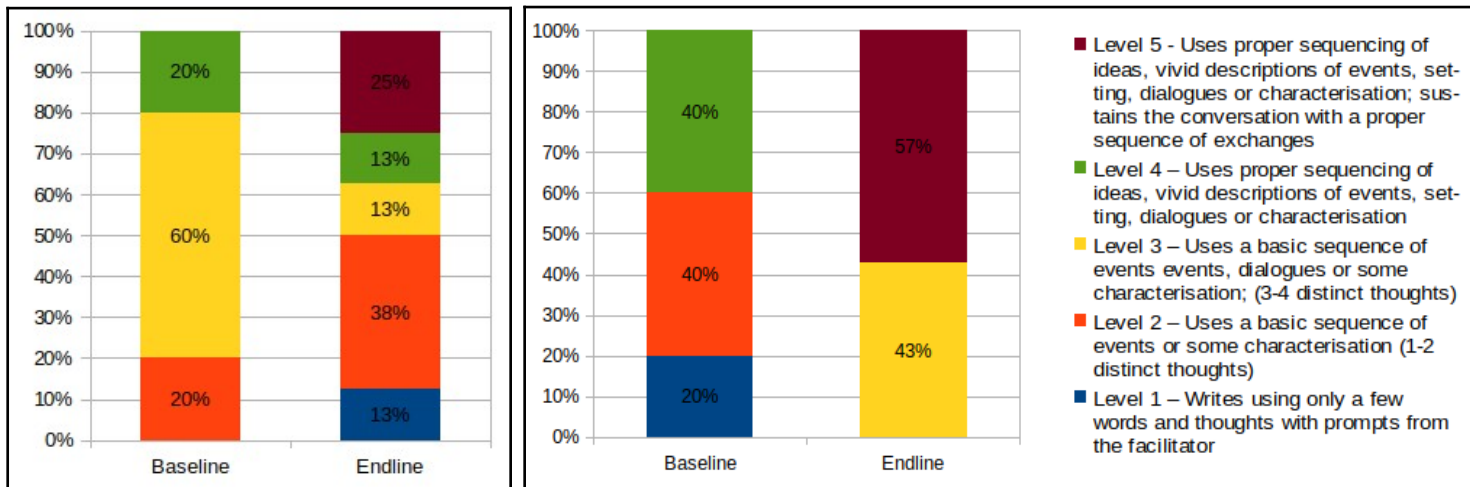
In terms of writing skills, the percentage increase in students' performance between baseline and endline was the highest in the ELL schools in Kollam at 167.05% (Graphic 9). As compared to the control school, school S6 in Kollam (which implemented ELL at least once a week) had 63% more students at level 6 in writing skills, ie. they were able to write some sentences relevant to the context with correct punctuation and capitalisation (Graphic 10).



Graphic 10: Improvement in students' performance levels in writing skills between control school (left) and high-frequency ELL school S6 (right) for Class 7 in Kollam

In another school in Kollam where ELL was implemented at least once a week (S4), students who needed prompts from the facilitator or could only formulate 1-2 distinct thoughts in the baseline were now able to come up with a sequence of events, and add much more detail to the discourse. The students at level 5 in the endline were 32% higher than in the control school (Graphic 11). The

average percentage improvement in students’ ability for creative expression for all the ELL schools in Kollam was found to be 316.67%.



Graphic 11: Improvement in students’ performance levels in creative expression between control school (left) and high-frequency ELL school S4 (right) for Class 7 in Kollam

Students’ reading skills have also improved overall, as evidenced by a greater number of students from ELL schools faring at level 6 i.e. able to answer all questions from the reading comprehension passage in Ernakulam (48%), Kasargod (32%) and Kollam (52%) as compared to the control schools. When asked about the ELL content 90% of respondents expressed that they like the stories, while 92% found the stories easy to understand. Some students mentioned that they found the stories a bit lengthy.

The complete list of tables and figures can be found in the annexure.

4.2 From interactions with teachers

Interactions were conducted individually with 2 to 3 teachers from each school, to get an understanding of the status of ELL implementation at the end of the academic year.

4.2.1 On the overall status of implementation:

1. Almost all teachers had attended the initial 2-day ELL training barring a few new or guest teachers.
2. Four schools had 5 or fewer computers/ laptops with ELL installed, and three schools had between 6-10 functional computers/ laptops. Only 1 school reported having more than 20

laptops/ computers for the ELL.

3. All teachers said they use digital tools and resources in their classrooms. Apart from ELL, most also use the projector to show videos related to the syllabus.
4. While nine of the fifteen intervention schools claimed to have conducted ELL sessions at least once a week, only 4 schools have completed more than 5 stories for at least one of the grades. Five of the 15 intervention schools have covered 3 - 5 stories, while another six have completed between 1 - 2 stories. The frequency of ELL sessions varies from school to school, even grade to grade, and so does the time taken to complete a story.
5. Only 3 schools have been able to conduct ELL sessions for students in a one-to-one mode. Most teachers are conducting ELL sessions either as a whole class activity or in a hybrid mode. *“Stories are given as whole-class activity as a listening exercise. but students do the activities in groups or individually”*, explained a teacher from Kollam.
6. Though teachers from half of the sample intervention schools in the study are tracking the student assessment data, only 2 out of 15 schools claimed to be generating student activity report cards via Moodle. Others are either doing it manually or have not been able to generate and track it yet. Teachers also spoke about facing difficulty in conducting formative assessments owing to
 - a. schools not having enough devices for students to log in individually and record responses and
 - b. lack of earphones/ microphones for students to make clear, audible recordings.
7. Teachers from one-third of the intervention schools mentioned that the ELL data has not been updated on the *Sampoorna* portal.

4.2.2 On strategies used for ELL sessions:

1. Regarding making connections between ELL and the curriculum, some teachers spoke about following the theme-based suggestions provided during the initial 2-day training - *“Was provided a theme initially by KITE for connecting E3 to the textbook, have been following it”*.
2. However, several teachers expressed that they are unable to link ELL content with the curriculum and that they require training for better integration between the two.
3. The teachers have tried to come up with strategies to implement ELL with existing resources, such as

- a. Conducting the session in turns for smaller groups.

“One day of the week (say Monday) I play the story for the whole class, then day by day I ask 5 students to stay back to do the activities individually”.

- b. Narrating the stories either orally or presenting them to the whole class using a projector and speaker
- c. The activities are conducted either as a whole class activity or by grouping as many as 5 students per device, where each student attempts one of the exercises.
- d. Allocating a separate period or time for ELL sessions in the weekly timetable
- e. Calling students early or on the weekends, and utilising free periods for ELL sessions whenever possible

4.2.3 On successes observed, if any:

1. Several teachers spoke about the positive impact ELL has been having on students. All the teachers agreed on the benefits of ELL in developing students' LSRW skills, especially vocabulary and grammar, and the overall interest towards English language.

“Yes, they (students) are trying to speak in English and are participating actively. It takes them less time to complete the story and activities now. They have improved in terms of grammar, and they try to speak in English. Students now set everything up on their own on the systems.”

2. While some teachers commented that it is too soon to say if students' proficiency levels have increased, others mentioned seeing some improvements, particularly in students' listening and reading skills. Most teachers expressed that students' speaking and writing skills could receive more focus in ELL.
3. Teachers reported that parents who are aware of ELL implementation have had a positive response towards it - *“Some know about it. They are quite interactive... They are very happy with the introduction of such projects/ initiatives along with workshops, camps, etc. for students”*

4.2.4 On challenges faced in implementing ELL:

1. The challenges that came up most frequently were inadequate physical and technology

infrastructure, high student strength, pressure to complete syllabus on time and existing teacher workload.

4.2.5 On support needed:

1. Some teachers expressed that they are not a part of any ELL-specific WhatsApp group. Others stated that the groups they are a part of have been inactive for some time now. Most of the teachers are also not a part of any other professional learning community.
2. 55% of the participants expressed interest in creating resources for ELL, albeit after some training.
3. Roughly 83% of the participants expressed interest in attending some MOOC-based capacity-building programs, particularly on content and pedagogy, digital literacy classes and ELL-specific training.

4.2.6 On suggestions to improve ELL and its implementation:

Apart from the need for more devices, teachers had several other suggestions:

1. Including more activities in ELL related to textbook content
2. Regular training on ELL setup, implementation and integration into classroom teaching
3. Including more multilevel stories (and other types of discourses) and activities, and making it more inclusive
4. Including group-based activities to tackle the issue of high student strength
5. Incorporating ELL sessions into the timetable

4.3 From Interactions with head teachers

HMs unanimously agreed on the benefits of ELL for language acquisition. They also brought up the challenges they are facing in implementing ELL, to improve the proficiency levels of government school students in English (particularly their pronunciation and vocabulary), and to increase their exposure to the language.

4.3.1 On the overall status of implementation:

1. 33% of the participants attended the initial 2-day ELL training, while 67% didn't. HM-specific training has not been provided yet.
2. 78% of participating HMs mentioned that they are yet to track student assessment data using the HM login option in ELL.
3. 33% of the HMs are updating the Sampoorna portal while 67% mentioned that they are yet to add the latest updates.
4. 44% of the participants are a part of at least one WhatsApp group where ELL is discussed, however, it was noted that many groups have been inactive for some time.

4.3.2 On strategies used to implement ELL at the school level:

1. 4 of the HMs expressed that their schools have tried to incorporate ELL sessions either

separately or with the English or Computer periods to ensure regular implementation. One of the HMs from Kollam said, “We are giving teachers extra time.. it is incorporated with the English period. It makes up for sufficient material in addition to the original curriculum – like a supplementary learning material”.

4.3.3 On successes/ changes observed, if any:

1. Almost all HMs expressed that teachers’ confidence level in using digital resources has increased after using ELL. Teachers are also able to express their thoughts and ideas with children in better and more creative ways.

“Teachers who were hesitant in the past have started exploring ELL on their own, the teacher resource person became a guiding force. Teachers are able to share ideas with each other.”

2. Although all participants agree that there has been some improvement in students’ LSRW skills in English, they expressed that the number of ELL sessions conducted needs to be increased and made regular. “Teachers have spoken about the improvement... This is discussed as an agenda in teachers’ biweekly meetings... There is a little slowness - need time to get used to it”.

4.3.4 On challenges faced in implementing ELL:

1. The most common challenges that came up were inadequate physical and technology infrastructure, high student strength, and the need for teacher training. Additionally, the HMs also requested for inclusion of more types of discourses in the ELL content, and for the circulars to also be made available in Kannada (especially in Kasargod).

4.3.5 On suggestions to improve ELL implementation:

Some of the suggestions that came up during these interactions were:

1. To provide ELL training to the newly appointed teachers as well as monthly follow-up training for others.
2. To include multi-level activities, more stories and other types of discourses in the content (such as poems, songs, news articles, short videos etc.). One HM also suggested that the names of the characters be changed to more local/ south Indian names wherever necessary to make them contextually relatable.
3. To either reduce the syllabus or to include ELL in the upcoming revised curriculum, so that adequate time can be devoted to ELL in the timetable.
4. To integrate ELL content and resources with topics from other subjects wherever possible.

4.4 From Interactions with District Coordinators and Master Trainers

An semi-structured discussion was conducted with the District Coordinator and Master Trainers from each district post the data collection from student and teacher interactions, to gather their impressions based on their experiences in supporting the implementation of ELL.

4.4.1 On overall implementation:

1. The Master Trainers stated that teachers have been generating student activity report cards and updating the Sampoorna portal, and an average of 3 stories have been covered per class. The MTs also agreed that the presence of a trained resource person plays an important role in the implementation of ELL.

4.4.2 On challenges faced in implementing ELL:

1. The District Coordinators and Master Trainers were aware of most of the challenges faced by teachers in implementing ELL. The challenges that came up in the discussion were inadequate physical infrastructure (shortage of classrooms, no dedicated computer lab space, etc.) and technology infrastructure (laptops/ computers as well as headphones, projectors and speakers), shortage of English teachers, need for teachers and HM training, and teachers' existing workload.
2. Technological issues such as difficulty in installing, re-installing and using the client-server setup also came up in the research teams' observations. Additionally, some of the stories for Level 4 were not displayed as required.
3. To the claim of several teachers that they are unable to connect the ELL content to the curriculum, the Master Trainer opined that this was due to teachers perhaps not being adequately clear about / aligned with the objectives of ELL.
4. A need to further strengthen the existing monitoring and support processes need to be improved was expressed, perhaps by additional training and orientation of the stakeholders.

4.4.3 On suggestions to improve ELL implementation:

Some of the suggestions from these interactions were:

1. Providing training for teachers, not just on ELL and its implementation, but also on digital literacy, English language proficiency and English language teaching.

“Teachers may need support for developing a deeper understanding of the ELL. They demand for a textbook connect... The role of ELL in ELT needs greater understanding.”

2. A demonstration is required to help teachers visualise the different ways in which ELL can be implemented in their classrooms.
 - a. Multilingual training manuals or user guides, a set of FAQs or a video tutorial might help demonstrate different approaches to integrating ELL into classroom teaching.
3. Forming a resource group for developing new stories which are culturally relevant and

include multilevel activities that can be used for both individual students and groups of students.

4. Exploring the option of exporting student portfolio data across machines (and across years).
5. Providing HMs proper training and orientation to share best practices and strategies to ensure effective implementation.
6. Regular visits from resource persons, as required, especially to schools that need more support would be useful
7. Organising teachers into learning communities as a part of the ELL to help discuss and share strategies and ideas for implementation of ELL.
8. Collecting data on all the technological and implementation-related issues faced by teachers by circulating an online form, so that they can be addressed.

4.5 From Classroom Observations

Findings from the demonstrations on ELL conducted by teachers in schools in Kollam and Kasargod :

1. The teacher at **S1** school in Kollam conducted the ELL session for students of Class 3, and the teacher in **S4** school Kasargod conducted it for Class 7 students. However, while in school **S1** the teacher conducted the session as a whole class activity, in school **S4** a KITE functionary had to support to help the teacher with the ELL interface. In the latter case, the ELL session and interactions with students were conducted by the research team. Overall, in both cases, it seemed that the preparation for conducting ELL sessions is low.
2. Teachers' proficiency levels in English also need to be enhanced through capacity building and facilitation by the resource persons/teams.
3. In Kollam, one of the students attending the ELL session was a child with special needs (CWSN). It was noticed that the student was able to participate in all ELL-related activities (conducted as a whole class activity) and answered the questions asked based on the story.
4. It was noted through the responses to activities that students have great potential, and teachers need orientation on various aspects like usage of digital resources, technology tools, and apt use of resources by linking it to different language lessons.

5. Analysis

The research has adapted the Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee's (DAC) 5-Point principles for program evaluation¹ to analyse the findings from the baseline, midline and endline studies. This framework helps assess ELL through parameters such as relevance, effectiveness, efficiency, impact and sustainability.

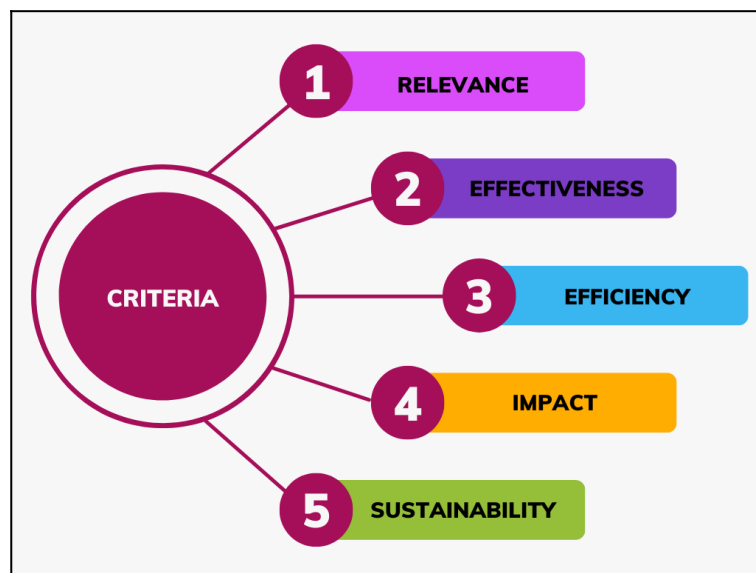


Figure 1: OECD-DAC Analysis Framework adapted for the Impact Assessment Study of ELL

5.1 Relevance

Relevance as a parameter focuses on the validity of program objectives - whether the activities and outputs are consistent with overall goal attainment and the intended impact of the ELL program, and whether the ELL is necessary and relevant for the context - students studying in government and aided schools in Kerala. Relevance is analysed under ‘necessity’ and ‘priority’ parameters.

5.1.1 Necessity

On whether the project matches the needs of target groups or society and if it is inclusive in its design and implementation.

The feedback from the teachers makes it clear that ELL fills a much-needed gap in terms of FOSS-based digital tools, to support and supplement language learning.

1. It serves as an effective counter to the vendor lock-in, cost, access and privacy-related constraints that can arise from using proprietary language lab software.
2. The software design of ELL builds on what the previously developed Online Language Lab software (piloted in 2019) lacked by:
 - a. doing away with the requirements of separate hardware, centralised servers and internet

¹The DAC Principles for the Evaluation of Development Assistance, OECD (1991), Glossary of Terms Used in Evaluation, in ‘Methods and Procedures in Aid Evaluation’, OECD (1986), and the Glossary of Evaluation and Results Based Management (RBM) Terms, OECD (2000).

- b. removing sharing of personal data, thus, enabling privacy
 - c. having a simple installation and server-client setup process
3. It was found that although the extent of implementation varies between schools and districts, stakeholders largely agree that such a program is necessary to help improve students' proficiency in English. The student interaction data collected from this study seems to suggest that the project is indeed moving towards achieving its vision of 'enhancing the English Language proficiency of all students by using affordable and appropriate technology solutions', as witnessed in the increase in students' performance levels across several parameters.
4. ELL also follows the salient features of process and discourse-oriented pedagogy as spelt out in Kerala's Education Framework (2007)² by
- a. providing learners with a rich linguistic experience by the spiralling of discourses and themes
 - b. making inputs or content comprehensible to the learners
 - c. providing opportunities for students to enhance their listening, speaking, reading, and writing skills, pronunciation, grammar, and vocabulary
 - d. following a whole language philosophy
 - e. proposing a modular mode of classroom transaction

5.1.2 Priority

On whether the project is consistent with Kerala's plan for achieving foundational literacy and the discourse-based learning approach followed by Kerala, and if it adheres to the various indicators for language learning.

1. Although the study did not cover parents, it is clear from secondary research that English communication skills are a very high priority for parents. This desire is seen as a cause for parents shifting their children from government schools to unaided schools. By providing supplementing instruction in English communication skills, which has had a positive impact on student abilities, the ELL is extremely relevant to public education. Implementing the ELL is a priority to further strengthen the public education system and encourage students from private schools to shift to the public education system, which has important implications for equity and reduction in stratification.
2. In our classroom observations during the endline study, we notice that a child with special needs (CWSN) could participate well in the ELL session and activities. It seems that the ELL has the potential to support inclusive education by providing visual and auditory support to language learning which could be especially useful for visually and hearing-impaired students.

5.2 Effectiveness

Effectiveness measures the extent to which a program or tool attains its objectives. The

²Kerala Education Framework (2007). Source: <http://14.139.60.153/bitstream/123456789/2098/1/Kerala%20Curriculum%20Framework%202007.pdf>

effectiveness of the ELL project was analysed across several parameters.

5.2.1 Appropriateness of key performance indicators and availability of means of verification

Key Performance Indicators		
Academic	Technological	General
<ul style="list-style-type: none"> ● Is ELL aligned to the curriculum and learning outcomes? ● What is the extent of engagement and interactivity of stories and activities? ● Are formative assessments and feedback an integral part of ELL? ● Does the platform provide options for generating students’ task completion and performance report? 	<ul style="list-style-type: none"> ● Is the platform stable? ● Does ELL allow a hierarchy of users? (enabling teacher oversight over students, and HM oversight over teachers) 	<ul style="list-style-type: none"> ● Is ELL cost-effective? ● Can the application be made available over a local network? ● Is ELL adaptable?

Table 2: “Key performance indicators for ELL” (rephrased from: <https://ecube.kite.kerala.gov.in/inner.php?id=5> and using indicator language)

The Key Performance Indicators (see above) defined by ELL include broader academic, technological and general parameters. This impact assessment study collected data on all the indicators mentioned, the analyses for which have been discussed below:

5.2.2 ELL’s impact on students’ performance levels

1. Midline and endline interactions with teachers highlighted that ELL can increase students’ exposure to the English language. However, the extent of exposure depends on the frequency and strategies used to integrate ELL into classroom teaching. As per one of the HMs - “We can see the difference in their language when they (students) participate in cultural activities. I am positive that conducting more such sessions will bring more benefits”.
2. The ELL stories and activities provide interesting input for students, are engaging and interactive (in line with ELL’s academic KPIs), and have increased students’ interest towards learning English, as noted from interactions with several stakeholders, including students. As per one of the teachers - “Students find the program very enjoyable, it also enriches their pronunciation, vocabulary and fluency in English.” 88.3% of the students liked the stories in ELL and 90.4% found them easy to understand, as per the endline interactions. One of the students expressed, “I learnt so many stories. The stories are funny, and I have learnt so many new things/facts about the world. I learnt new words. I like the activities and recording new words. I want to learn more.”

3. There has been a notable improvement in students' proficiency levels for several language skills, as is evident after comparing the baseline and endline data from the student assessments across the 3 districts.
 - a. Students' listening and speaking skills, writing skills and the ability to read images have shown the most improvement versus other skills analysed across the three sample classes (3, 5 and 7). Creative expression was also found to have significantly improved, as per students' responses in class 7.
 - b. However, the patterns corresponding to overall improvement across the different skills could not be definitively determined owing to the wide variations in frequency and nature of implementation of ELL across schools.
 - c. Schools with a higher frequency of implementation (using ELL at least once a week) seem to have performed better than schools reporting a relatively lower frequency of implementation (once a month or less) across several parameters. However, some variations in achievements could also have arisen due to other factors such as students' digital literacy levels, language-based extracurricular activities (debates, class assemblies, quizzes etc.) conducted in schools, teacher motivation and engagement, parental/home support etc.

5.2.3 Influence of teachers' demographics, experience, beliefs or assumptions on the attainment of program purpose

1. In baseline, midline and endline studies, the team found all the teachers to be very supportive and accommodating of the study. They spoke quite freely about the background of their students, the current status of implementation in their school, the training provided, and the support required etc.
2. As per the midline data, factors like the gender or age of the teachers do not seem to impact the implementation of ELL in schools. This can perhaps be attributed to the fact that Kerala had started taking steps towards the integration of ICT in education way back in 2002 and teachers have undergone several training programs on digital literacy and integration of subject-specific digital resources. KITE also runs an online Basic ICT Training course on its learning platform which is compulsory for all teachers.
3. Teachers' reasonable unanimity regarding the usefulness of digital tools, particularly ELL, for English language teaching because of the appealing nature of e-content, students' higher interest levels, greater inclusivity, more opportunities for exposure to the English language, and also the possibility of creation of contextual digital resources at school level, offers one reason for the effectiveness of ELL program.
4. On ELL content, teachers had different opinions on how similar or different it should be from the content of the SCERT textbooks. Some expressed the need for content that is identical to that found in the textbook and saw the language lab as having the potential to be an aid in the completion of the syllabus. Greater alignment with the program objectives (ELL as an open supplementary resource) can enhance effectiveness in transacting ELL.
5. The issue regarding inadequate technology infrastructure came up in all the interactions. Likely, one of the reasons behind the uneven or low frequency of ELL implementation is

teachers' assumption that unless there are a specific number of devices available, ELL cannot be implemented. This necessitates proper training of teachers along with guiding models for implementation and demonstration on how to effectively conduct ELL sessions with existing resources.

5.2.4 Factors promoting and hindering ELL implementation

1. Table 3 (below) shows the implementation status of ELL in schools across Kerala. As per teachers' responses in the online survey (in the midline study), though 97% of the sample schools are currently implementing ELL, at least 75% are facing challenges.

What is the status of ELL implementation in your school?	% of responses
Implementation has begun and is going smoothly	22%
Implementation has begun but facing several challenges	75%
Has not been implemented yet	3%
Total Responses	595

Table 3: Status of implementation of ELL in sample schools in the midline study

2. It was found that the frequency of ELL sessions varies from school to school and so does the time spent to complete a story. Although 9 of the 15 sample schools in the endline study claim to have conducted ELL sessions at least once a week, only 4 of the 15 schools have completed more than 5 stories for at least one of the grades. On average, across Kerala, 3-4 stories have been completed for at least one of the classes. This variation warrants further in-depth qualitative study to assess the parameters that affect the implementation effectiveness and efficiency, including frequency of the ELL sessions, duration of the sessions etc.
3. The flow of information seems to be quite smooth from the installation of E-Language Lab, the support provided by KITE, to the training and support provided by the District Coordinators and Master Trainers.
4. In both midline and endline studies, teachers expressed that they are yet to track student progress data (via formative assessments) and generate student activity report cards using ELL as per the Moodle requirements. Formative assessments can help teachers provide academic support to students in a more targeted manner. It might be that teachers are unclear about the purpose and/ or process of conducting and tracking these assessments. Further discussion with teachers might be necessary to identify the exact nature of challenges faced in this regard.
5. The inadequate number of working devices seems to be a significant factor in slowing down the ELL implementation. Coupled with a high student-teacher ratio, it becomes a daunting

task and makes teachers reluctant to conduct these sessions. It is hence necessary for identifying ways in which the device availability in schools can be improved.

6. Several obstacles to the program implementation are connected to teachers. Shortage of teachers, teachers' existing workload, focus on syllabus completion and exam-based thinking, along with no set separate time being allotted for ELL sessions (say, in the weekly school timetable) to ensure regular implementation has possibly led to uneven implementation of ELL in schools. These issues may require to be addressed in continuous professional development programs with both teachers and HMs to explore how these may have local solutions. The 'ELL implementation models' document could perhaps include 'best practices' of schools in identifying such local solutions.
7. Interactions with teachers and Master Trainers in the midline and endline studies highlighted that several teachers are unable to connect the ELL content to the curriculum, which the Master Trainers chalked up to teachers not being too clear/ aligned with the objectives of ELL. From the classroom observations, it was also evident that some teachers are not very confident when it comes to conducting ELL sessions and that they might benefit from a refresher training session on ELL. It seems that the initial 2-day teacher training (which largely focussed on the technological aspects), needs a significant element of pedagogy and philosophy of education to be added to address some of these challenges. The 'TPCK' (Technological Pedagogical Content Knowledge) framework may be relevant to consider for the CPD program.
8. Some teachers expressed that they are not a part of any ELL-specific WhatsApp group. Others stated that the groups they are a part of have been inactive for some time. Most of the teachers are also not a part of any other professional learning community. Such groups which connect teachers within a school and across schools can be useful for peer learning, sharing of ideas, problems and possible solutions, as well as motivating teachers to implement ELL for their own classes.
9. It was noted that HMs not receiving ELL training can impact their ability to provide the necessary support and oversee the implementation in their school across the classes.

5.3 Efficiency

As a parameter, efficiency measures the outputs -- qualitative and quantitative -- with respect to the inputs, such as using existing devices to maximise student exposure to ELL.

5.3.2 At the District level

1. School-wise data from the Sampoorna dashboard has been the main approach for gauging the implementation of ELL at the block/ cluster level thus far. However, in our FGD with MTs, it came up that this data might not be accurate since some schools are yet to update it. The ability of the district systems to provide support is impacted by a lack of current and correct data. If it is available, the district teams can focus their energies on schools needing more support and thereby improve the efficiency of the overall implementation in the district. The MTs expressed that owing to the high number of schools they were supposed to cover (some having significantly high student strength) and in bigger districts, timely and regular visits were proving to be unfeasible. Better information availability will make the

support processes more efficient.

5.3.3 At the School level

1. Despite the challenges mentioned, several schools and teachers have come up with certain innovative practices to counter these issues such as
 - a. conducting ELL sessions for students in groups, either as a whole class activity or splitting the story narration and activities in a hybrid mode
 - b. setting aside a slot for ELL in their school timetables
 - c. conducting ELL sessions during weekends and/or before or after school timings
 - d. connecting ELL themes and stories to existing textbook content, taking ideas from the initial training on integrating ELL content with the curriculum
 - e. providing additional support to weaker students, and posting videos and photos of the activities conducted in their school's WhatsApp groups
 - f. organising and conducting extra-curricular activities (such as language workshops, English camps, debates, quizzes, class assemblies, poem recitation competition, etc.) to build on the benefits of ELL.
2. Though the HM is the monitoring authority in schools, they have not yet received specific training or orientation on implementing ELL in schools. Developing the HM's abilities to support teachers to design the ELL in a manner that best use of existing resources (devices, time allotted in the timetable) in the school, will increase the efficiency in their use. This is an aspect that the HM will need to take responsibility for, as it is a school-level function and not a teacher-level function.

5.4 Impact

This parameter covers the positive and negative changes produced by ELL, either direct or indirect, intended or unintended. It involves the main impacts and effects resulting from the activity on the local social, environmental and other development indicators. The ELL seems to have impacted the stakeholders in the following ways:

1. The district coordinators and HMs have reported that the program has helped build confidence in teachers, as the recorded materials help the teachers who are not English experts but have started teaching English recently.
2. Some teachers' belief in its impact is so high that they come to the school on Saturday and Sunday to help students and to use the ELL.
3. Though students from Kasargod scored lower than their counterparts from Ernakulam and Kollam in the baseline study, in the endline they have shown the most improvement of the three districts across the different skill levels for classes 3, 5 and 7. Possibly, more children with lower proficiency levels in English are able to benefit from ELL, which indicates a profound impact on equity.
4. Both teachers as well as HMs, noticed improvements in students' language skill levels, the maximum in listening skills, followed by reading and speaking skills. HMs have also

noticed a difference in students' confidence as well as language proficiency levels. The HMs feel that ELL could be responsible for this shift. This belief seems to confirm the well-known 'affective filter' hypothesis of Krashen. If the learner feels confident about learning the language, then it will reduce the 'affective filter' and enhance learning. This has been backed by the findings from the endline study in some capacity, which shows a marked improvement in listening and speaking skills, the ability to read images and creative expression.

5. In language, receptive skills (listening and reading) and productive skills (speaking or writing) are closely interrelated. This could be why although a very little part of the ELL implementation included writing, students' writing skills have also improved significantly. Other writing-focused activities in schools conducted by teachers could have also contributed to the notable improvement observed.

However, as in the case with most Education Research, it is difficult to identify with certainty the extent of progress made in students' language proficiency levels due to the use of ELL. Other academic activities in the school, both in English and in other subjects over the course of the academic year, higher parental support towards education, and community interactions etc, would have contributed to the academic improvements seen in the endline findings and analyses.

5.5 Sustainability

Sustainability here measures whether the benefits of the ELL program activity are likely to be consistent in the long run. The study found that

1. The state officials spoke about creating "parallel strategies for different categories of schools" with respect to the technology and physical infrastructure available. The design of different 'ELL implementation models' for different contexts can support the program to continue, expand and sustain in the years to come.
2. The possibility of creating digital profiles for students and teachers in ELL should also be explored (suitably addressing privacy aspects) since it might allow multiple students to use the same device over the years. This will also help in building the student portfolio over years and enable the teacher to track their progress over the years, which will encourage sustainability.
3. Another major aspect that can influence the effectiveness of ELL, in the long run, is resource creation. Stories have great potential and help in the production and acquisition of the language, which makes KITE's E-Language Lab a crucial and commendable project. MTs, teacher resource persons, HMs and teachers have already expressed that multilevel activities need to be created and more stories are needed to be added to ELL. If teachers are provided appropriate training on storytelling as a pedagogical tool and resource creation for ELL, resource creation can evolve into a more decentralized system so that teachers can develop and upload materials. This way, a growing collection of curated, context-specific resources can be created for ELL, which will strengthen program ownership at teacher level and enhance sustainability.
4. A new dimension to be explored can be to identify strategies to make ELL more inclusive and specifically beneficial for CWSN. This can include providing simple and clear

directions to use ELL, identifying students' strengths and providing appropriate options for input and output, and incorporating adapted activities for students with sensory differences, among others. The digital nature of ELL allows for amplified audio and visual inputs for learners which can be designed to support learning for students with visual and auditory challenges.

5. Formulating a comprehensive perspective plan for the next 5 years, which should include a bottom-up approach to strengthen teacher and school ownership over ELL. Customised orientation on the same for HMs, teacher resource persons, master trainers, district coordinators, and educational officers can help ensure that the existing monitoring, feedback and support processes are strengthened.
6. Based on the experience and observations in the three districts, it seems that including teachers from subjects other than English is a good idea, since it leads to more active members in conducting the Language Lab program and helps students utilise it in the best way possible. As more stories are developed which can connect to the different subjects taught (history, geography, political science, science and even mathematics), it will enable other subject teachers also see value in ELL and improve the sustainability of ELL.
7. A collaborative open educational resources (OER) model can be valuable for both supporting continuous teacher professional development for teachers and resource creation. (IT for Change has developed a toolkit for the 'Professional Learning Community - OER development model of TPD' based on its work in Karnataka. Elements of this model would be relevant to TPD program for ELL. The PLC and OER components act as a virtuous cycle, supporting the sustainability of the processes.
8. It is perhaps now time to explore with SCERT how ELL implementation can be supported since a common understanding will be integral in bringing ELL into the mainstream.

Some other suggestions to strengthen the ELL program are discussed in the next section on recommendations.

6. Recommendations

The comprehensive set of interactions with primary and secondary stakeholders in the baseline conducted in the midline and endline studies helped identify many different ways in which the ELL program can be further strengthened. The recommendations section is provided by stakeholders and further split into immediate and long-term suggestions.

6.1 For KITE state functionaries

Short-term recommendations

1. Orientation and training of stakeholders
A comprehensive orientation program for all stakeholders will help strengthen the understanding and ownership over ELL
 - a. Teacher Continuous Professional Development (CPD)
Teachers have received valuable training in terms of the ELL application, its installation and use, which has facilitated its widespread deployment. The next level of professional development that is based on integrating the technological, pedagogical and content aspects of ELT will support teachers to further improve the implementation.
 - b. Training based on TPCK framework - The ‘Technological Pedagogical Content Knowledge (TPCK) framework³, which focuses on technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK), offers a productive approach to many of the dilemmas that teachers face in implementing ELL in their classrooms. This can help tackle the challenge teachers face in integrating ELL in ELT in their classrooms. The framework can be useful to design such a program that not only includes leveraging the functionality offered by the ELL but also the pedagogical and content aspects of ELT. More specifically, the teacher training program could cover
 - i. ELL-specific training - a revised training session for all teachers that covers:
 1. Technological - ELL larger objectives, its potential benefits, different set-up processes that optimize the device availability in the school
 2. Pedagogical - how to integrate ELL with the curriculum, demonstration of different approaches to ELL sessions using existing resources, conduct formative assessments, interpret assessment data and enhance learning possibilities
 3. Content - how to individually and collaboratively create/adapt/curate stories to supplement and complement existing stories and develop relevant activities and assessments around these stories.
 - ii. Improving teachers’ proficiency in English - Language teachers must see

³Mishra, P., & Koehler, M. J. (2006). *Technological pedagogical content knowledge: A framework for integrating technology in teachers’ knowledge*. *Teachers College Record*, 108 (6), 1017–1054

themselves as creators and producers of language. Thus, continuous professional development that includes strategies to improve teachers' proficiency in English (including the more complex capacities such as creative writing, and review of writing) is important and workshops can be planned in collaboration with RIESI.

- iii.** Multilingual pedagogy - Like most parts of India, Kerala too displays a relatively high occurrence of multilingualism. It can be observed in both small towns and cities (due to in-migration from other states) as well as in more remote/ tribal regions (with several local/ tribal languages). Efforts need to be put in towards familiarizing teachers with multilingual approaches to ELT including code-switching, code-mixing, and translanguaging between 2 or more languages, based on their classroom contexts.
 - iv.** The larger purpose of education - There is a need to include aims of education to refresh the understanding of teachers from time to time, and practically connect these aims to teacher contexts. This will help in addressing the larger challenges of 'folk pedagogies' such as the role of the syllabus and the role of assessments in learning.
 - v.** Varied modes of CPD - Although the traditional method of conducting teachers' workshops can be effective, online and blended courses (MOOC model), online resource repositories including stories, activities, assessments, common queries and FAQs, as well as building and strengthening professional learning communities are methodologies that can help provide teachers with continuous support and the facilitation required to make ELL a regular classroom process. SCERT and KITE's collaboration, leveraging the experience of the research institutions on such a model of TPD will be greatly valuable.
 - vi.** Exemplar demonstrations (live and through videos) on how to conduct ELL sessions
Demonstrating how to conduct ELL sessions using different approaches - for groups of students, as a whole class activity or using hybrid mode - can help teachers visualise the implementation better and encourage them to come up with their own innovative strategies for integrating ELL with ELT.
 - vii.** Different approaches to implementing ELL in schools need to be discussed (with feedback), documented and disseminated widely using SRGs, WhatsApp groups, teacher courses etc. to support peer and collaborative learning. Periodic documentation can also be done online, and even through a publication (e-newsletter on ELT).
- c.** On HM capacity building
In our study, we observed where HMs have a language background - ELL implementation is higher. Having an academically engaged HM appears to enhance program effectiveness. Hence, a program of HM capacity building, focusing on "Pedagogic leadership" is required so that all HMs are able to provide academic leadership (apart from administrative support) for the ELL implementation

- d. Pedagogical Leadership at all levels**
A similar program of ‘pedagogical leadership’ will also help the teacher support roles, and enhance the quality of implementation (basically this requires an academic component of language learning, in addition to the administrative aspects commonly understood and accepted). Pedagogical Leadership at all levels - school, block, and district will significantly enhance the effectiveness of program design and implementation.

2. Conducting a state-wide online survey to identify issues with existing technology infrastructure

An online survey form (containing a list of possible technology and implementation issues) can be available in ELL-implementing schools in all districts (in Sampoorana), which should be periodically (monthly) refreshed. If the data collected is current, then such a survey can help identify and provide schools for priority visits by the district teams and allow targeted support to schools and help them make judicious use of the existing infrastructure.

3. Revising and sharing guidelines for implementing ELL

It might be helpful to create and share comprehensive guidelines for schools and teachers on how to conduct ELL sessions, the factors and parameters that affect implementation including the number of devices, student strength etc. The document can also include a set of template models as well as FAQs. The document on proposed models of implementation of ELL can provide some suggestions in this regard. This document should be a digital document that is regularly refreshed based on actual teacher experiences and learnings, and include best practices. Such a document can also be a part of the ‘content creation’ program discussed earlier in CPD. The Department should consider guidelines on including ELL in the school timetable so that it can also be implemented as a part of the teaching-learning process in schools. The research team plans to share a draft of such a document identifying potential models of ELL implementation.

4. Strengthening the review and support mechanisms for ELL
The study recognized a strong network for providing feedback and mutual support between teachers and the district resource teams. This can be further strengthened by:

- a.** planning and scheduling visits of education officers, master trainers and resource persons to the schools in line with the school's needs
- b.** having regular meetings (can be virtual also) to discuss ELL implementation at different levels and its impact (both qualitative and quantitative), feedback from stakeholders and review of support provided to teachers and schools
- c.** The ELL program performance indicators can be reviewed based on the experience gathered so far, in discussions with teachers.
- d.** Though the study did not cover the Sahitham student mentoring programme, its principles and lessons relating to mentoring could be utilized to support teacher mentoring in ELL. The mentor teacher can closely observe, study and record online the improvement in each students’ linguistic skills, and use this to plan necessary context-based supplementary learning activities. Digital support can be used to record and recall individual data for mentoring, and also can be ‘clustered’ by

teachers which can help them in designing group activities. (The Public AI program is expected to provide support to teachers, for such clustering)

Longer term recommendations

1. Resource creation and updating ELL content

ELL should be envisioned as a curated repository of stories which caters to multilevel learners spanning different themes and contexts.

- a. Right now, the content creation process is centralised. Decentralising this process at the district level can help include districts' unique characteristics and contexts in the stories, while more multicultural stories can be introduced at the State level.
- b. Schools can be provided with a list of themes on which stories can be developed (by teachers and students), along with access to a platform to upload the content created.
- c. A vetting process can be put in place for curating the collected stories, as well as developing appropriate multilevel activities, even at the district levels (district-level decentralization of curricular resource development is the suggestion from the initial DIET guidelines and the digital era can support this process, the benefit being contextualized resources for learning). Practising teachers, resource persons and academics in the KITE team can oversee this process.
- d. The existing activities could be revised to include multilevel activities that explicitly allow individual, pair and group work.
- e. Student feedback should also be factored in regular revisions of the content, and mechanisms for collecting these need to be devised.
- f. Ways to make ELL content more inclusive and accessible to CWSN (for example, including a sign language component in ELL story narration videos) can be explored.

2. Making ELL available on alternative devices

The inadequate number of working devices seems to be a significant factor in slowing down the ELL implementation. This is a non-trivial challenge as devices (computers/laptops) are expensive. Making the ELL available on cheaper devices like Tablets (for performing some of the ELL activities such as audio and video narration of stories) could be one option to increase device availability, this consideration may need to be weighed against equity considerations. Making ELL available on hand-held devices may provide students, who have access to such devices at home, more time on ELL than students from less privileged backgrounds, causing inequity. It should also be considered that donations of tabs and phones may be easier to obtain than those of computers or laptops, so bridging the digital divide may be easier. But this should be done by taking parents into confidence including on aspects such as digital addiction.

3. Including ELL in the State literacy mission

The possibility of making ELL a part of Kerala's literacy mission should be explored, especially for older children who were not able to complete their schooling. ELL can also

be explored, as a part of an adult literacy program, say for parents and community members, and can grow to include relevant multilevel and context-based text, audio, and video resources to support language learning for adults. This can tie into adult literacy/panchayat library programs, to strengthen deep reading habits among all in society.

4. Incorporating AI to support teachers in student assessment may enable addressing the load and complexities of assessing individual student portfolios.

6.2 For district resource team

Short-term recommendations

1. Planning visits to schools based on requirements. School support can be further strengthened by scheduling visits of resource persons based on need and priority.
2. Building Professional Learning Communities (PLCs)

Building active PLCs of teachers, (say, at the sub-district level) can help provide a platform to teachers where they can

- a. work in collaborative teams to critically examine and discuss layered standards-based learning expectations for students
- b. share and identify the most effective strategies for achieving the learning objectives
- c. develop common lesson plans incorporating the selected strategies, including formative assessment
- d. share reflections, successes and challenges faced in conducting ELL sessions
- e. review students' progress, identify learning gaps and discuss potential modifications to instructional strategies
- f. Commonly faced challenges, follow-ups and strategies for providing pedagogical and technological support can be discussed in regular physical meetings, complemented with phone-based communities at the cluster, block or district level.

To make such PLCs effective, active techno-pedagogical facilitation is required - making use of the 'technological' to strengthen the pedagogical processes.

6.3 For teachers and schools

Short-term recommendations

1. Incorporating ELL in academic planning

This study shows that a higher frequency of implementation of ELL can further improve students' language acquisition and LSRW skills. Allotting a block period in the timetable for ELL, and integrating ELL sessions with other subjects (such as computers or science), free periods and/ or extra time before or after school hours are some ways to make ELL sessions a part of regular classroom teaching. (These suggestions were identified during the study, and as mentioned, an ongoing effort to document 'best practices' will be useful for all)

2. Making judicious use of existing school infrastructure

The existing technology infrastructure in schools must be used prudently. Any issues with the technology infrastructure (such as installing the client-server setup, or devices not functioning optimally) should be reported to KITE at the earliest.

- a. A fixed period for ELL in the timetable can help lower primary, upper primary and high school classes designate time for access to labs/ devices.
- b. Wherever possible, smart classes and projectors can also be used to conduct ELL sessions as a whole class activity. If possible, pairs of earphones can be made available for students to help them better engage with ELL activities.
- c. ELL sessions need not necessarily be visualised as a strict computer-lab type of setup. More innovative ways of setting up ELL can be devised. For example, creating a comprehensive learning space where smaller groups of students can work on one activity at one skill/ hub station, and then move to another hub/ station for the next skill or activity (illustration, reading, listening, speaking, writing etc.). A note on "Proposed models of ELL implementation," which can be collaboratively prepared by the research and ELL teams can provide some suggestions in this regard.

Long-term recommendations

1. Teacher professional development

Being an active participant in ELL and ELT-related teacher development programs is crucial not only for better implementation of ELL but also for the CPD of each teacher. Hands-on practice of ELL and conducting ELL sessions is essential. Active engagement of teachers in the PLCs to discuss ELL implementation strategies, best practices, impact on students (via formative assessments), challenges and feedback amongst each other and with the master trainers and resource persons can prove to be valuable.

2. Supporting language learning

By giving students additional speaking and writing activities, follow-up questions and take-home assignments based on ELL content, and conducting more language-based co-curricular and extracurricular activities, teachers can further supplement language learning in learners. If possible, the team suggests that language teachers of the schools come together and think of multilingual approaches (content and learning approaches) that can be used in ELL (and other language teaching) sessions. Given the increasing emphasis on ‘multilingual’ approaches to language teaching, collaboration amongst language teachers in the school is an important area for exploration.

3. Resource creation process

A collaborative resource creation process can be taken up by teachers in each school, where the stories include age-appropriate themes and elements from the local context. Activities such as story writing, or digital storytelling/ writing competitions can be conducted for students to generate new stories and also become a part of this process.

4. Exploring ways to improve device availability

All stakeholders should come and look for ways to improve device availability in schools. KITE is also exploring ways to allow multiple students to use the same device such as using stand-alone architecture (not dependent on a client-server setup) using the internet and providing a file-exporting option for all systems in schools.

7. Conclusion

This report summates the findings from baseline, midline and endline conducted during the first year of implementation of the ELL program. Stories have great potential and help in the production and acquisition of the language, which makes KITE E Language Lab a crucial and commendable project. With a fun-based learning structure, ELL has been unanimously praised as a unique and engaging learner-centric language learning resource for students studying in government schools across Kerala. Its strength lies in the interesting storytelling-based pedagogy, innovative implementation strategies developed by teachers, and a strong system for providing support and feedback to teachers and schools. Master trainers, district coordinators and the KITE state officials were all aware of the challenges that have come up at the ground level while implementing ELL in classrooms - which speaks for the smooth flow of communication and coordination among the stakeholders.

ELL offers complete linguistic immersion and self-paced learning possibilities for students, providing them with a conducive and focused learning environment to increase the effectiveness of comprehension and individual learning. The use of audio and video elements, interactive activities, and simulations seem to have enhanced the learning experience of students to some extent - which is reflected in students' increased interest levels reported by teachers. Although the existing technology infrastructure in schools and uneven implementation came up as major challenges, students' performance levels in the endline have still shown significant improvement vis-à-vis their baseline performance when comparing intervention and control schools, particularly for listening skills, the ability to read images and writing skills.

It was also found that regularity in the implementation of ELL translates to greater improvements in students' language proficiency levels. That being said, in light of the challenges identified, there is a need to refine the methodologies for the adoption and integration of ELL into classroom teaching. A set of comprehensive guidelines and FAQs can help teachers visualise the implementation of ELL and its integration with ELT better. Orientation/ training of all stakeholders will provide additional clarity on the objectives of ELL and ensure efficient implementation.

The need for a comprehensive CPD plan for teachers which focuses on ELL-specific training, and improving their language proficiency and understanding of content and pedagogy, has been highlighted in the report. The study recommends that along with creating professional learning communities of teachers, they be provided continuous academic and technological support to build their comfort level, confidence and expertise in using ELL.

For the coming years, the study stresses the need for a decentralised resource creation process. ELL should be envisioned as a curated repository of stories that are multilevel, multilingual and span multiple themes and contexts within (and outside) Kerala, to cater to young and adult learners alike. The research team is in the process of developing a comprehensive document on proposed models of implementation that can potentially counter the hindering factors to ELL identified in this study. Ultimately, the strength and sustainability of the ELL program lie in the network of support that exists amongst its stakeholders. Since such collaboration cannot be forced, this network should be strengthened and leveraged to provide continuous support to teachers and schools for them to feel committed to, and further own the ELL program.

8. Annexure - Endline Study

1. The baseline study report can be found [here](#).
2. The endline report can be found [here](#).
3. The student interaction tool used in the baseline and endline studies can be found [here](#).
4. The sample teacher interaction tool from the endline study can be found [here](#).
5. The sample HM interaction tool from the endline study can both be found [here](#).

KITE ELL Endline Study – All charts and tables

1. Endline Study Design

Table 1.1: The selection criteria for participants in the endline study was as follows:

Stakeholder	Data Collection Mode	Sample	Comment
KITE District Coordinators and Master Trainers (Kasargod)	Informal discussion	3-4	1 DC and 2-3 coordinators as per availability
KITE District Coordinators and Master Trainers (Ernakulam)	Informal discussion	3-4	1 DC and 2-3 coordinators as per availability
KITE District Coordinators and Master Trainers (Kollam)	Informal discussion	3-4	1 DC and 2-3 coordinators as per availability
HMs (Kasargod)	DI	5	5 HMs from 5 ELL schools from Kasargod
HMs (Ernakulam)	DI	5	5 HMs from 5 ELL schools from Ernakulam
HMs (Kollam)	DI	5	5 HMs from 5 ELL schools from Kollam
Teachers and Teacher Resource Persons (Kasargod)	DI	2-3	2-3 Teachers involved in conducting ELL sessions per ELL school

Teachers and Teacher Resource Persons (Ernakulam)	DI	2-3	2-3 Teachers involved in conducting ELL sessions per ELL school
Teachers and Teacher Resource Persons (Kollam)	DI	2-3	2-3 Teachers involved in conducting ELL sessions per ELL school
Students	Student Interactions	8 x 3 x 6 x 3	Individual interactions with 8 students per class (3, 5 and 7) for 5 ELL and 1 Control school in all 3 baseline districts
	Total	468*	

* exact number subject to availability of participants

Table 1.2: The schedule followed for the endline study for Ernakulam and Kollam :

Day-wise Visit Plan for Ernakulam and Kollam (14th to 17th February 2023)		
	Agenda	Slot
Day 1 (14th Feb)	Arrival & Check-in	7:30 - 8 AM
	Brief discussion with the district research coordination team	9:30 to 10 AM
	School visit (S1)	10:30 AM to 12:30 PM
	Lunch	12:30 to 1:30 PM
	School visit (S2)	2 to 4 PM
Day 2 (15th Feb)	School visit (S3)	10:30 AM to 12:30 PM
	Lunch	12:30 to 1:30 PM
	School visit (S4)	2 to 4 PM
Day 3 (16th Feb)	School visit (S5)	10:30 AM to 12:30 PM
	Lunch	12:30 to 1:30 PM
	School visit (S6)	2 to 4 PM
Day 4 (17th Feb)	Interaction & Debrief meeting with district research coordination team	10 AM to 1 PM
	Lunch	1 to 2 PM
	Departure	5 PM onwards

Table 1.3: The schedule followed for the endline study for Kasargod :

Day-wise Visit Plan for Kasargod (28th February to 3rd March 2023)		
	Agenda	Slot
Day 1 (28th Feb)	Arrival & Check-in	7:30 - 8 AM
	Brief meeting with the district research coordination team	9:30 to 10AM
	School visit (S1)	10:30 AM to 12:30 PM
	Lunch	12:30 to 1:30 PM
	School visit (S2)	2 to 4 PM
Day 2 (1st March)	School visit (S3)	10:30 AM to 12:30 PM
	Lunch	12:30 to 1:30 PM
	School visit (S4)	2 to 4 PM
Day 3 (2nd March)	School visit (S5)	10:30 AM to 12:30 PM
	Lunch	12:30 to 1:30 PM
	School visit (S6)	2 to 4 PM
Day 4 (3rd March)	Interaction & Debrief meeting with district research coordination team	10 AM to 1 PM
	Lunch	1 to 2 PM
	Departure	5 PM onwards

2. Findings from student interactions

2.1 Findings from Student Interactions for CLASS 3

Chart 2.1.1: Listening Skills across all three districts in the endline

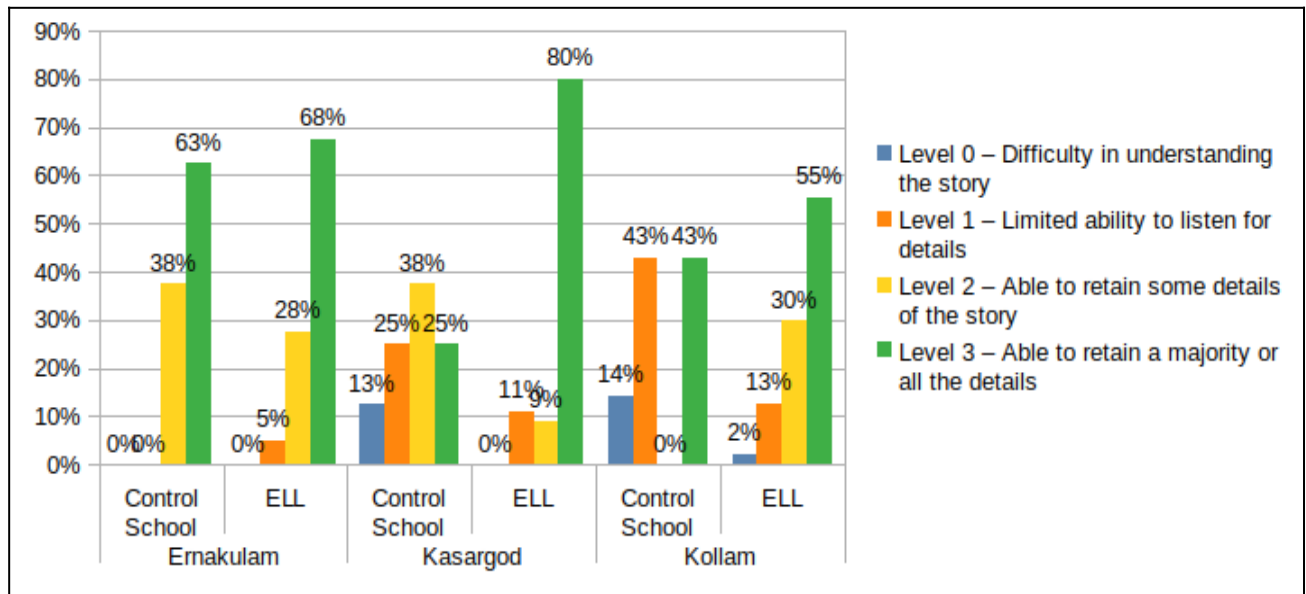


Chart 2.1.2: Improvement in students' performance levels in listening comprehension between control school (left) and high-frequency ELL school S3 (right) for Class 3 in Kasargod

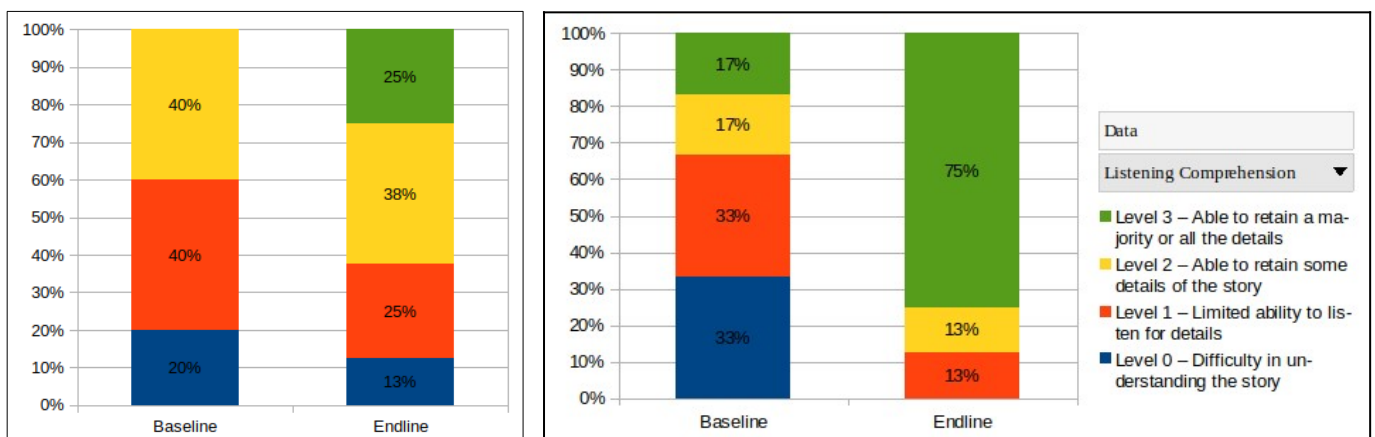


Chart 2.1.3: Reading Skills across all three districts in the endline

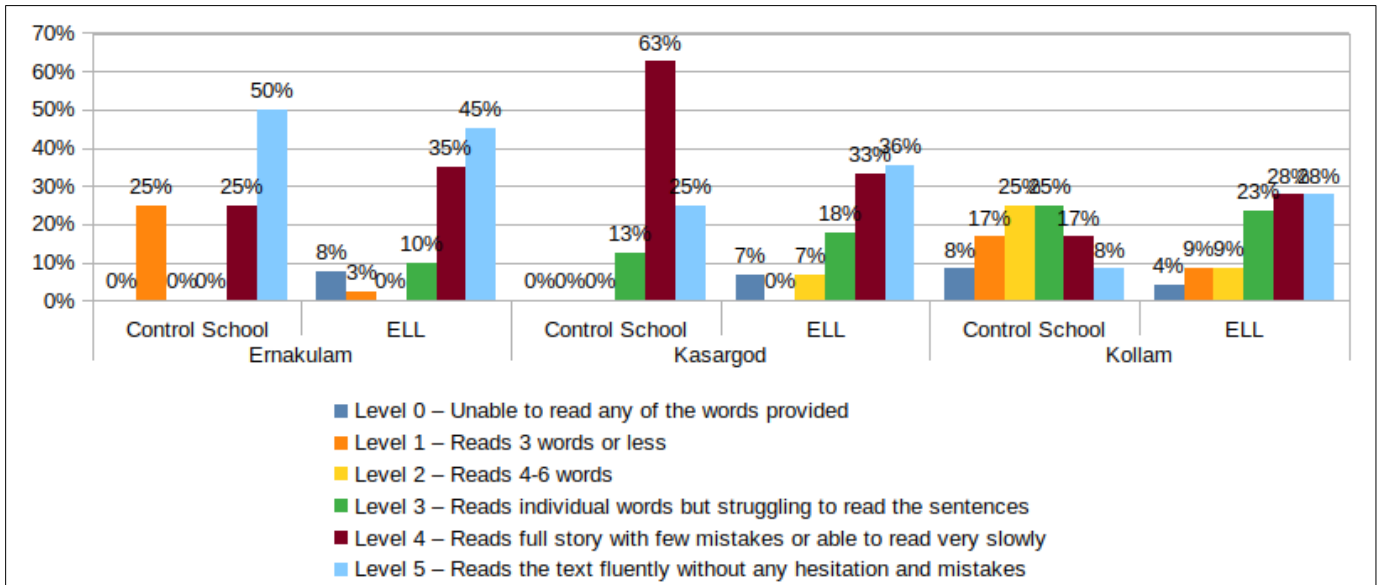


Chart 2.1.4: Improvement in students’ performance levels in reading skills between control school (left) and high-frequency ELL school S6 (right) for Class 3 in Kollam

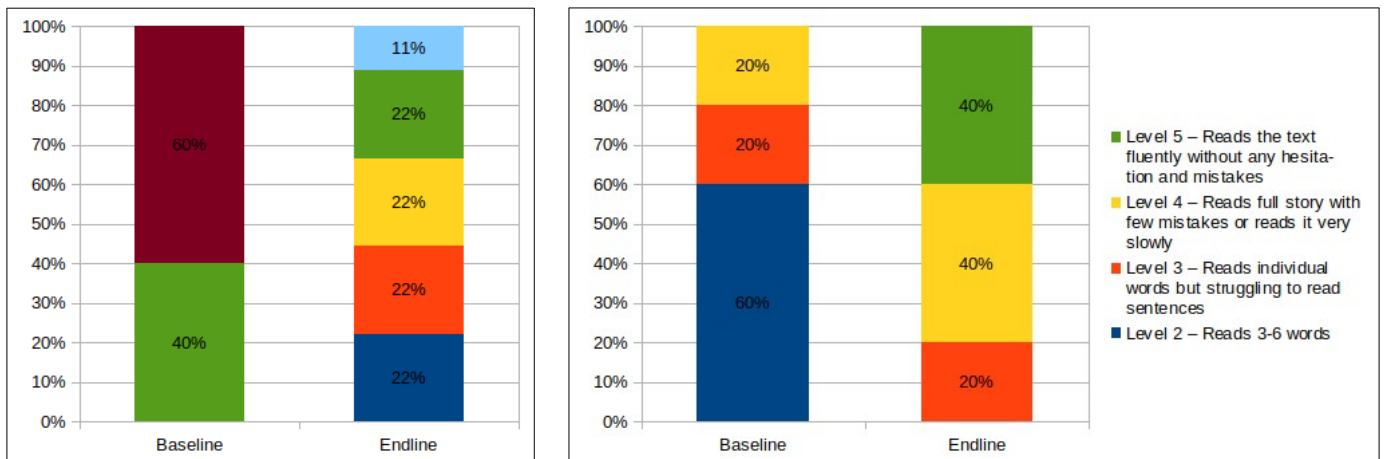


Chart 2.1.5: Ability to read images and Speaking Skills across all three districts in the endline

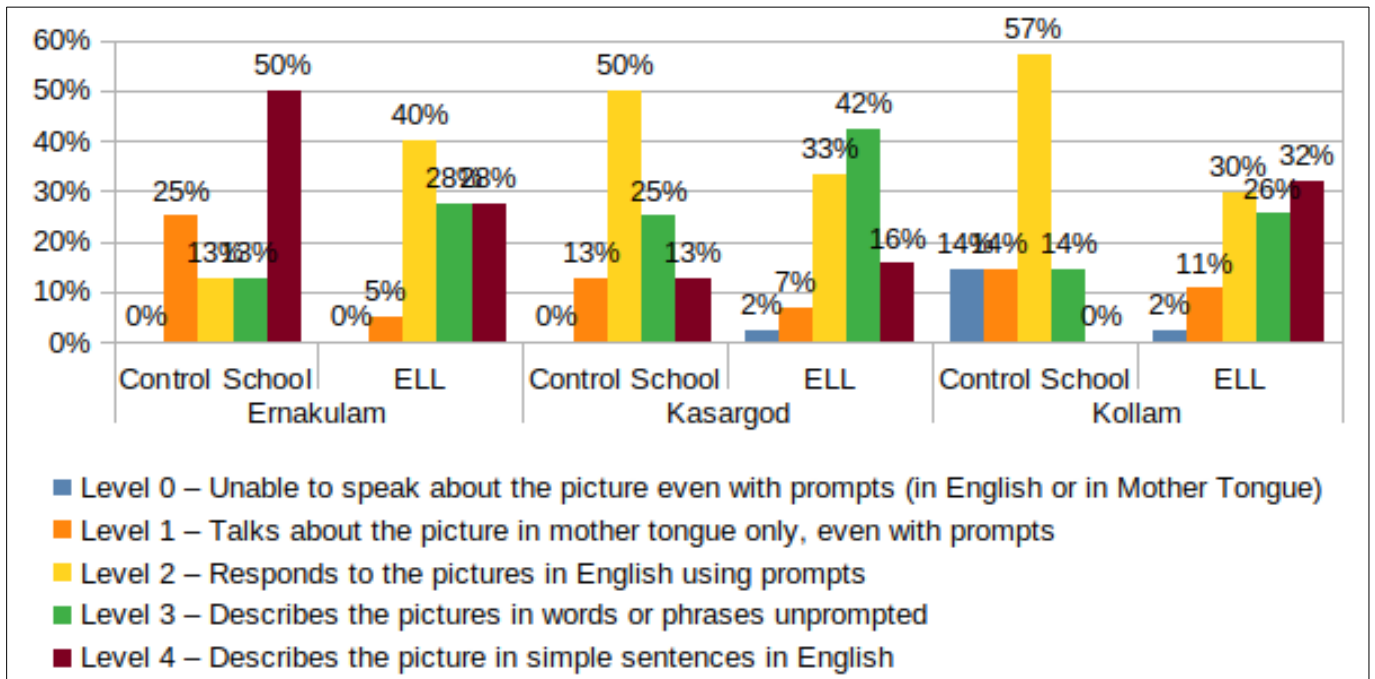


Chart 2.1.6: Improvement in students’ performance levels in reading images and speaking skills between control school (left) and high-frequency ELL school S6 (right) for Class 3 in Kollam

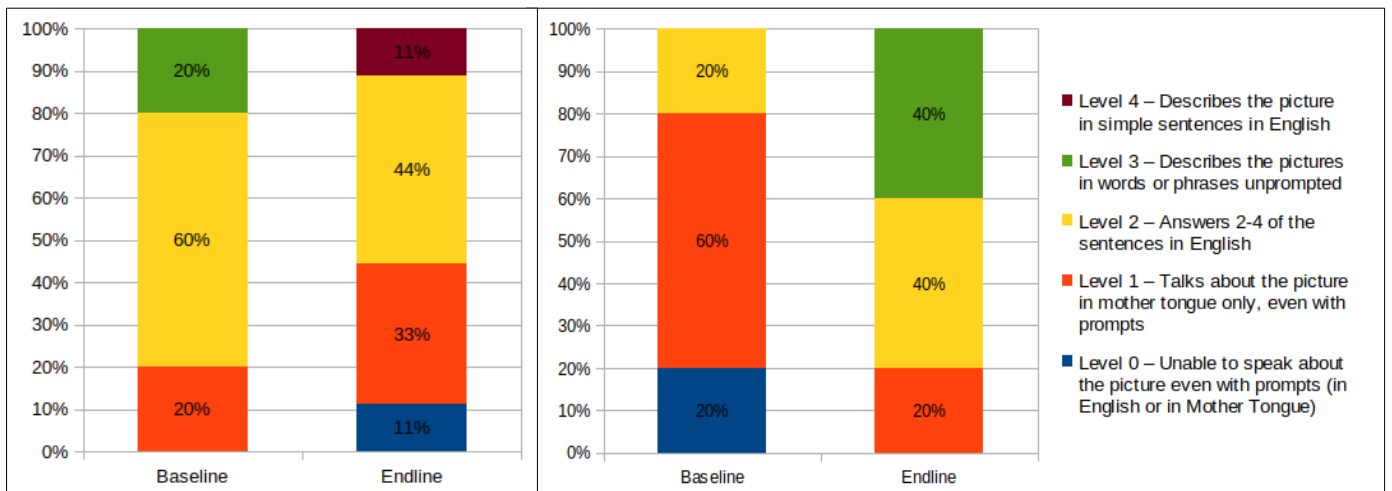


Table 2.1.7: Writing Skills across all three districts in the endline

District	Control/ ELL	Level 0 – Unable to draw or write	Level 1 – Draws, but does not write	Level 2 – Draws & writes some	Level 3 – Draws & writes words/	Level 4 – Draws & writes words or	Level 5 – Draws & writes contextually
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			anything	letters or words	phrases not relevant to context	phrases/sentence fragments relevant to context	relevant 1-4 simple sentences
Ernakulam	Control School	0%	13%	13%	0%	25%	50%
	ELL	0%	5%	13%	0%	28%	55%
Kasargod	Control School	0%	0%	13%	13%	50%	25%
	ELL	0%	18%	7%	7%	22%	47%
Kollam	Control School	14%	29%	29%	29%	0%	0%
	ELL	2%	2%	9%	21%	34%	32%

Chart 2.1.8: Writing Skills across all three districts in the endline

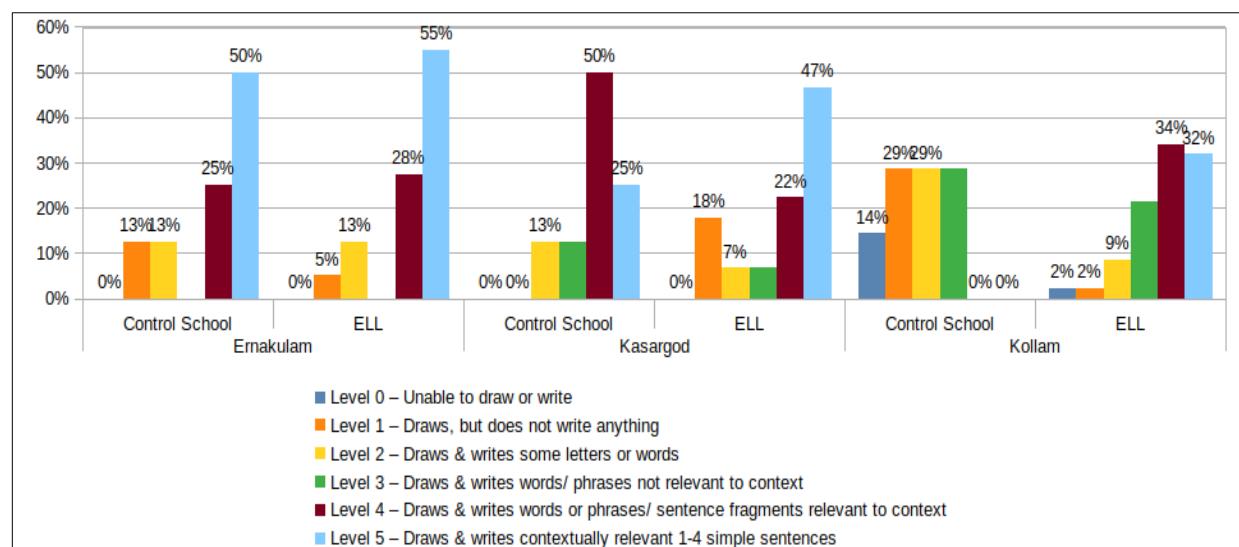


Chart 2.1.9: Improvement in students' performance levels in writing skills between control school (left) and high-frequency ELL school S4 (right) for Class 3 in Kasargod

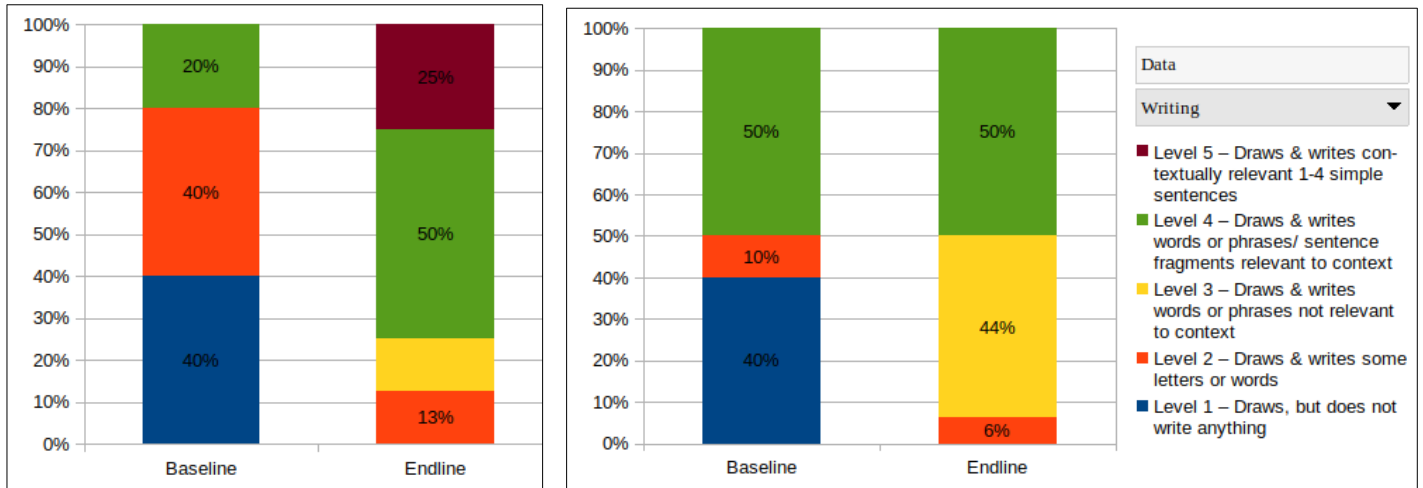


Chart 2.1.10: Improvement in students' performance levels in writing skills between control school (left) and high-frequency ELL school S7 (right) for Class 3 in Kollam

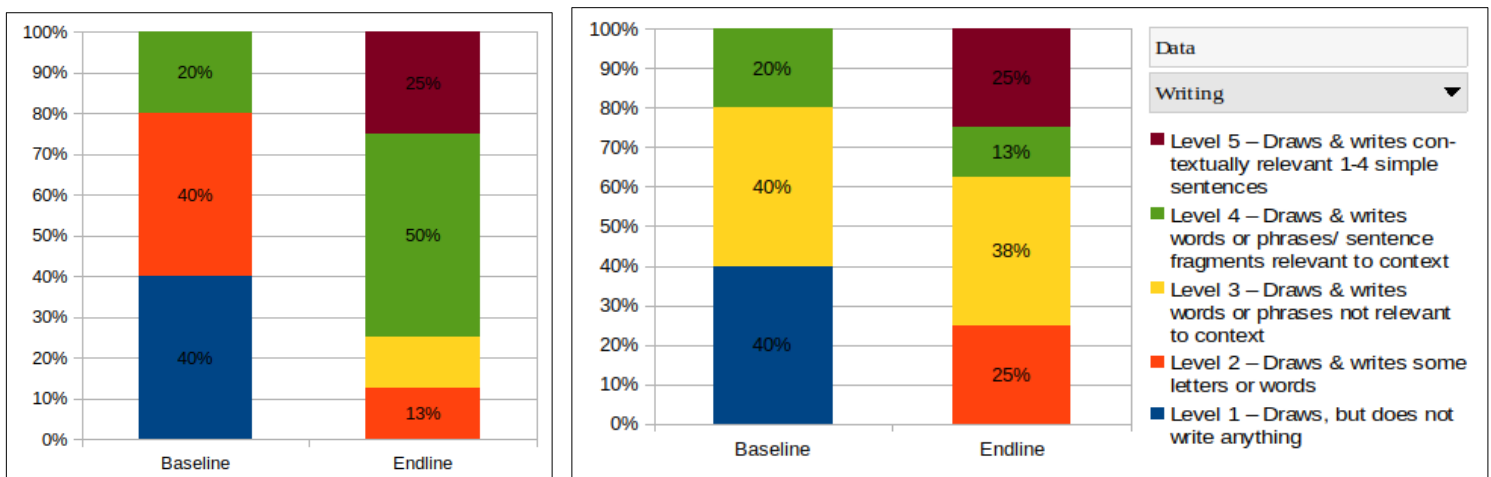


Table 2.1.11: Ability to follow instructions across all three districts in the endline

District	Control/ELL	Level 0 – Did not understand instructions even in mother tongue	Level 1 - Understood instructions in mother tongue but not in English	Level 2 – Understood some instructions in English; responded only in mother tongue	Level 3 – Understood some instructions in English, responded using few words/ phrases in English	Level 4 - Understood most instructions in English, responded using few words/ phrases in English	Level 5 – Understood all instructions in English, responded in appropriate words, phrases & sentences in English
Ernakulam	Control School	0%	13%	13%	13%	0%	63%
	ELL	0%	0%	8%	5%	23%	65%
Kasargod	Control School	0%	0%	13%	25%	38%	25%
	ELL	0%	2%	11%	11%	40%	36%
Kollam	Control School	0%	71%	29%	0%	0%	0%
	ELL	2%	6%	13%	32%	15%	32%

Chart 2.1.12: Ability to follow instructions across all three districts in the endline

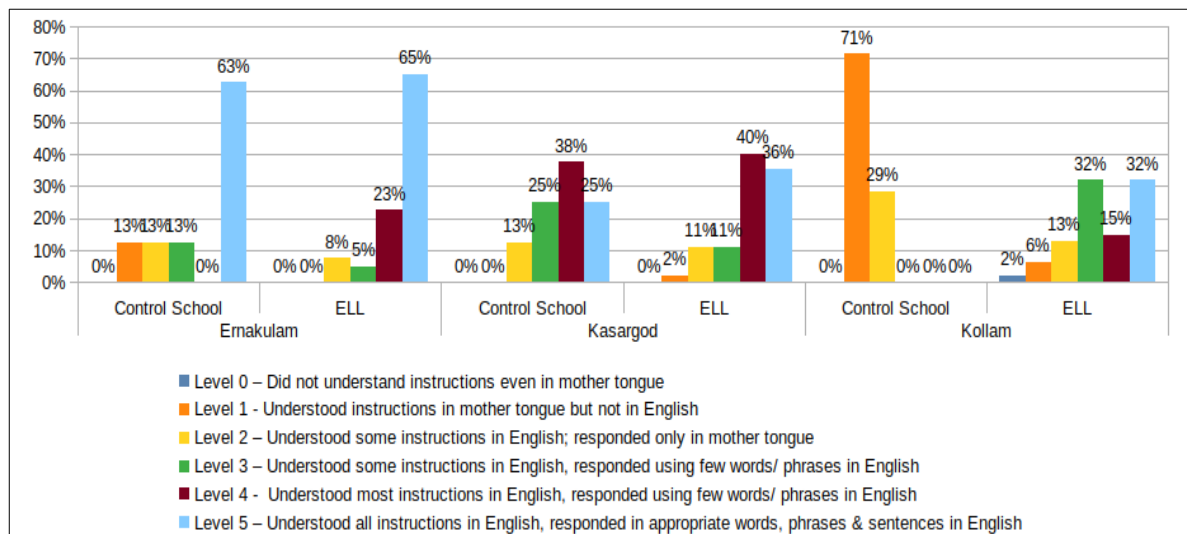
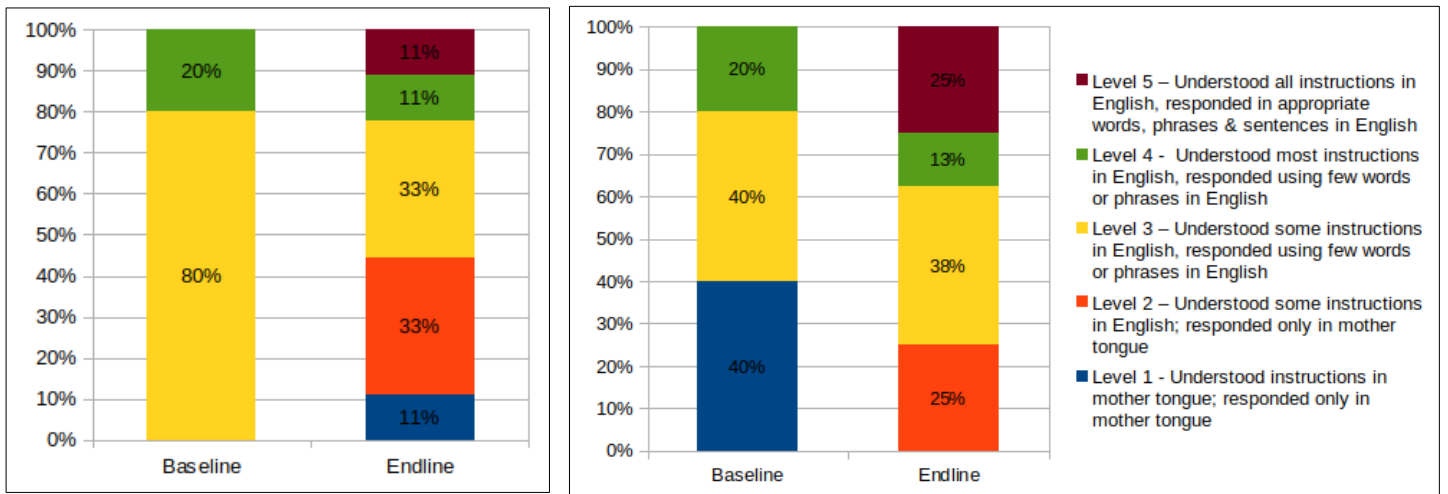


Chart 2.1.13: Improvement in students’ performance levels in ability to follow instructions between control school (left) and high-frequency ELL school S7 (right) for Class 3 in Kollam



2.2 Findings from Student Interactions for CLASS 5

Table 2.2.1: Listening and Speaking Skills across all three districts in the endline

District	Control/ELL	Level 0 – Unable to understand audio clip, does not respond even in mother tongue	Level 1 – Understands the vocabulary & some details of the discourse, speaks mostly in mother tongue	Level 2 – Understands and follows the discourse, uses a few words or phrases in English (1-2 lines or phrases)	Level 3 – Understands and follows the discourse, responds using a few phrases/sentences in English (3-5 phrases or sentences)	Level 4 – Can tell a lot of the details contextually relevant to the discourse in English (above 5 sentences)
Ernakulam	Control School	0%	13%	38%	25%	25%
	ELL	0%	18%	21%	26%	36%
Kasargod	Control School	0%	0%	50%	50%	0%
	ELL	0%	10%	32%	42%	16%
Kollam	Control School	0%	57%	29%	0%	14%
	ELL	2%	17%	29%	27%	25%

Chart 2.2..2: Listening and Speaking Skills across all three districts in the endline

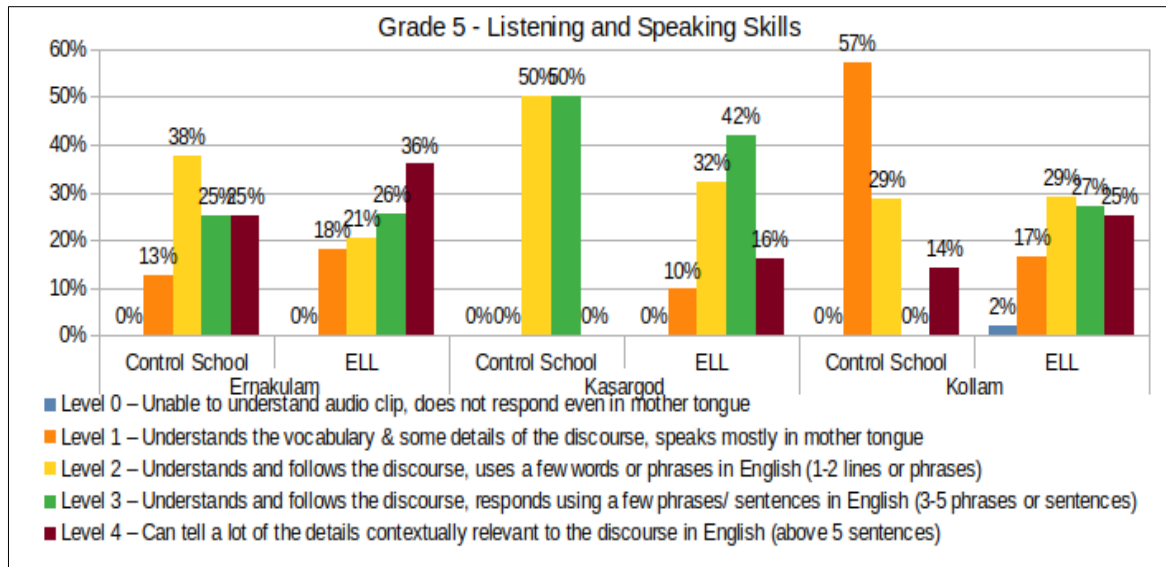


Chart 2.2.3: Improvement in students’ performance levels in listening and speaking skills between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam

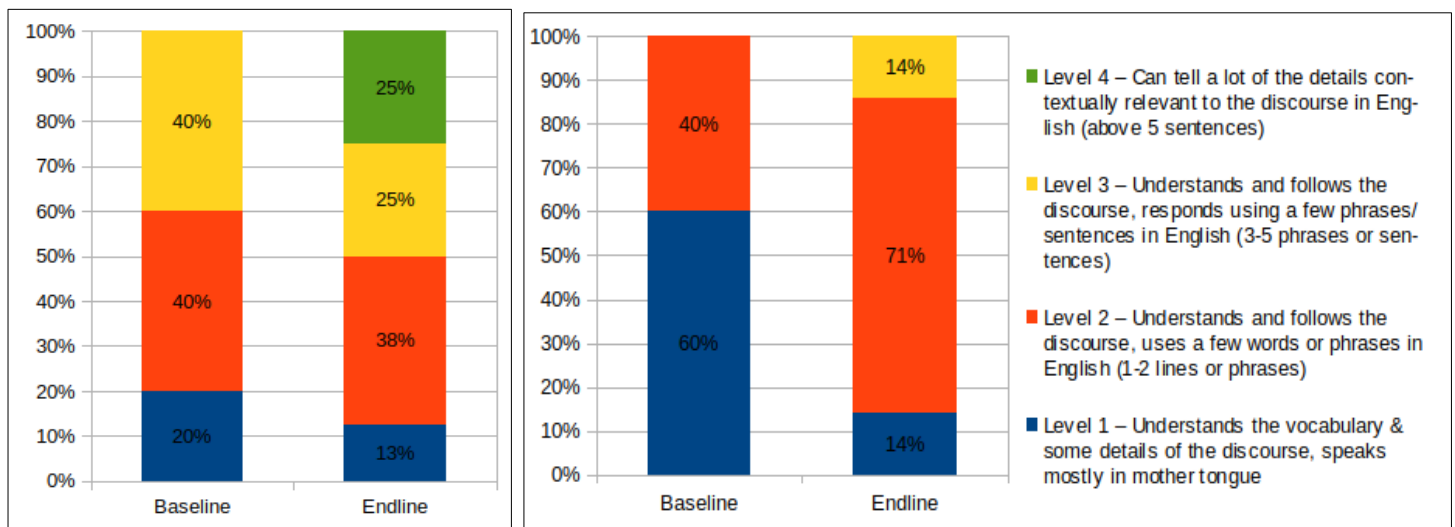


Chart 2.2.4: Improvement in students’ performance levels in listening and speaking skills between control school (left) and high-frequency ELL school S10 (right) for Class 5 in Kollam

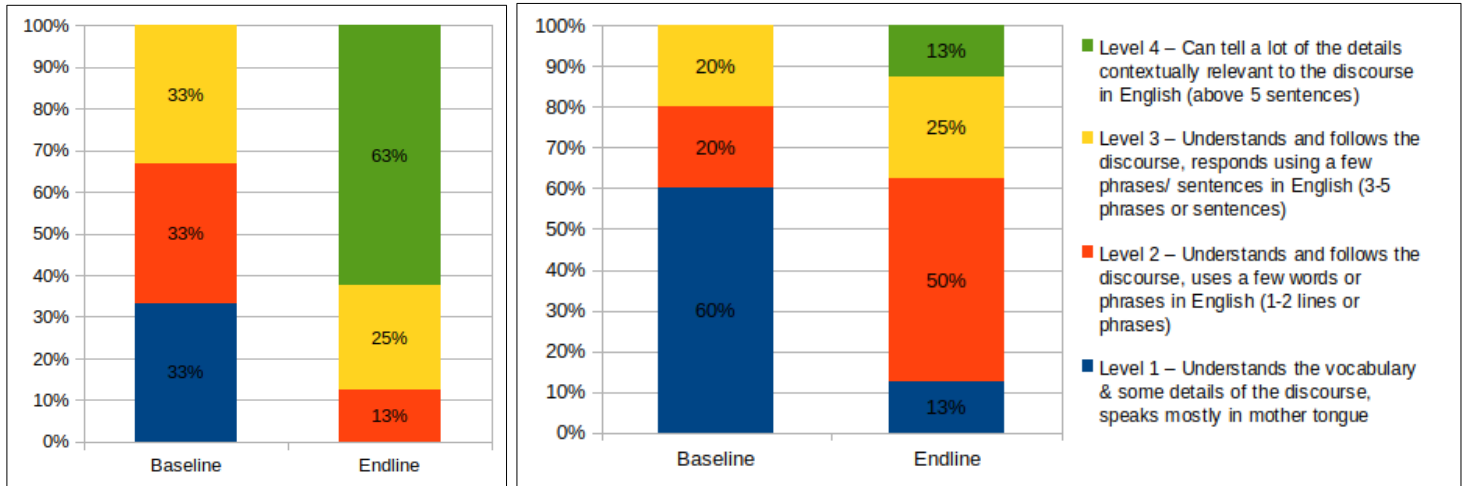


Table 2.2.5: Creative Expression across all three districts in the endline

District	Control/ ELL	Level 0 – Unable to speak about the topic in English	Level 1 – Uses few words and thoughts with prompts from the facilitator	Level 2 – Uses proper sequencing of ideas, vivid descriptions of events, setting, dialogues or characterisation; sustains the conversation with proper sequence of exchanges
Ernakulam	Control School	0%	63%	38%
	ELL	8%	38%	54%
Kasargod	Control School	0%	88%	13%
	ELL	3%	68%	29%
Kollam	Control School	0%	86%	14%
	ELL	10%	46%	44%

Chart 2.2.6: Creative Expression across all three districts in the endline

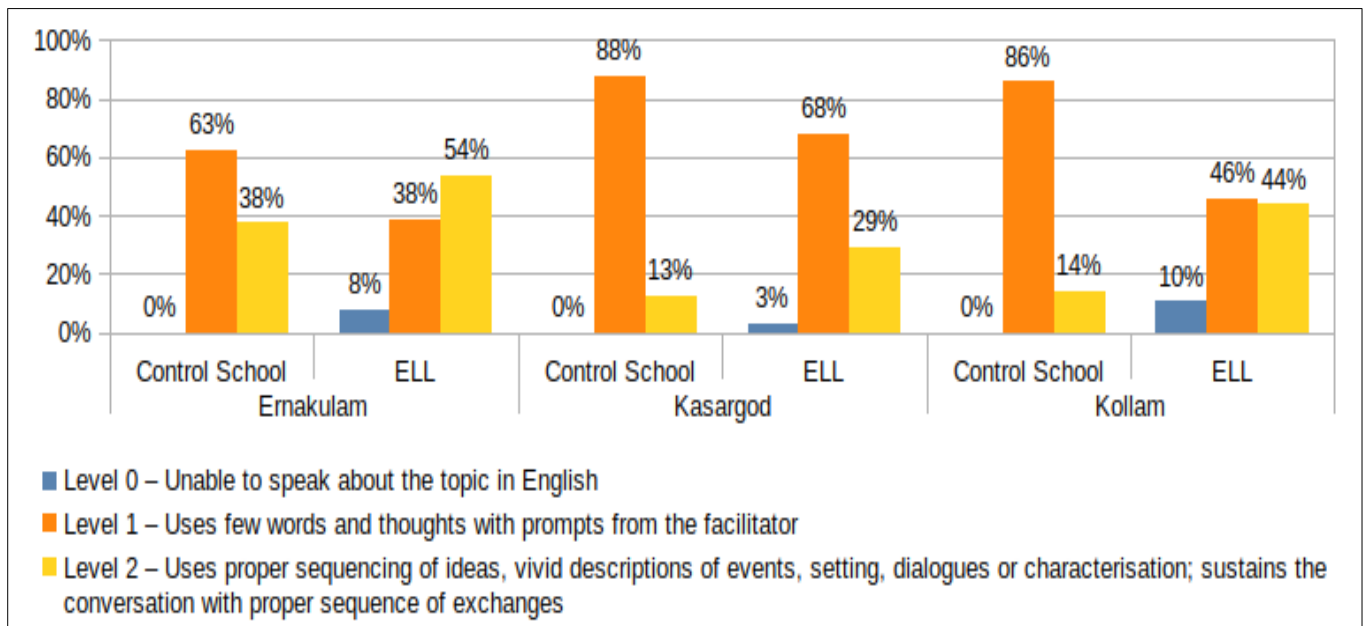


Chart 2.2.7: Improvement in students’ performance levels in creative expression between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam

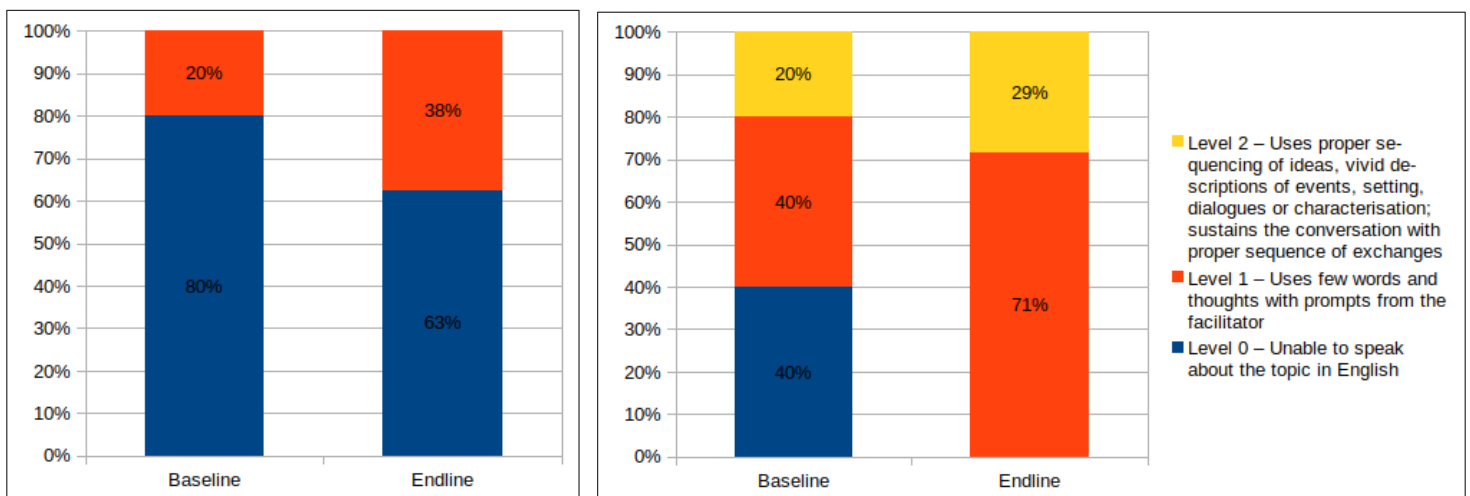


Chart 2.2.8: Improvement in students’ performance levels in creative expression between control school (left) and high-frequency ELL school S3 (right) for Class 5 in Kasargod

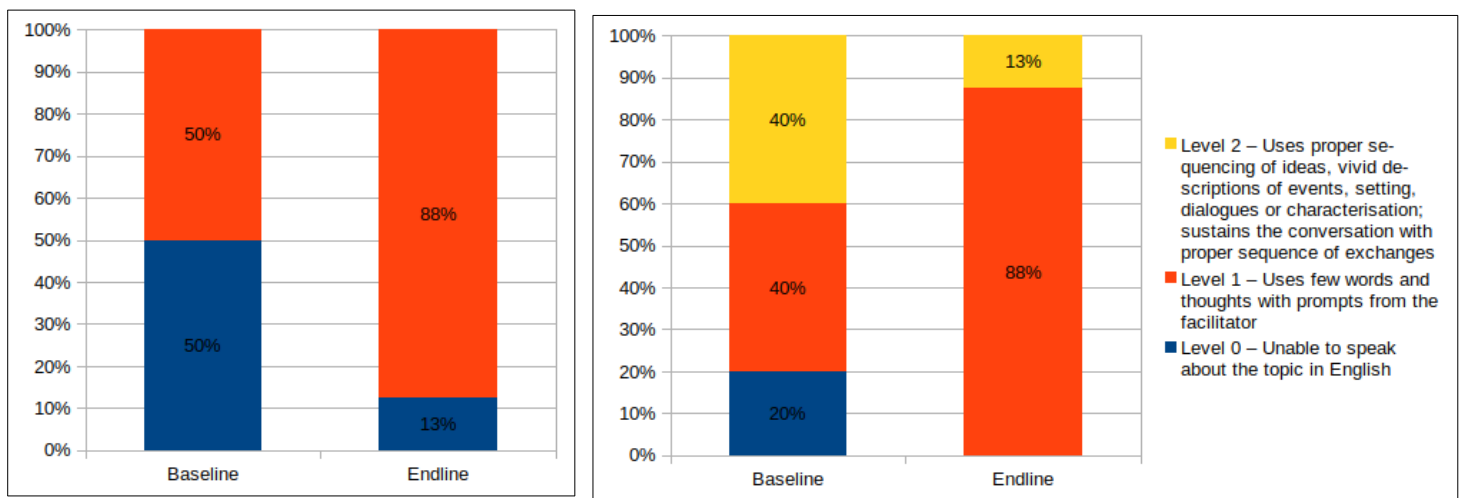


Chart 2.2.9: Ability to read images across all three districts in the endline

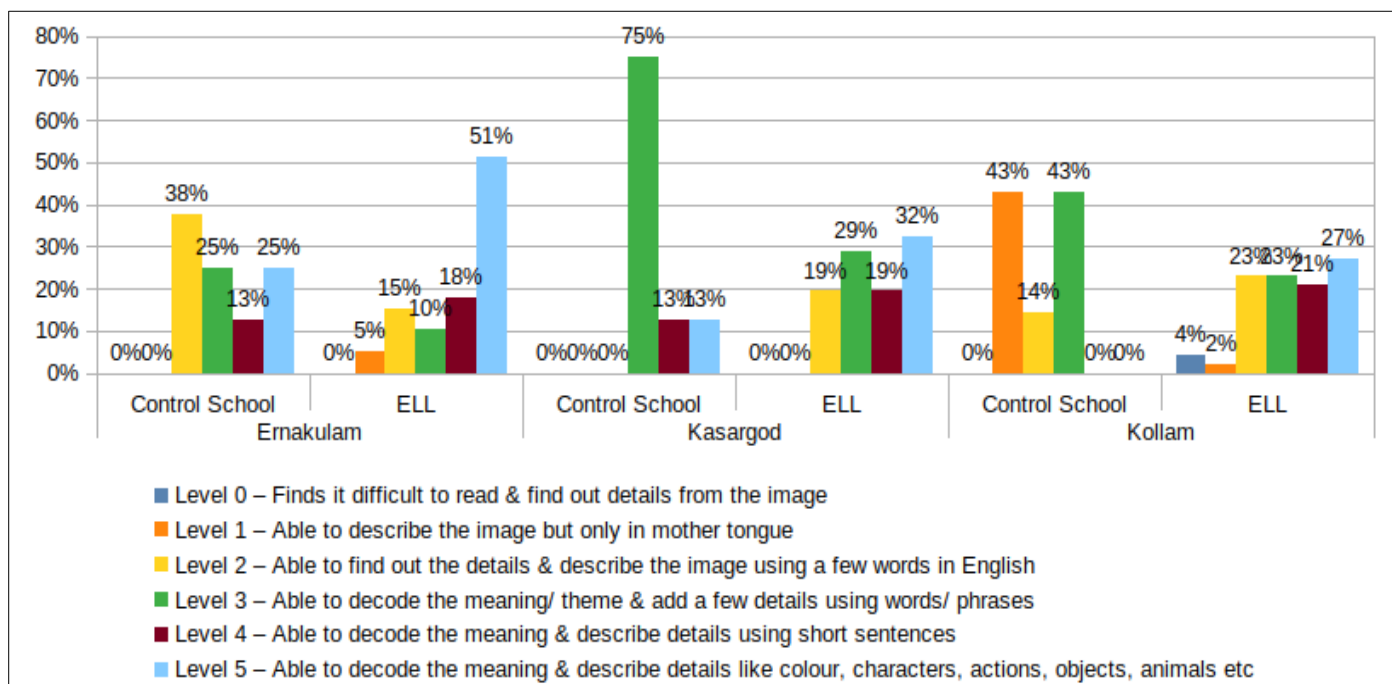


Table 2.2.10: Ability to read images across all three districts in the endline

District	CS/ ELL	BL/EL	Average	% difference from baseline to endline
Ernakulam	Control School	Baseline	1.80	80.56
		Endline	3.25	
	ELLSchool 7	Baseline	1.40	134.69
		Endline	3.29	
Kasargod	Control School	Baseline	1.80	87.50
		Endline	3.38	
	ELLSchool 3	Baseline	2.25	111.11
		Endline	4.75	
Kollam	Control School	Baseline	1.40	42.86
		Endline	2.00	
	ELLSchool 10	Baseline	1.60	103.13
		Endline	3.25	

Chart 2.2.11: Improvement in students’ performance levels in ability to read images between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam

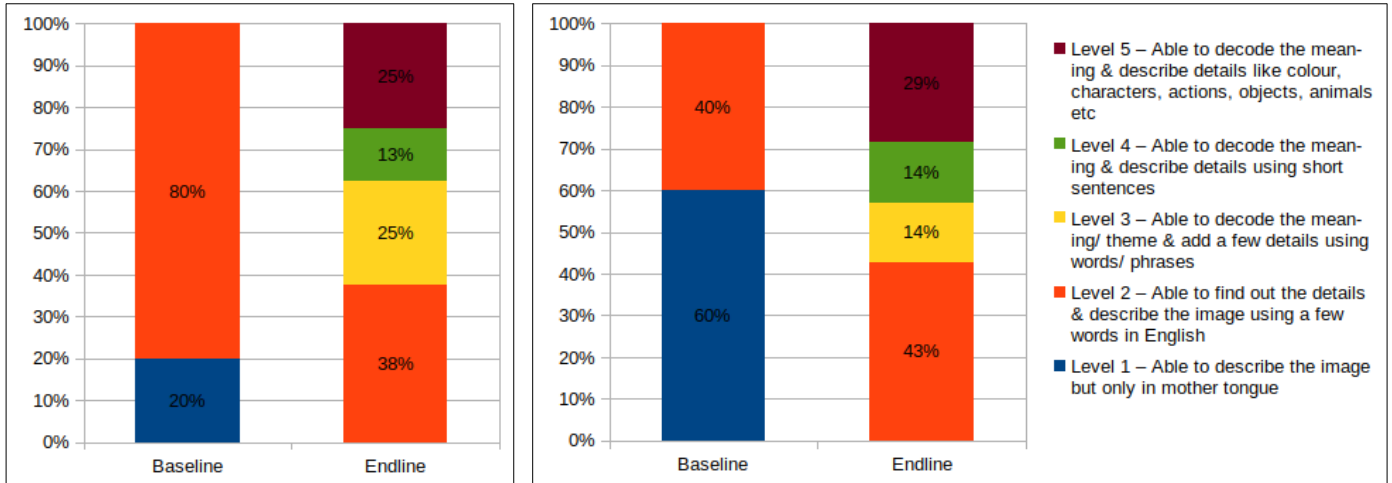


Chart 2.2.12: Improvement in students’ performance levels in ability to read images between control school (left) and high-frequency ELL school S3 (right) for Class 5 in Kasargod

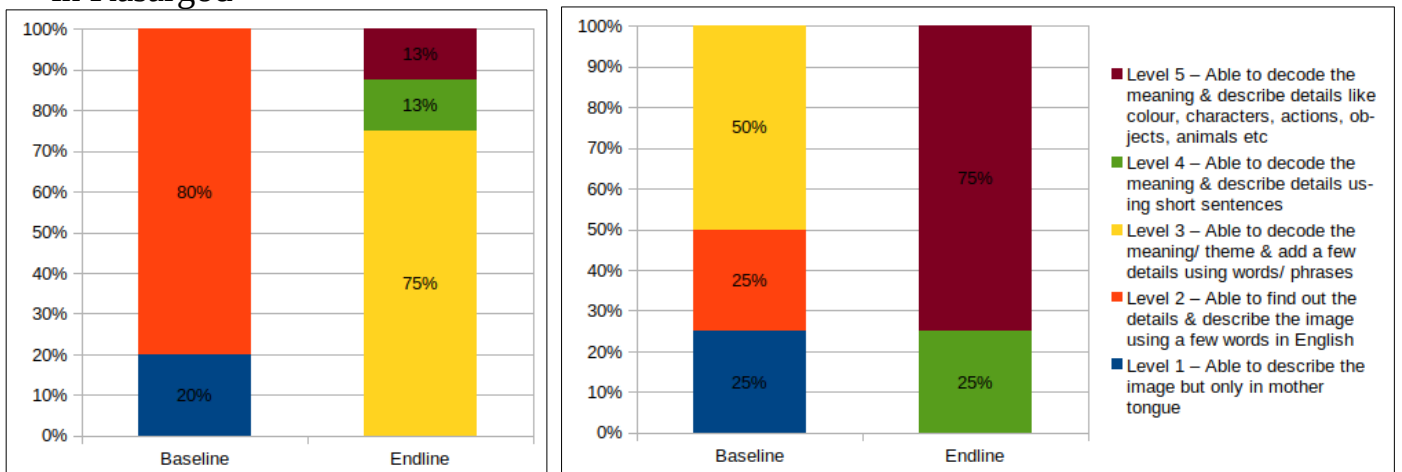


Chart 2.2.13: Improvement in students' performance levels in ability to read images between control school (left) and high-frequency ELL school S10 (right) for Class 5 in Kollam

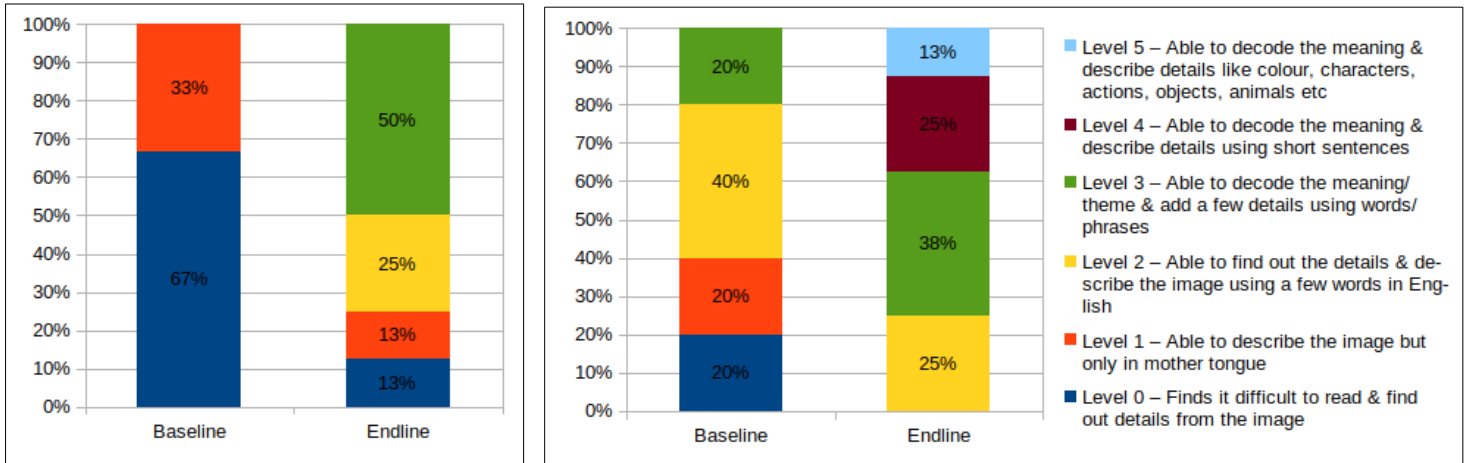


Chart 2.2.14: Reading skills across all three districts in the endline

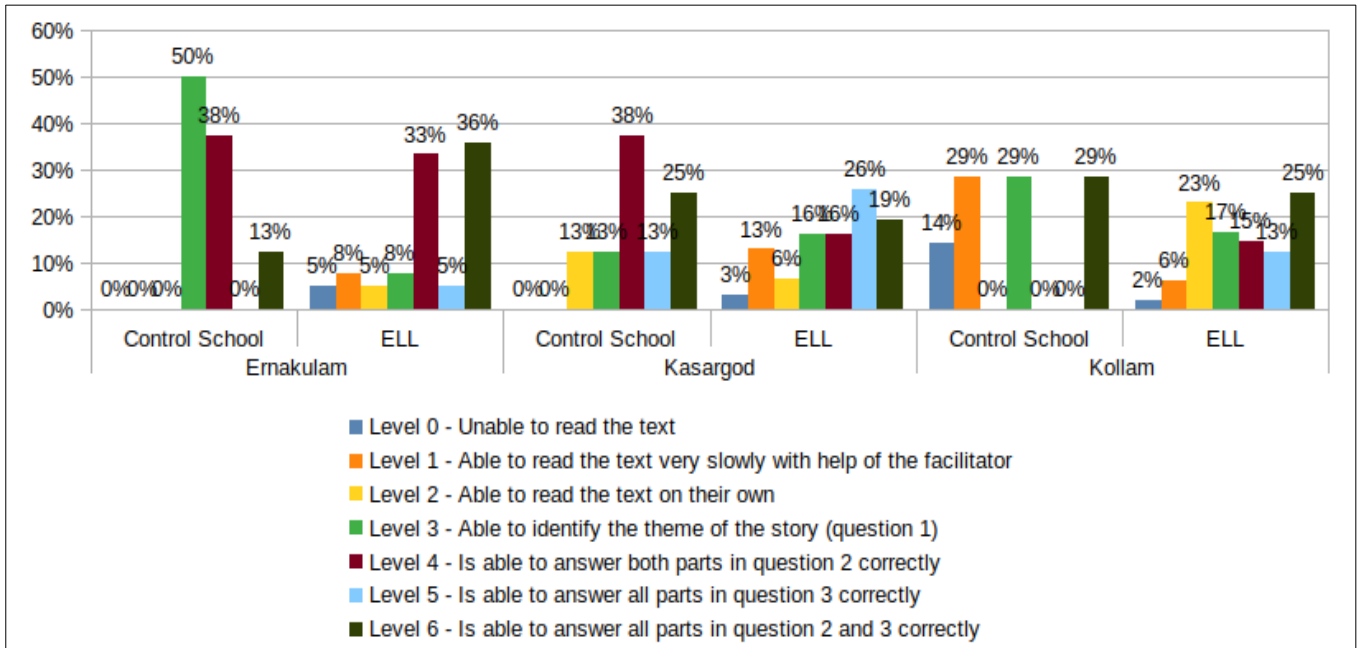


Chart 2.2.15: Improvement in students' performance levels in reading skills between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam

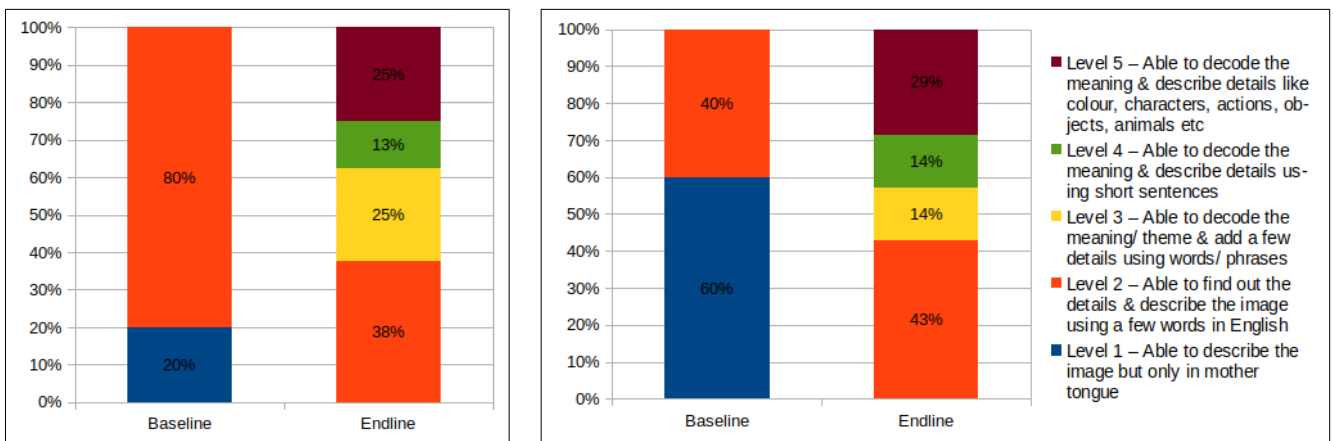


Table 2.2.16: Writing skills across all three districts in the endline

District	Control/ ELL	Level 0 – Unable to write	Level 1 – Tries to write	Level 2 – Writes some of	Level 3 – Writes some	Level 4 – Writes some	Level 5 – Writes some sentences
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		anything	words or phrases not relevant to context	the words relevant to the context for at least one of the questions	words/phrases relevant to the context for both questions	sentences relevant to the context for both questions and spells most of the words right	relevant to the context for both questions and uses capital letters, full stop and comma correctly
Ernakulam	Control School	0%	0%	63%	13%	25%	0%
	ELL	15%	3%	23%	18%	26%	15%
Kasargod	Control School	0%	0%	13%	63%	25%	0%
	ELL	6%	6%	6%	23%	42%	16%
Kollam	Control School	14%	43%	14%	29%	0%	0%
	ELL	4%	4%	4%	40%	35%	13%

Table 2.2.17: Writing skills across all three districts in the endline

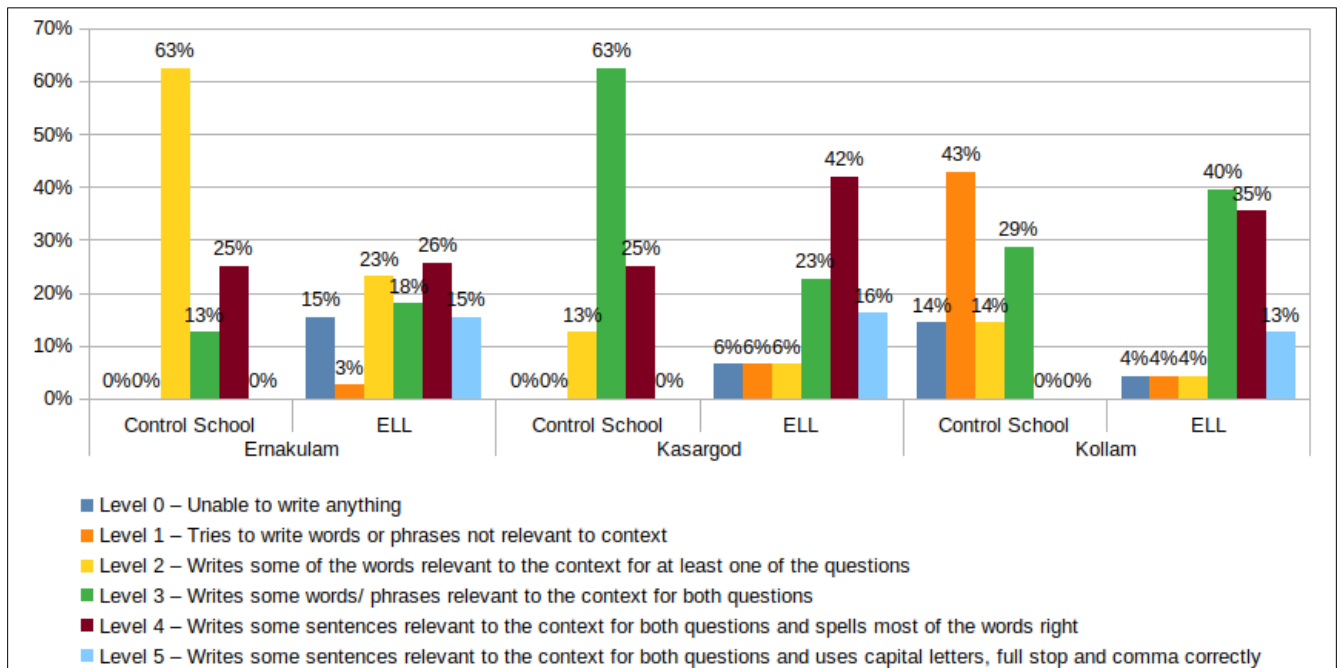


Chart 2.2.18: Improvement in students' performance levels in writing skills between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam.

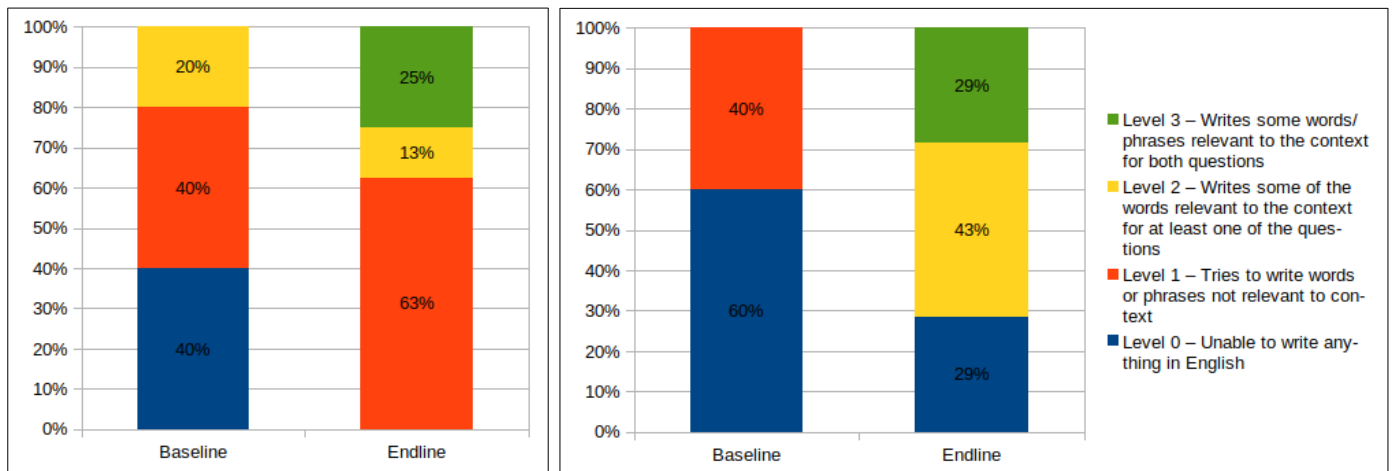


Chart 2.2.19: Improvement in students' performance levels in writing skills between control school (left) and high-frequency ELL school S3 (right) for Class 5 in Kasargod.

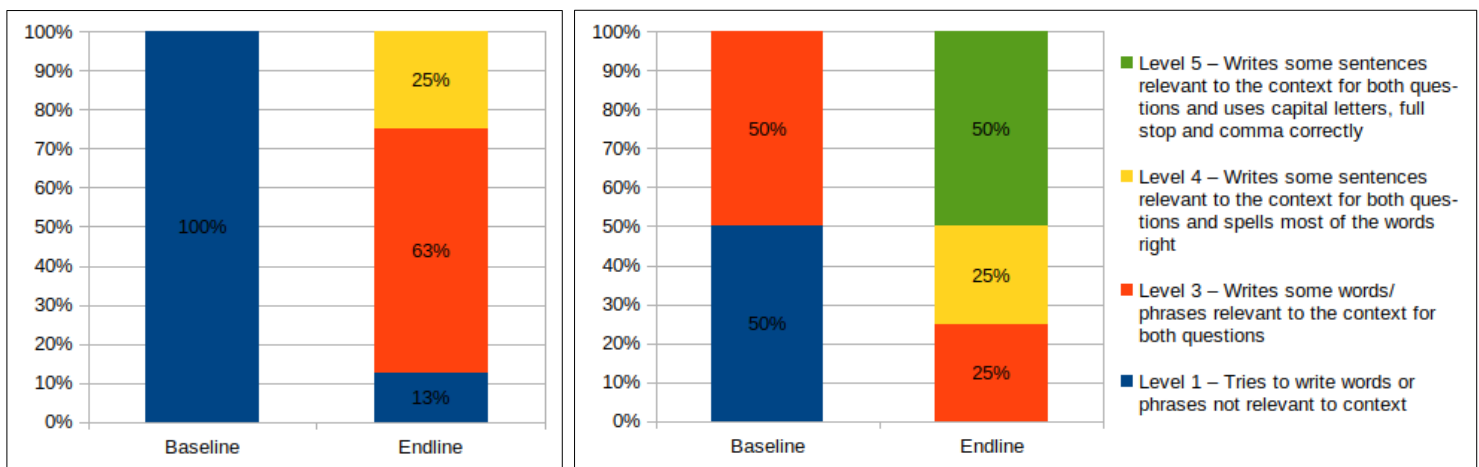


Chart 2.2.20: Improvement in students’ performance levels in writing skills between control school (left) and high-frequency ELL school S10 (right) for Class 5 in Kollam.

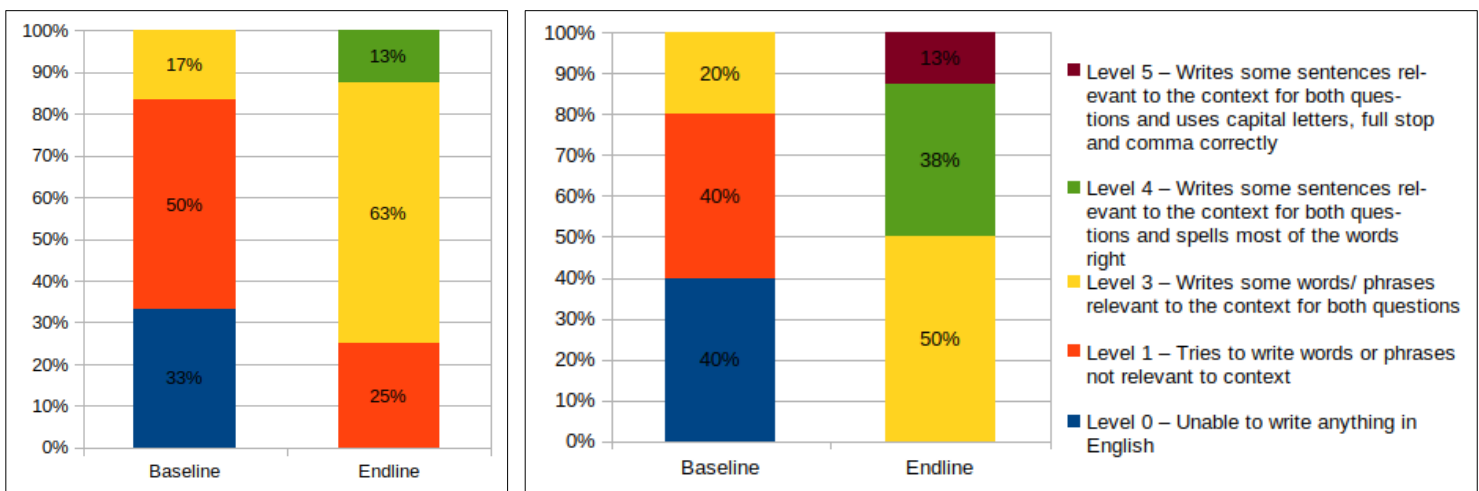


Table 2.2.21: Overall ability to follow instructions across all three districts in the endline

District	Control/ ELL	Level 0 - Did not understand instructions even in	Level 1 - Understood instructions in mother tongue;	Level 2 – Understood some instructions in English;	Level 3 – Understood some instructions in English,	Level 4 - Understood most instructions in English,	Level 5 – Understood all instructions in English,

		mother tongue	responded only in mother tongue	responded only in mother tongue	responded using a few words/ phrases in English	responded using a few words/ phrases in English	responded in appropriate words, phrases & sentences in English
Ernakulam	Control School	0%	0%	38%	25%	13%	25%
	ELL	0%	5%	8%	18%	26%	44%
Kasargod	Control School	0%	0%	0%	38%	38%	25%
	ELL	0%	0%	10%	23%	32%	35%
Kollam	Control School	0%	43%	14%	0%	43%	0%
	ELL	0%	0%	17%	40%	10%	33%

Chart 2.2.22: Overall ability to follow instructions across all three districts in the endline

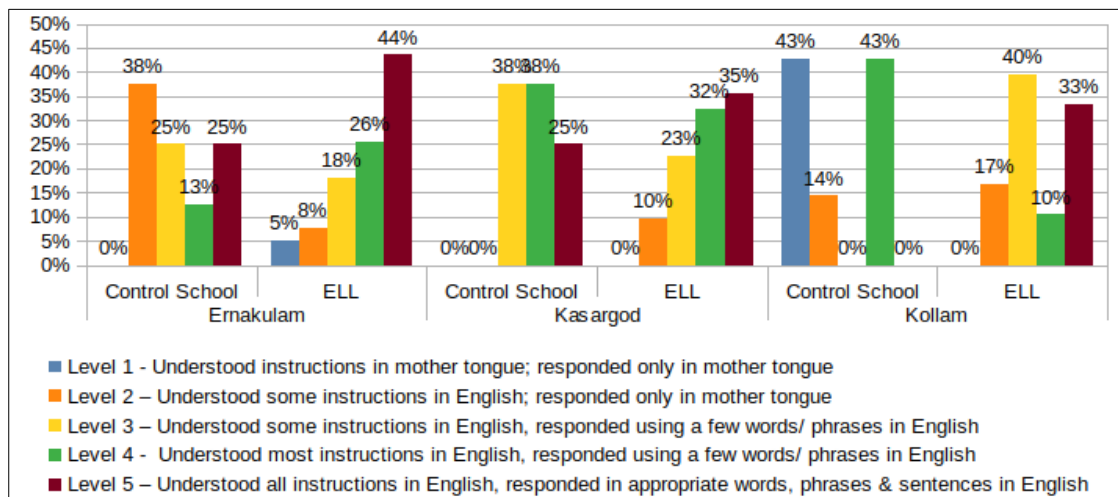


Chart 2.2.23: Improvement in students’ performance levels in ability to follow instructions between control school (left) and high-frequency ELL school S7 (right) for Class 5 in Ernakulam.

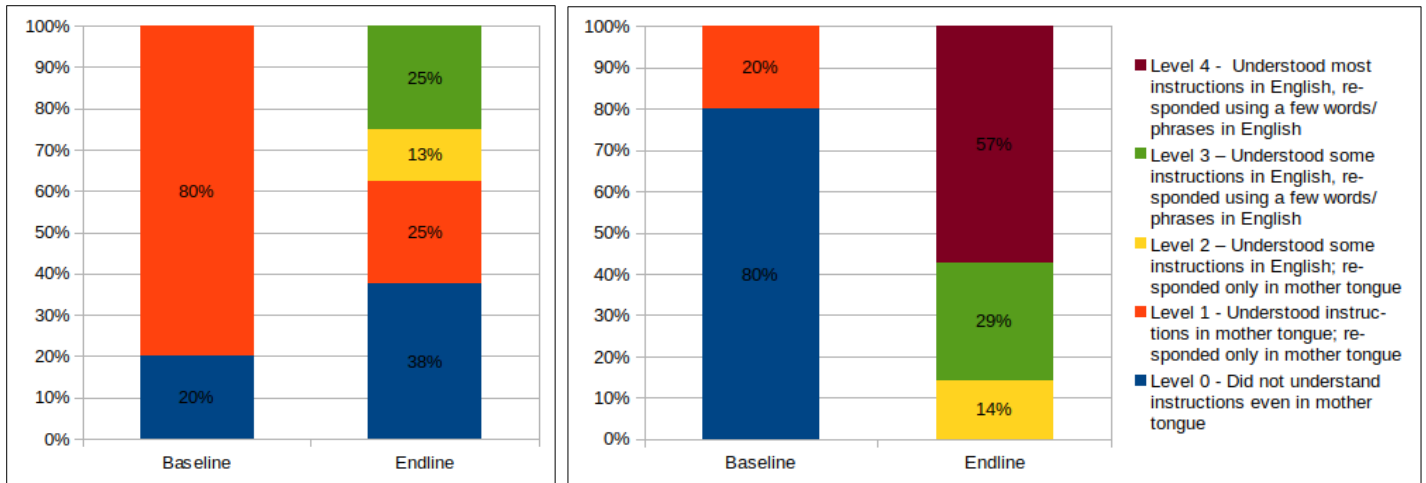
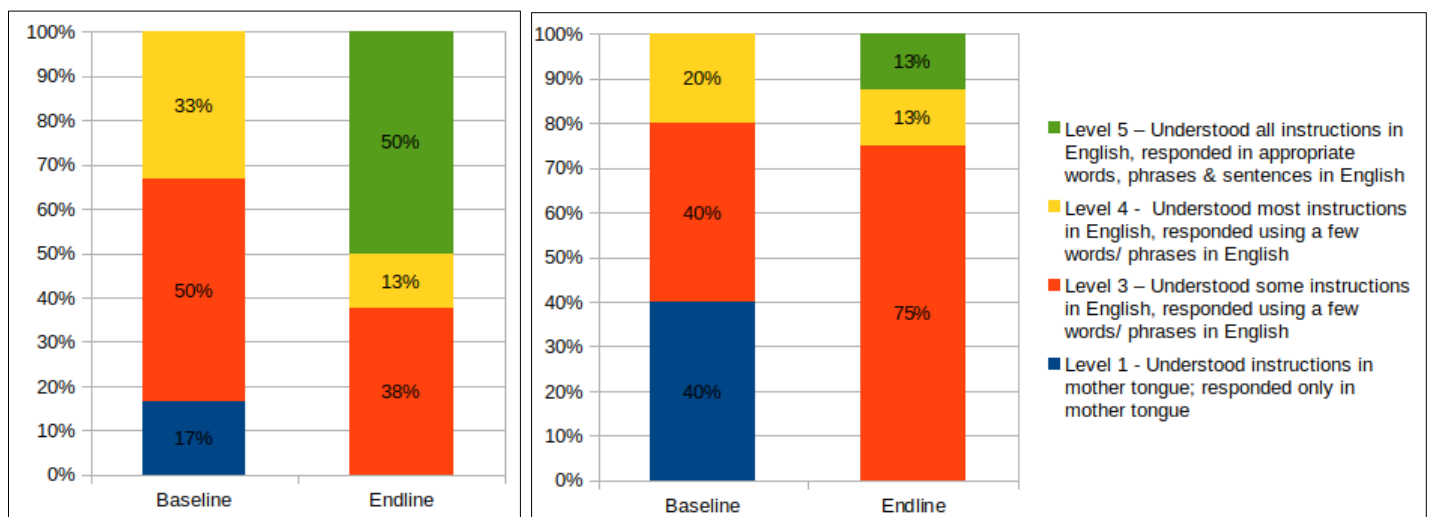


Chart 2.2.24: Improvement in students’ performance levels in ability to follow instructions between control school (left) and high-frequency ELL school S10 (right) for Class 5 in Kollam.



2.3 Findings from Student Interactions for CLASS 7

Table 2.3.1: Listening skills across all three districts in the endline

District	Control/ ELL	Level 0 – Unable to understand the discourse, does not respond even in mother tongue	Level 1 – Understands the vocabulary & some details of the discourse, speaks mostly in mother tongue	Level 2 – Understands and follows the discourse, uses a few words/ phrases in English	Level 3 – Can tell a basic narrative using events and characters (using a few words/ phrases)	Level 4 – Can tell a narrative using a sequence of events, dialogues and characters (Using 3-5 phrases or simple sentences)	Level 5 - Can tell a narrative using a sequence of events, dialogues and characters (Using 5 or more sentences)
Ernakulam	Control School	11%	0%	33%	11%	44%	0%
	ELL	3%	5%	5%	20%	25%	43%
Kasargod	Control School	0%	0%	50%	13%	13%	25%
	ELL	0%	0%	32%	30%	24%	14%
Kollam	Control School	0%	13%	25%	25%	25%	13%
	ELL	4%	10%	16%	18%	16%	36%

Chart 2.3.2: Listening skills across all three districts in the endline

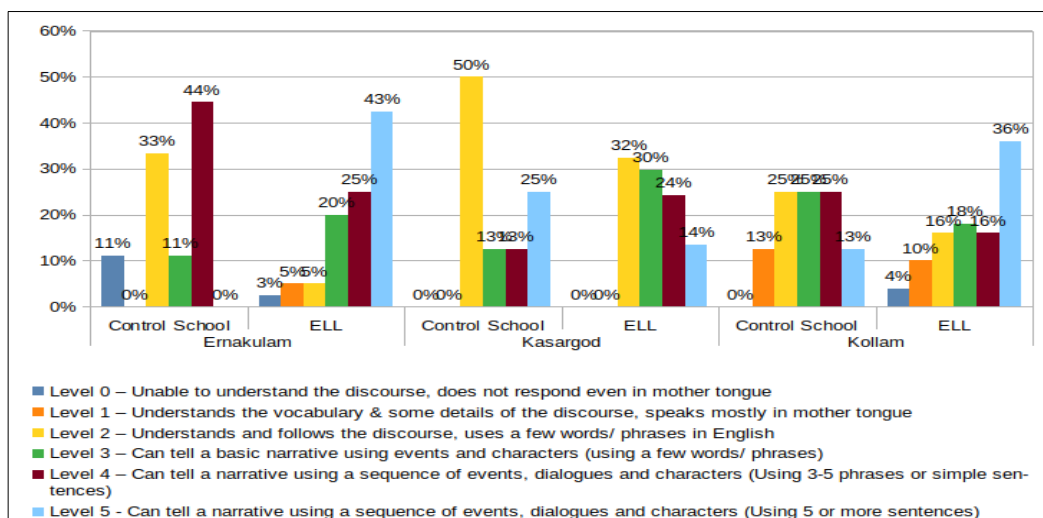


Chart 2.3.3: Improvement in students' performance levels in listening and speaking skills between control school (left) and high-frequency ELL school S3 (right) for Class 7 in Ernakulam.

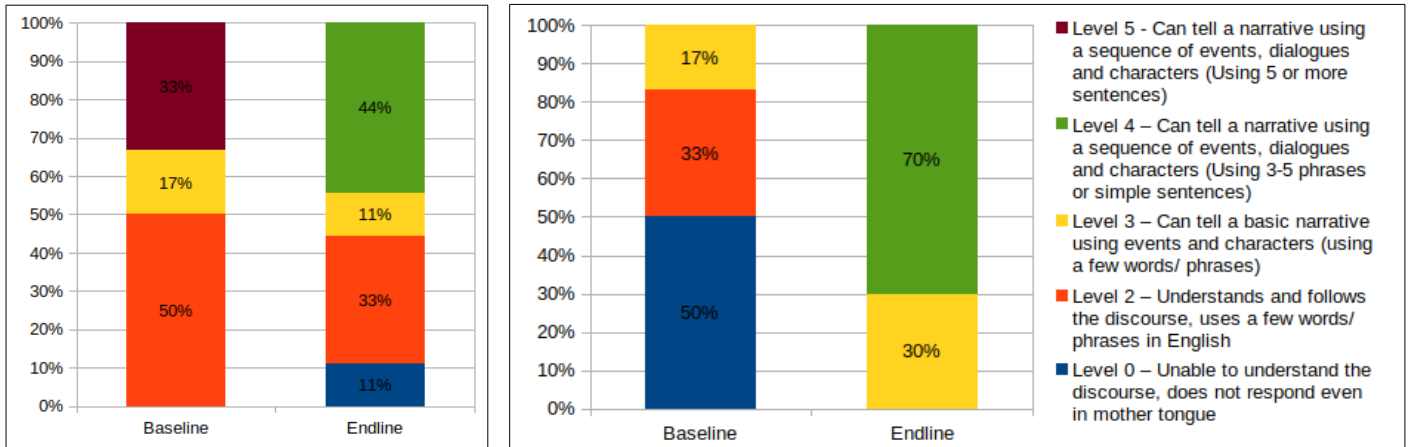


Chart 2.3.4 Percentage improvement in students' performance in writing skills between control and ELL-implementing schools across the 3 districts for class 7 across districts

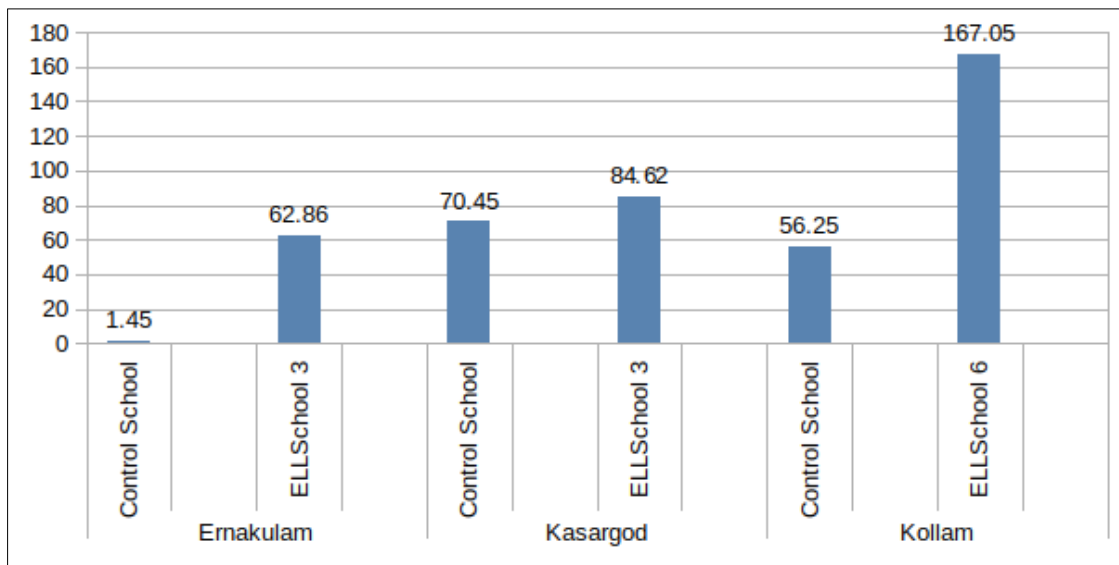


Chart 2.3.5: Improvement in students' performance levels in writing skills between control school (left) and high-frequency ELL school S3 (right) for Class 7 in Ernakulam.

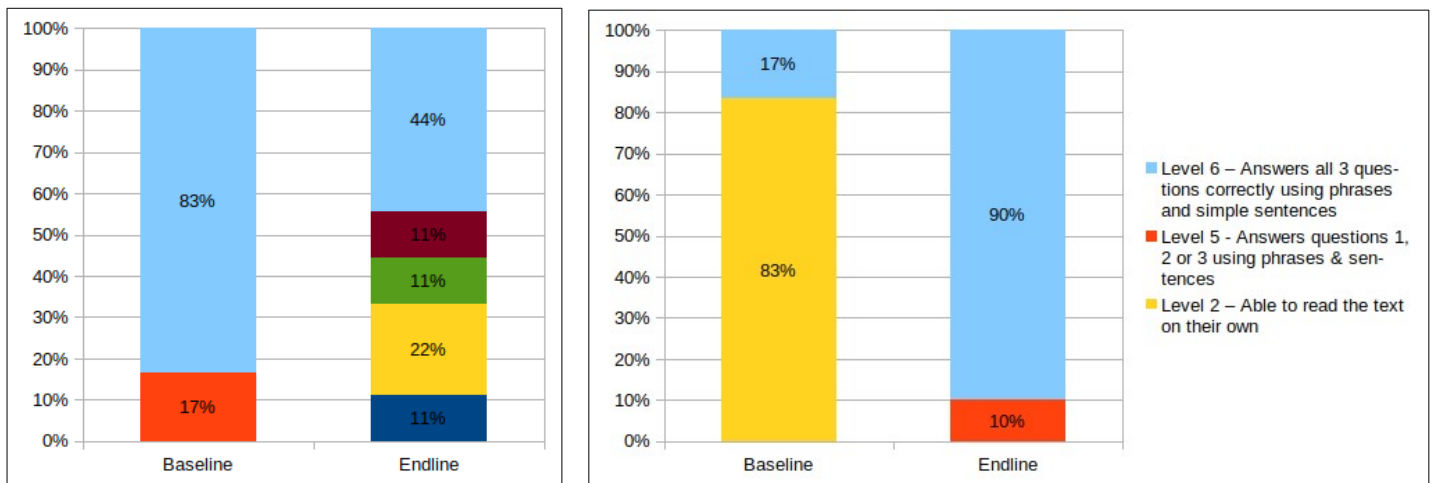


Chart 2.3.6: Improvement in students' performance levels in writing skills between control school (left) and high-frequency ELL school S6 (right) for Class 7 in Kollam.

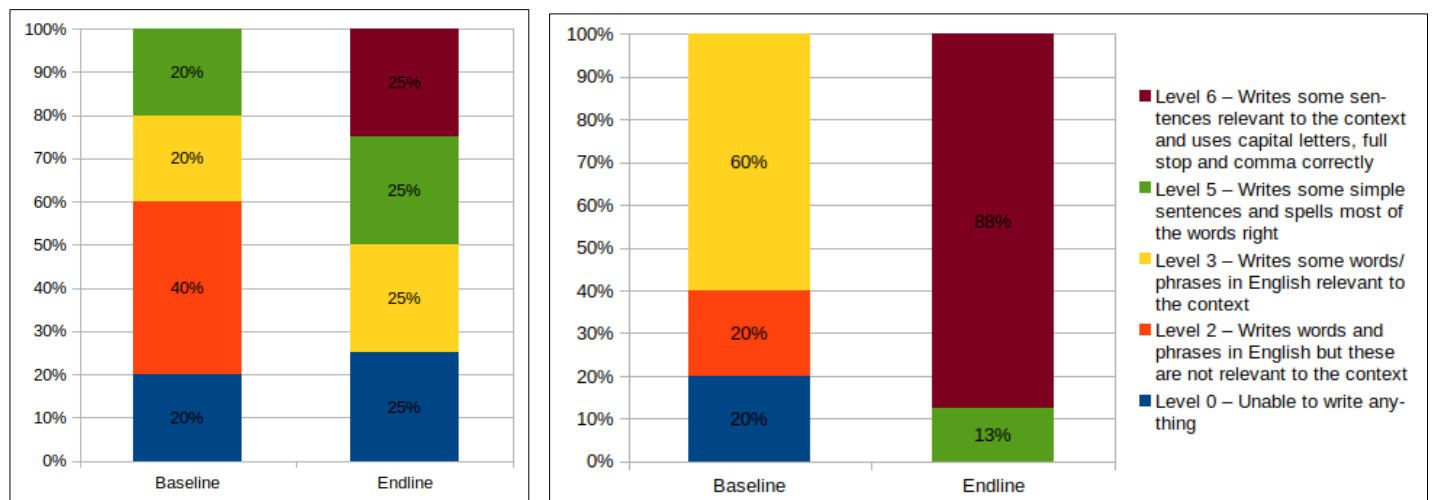


Chart 2.3.7: Creative Expression across all three districts in the endline

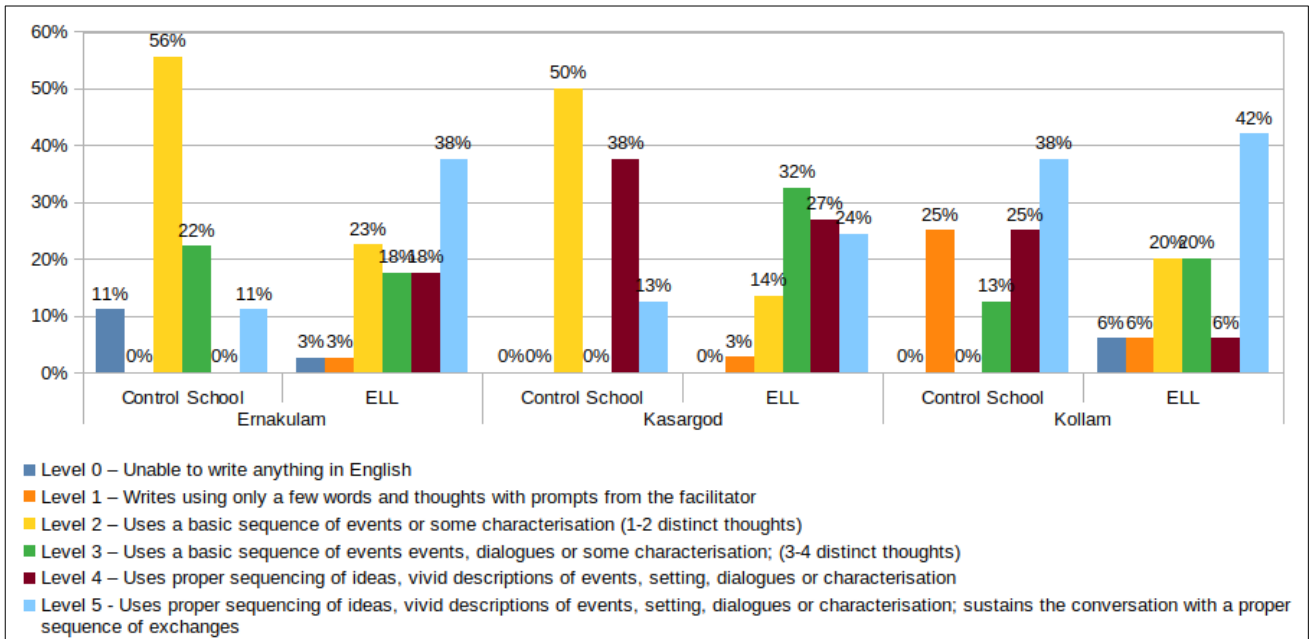


Chart 2.3.8: Percentage improvement in students’ performance in creative expression between control and ELL-implementing schools across the 3 districts for class 7 across districts

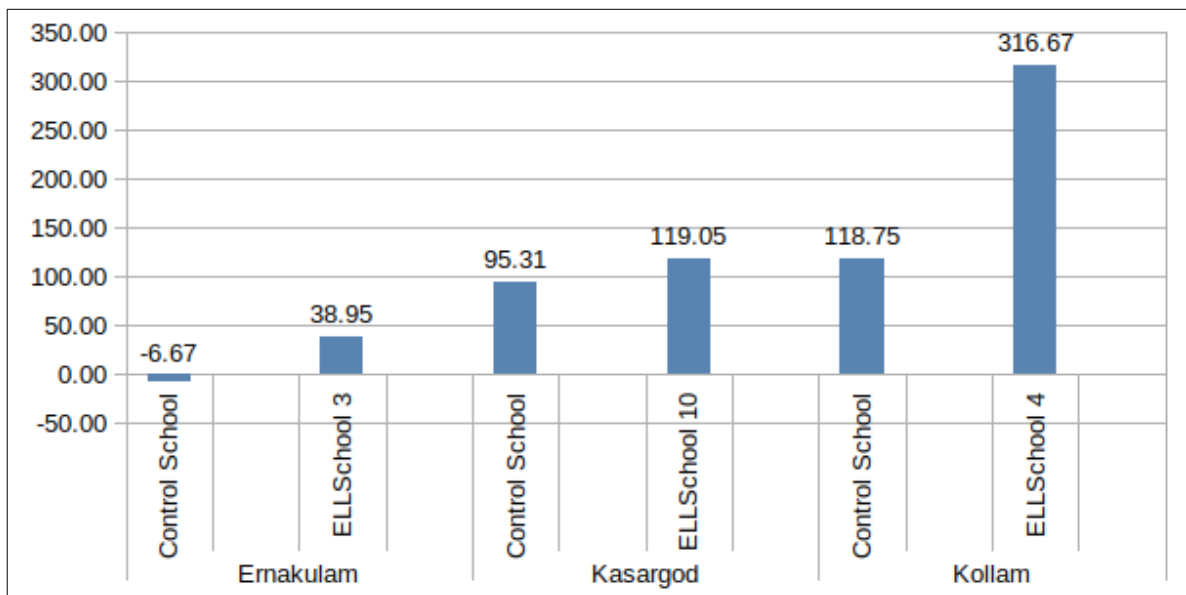


Chart 2.3.9: Improvement in students' performance levels in creative expression between control school (left) and high-frequency ELL school S3 (right) for Class 7 in Ernakulam.

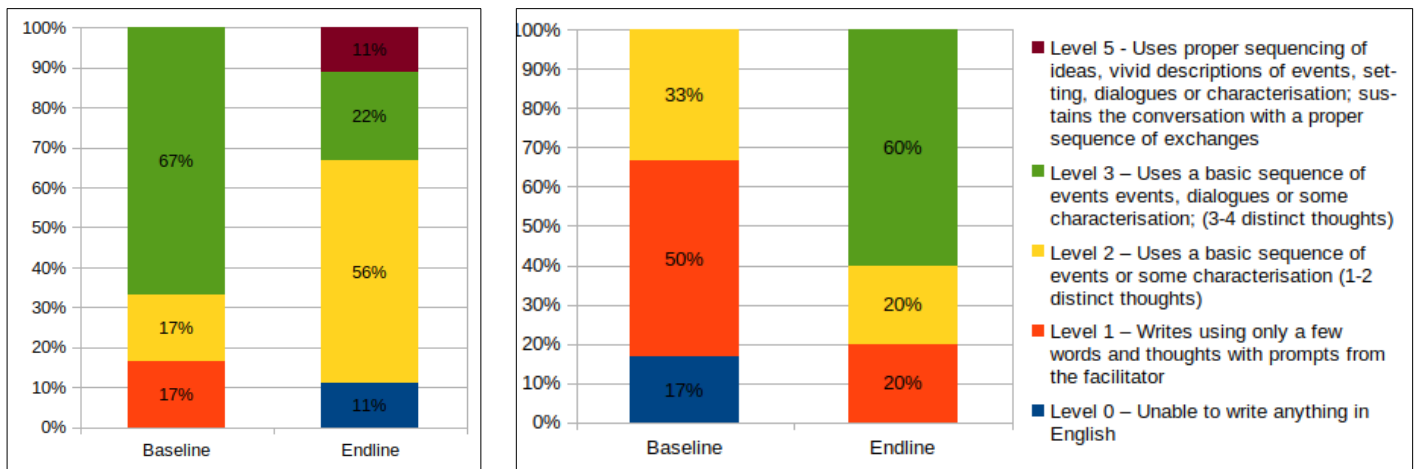


Chart 2.3.10: Improvement in students' performance levels in creative expression between control school (left) and high-frequency ELL school S4 (right) for Class 7 in Kollam.

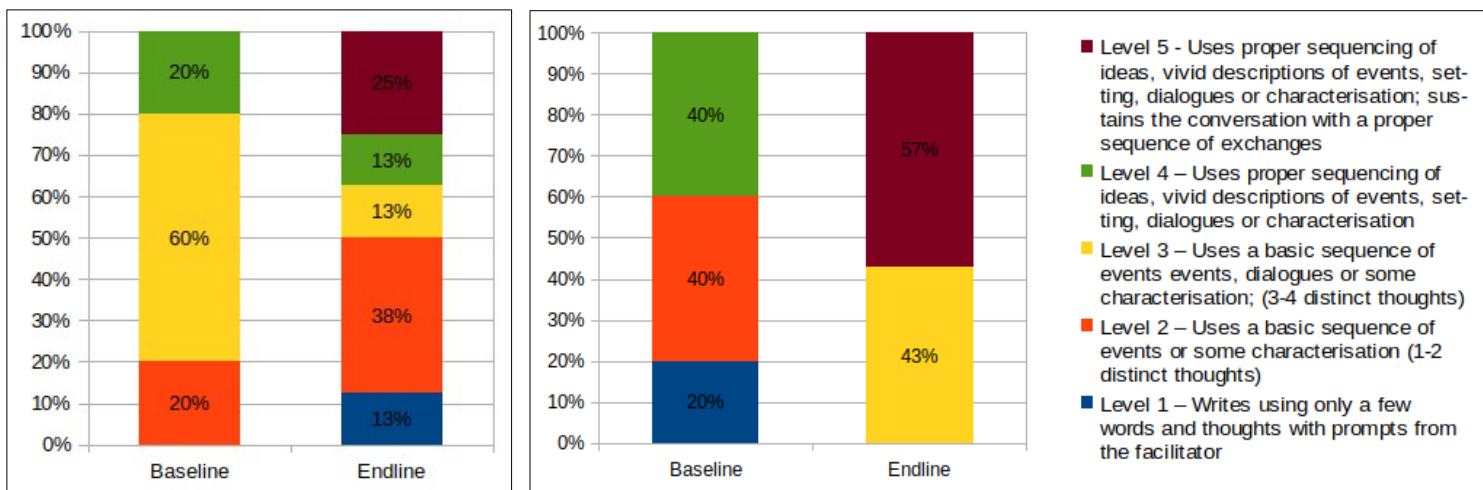


Table 2.3.11: Reading skills across all three districts in the endline

District	Control/ ELL	Level 0 – Unable to read the text	Level 1 – Able to read the text very slowly with help from the facilitator	Level 2 – Able to read the text on their own	Level 3 - Answers questions 1, 2 or 3 in mother tongue only	Level 4 - Answers questions 1, 2 or 3 in English using some words & phrases	Level 5 - Answers questions 1, 2 or 3 using phrases & sentences	Level 6 – Answers all 3 questions correctly using phrases and simple sentences
Ernakulam	Control School	11%	0%	22%	0%	11%	11%	44%
	ELL	0%	10%	3%	0%	25%	15%	48%
Kasargod	Control School	0%	0%	0%	0%	63%	13%	25%
	ELL	0%	3%	11%	0%	30%	24%	32%
Kollam	Control School	0%	0%	25%	0%	25%	38%	13%
	ELL	0%	10%	2%	6%	18%	12%	52%

Chart 2.3.12: Reading skills across all three districts in the endline

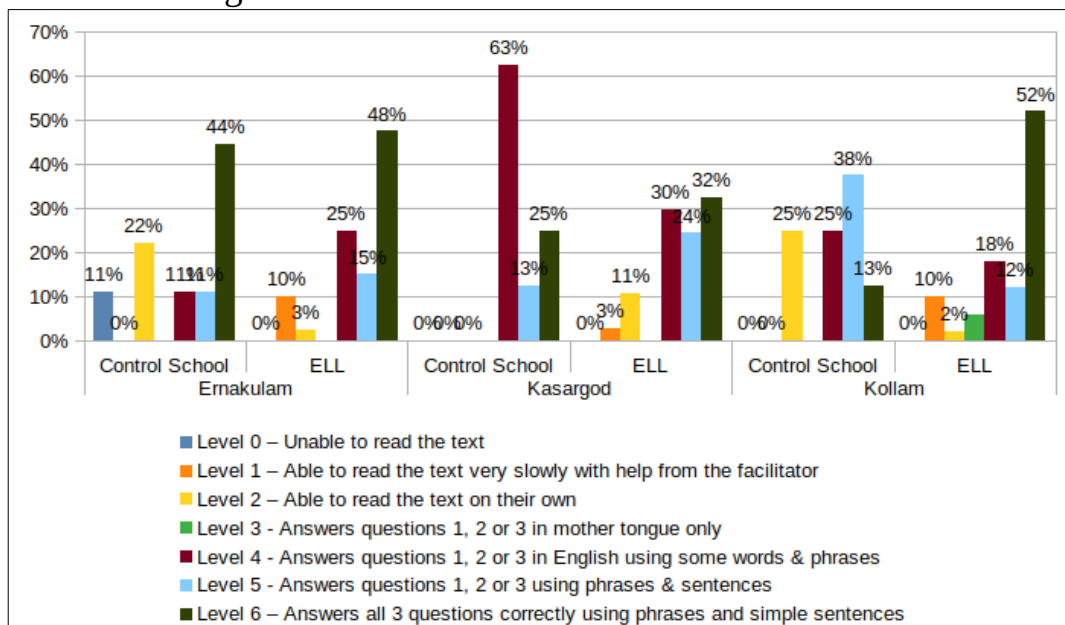


Chart 2.3.13: Improvement in students' performance levels in reading skills between control school (left) and high-frequency ELL school S3 (right) for Class 7 in Ernakulam.

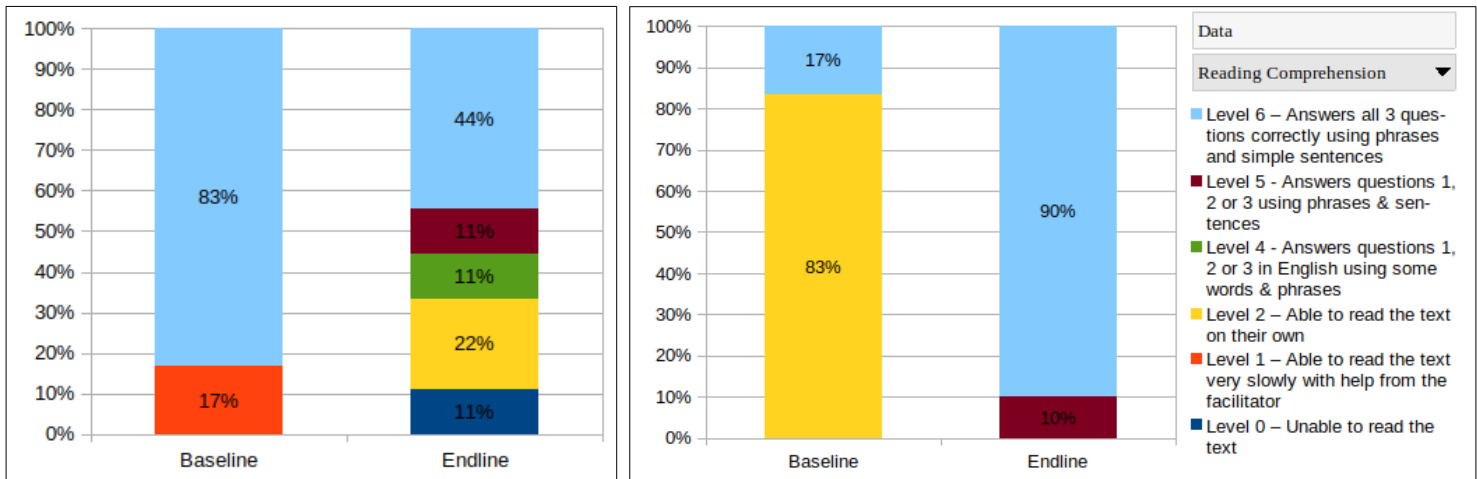


Chart 2.3.14: Improvement in students' performance levels in reading skills between control school (left) and high-frequency ELL school S6 (right) for Class 7 in Kollam.

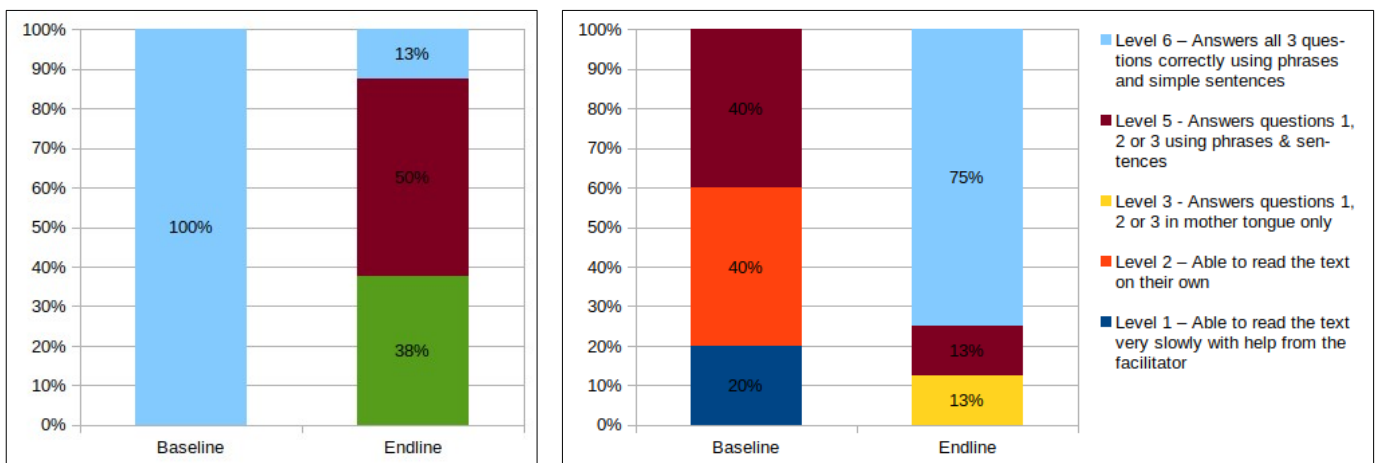


Table 2.3.15: Overall ability to follow instructions across all three districts in the endline

District	Control/ ELL	Level 0 – Did not understand instructions even in mother tongue	Level 1 - Understood instructions in mother tongue but not in English, responded only in mother tongue	Level 2 – Understood some instructions in English; responded only in mother tongue	Level 3 – Understood some instructions in English, responded using few words/ phrases in English	Level 4 - Understood most instructions in English, responded using few words/ phrases in English	Level 5 – Understood all instructions in English, responded in appropriate words, phrases & sentences in English
Ernakulam	Control School	0%	11%	0%	22%	44%	22%
	ELL	3%	3%	5%	8%	15%	68%
Kasargod	Control School	0%	0%	0%	25%	50%	25%
	ELL	0%	0%	0%	41%	22%	38%
Kollam	Control School	0%	0%	13%	25%	13%	50%
	ELL	0%	14%	4%	18%	12%	52%

Chart 2.3.16: Overall ability to follow instructions across all three districts in the endline

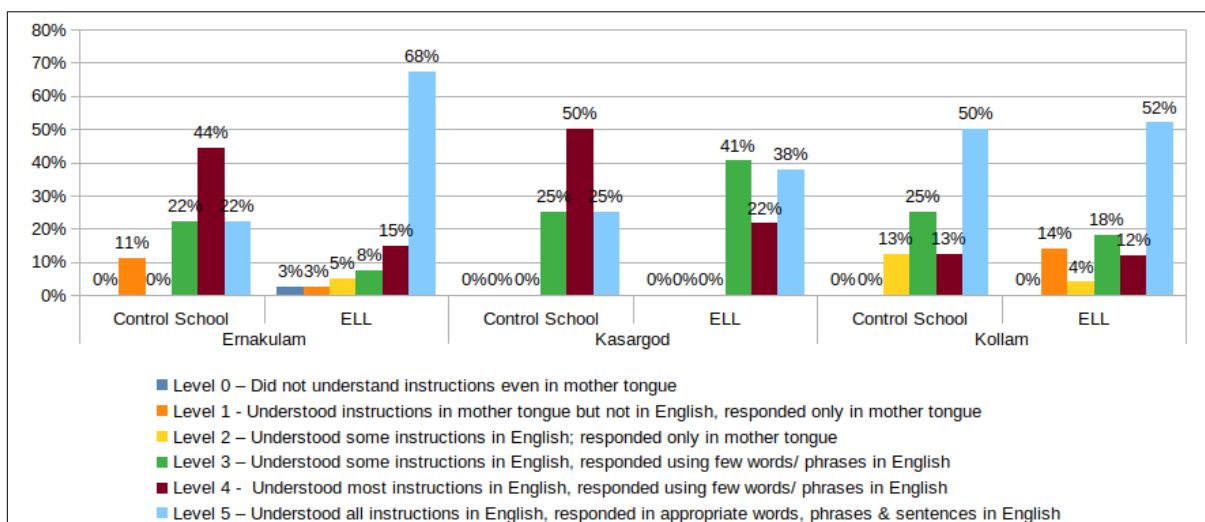


Chart 2.3.17: Improvement in students' performance levels in ability to follow instructions between control school (left) and high-frequency ELL school S3 (right) for Class 5 in Ernakulam.

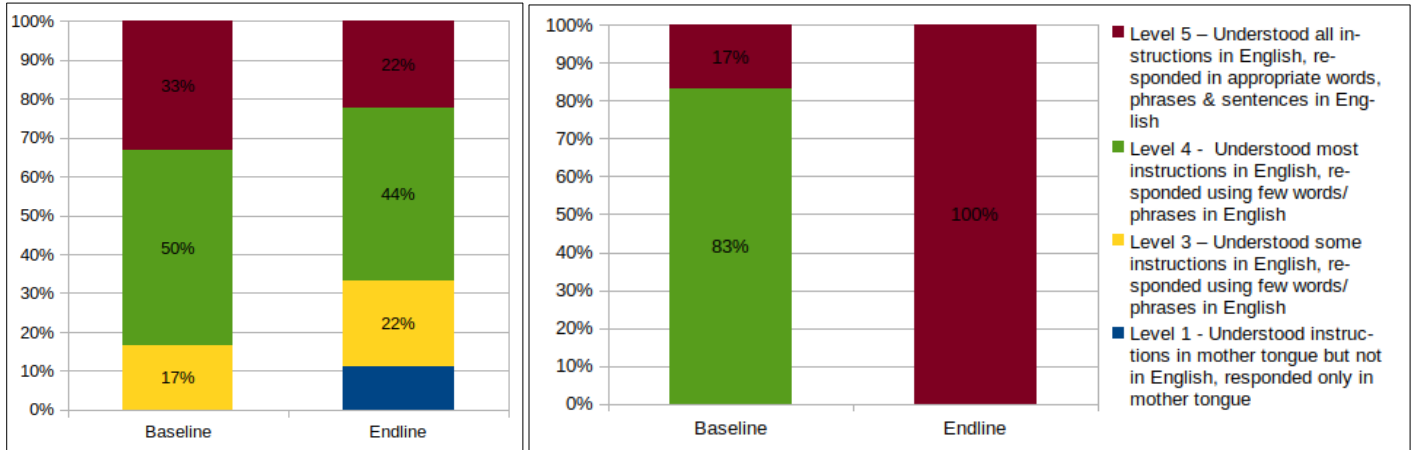
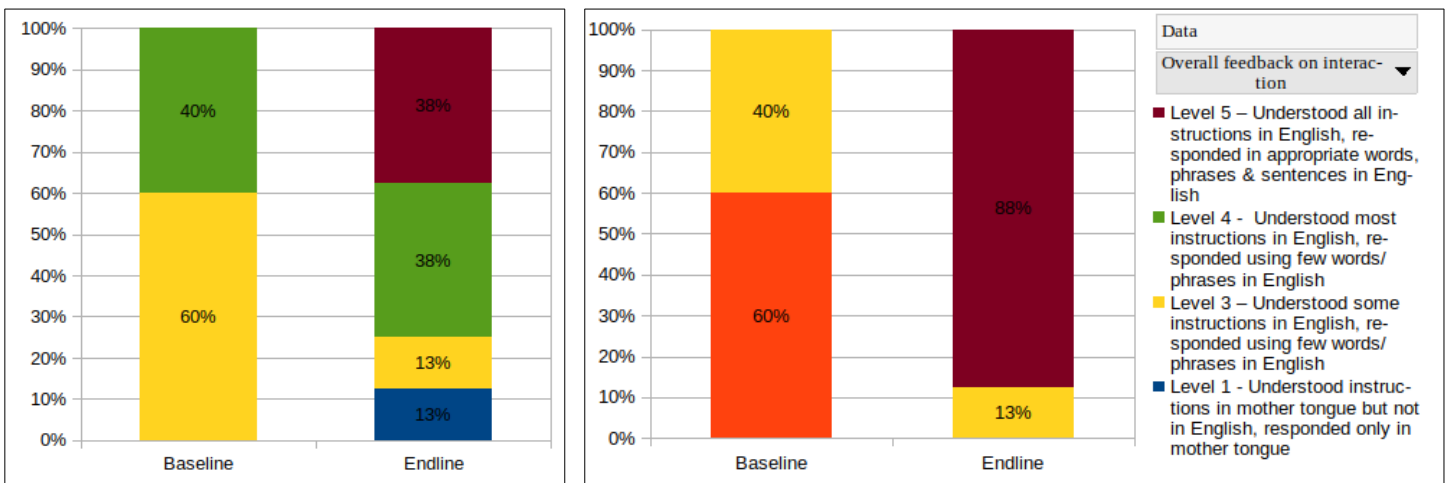


Chart 2.3.18: Improvement in students' performance levels in ability to follow instructions between control school (left) and high-frequency ELL school S6 (right) for Class 5 in Kollam.



Findings from teacher interactions

District	School	Grade	Frequency (reported in Teacher Dis)	No. of stories completed	Generating student activity reports (Y/N)
Kasargod	S2	Classes 1-8	Once a week	4 stories	N
	S3	3 5 7	At least once a week At least once a week At least once a week	3 stories 5 stories 7 stories	N
	S4	Classes 1-8	At least once a week/ thrice a month	3 stories	Y (1 out of 4 teachers)
	S7	Not mentioned	Once a week	3-4 stories	N
	S10	Classes 5-7 Classes 1-7 Class 7	Once in two weeks/ once a month Once a month Once in two months	2 stories	Y (2 out of 3 teachers)
Ernakulam	S2	Classes 1-7 Classes 3-7	Once in two weeks	More than 5 stories, 3-5 stories	N
	S3	Classes 3-7	Once a week Once a month Once in two weeks	More than 5 stories	N
	S7	Classes 1-8	Once a week/ Once in two weeks	More than 5 stories	N
	S9	Classes 5-7 Class 6	Once a month At least once a week	1-2 stories	N
Kollam	S1	Classes 1-5	Once a month	3-5 stories	Y

	S4	Classes 1-4 Classes 1-4 Classes 5-7	Once a month Twice a month At least once a week	1-2 stories	N
	S6	Classes 1-7	At least once a week	2-4 stories	Y (1 out of 3 teachers)