Government of Tamil Nadu
State Planning Commission

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Evaluating 'Ennum Ezhuthum'

A Study on teachers' Time-on-Task with the new pedagogical approach in Government Elementary Schools in Tamil Nadu

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Foreword

"Education is not the learning of facts, but the training of the mind to think"

– Albert Einstein

The prolonged school closures during the global pandemic severely impacted the education of young children and created a significant gap in the learning process. After serious discussions to bridge this gap, the Government of Tamil Nadu has launched a significant literacy and numeracy initiative called "**Ennum Ezhuthum**" (EE) program in 2022. This EE program was designed to meet the foundational literacy and numeracy needs of primary school students.

This evaluation on EE focuses on assessing the effectiveness of the EE program through a proven approach called "**teachers' time on task**," which suggests that learning outcomes are influenced by the time teachers spend on teaching tasks.

The findings explicitly highlight the necessity for a more comprehensive evaluation to fully understand the EE program's impact on teaching and learning outcomes. This report highlights areas for improvement and emphasizes the importance of continuous evaluation in achieving educational excellence. I extend my heartfelt gratitude to all the teachers, administrators, and researchers who contributed to this study. Your dedication to enhancing primary education in Tamil Nadu is truly appreciated.

I commend the authors, Prof. R. Srinivasan, Full Time Member, State Planning Commission, Dr. N. Anitha, Head of the Division (Education and Employment) and Dr. M.S. Elayaraja, Public Policy Consultant, State Planning Commission for undertaking this study.

This report sheds light on various aspects of primary education in Tamil Nadu. By addressing the identified issues, we can ensure inclusive quality education for all, for fostering a healthier society and a better tomorrow.

Vice Chairman
State Planning Commission

Acknowledgement

Executive Summary

The primary aim of this study is to evaluate the effectiveness of 'Ennum Ezhuthum' in imparting education in the primary school classes. An evaluation of the curriculum and pedagogical changes, requires evaluation of several aspects like suitability of content, range of pedagogical techniques offered, books, teacher training and availability of teaching and learning materials. This is short term study and hence covering all these aspects was beyond its scope. However, findings of this quick and short study on the effectiveness of 'Ennum Ezhuthum' led to logical deduction of issues for a comprehensive study.

Among the various methodologies, time on task is the proven method of evaluating the effectiveness of curriculum and pedagogies in the schools. Repeated use of this method and continuous improvement in the measurement of time on task are the compelling reasons to use this method in this study.

The measurement of time on task by teachers was carried out using a self-reporting form that was issued to nearly 200 teachers in two districts – Chennai and Tiruvallur. Time allocated for various activities in a day – curricular and extra-curricular activities and between various levels of students, that is, Arumbu, Mottu and Malar was recorded by the teachers in the prescribed form. Exhaustive interviews with 50 teachers were conducted to collect qualitative information about the other aspects of curriculum, pedagogy and teaching and learning experiences in schools.

Findings from the time on task reveal that the time allocated to teaching each subject was sub-optimal and that there was considerable variation in the time allocated between schools. This is a major finding that leads to conclude that the teaching and learning experiences have not been uniform across

schools and that we need to explore whether the minimum standards were ensured in schools.

The qualitative information collected through interviews revealed that the 'Ennum Ezhuthum' project was adopted by almost all the teachers even though there were differences in the opinions about its suitability both in content and pedagogy. Multigrade teachers found this new project difficult to implement as the students must shift to different books for every subject as well as their inability to groups students by levels of learning. The lack of time to complete all the curricular activities within prescribed period was a major handicap. The teachers highlighted the need to give scope for them to innovate with pedagogy and teaching and learning materials as well as with the pace of teaching. The report was shared with the Department of School Education, Government of Tamil Nadu and their comments are given in Appendix 4.

In spite of the fact that the 'Ennum Ezhuthum' was generally acceptable to the teachers, there were implementation bottlenecks and clamour for restoring guided-autonomy for teachers to innovate on content and pedagogy. The findings of this study lead to identification of major issues that could be taken into account while carrying out a comprehensive study.

1. Whether the content of the EE is in accordance with the stated curriculum framework for the elementary classes?

2. Whether the content is properly drawn into syllabi, textbooks and workbooks and teacher manuals? Whether these books are based on a cogent set of pedagogical approaches/techniques?

3. Whether the use of language, social constructions, description, illustrations and examples are appropriate for the elementary classes and varied social groups in the state in terms inclusivity as well?

4. The content analysis should be preceded by a literature review-based research on alternative pedagogical approaches and best practices for teaching and learning in elementary schools across the country.

5. Whether the contents of teacher training camps are properly drawn and delivered? Whether the teachers are sensitised to accept and implement the programme with involvement? Whether the training camps opened scope for the teachers' initiatives within the curriculum framework?

6. Based on a carefully selected methodology, we should measure and verify whether the time on task for both teachers and students is adequate and effective?

7. Evaluation of assessment methods should lead to explain the appropriateness and credibility of assessment and whether such assessments can be built in the learning process?

Content

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Introduction

During the prevalence of pandemic COVID 19 in 2020 and 2021, the schools were closed for nearly two academic years, particularly the Anganwadis (children in 2-5years) and the elementary schools (children in 6-10 years). This resulted in considerable learning loss for the children. The learning gap among primary school students in Tamil Nadu was noted in the ASER and NAS documents in successive years over the last decade. Therefore, the learning inadequacy that existed in the pre-COVID 19 period was aggravated by the lock down during the two academic sessions in 2020 and 2021. The Government of Tamil Nadu initiated two important schemes in 2021 to address this issue. One was the 'Illam Thedi Kalvi' wherein learning centres were organised near the children's residences with volunteers in the neighbourhood. These alternate education centres offered support to the children to continue their education while the schools were intermittently closed. Two, when schools were reopened in latter half of the academic year 2021-22 the Department of School Education introduced a second new education scheme for the classes 1 to 3 and to be extended to classes 4 and 5. This new education scheme, called 'Ennum Ezhuthum' (EE) meaning 'Numeracy and Literacy' is a change in pedagogical approach to teach Arithmetic, Tamil and English. The earlier pedagogy was construed as teacher-centric and hence not as effective to improve learning outcomes of students in primary classes. The major aspects in this approach are, encouraging guided self-learning of students, teaching by levels of learning and use of several teaching aids, role play, creation of ambience in classroom and many more instead of restricting only to textbook materials. The aim of

EE is to ensure that all the students learn to read and write in two languages and perform basic arithmetic functions by the age of 8 years.

2.0 Ennum Ezhuthum

The new scheme EE was designed and prepared by the Directorate of State Education Research and Training, Government of Tamil Nadu. The learning levels are categorised as *Arumbu* (level 1), *Mottu* (level 2) and *Malar* (level 3). *Arumbu* starts from Class 1 and Students of Class 3 should complete level *Malar*. There are three books, a basic textbook, a workbook for students and a teacher's manual for each level in every subject. The teachers are trained through a series of training camps and continuous retraining camps were conducted throughout the academic years 2021-22 and 2022-23. There is a standardised timetable for each day in a week and allocation of subject matter for each week. There are fixed schedules of assessments of students' learning outcomes to be carried out by the teachers. Data on teachers' and students' attendance, assessments and completion of various academic and extra-curricular activities are collected and analysed at the state level. Specific mobile applications have been developed and implemented for data upload by the teachers. A detailed description of EE is given in Appendix 1.

3.0 Evaluation of Ennum Ezhuthum

A simple analysis of the various assessments conducted by the teachers show that there is only a slight variation in learning outcomes among students and most of the students have achieved the desirable level of learning outcomes. There can be two reasons for this outcome. One, the students are too young to present themselves for a rigid assessment system in terms of time and contents, therefore the teachers could have awarded marks based on subjective assessments of students. Two, the teachers may find that differences in learning outcomes of individual students if recorded in terms of marks or grades would demotivate both children and their parents to continue education. The validity of these two reasons is not difficult to understand and appreciate.

While evaluating the EE pedagogy, we need to consider the contents, the textbooks, students' workbook, teachers' manual and teaching and learning materials used in the classroom. However, this being a preliminary study to understand the issues that should be flagged for a comprehensive evaluation study, we restrict to a brief and exploratory study. The culmination of all preparatory activities relating to EE is the actual classroom teaching-learning activity. Therefore, we consider that an evaluation of actual classroom activities shall reveal certain concrete aspects of teaching and learning based on EE. We decided to use the "teachers' time on task" approach to evaluate the teaching aspects of EE. The questions that this study tries to answer are:

1. Whether the 'time on task' varies from the assigned timetable for the subjects?

2. Whether the opinions and actual practices of teaching and learning activities differ between teachers that reflect the quality of time on task?

3. Whether we could identify and define concrete research problems for a comprehensive evaluation of EE?

3.1 The concept of time on task

Carroll (1963) in a pioneering work on quantifying teaching and learning processes in a classroom identified three attributes of students and two attributes of teachers that account for variations in their learning outcomes. These five attributes, though qualitative, can be measured in terms of time.

1. Aptitude – the amount of time a student needs to learn a given task or instruction to an acceptable level of mastery under best conditions of instruction and student motivation.

2. Ability to learn – time taken to understand a task.

3. Perseverance – the amount of the time the student is willing to spend on learning a task. This is also a sign of motivation.

4. Quality of Instruction – the adequacy and effectiveness of time spent on teaching a task by the teacher.

5. Opportunity – the amount of time the teacher gives the student to learn a task or instruction.

The first three attributes of students work in conjunction with the two attributes of teachers to improve the learning outcomes of students. Teachers should spend more time for students with low levels of aptitude and ability to learn. Lack of motivation on the part of students requires more teaching time. Of course, for any given level of aptitude, ability and motivation of students the quality of instruction can reduce the time for teaching. With enhanced abilities of teachers and spending adequate time with students to enable them to learn a task shall improve the level of learning outcomes. The time spent on learning a task for students is a complex function of these five attributes. The central point in this path breaking work is 'learning is a function of time on task'.

Both the quality of teaching and time spent have direct influence on learning, given the other attributes of students. In calculating the time on task for teachers, we may also assume that the time spent on teaching is equal to time spent on learning by students. This assumption is justified particularly when the learning happens only in the school and students spend little time on learning at home. We shall also assume that there may not be wide variation in attributes of students such as aptitude, ability, and motivation among young children in elementary school in the age group of 6 to 8 years. When the teachers face a homogeneous group of students for each level of learning, the time on task will have a fair impact on every student in the classroom.

Based on Carroll's work, numerous research studies on 'time on task' were carried out by research institutes and universities. Till today the concept of 'learning is a function of time on task' remains the central idea and methodologies for measuring time on tasks are improving with the passage of time. In 1982 Karweit N L published a comprehensive review of the studies

on this subject matter. The studies reviewed in this monograph did not disprove that learning requires time, but the effect of time on task on learning was small. This does not underestimate the importance of time in learning, because time is malleable for teachers and educational administrators. One aspect of interest in these studies in the context of EE is that grouping and seating of students is proper if the classroom is heterogeneous. Grouping and seating of students comes with certain costs and benefits. This reduces overall time for instruction and improves the scope of effective instruction.

1988 marked the 25th anniversary of Carroll's 1963 paper. Carroll (1989) published a review of studies carried out in the intervening years on teaching and learning in schools. The studies emphasised the importance of time in learning. Bloom (1968) put forth the hypothesis, 'degree of learning or achievement is a function of the ratio of the time actually spent on learning to the time needed to learn.' Mastery of a subject can be achieved either by increasing time spent or by reducing time needed. This extended the Carroll's model to further application-oriented research studies.

Carroll approved the psychologists warning 'time is an empty concept' and emphasised what happened during the time as important. But educational psychologists have not been able to determine the duration of time required to learn a unit of instruction. A criticism that flows from this is that Carroll's model is an oversimplified construction of reality, and therefore that cannot unravel the complexities of teaching and learning. Carroll's reply was 'even a moderately oversimplified model is often useful, nonetheless, in dealing with complex phenomena.'

Carroll's model was extended to include many other variables like classroom environment, home environment, peer influence, and mass media. These studies highlighted the problems in measuring the qualitative aspects of most the variables including time. At the same time, they emphasised the importance of time in learning. The quantity of learning time was also emphasised because 'hard work and discipline in learning pays till student learn smart work.'

Several studies engaged with methodological issues of measurement of time on task. Overt behaviour of students could be observed and counted as time on task. The discussion on length of academic year, school day and period of instruction per unit or task was pervasive in research studies. Because the educational administrators can manipulate these time periods, they look for the optimal time periods in each of these categories considering the adverse effects of reduced time periods for games, for instance.

Another issue that the review by Carroll (1989) raised was the differences in time required to learn as the students differ in terms of aptitude, motivation and perseverance. Grouping and seating of students who are at the same level of academic achievements may be a useful strategy. Training teachers in finding differences in students learning abilities and in managing classroom with heterogeneous students is essential. A corollary to this is the quality of instruction. This aspect attracted the least attention in the family of studies emanating from Carroll's work. Pedagogies suitable for students and subject matters are many and varied. Given a range pedagogy, every teacher will alter the approaches assessing the students' abilities, aptitude and motivation. This is also an important aspect of classroom management.

Carroll opined that the effectiveness time on task and how it could be controlled or manipulated were elusive for researchers. He emphasised that every student should be given equal time to learn that pushed them to realise their potentialities in full. Of course, this requires differing the pace and content of learning for different students. The teachers should be knowledgeable in the subject matter as well as in pedagogies and classroom management. Good teaching and adequate time to learn should be ensured for all students, the variation in perseverance in students will be automatically addressed – conclusion that Carroll gave after this review.

Measuring time on task has always been elusive for researchers. Karweit (1982) narrated how the time varies as we moved from an academic calendar to the length of a school day, duration of a unit of instruction, within that duration the changes in activities and engagement time with students. The

correlation between time and learning is difficult to establish as we have different notions of time and difficulties in measuring time for activities in the classroom. With reference to measurement of Time on Task for teachers and students we refer to three recent studies.

Karrie E G, et.al (2021) used Baker-Rodrigo Observation Method Protocol to measure the engagement time of students in the classroom. In this system, a student's eye gaze on teacher or instructional material was coded as on task, otherwise off-task. Learning is measured through many assessments such as quizzes and report cards of students. A weak and highly variable relationship (gender, classroom, school type and grade) between time and learning was observed in this study. This only established the notion that increasing instruction time is not enough to increase learning. Other factors that interact with time and learning should be explored.

Just like students' engagement time was measured in the Godwin's (2021) study, the teacher's time on instruction was measured and its relationship with students' outcomes were explored by Simon M B, et.al (2022). Time allocated to twelve different instructional activities by teachers was recorded and quality of teaching was coded with a detailed rubric called the 'Framework of Teaching' (Danielson, 2007). Among the twelve instructional activities, some of them were evaluated as more effective irrespective of the skills of teachers. Similarly, teacher's effectiveness in instruction was also coded and that had a positive impact on students' learning outcomes.

World Bank (2016) published a report on what was happening inside classrooms in Indian Secondary Schools based on a Time on Task study carried out in 10th Classes in Madhya Pradesh and Tamil Nadu. "Stallings tool" was used in this study to quantify the interactions between teachers and students in the classroom. This method was widely used in both developed and developing countries. This study did not relate the time on task with learning outcomes but quantified the effective classroom time through clocking interactions between teachers and students. Some of the key

findings with reference to teacher-student interaction in the classroom in this study are:

1. Almost 89 per cent of teachers' time spent on instructional activities.

2. There were significant differences (reading aloud, discussion, class work, copying) in the way instructional time used across subjects.

3. Use of teaching and learning materials differed between subjects.

4. Availability of teaching and learning materials also differed between states.

5. The engagement level of students in Tamil Nadu was 73 per cent of the classroom time compared to 41 per cent in Madhya Pradesh.

From this review of literature, we can conclude that 'learning needs effective teaching time'. In other words, the quantum of time spent on teaching is as important as the quality of teaching and both the aspects of teaching can be measured and correlated with learning outcomes of students.

In the context of primary classes in government schools, we may assume that there will be small variations in learning abilities, aptitude and motivation of students in the age group of 6-8 years, given their more or less same socio-economic and educational background of their parents. However, the previous assessments of students and teachers' opinions reveal that the levels of learning achieved varied across students and subjects. As we mentioned in this literature review, grouping and seating of students is an effective pedagogy to increase 'effective teaching-learning time period' however, with its own merits and demerits. This provided the strong foundation for the construction of EE as a multi-grade teaching system emphasising the progression of learning through the three levels instead of three years of learning.

3.2 Methodology of data collection for evaluation of EE

In the light of these studies, we think that the time on task approach is the most suitable one for evaluating the effectiveness of EE in the government

schools. The Directorate of State Educational Research and Training, Government of Tamil Nadu prepared the textbooks, workbooks and teaching and learning materials and trained the teachers to use these materials and teach as per the new pedagogy. Apparently, the teaching and learning process should be the same in all 1 to 3 classes in government primary and middle schools. Before we could embark on a nuanced measurement of time on task for teachers, we attempted a quick and preliminary data collection on teachers' time on task and teachers' opinions about EE. The usual elaborate observations of classroom teaching were avoided in our preliminary study for two reasons: one, all the three approaches explained in the studies quoted in the last section are resource intensive and time consuming and two, the presence of an observer in the classroom itself would change the teacher's behaviour. We relied on self-reporting by teachers on time-use, that is, teachers recorded a day's activities by a timeline, segregated activities by time periods and gave details of activities. Since this was surprise assignment for the teachers and they were given a guideline to prepare this note. The guideline was with regard to segregating the time periods, nature of instructional activities in the classroom and outside the classroom. It was suggested that an elaborate description of the activities could be given. We assume that the self-reporting should reveal the variations in classroom practices. This data was analysed and supplemented with qualitative data collected through a direct interview-cum-discussion with a few randomly chosen teachers on their experiences in teaching after introduction of new pedagogy EE. Thus, in addition to quantifying the time on task through a self-reporting data on classroom activities by teachers in more than 200 schools, recording the quality of teaching and learning activities through elaborate interviews with a sample of 51 teachers was also carried out.

We selected Corporation Schools in Chennai district and Government Schools in Thiruvallur District, which is adjacent to Chennai district. The number of schools and samples drawn from these two regions are given in the Table 1.

**Table 1: Sample of schools, students and teachers drawn
from the Two Districts**

Sl.No	Particulars	Chennai District	Tiruvallur District
1	Total Number of Primary and Middle Schools	1100	1495
2	Total Number of Teachers	9078	6326
3	Total Number of Students	187899	127949
4	Student: Teacher Ratio in District	20.7	20.23
5	Number of Schools in Sample	101	131
6	Number of Students in Sample Schools	187899	127949
7	Number of Teachers in Sample Schools	532	764
8	Student: Teacher Ratio in Sample Schools	34.3	16.5

We collected information about the curricular and extra-curricular activities in the school in a day. Teachers were given a guideline to write the list of activities. One, give the list activities from 9 AM to 4.30 PM. Two, each time period is divided by the length of activities, therefore, we did not suggest any division of time periods. Three, as far as possible, the description of activities shall be given. For academic activities it shall the use of textbooks, workbooks, teaching materials, grouping of students, etc. For non-academic activities, games, extracurricular activities and revision of lessons shall be the described. Three, there is no word restriction for description. Four, the identity of teachers need not be given. Five, the headmaster/headmistress should authenticate the form filled by the teacher. We have also selected 51 teachers at random from the two districts and conducted elaborate interviews with each of them separately about the quality of teaching and learning in the classrooms.

4.0 Evaluation of EE based on sample data on 'Time on Task' by Teachers and Qualitative Information collected through Interviews

Our analysis of the data received through this self-reporting of a day's activities by teachers is of two parts. First part analyses the actual allocation

of time for various instructional and non-instructional activities and the second part analyses the actual description of activities submitted by the teachers.

4.1 Allocation of time for curricular and extra-curricular activities

In the Appendix 1, we have given a description of the EE, in which the standard weekly timetable as well as allocation of lessons for each week are given. The weekly timetable gives the standard allocation of time periods for different curricular activities. We compared the time periods as given by the teachers with the standard reference given in the EE guidelines and the comparison is given in Table 2.

Table 2: Comparison of Durations of Instructions in Two Districts

Sl.No	Activities	Average Time Periods of Activities (Hours:Minutes)			Prescribed Time Periods of Activities
		Chennai (N=101)	Tiruvallur (N=131)	Total (N=232)	
1	Prayer and Attendance	00:19	00:23	00:22	00:20
2	Revision	00:16	00:14	00:15	-
3	Tamil	01:08	01:22	01:21 (00:44)	01:30
4	English	01:02	01:11	01:07 (00:32)	01:30
5	Mathematics	01:09	01:18	01:14 (00:34)	01:30
6	Total (E+T+M)	03:19	03:51	03:42	04:30
7	Extracurricular Activities	01:09	00:56	01:02	01:00
8	Total	04:46	05:02	04:55	05:30

First, we discuss the combined samples' (Chennai plus Tiruvallur) results. We find that the duration of curricular activities (row 6) is nearly 48 minutes less than the prescribed duration of 4 hours 30 minutes. The overall school time in a day is less by 35 minutes. Thus, our first observation is that the duration of curricular activities is less than the prescribed duration. The duration of

instruction for English is less by about 23 minutes and for Mathematics, the difference is about 16 minutes only. The duration of instruction for Tamil is less by 9 minutes. Nearly 15 minutes are spent for revision, which could be accommodated in the periods allocated for the three subjects. On the whole, there is a need to increase the duration of instruction for the three subjects.

If we compare the distribution of time periods among the three subjects, schools in Tiruvallur allocated more time for all the three subjects than schools in Chennai. Therefore, in the aggregate, schools in Tiruvallur allocated 33 minutes more for the three subjects than the schools in Chennai. The students in Tiruvallur spent 5 hours and 2 minutes in a day in schools compared to 4 hours and 46 minutes in Chennai schools. Schools in both the districts should increase the instructional duration in a day.

In Table 2, the standard deviation for the instruction time for Tamil, English and Mathematics are given in brackets. The standard deviations are quite large compared to the average duration. For Tamil, one standard deviation is 44 minutes, when means the duration across schools can be in the range of 37 minutes to 125 minutes and similar ranges of duration of instruction for English and Mathematics are 35 to 99 minutes and 40 to 108 minutes respectively. It is quite possible that some schools may not teach all the three subjects in a day. The proportions of schools that taught all the three subjects on the day of data collection in Chennai and Tiruvallur were 65 per cent and 82 per cent. The variation in duration of instruction of the three subjects as well as variation in the number of subjects taught in a day across schools are pointers that the learning outcomes should differ between schools in different schools.

4.2 Quality of Teaching and Learning in Primary Classes after implementation of EE

The next step is to reflect on the actual teaching process that has taken place in the classroom. Though all the teachers were given similar set of instructions (see Appendix 2) and asked to give the schedule of activities carried out in a day in the classroom; the responses from teachers can be

classified into three groups. One, some teachers gave just the list of subjects taught along with duration of instruction for each subject. Two, some teachers specified the actual lesson taught or activity carried out in the classroom along with duration of instruction for each subject. Three, a few teachers gave the detailed description of the activities, teaching learning materials used, and description of the class as mono-grade or multi-grade, how students of different levels that is arumbu, mottu & malar were taught. From the descriptions that the teachers had given, we could hardly construct a unified account of the classroom activities in these schools. Therefore, we decided to have an in-depth interview with 51 teachers from the two districts, that is, 25 from Chennai and 26 from Tiruvallur. The interview with teachers was guided by a list of open-ended questions given in Appendix 3. The questions were used to start the interview, but long conversations followed to get clarification on many of the issues that the teachers highlighted during this interaction.

All the teachers have attended all the training classes, and all the schools have the Teaching Learning Materials. All of them have been following the EE pedagogy since its introduction in 2021. They also declared that they followed the prescribed Timetable. We classified the responses to our questions and opinions given by the teachers into broad categories that explain the key issues in adopting EE in the classroom.

Class Strength

Mono-grade teachers are only half of the sample number of teachers. The remaining multi-grade teachers must teach a widely heterogeneous classroom. A teacher from Chennai puts it perceptively, "For monograde classes, the first standard has one option, the second standard has two options, and the third standard has two options and rarely three options. Compare this with a multi-grade class of first and second standards, will have two options with two grades students and a multi-grade class of all the three standards, the variations in students by grades and levels make the classroom difficult to manage. Even in mono-grade classes if the strength is high, it is chaotic. A mono-grade class shall have a maximum of 15-20

students". Another teacher reflecting the collective opinion says, "If the number of students is less than 15 in a monograde class, all teachers feel it is convenient to teach". The multi-grade teachers with large number of students in a classroom do face more challenges than others.

Infrastructure

The problem of multi-grade class is aggravated by smaller classrooms and non-availability of proper and spacious classrooms. "At present the space in classroom, furniture and other facilities are suitable for chalk and talk," said teachers. The teaching aids, display materials and platform for training in oration and arts, make the classroom clumsy with little space for children and teachers to move around. Several classrooms in Chennai need renovation and some need demolition and new buildings.

Seating and other issues in classroom

The time taken for prayer, attendance and for contacting parents of absentees is more than the allotted time for these activities and this reduces the time for instruction as we noted in the previous section. This is a common problem in both Chennai and rural areas in Tiruvallur district. Teachers must send someone to bring children from their homes. As every child should be given breakfast before the start of the class, the latecomers must take breakfast and join the class later than other students. Taking breakfast in the classroom also delays the start of academic activities in some schools. However, there is a general decline in the number of absentees compared to the previous years. As children like the group activities and they are willing to attend school.

EE requires seating and grouping of students for each subject as per the levels of learning. Often students are confused about the changing the groups for each subject and sometimes they are unwilling to change the group and seating arrangements. "Settling students into groups for each subject is tough for us. We often feel confused and the students too" was the anguish of a teacher. Some teachers continue without grouping and seating of students as per the level.

Students take more time to shift between textbook and workbook and the teachers take more time to shift between different levels in a subject. Though teaching could be as per level, the effectiveness of teaching may not be as desired. This could be a reason for the teachers not able to attend to the requirements of every student in the classroom. Generally, the intensity of these problems are less in mono-grade classes.

EE Textbooks and Workbooks

The EE process is very elaborate with many teaching-learning materials to be used, filling up data in mobile apps, correcting the workbooks, and conduct of various assessments. The workbooks and textbooks are good and attractive with colourful pictures and practice exercises for the students. Teaching-learning materials are useful, and children enjoy learning while the teachers use the materials in the classroom. However, the fonts, font-size and elaborate descriptions in lessons should make these books more useful, observed many teachers. Improving the textbooks, workbooks and teachers' manuals are important to make EE effective.

Teachers and students find it difficult to handle two books for each subject and suggest combining the two as one book, with exercises at the end of each chapter. Students are not able to open the appropriate chapters in textbooks and workbooks simultaneously. Most of the times, the teachers must do this for each student. Use of many teaching-learning materials sometimes is confusing and unnecessary. The use of several textbooks and workbooks in a multi-grade classroom is impossible. Mostly teachers concentrate on a particular level of students, mostly the mottu or arumbu students, neglecting others. Left with reduced time for instruction and correction for workbooks, the teachers resort to concentrating on *Arumbu* students, and allowing higher level students to learn from each other.

Regarding Math, "Math activities are not systematically designed, lack continuity, and difficult for the students to understand the logic and recollect the steps for calculations" observed a teacher. Teachers suggest improvements in Math textbooks and workbooks, including the font and its

size. There is a need to redesign the Math textbooks and workbooks both in terms of contents and exercises for practice.

Teachers also report that the time taken for correction of workbooks considerably reduces the time for effective teaching. Students do not complete the exercises in the workbooks, particularly in English. If the teachers must complete the task of teaching within the school hours, then the teachers are compelled to correct the workbooks after the class hours, and without having the students beside them and that is a useless exercise according to many teachers. Sometimes, teachers write the workbooks on behalf of the students, or they have to teach the students each of the exercises and coach them to complete the tasks. This, obviously, should reduce the time to teach the textbooks.

Teachers also specify lessons in subjects and the corresponding workbook exercises that are difficult to teach or difficult for the students to complete the tasks. Teaching English is difficult, as they need to complete exercises as per the instruction in the training and this is preferred to teaching and learning in the classroom. For this reason, teachers suggest giving scope to innovate on pedagogies. One observation by a teacher is pertinent to quote here. "The process of EE is quite mechanically carried out following the instructions given by the teacher trainers. The process of building personal bond with the student is lost in this process."

Rather returning to the old system of chalk and talk is also preferred by some of the teachers. Memory, recall, loud reading and writing are important exercises which the present set of students are not adequately exposed to, according to teachers. Both the teaching process and the assessment systems should give equal importance to teaching and assessing all the three skills of listening, reading and writing.

EE Pedagogy

Teachers are not totally apprehensive about EE; they encourage students to write on black board and to speak on platform. In the new EE pedagogy, there is scope for participative learning that encourages the students to

approach the teachers confidently and enthuse them to learn better. It is also acknowledged by teachers that learning English has improved. Many teachers have recorded the joy of conducting the 'Enn Medai' and 'Enn Pechu' and students also equally enjoyed the activity. Some teachers enact dramas, arrange singing competitions and many other creative activities in the classroom. Some other teachers also complained about too many activities to be conducted within a short period of time. Many teachers told us the pedagogy techniques learnt in the training classes were difficult to practice in the classroom, mostly for want of time.

The teachers also suggested that the classification of students as Arumbu, Mottu and Malar should be revisited. Some of them find some students have been wrongly classified and placing them in inappropriate groups is discouraging them. Teachers also find the classification as inappropriate for young children as they may swiftly change between levels by our assessments, but their overall learning abilities will remain the same. Teachers should be given greater freedom to carry out this classification. Teachers want the freedom to classify the students by levels of learning based on their subjective and continuous observation and structure the teaching according to the levels so determined. Teachers want to discontinue the rigidity in classification of students and the rigorous academic schedule. Instead, they suggest that good training on EE followed by well guided autonomy for the teachers will improve learning outcomes of students.

Assessment process

Majority of the teachers have some reservations about assessments. The present assessment system is good for the slow learners to bring out the best in them and also it is not an intimidating exercise. But teachers also point out that it is not challenging for intelligent students. The Formative Assessments 1 and 2 are not essential, however, if it is enforced, increase the number of questions to train the students with more exercises. Mobile app-based assessments are difficult to administer. Teachers must prompt the students to reply, otherwise they go without answering the question even if they know

the answer. Too much of work on data filing is also resented by many teachers.

Generally, the teachers accepted EE with caveats. They accept that the EE pedagogy is student-centric and therefore a reorientation of teachers is essential and that has been sufficiently completed. But the system is still rigid with timeline of activities to be completed, giving little scope for initiatives of the teachers. The teachers are willing to learn and follow the EE. There are very creative and passionate teachers who should be deployed for conducting demonstration classes to other teachers. The EE should undergo continuous improvement in successive years creating scope for teachers' guided autonomy in the classroom and assessments.

5.0 Conclusion

It is understood from the various documents and training manuals with regard to implementation of EE that the government considered the level-based teaching and learning as the surest method of improving learning in primary classes in Tamil Nadu. Of course it is a time-tested approach to teaching in elementary schools. The concept of level-based teaching allows for use of different pedagogical techniques suitable to the student's aptitude and motivation. This also needs some freedom for the teachers to decide on the choice of pedagogies for effective contextual learning. The department believed that the pedagogical procedures conceived under EE as the best option available for the teachers to improve teaching and learning in primary classes. The preparations of textbooks, workbooks and teachers' manual along with teaching and learning materials have been commendable. The elaborate in-service trainings have been repeated to inculcate the techniques of teaching as per the predetermined pedagogical approaches in EE. However, the EE is a monolithic top-down approach to ensure that the teachers in all the schools follow the uniform pedagogical approaches and assessment processes to achieve the desired levels of learning outcomes in each subject.

After the summative assessments in elementary schools, we learn that the grades of students reveal only slight variations in learning outcomes across schools and across students in a school. Does this mean the common pedagogy is quite effective in improving the students' learning outcomes to the same level? On the other hand, we find considerable variation in the time on task and quality of task in schools. This should necessarily result in variations in the learning outcomes of students. In this study, with data from a small sample of elementary schools, we could infer that there is a need for considerable corrective measures to improve the EE strategy as an effective method of teaching in primary classes. At the same time, in Tamil Nadu, students differ across regions by dialects, social and cultural aspects which require different approaches to suit the varied needs of the students across the state. Experiential learning in foundational literacy and numeracy can never be understated. This causes a need to conduct larger studies with data collected from all the districts in the state to evaluate the relevance of contents and pedagogical practices as suggested in EE. A comparative study on several types of pedagogies should precede the training of teachers in a bouquet of pedagogies and to enlarge the scope for them to choose pedagogies that are suitable for their students.

The primary objective of this study is to identify issues for a thorough study of the implementation of EE in Tamil Nadu. Accordingly, any future study shall consider the following research questions:

1. Whether the content of the EE is in accordance with the stated curriculum framework for the elementary classes?

2. Whether the content is properly drawn into syllabi, textbooks and workbooks and teacher manuals? Whether these books are based on a cogent set of pedagogical approaches/techniques?

3. Whether the use of language, social constructions, description, illustrations and examples are appropriate for the elementary classes and varied social groups in the state in terms inclusivity as well?

4. The content analysis should be preceded by a literature review-based research on alternative pedagogical approaches and best practices for teaching and learning in elementary schools across the country.

5. Whether the contents of teacher training camps are properly drawn and delivered? Whether the teachers are sensitised to accept and implement the programme with involvement? Whether the training camps opened scope for the teachers' initiatives within the curriculum framework?

6. Based on a carefully selected methodology, we should measure and verify whether the time on task for both teachers and students is adequate and effective?

7. Evaluation of assessment methods should lead to explain the appropriateness and credibility of assessment and whether such assessments can be built in the learning process?

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Appendix -1

Ennum Ezhuthum -Guidelines

A. Introduction

- Hon'ble Chief Minister of Tamil Nadu launched the Ennum Ezhuthum mission on 13.06.2022. The mission's goal is that by the end of the academic year 2025, students who have completed Class 3 in all government and government-aided schools in Tamil Nadu should be able to read, comprehend, write and do basic arithmetic.

- A high-level committee of education experts was formed based on Government Order No. 147, School Education (ERT) Department, dated 22.10.2021 to implement this.

- Based on continuous discussion meetings with teachers and educators, consultation with all government and government-aided primary school teachers across Tamil Nadu and field tests, the High-Level Committee recommended implementing the Ennum Ezhuthum mission.

- The mission aims to improve the quality of learning and teaching in primary classes in Tamil Nadu.

- Based on this, the Ennum Ezhuthum mission is being implemented in classes 1, 2 and 3 of all Government and Government-aided schools in Tamil Nadu from the academic year 2022-23.

- For the academic year 2022-23, teachers' manuals and training books for the first term have been developed and provided to all government and government-aided schools.

- Explanations on Ennum Ezhuthum mission curriculum structure, Teaching Learning Materials and Classroom Structure Quick links to Teacher's Guides for Tamil, English and Maths subjects are provided within QR Codes.

- In addition, videos for Ennum Ezhuthum model classes will be telecasted weekly on Mondays, Wednesdays and Fridays at 8.30 pm on Kalvi TV. This broadcast will start on 27.06.2022.

B. Guidelines for implementation of Ennum Ezhuthum Mission

1. Level-based learning and teaching

- The learning gap has widened following the closure of schools due to the coronavirus pandemic.

- To bridge this learning gap, Ennum Ezhuthum's mission focuses on level-based learning rather than grade-based learning.

- For example, children in third grade are likely to be at the arumbu/bud (level 1) or mottu/blossom (level 2) or malar/flower (level 3) levels of learning.

- Similarly, children in second grade are likely to be at arumbu/bud (level 1) or mottu/blossom (level 2) levels of learning.

- That is, in the same class there are children at different levels of learning such as arumbu/bud (level 1), mottu/blossom (level 2) and malar/flower (level 3). Teaching should be tailored to these different learning levels. Based on this, the teacher's manual provides clear instructions for teaching children at these three learning levels.

- Apart from that, more than 70% of them are one-teacher schools. In such schools, a multi-class teaching method is followed. Also, having children of multiple levels in mono-grade classes is possible. The level-based teaching approach will be beneficial for teachers from these schools. Based on this, the teaching in Ennum Ezhuthum's mission focuses on the learning level.

Learning-level Based Classroom

Class	Level of learning
1 (Mono-grade)	Arumbu/bud (level 1)
2 (Mono-grade)	Arumbu/bud (level 1), Mottu/blossom (level 2)
3 (Mono-grade)	Arumbu/bud (level 1), Mottu/blossom (level 2), Malar/flower (level 3)
1, 2, 3 (Multi-grade)	Arumbu/bud (level 1), Mottu/blossom (level 2), Malar/flower (level 3)

2. Teachers

1. All Government and Government-aided schools shall use the calendar given in Annexure 1.

2. Teachers should follow a level-based teaching approach as given in the Teacher's Handbook and oriented in training.

3. Classes 2 and 3 to conduct baseline assessment from 04.07.2022 to 08.07.2022 to ascertain children's learning level. Only the teacher can see the children's learning level report after completing the assessment. Teachers may maintain a copy of the report.

4. All children should have one Tamil, English and Math workbook per term. Class 1 children should be given Arumbu/bud workbook, class 2 children should be given Mottu/blossom workbook and class 3 children should be given Malar/flower workbook.

5. The arumbu workbook contains activities for the arumbu level. The mottu workbook contains activities for arumbu and mottu levels. The malar workbook contains activities for arumbu, mottu and malar levels.

6. Arumbu, Mottu and malar workbook activities are given in blue, yellow and green, respectively

7. All teachers must complete the lesson note form in Annexure 2 weekly. Course-wise sample lesson notes are also given in Annexure 2.

8. The Ennum Ezhuthum mission's central aim is to improve numeracy and literacy quality. Hence, scientific attitude and social skills are integrated with Tamil, English and Maths subjects. The non-integrated Environmental Science, Science and Social Science subjects in Annexure 3 should be taught to the respective classes as mentioned in Annexure 1- Time Table.

9. Learning corners should be set up based on the subject and subject matter taught in all classrooms. Learning corners are meant to stimulate children's interest and engagement and make them participate in classroom activities.

10. Learning corners should establish the background and environment for teaching each subject. After the corner is set up and taught, the materials used in the classroom are to be displayed in the corners - story, song, creativity, activity, puppetry, quiz and reading. In addition, subject-specific activities of the children will also be displayed in the learning corner.

11. All teachers are required to download/update the TNSED app on their mobile phones for recording student attendance. Inside this app, there is a framework for assessment.

12. All teachers must enter their classroom information into the Ennum Ezhuthum app once.

13. A list of activities and action plans for formative assessment (A) is given in Annexure-4.

14. Among them, any 4 activities should be registered in the app separately for Tamil, English and Maths subjects. Please keep a copy of the relevant report.

15. Every week on Fridays, formative assessment (B) activities should be conducted through the Ennum Ezhuthu app. The timing for conducting the assessment is given in the timetable (Annexure 2). This evaluation should be conducted from 22.07.2022 onwards.

16. All formative assessments must be conducted individually for each child in a game-like (activity-based) manner.

17. Guidance notes on how to conduct the assessment through the app will be provided through the Digital Video Module.

18. The Summative Assessments conducted at the end of the term to test the learning level of the children will be given to the teachers through the Ennum Ezhuthum app.

19. There will also be an opportunity to upload videos on learning corners through the Ennum Ezhuthum app.

20. All teachers must use the Ennum Ezhuthum app to implement assessments as planned and on schedule.

21. Continuous and Comprehensive Evaluation forms (in CCE formats) are available for teachers to maintain formative and summative assessments. Apart from these, teachers are not required to maintain any other register.

3. Head Masters

1. If it is a multi-grade classroom, arrangements should be made so that classes 1, 2, and 3 are taught by one teacher and classes 4 and 5 are taught by another teacher.

2. All the teachers should have separate subject-wise Tamil, English and Maths teacher handbooks for the first term.

3. Each teacher will be given an Ennum Ezhuthum Kit containing learning materials.

4. Every classroom should have a small dummy stage and a dummy mike for children to speak, sing, act and enact.

5. Every school must conduct parent-teacher meetings for classes 1, 2 and 3 every month. During this meeting, teachers and parents should discuss the student's learning level, activities and progress.

6. The progress/development status of the Ennum Ezhuthum mission should be included and discussed as part of the agenda of the School Management Committee meetings.

7. Every school should conduct a talent celebration event to showcase the special abilities of the children once every two months on the last working day of the month.

Children should be encouraged to showcase their talents, both subject-related and extra-curricular abilities, and inspire other students through their special abilities. It is important to get all children involved in such activities either individually or in groups.

4. Role of Cluster Resource Centre (CRC) Co-ordinator

1. The CRC coordinators are responsible for consolidating the Teacher training programs at the cluster level. Annexure 5 presents the overview of procedures (tasks) involved in setting up the training center.

2. The coordinator is incharge of presenting the CRC training calendar which details the component, venue and mode of delivery. Annexure 6 presents the overview of the calendar.

3. The coordinator is responsible to ensure that all training comply with the calendar and the procedures shared to them.

5. State Officials (CEO, DEO, BEO and DIET lecturers) responsible for classroom observation

1. State officials from the CEO, DEO, BEO and DIET lecturer cadre are allotted training centres to conduct training observations at the cluster level regularly. They use the Payirchi Paarvai application through TNSED to record their observations.

2. They check to ensure that the logo of Ennum Ezhuthum is displayed in the school premises. Annexure 7 presents the Ennum Ezhuthum logo.

3. They work towards ensuring that all domains of the Ennum Ezhuthum mission have been successfully implemented. Annexure 8 presents the overview of subject-wise objectives and focus areas in Tamil, English and Numeracy.

4. State officials from the CEO, DEO, BEO and DIET lecturer cadre are allotted schools to conduct classroom observations at the cluster level regularly.They are expected to use the Palli Paarvai application to record their observations.

5. In order to evaluate and monitor the progress made, CEOs and DEOs conduct a monthly review meeting.

6. The highlights from the discussion points that are recorded in the review meeting have to be uploaded in the Palli Paarvai application.

C. District Level Steering Committee (DLSC)

A steering committee is to be formed in the month of June, 2022. The following list presents the State officials who are to be appointed for the DLSC.

1. District Collector

2. Chief Educational Officer (CEO)

3. DIET Principal

4. Assistant Program Officer (APO)

5. DEO (District Educational Officer)

Roles and Responsibilities of the District Level Steering Committee (DLSC)

- The committee members are responsible to work alongside the teachers to ensure that the mission is successfully achieved.

- This committee provides awareness to all stakeholders such as teachers, parents and the society about the mission.

- The committee is responsible to ensure all stakeholders are communicated with all important information about the mission.

- This committee is responsible to monitor and check successful implementation of the mission in both government and government aided schools.

- This committee is responsible to monitor prompt delivery of teacher handbooks, and student workbooks. They also provide guidance to schools on the effective use of the resources.

- The committee is responsible to monitor and check if level based teacher-learning practices are being followed in all classrooms regularly.

- The committee is responsible to monitor if weekly level based assessments are conducted using the Ennum Ezhuthum app.

- In order to evaluate and monitor the progress made, the committee monitors if monthly review meetings are conducted systematically.

- The committee is responsible to provide periodic recommendations based on the data consolidated from the school's performance .

Annexure 1 : Time Table

Annexure 2 : Course-wise : Lesson plan Model Format

Annexure 3 : Period Plan

Annexure 4: Ennum Ezhuthum - English Formative Assessment – FA(a)

Annexure 5: CRC Training Time Table

Annexure 6: CRC Training Calendar

Annexure 7: Ennum Ezhuthum Logo

Annexure 8: Subject-wise Ennum Ezhuthum assessment indicators

Annexure 1 – Time Table

Primary School - Timetable

Grade 1 - Grade 3

Day / Time	1 9.10 am - 9.30 am	1 9.30 am - 11.00 am	11.00 am - 11.10 am	2 11.10 am - 12.40 pm	12.40 pm - 1.30 pm	1.30 pm - 2.00 pm	3 2.00 pm - 3.30 pm	3.30 pm - 3.40 pm	4 3.40 pm - 4.10 pm
Monday	Morning Prayer	Tamil	Break	Maths	Lunch Break	Spoken English	English	Break	EVS / Social Science Activities
Tuesday		English		Tamil		Arts and Crafts	Maths		PTE
Wednesday		Tamil		Maths		Maths Tables	English		EVS / Social Science Activities
Thursday		English		Tamil		Read & Write	Maths		PTE
Friday		Maths		English		Spoken English	Tamil		EVS / Social Science Activities

Syllabus for one week

Tamil	English	Maths	EVS / Social Science Activities	PTE	Total
5	5	5	3	2	20

Time Allocation - Primary School (Weekly) Grade 1 - Grade 3	
Subject	**Lesson Time**
Tamil	7 hours 30 minutes
English	7 hours 30 minutes
Maths	7 hours 30 minutes
EVS / Social Science Activities	1 hour 30 minutes
PTE	1 hour
Co-Curricular Activities (Spoken English, Arts & Crafts, Maths Tables, Read & Write)	2 hours 30 minutes

Model Time Table (Grade 1-Grade 3)			
Si.No	**Time**	**Period**	**Duration**
1	09.10 am - 09.30 am	School Assembly	20
2	09.30 am - 11.00 am	First Period	90
3	11.00 am - 11.10 am	Break	10
4	11.10 am - 12.40 pm	Second Period	90
5	12.40 pm - 1.30 pm	Lunch Break	50
6	01.30 pm - 02.00 pm	Extra curricular activities	30
7	02.00 pm - 3.30 pm	Third period	90
8	03.30 pm - 03.40 pm	Break	10
9	03.40 pm - 04.10 pm	Fourth Period	30

Annexure 2 – Format Lesson

Format-Lesson Plan

Class		Subject		Month, Week	
Module No		Topic			
Learning Outcomes					
Teaching Learning Materials					
Plan per day			Arumbu	Mottu	Malar
			Page No of Workbook	Page No of Workbook	Page No of Workbook
Day 1	Teacher's Handbook Page no				
Day 2	Teacher's Handbook Page no				
Day 3	Teacher's Handbook Page no				
Day 4	Teacher's Handbook Page no				
Day 5	Teacher's Handbook Page no				

Model Format-Lesson Plan- Tamil

Class	1,2,3	Subject	Tamil	Month, Week: July 3rd week
Module No	4	Topic	அமுதாவும் ஆட்டுக்குட்டியும்	

Learning Outcomes	• கதை கேட்டுப் புரிந்து கொண்டு நிகழ்வுகளை ஊகிப்பர். • கலந்துரையாடலில் பங்கேற்று வினாக்களுக்கு விடையளிப்பர். • சூழலின் காரண காரிய தொடர்பு அறிந்து பேசுவர். • கேட்ட ஒலிப்பை, ஒலிப்பிற்குரிய வரி வடிவத்தை அடையாளம் காணுவர். சொற்களைப் படிப்பர், எழுதுவர்.

Teaching Learning Materials	பந்து/ தாள் பந்து, சொல் அட்டைகள், எழுத்து அட்டைகள்.

Plan per day		Arumbu	Mottu	Malar
		Page No of Workbook	Page No of Workbook	Page No of Workbook
Day 1	Teacher's Handbook Page no 25 to 27	4.0	4.0	4.0
Day 2	Teacher's Handbook Page no 28 & 29	4.1,4.2	4.1, 4.2,4.3,4.4,4.5, 4.6,4.7	4.1, 4.2,4.3,4.4,4.5,4.6,4.7, 4.8,4.9,4.10
Day 3	Teacher's Handbook Page no 29 & 30	4.3.4.4	4.8,4.9,4.10	4.11,4.112,4.13,4.14
Day 4	Teacher's Handbook Page no 30 & 31	4.5	4.11,4.112,4.13,4.14	4.15,4.16,4.17,4.18, 4.19, 4.20, 4.21
Day 5	Teacher's Handbook Page no 32	4.6 & Evaluation	4.15,4.16,4.17 & Evaluation	4.22,4.23,4.23 & Evaluation

Model Format-Lesson Plan- English

Class	1,2,3	Subject	Tamil	Month, Week: July 3rd week
Module No	4	Topic		Things we use (Parrt-I)

Learning Outcomes	By the end of the module, students can • listen and repeat songs and chants. • listen and talk about the story "Thambi goes to school" • identify and say the initial sounds of their names. • name familiar classroom objects with picture cues. • use "How are you? I am fine, thank you, sit down, stand up, look at" in conversations.
Teaching Learning Materials	A string bag, newspaper and classroom objects. Stick puppets of the characters in the story.

Plan per day		Arumbu	Mottu	Malar
		Page No of Workbook	Page No of Workbook	Page No of Workbook
Day 1	Teacher's Handbook Page no 16 to 18	4.1	4.1, 4.2	4.1,4.2,4.3
Day 2	Teacher's Handbook Page no 18 & 19	-	-	-
Day 3	Teacher's Handbook Page no 19 & 20	4.2	4.3	4.4
Day 4	Teacher's Handbook Page no 20 to 22	4.3	4.4,4.5	4.5,4.6
Day 5	Teacher's Handbook Page no 22	Assessment	Assessment	Assessment

Model Format-Lesson Plan-Maths

Class	1,2,3	Subject	Tamil	Month, Week: July 3rd week		
Module No	4	Topic	☒ I Know Numbers-I			
Learning Outcomes	Recognise the Numbers and wording from 1 to 9					
Teaching Learning Materials	Stones, Balls, Leaves, Flowers, Seeds, Sticks, Feathers, Chalk Pieces, Pencils, Colour Papers, Buttons, Caps, Chart Papers, 1-9 numbered chart papers, Thread, 1-9 numbered in the Fish shaped chart paper, Magnet, Safety pin, Whistle, Thayakatai, Bambaram, Goli balls, Balls sticks etc					
Plan per day			Arumbu	Mottu	Malar	
			Page No of Workbook	Page No of Workbook	Page No of Workbook	
Day 1	Teacher's Handbook Page no 21 to 23		4.1,4,2	4.1, 4.2	4.1,4.2,	
Day 2	Teacher's Handbook Page no 24 & 25		4.3,4.4,4.5	4.3,4.4	4.3,4.4	
Day 3	Teacher's Handbook Page no 25 & 26		4.6,4.7, 4.8,	4.5, 4.6	4.5, 4.6	
Day 4	Teacher's Handbook Page no 27 to 28		4.9,4.10, 4.11	4.7, 4.8,	4.7, 4.8,	
Day 5	Teacher's Handbook Page no 28		4.12,4.13 & Assessment	4.9,4.10 & Assessment	4.9,4.10 & Assessment	

Annexure 3 – Subjects to be taught Science /Social Science

Class III Science and Social Science Subjects

Subject	Periods (time period – 30 Minutes)
Science	
States of Matter	7 Periods
Force	7 Periods
Science in everyday life	8 Periods

Subject	Periods (time period – 30 Minutes)
Social Science	
Village Panchayat	7 Periods
Safety	7 Periods

Period Plan

Week	Periods (duration: 30mints)	Subject, Topic
Week 1	3	Science: States of Matter
Week 2	3	Social Science: Panchayat
Week 3	3	Science: states of Matter
Week 4	3	Social Science: Panchayat
Week 5	3	Science: states of Matter, Force
Week 6	3	Social Science: Panchayat, Safety
Week 7	3	Science: Force
Week 8	3	Social Science: Safety
Week 9	3	Science: Force, Science in everyday life
Week 10	3	Social Science: Safety
Week 11	3	Science: Science in everyday life
Week 12	3	Science: Science in everyday life

Annexure-4 Formative Asessment and activities

Science and Social Science Topics for III Std		
Topic	Learning Objectives	Periods (Duration: 30 mins)
Science		
States of matter	After learning this lesson, students will be able to • Know the matter surrounding us • Difference between solids, liquids and gases • Observe the properties of matter • Describe the nature of the material • Conduct simple experiments	7 periods
Force	After learning this lesson, students will be able to • Define movements and actions • Define force • Know different types of forces • Know the force of friction • Understand the need and significance of frictional force	7 periods
Science in Everyday life	After learning this lesson, students will be able to • apply the knowledge of scientific principles in day-to-day life • observe the science that works in the kitchen	8 periods

	• learn about the value of cooking items and their medicinal properties • explore scientific investigations in everyday life • measure the boiling point of water and milk	
Social Science		
Panchayat	After learning this lesson, students will able to • Know about our Panchayat system. • Understand that Panchayat provides the basic facilities to the village people. • Know about the duties of Gram Sabha. • Know about the local self-government.	7 periods
Safety	After learning this lesson, students will able to: • Understand the safety measures to avoid accidents • Know about Fire safety • Know about Road safety • Understand the water safety • • Know about the electrical safety	7 periods

Ennum Ezhuthum- Tamil

Module	Activity
1.பாடி ஆடி விளையாடலாம்	1.1. முகமூடி அணிந்து பிடித்த பாடல்வரிகளைப் பாடுதல் 1.3. செய்வோம்! செய்வோம்!
2.ஆசையாகப் பேசலாம்	2.3. பிடித்ததைச் சொல்வேன், சொன்னதைச் செய்வேன் 2.3.2. என்னைப் பற்றி
3.செய்து கற்று மகிழலாம்	3.2. என் பெயர் வரைவேன் 3.3.2.சொல்லக் கேட்டுச் செய்வேன்
4.அமுதாவும் ஆட்டுக்குட்டியும்	வீட்டில் பேசுவோம் சிந்திக்கலாமா?
5.ஆட்டுக்குட்டியைத் தேடி	அரும்பு - தெரிந்த எழுத்துகளைக் கண்டுபிடித்து வட்டமிடுவேன் மொட்டு, மலர் – மறைந்துள்ள சொல்லைக் கண்டுபிடித்து எழுதுவேன்
6.ஆட்டுக்குட்டிக்கும் பசிக்கும்	எழுத்தில் அடுக்கலாம் (ஆ.கை)
7.லப்டப்…. லப்டப்….	நான் கற்றவை - சொல்லக் கேட்டு எழுதுவேன்
8.பூப்பூவாப் பூத்திருக்கு	இலையில் உருவம் செய்வோம்
9.கொக்கு நிற்கும் குளக்கரை	அரும்பு – 9.2, மொட்டு – 9.1, 9,2, மலர் – 9.1, 9.2
10.பந்தைத் தேடிய குரங்கு	அரும்பு – 10.5, 10.9, 10.10 மொட்டு – 10.15, 10.20, 10.21 மலர் – 10.16, 10.21, 10.22
11.அணில் தின்ற கொய்யா	அரும்பு – 11.7,11.9 மொட்டு, மலர் – 11.5, 11.6, 11.14, 11.15
12.நானே முடிவெடுப்பேன்	அரும்பு, மொட்டு, மலர் – 12.2, 12.3

*Any 4 activities can be chosen for Formative Assessment (a).

Ennum Ezhuthum - English

Formative Assessment – FA(A)

Module	Activity
1. Getting to know each other	2.a. Small group activity: Hand printing 3.d. Whole class activity: A Gift for a friend
2. My classroom	3.a. Decoration for the classroom 3.b. Around the classroom – Animal walk
3. About me	1.d. Independent Activity: Draw simple house on the floor 2.d. Independent Activity: Draw simple flower on the floor 3.d. Independent Activity: Draw simple kite with a long tail 5.d. Craft Corner: Prepare a paper bag out of a newspaper
4. Things we use (Part – 1)	1.c. Independent Activity: 1.Prepare a mask using kerchief 2. Draw smileys on the floor 2.c. Independent Activity: Draw shapes on the floor and walk on it 4.c. Independent activity: Draw a pot and decorate

Module	Activity
5. Things we use (Part 2)	1.d. Independent activity: 1.d. Draw four things that you take with you when you go to your grandma's house. 3.d. Draw a clock on the floor.
6. My body (Part 1)	3.e. Independent Activity: Collect three things in any one colour and paste them on a sheet of paper. 4.e. Independent activity: Make small letters a b c d with dough or clay.
7. My family	2.e. Independent activity: 1. Show pictures of family members and say their names to friends 2. Draw or paste pictures of family members in their notebook. 4.c. Independent activity: Prepare letters using sand.
8. My body part (Part 2)	4.d. Independent activity: Ask students to name the parts of the body on the chart displayed in the classroom. 5.d. Circle Time: Revising parts of the body using spinner game.
9. My Senses	1.e. Independent Activity: 1.Draw a big ball and a small ball and name the big one. 2. Draw a big pencil and a small pencil and draw the small one. 2.d. Independent Activity: Draw M and N on the floor and make a small vehicle run through it.

Module	Activity
	3.e. Independent Activity: Write letters O and P on the sand paper/sand tray 4.d. Independent Activity: 1. Do a flower rangoli using kolam powder, flowers and leaves. 2. Use glitter pens to make an outline of a flower/star/moon on a drawing paper.
10. My home	1.d. Independent Activity: Form letters by rolling and folding using newspapers. 3.d. Independent activity: Draw and talk with pair on it. 4.d. Independent Activity: Form letters using sticks.
11. Daily Routine	1.e. Independent Activity: Make students bring pictures of words that start with V and W and place them in their notebooks. 2.c. Large group activity: Reinforcing daily routine 2.e. Independent Activity: Read sight words displayed on the word wall to their friends. 3.c. Small group activity: Prepare an elephant using paper plate. 5.b. Circle Time: Recalling daily routine
12. My school	1.e. Independent activity: Reading sight words and names of vehicles. 3.c. Independent Activity: 2. Draw any place that you like in your school.

Any 4 activities can be chosen for Formative Assessment (a).

Ennum Ezhuthum – Maths

Formative Assessment – FA(A)

Module	Activity
1.My surroundings	3 – Group Activity In and Out: Aadu Puli Attam game
	5 – Joint Activity Near: far / front and back jumping
	7 – Group Activity -Bigger- Smaller: Feel the object and telling the name by blindfold.
2. I Know Shapes	2 – Group Activity Rolling, Sliding, Rolling and Sliding: Describe the state of materials.
	7 – Group Activity 2 D objects/ Shapes: Jumping into correct shape
3. I Know Patterns	5 – Group Activity Smooth and Rough : Telling the stage of vegetable by blindfold.
	8 – Group Activity -Arranging the things by size
	11 – Group Activity Excess- Less: Recognise the things that it is less or excess by handling
4. I Know Numbers-I	8 – Group Activity Recognise the Numbers: Writing the numbers (1-9) in sand and backside of the student.
	13 – Individual Activity Recognise the Numbers: (1-9): Fishing Game
5. I Know	5 - Joint Activity

Module	Activity
Numbers-II	Recognise the Numbers: Pointing out the empty hand.
	13 – Individual Activity Recognise the Numbers: (11-20): Putting rings in the hanger as pet the numbers
6. I Know Numbers-III	2 - Group Activity Recognise the Numbers: (10-90): Throwing paper rocket – game
	9 - Group Activity Recognise the Numbers: (1-99): Remove the sticks without touching other sticks
	12 - Individual Activity Recognise the Numbers: (1-99): Game-Throwing of buttons
7. I can compare the things	6 - Group Activity Numbers smallest & Biggest: Compare the numbers using sticks
	12 – Group Activity Prefix- Suffix : Compare the number in the register
8. I can process Information	8 - Group Activity Accenting- Descanting order: Stand as per the numbers order
	11 – Group Activity Arrange the things as per the order
	12 – Group Activity Arranging of things as per Numbers
9. I Know	6 - Group Activity

Module	Activity
Addition -I	Addition : Colouring the number
	11 – Group Activity Addition : Identify the Numbers in the dotted cubes.
10. I Know Addition -II	2 - Group Activity Addition: Addition through drawing
	5 - Joint Activity Addition : Adding the numbers of dotted cubes by using hands and lines.
	8 - Joint Activity Addition : Making addition by using dotted cubes.
	12 - Joint Activity Addition : Making addition chart by using good habits.
11. I Know Addition -III	4 - Group Activity Addition : Colouring the boxes and Adding
	7 - Group Activity Addition : Count and add the things
	8 - Group Activity Addition : Addition by balls
12. I Know Subtraction	4 - Group Activity Subtraction: Learning Subtraction by Draw and delete the pictures
	9 - Joint Activity Subtraction: Subtraction by rolling chart
	10 – Group Activity Subtraction -Answer the sum in the chart

Annexure 5 - CRC Training Time Table

Training for Teachers and Time Table	
Time	**Activities**
9.30- 9.45	Attendance (Thro' APP) Visualisation of the day's activity
9.45 – 11.00	Discussion on doubts and facing challenges in the class room & Sharing the best class room experiences.
11.00-11.15	Tea Break
11.15 – 12.15	Frameworks and videos – based on the requirement
12.15 -01.00	Discussion on the Training Frameworks and videos
1.00 – 1.45	Lunch Break
1.45 – 2.15	Model Class- Technical Teaching
2.15 – 4.00	Planning for activities on next classes and preparation of materials for teaching
4.00 – 4.30	Feedback of teachers/ quiz/ planning for next CRC Training

Annexure 6 - CRC Training Calendar

Date	Component	Venue	Mode of Delivery	Target Group
16th July 2022	Cluster Level Meeting	Cluster Resource Centre	In person	All Govt School Teachers
27th August 2022	Cluster Level Meeting	Cluster Resource Centre	In person	All Govt School Teachers
8th October 2022	Cluster Level Meeting	Cluster Resource Centre	In person	All Govt School Teachers
12th November 2022	Cluster Level Meeting	Cluster Resource Centre	In person	All Govt School Teachers
7th January 2023	Cluster Level Meeting	Cluster Resource Centre	In person	All Govt School Teachers
18th February 2023	Cluster Level Meeting	Cluster Resource Centre	In person	All Govt School Teachers

Annexure 7 – Ennum Ezhuthum LOGO

Annexure 8 – Target of Ennum Ezhuthum Programme
தமிழ்

Skill	Assessment Indicators	Learning Indicator (percentage %)			
		Total	Stage-1	Stage-2	Stage-3
Listening & Speaking	2 Listening and action-based response)	10	5	6	8
	3-Story/Song based Conversation - Vocabulary)	10	5	6	8
	4 -Picture Comprehension)				
	5- Self expression				
	6 - Life Skills - Expressing thoughts)				
Reading Comprehension	7 - Phonological Awareness + decoding).	10	7	8	9
	9-Reading Comprehension - Words / Phrases	10	7	8	9
	10-Reading Comprehension - Sentences / Short Passage	10	7	8	9
Writing	11.Writing - Letters / Words / Phrases	10	5	7	8
	12 -Phrases / Sentence Writing focus	10	-	Scope:5	Scope:6

English

Skill	Assessment Indicators		Targets for indicators		
		Total	Level 1	Level 2	Level 3
Listening & speaking	No. of instructions that are followed correctly in a conversation	10	5	6	8
	No. of questions answered during a story-based discussion	10	5	6	8
	No. of pictures/objects identified correctly by name	10	6	7	9
Reading Fluency & Reading Compre -hension	No. of letter sounds identified correctly	10	6	7	9
	No. of letters decoded correctly	10	6	7	9
	No. of words read correctly	10	5	6	7
	No. of questions answered correctly after reading the story	10	Scope: Big Picture Stories Response can be in local language 6	Scope: Labelled Picture Stories Responds using words indicated in the picture 6 to 7 letters	Scope: 3-5 line stories Responds using phrases from the story 6 to 7three and four letter words
Writing	No. of letters/words/phrases written correctly	10	6 letters 5 two letter words	- 5 three letter words	- 5 phrases

Mathematics

Concept	Lo - Assessment Indicators	Total	Assessment Targets		
			Arumbu	Mottu	Malar
Shapes	No. of questions answered correctly related to positionality of the objects	10	6	7	8
	No. of 2D shapes identified correctly.	10	6	7	8
	No. of 3D shapes identified correctly.	10	-	6	8
Pre number concept	No. of objects classified correctly based on properties	10	6	7	8
Numbers	No. of objects counted correctly	10	Scope: 1 - 9 6	Scope: 1- 20 7	Scope: 1 - 99 8
	No. of numerals identified and written correctly	10	Scope: 1- 9 6	Scope: 1 - 20 6	Scope: 1 - 99 7
	No. of objects/pictures/numerals compared correctly	10	Scope: 1- 9 6	Scope: 1 - 20 6	Scope: 1 - 99 7
	No. of objects for which cardinality and ordinality are identified correctly	10			Scope: 1- 9 8
Operation	No. of addition questions answered correctly (without regrouping)	10	Scope: 1- 9 6	Scope: 1 - 20 6	Scope: 1 - 99 6
	No. of subtraction questions answered correctly (without regrouping)	10	Scope: 1- 9 6	Scope: 1 - 9 7	Scope: 1 - 9 /8

Appendix-2

Appendix Table 2.1: Assessment of One Day Activity of the Primary Class Teacher During Working Hours

A. Basic Information:

School address:	Date:
Working Hours: …….. am - ……… pm	
Breakfast timing:	Lunch break____/Interval____
Students' Strengths in total and category	

Std -1 (total): Arumbu: Mottu: Malar:	**Std-2**(total): Arumbu: Mottu: Malar:
Std-3 (total): Arumbu: Mottu: Malar:	**Std-4** (total): Arumbu: Mottu: Malar:

Time* From_ To_	**Activity undertaken***	**Any additional details**

Note: *No need to stick-on to the school period-Feel free to write as per the way that you have used handled the class and time.

     ** Activity for the full class or in groups or individually.

Please Mention:

   a). What are the teaching Aids used – chalk and talk / Cards:

   b). Any work done other than teaching in the campus – specify the work:

   c). Out of campus work – specify its nature e.g. meeting or training:

   d). Any Additional details: describe its nature:

Appendix Table 2.2: Assessment of Opinion about the Ennum Ezhuthum

S.No	Particulars	Detail
1	Regular / Temporary appointment	
2	Number of years of experience	
3	Mono Grade/Multi Grade	
4	In charge of class: I II III IV V	
5	Total class Strength	
	Number in students in class-wise: I____ II ____ III ____ IV ___ V___	
6	Number of teachers in your school including Headmaster	
	Number of Teachers in Regular/ Temporary	
7	Subject-Wise and Level-wise No. of students;	
	2nd Std Tamil: Arumbu_____ Mottu_____	
	2nd Std English: Arumbu_____ Mottu_____	
	2nd Std Mathematics: Arumbu_____ Mottu_____	
	3rd Std Tamil: Arumbu_____ Mottu_____Malar_____	
	3rd Std English: Arumbu_____ Mottu____ Malar_____	
	3rd Std Mathematics: Arumbu____ Mottu____ Malar_____	
8	Have you received, Teacher Hand Book, Students Text books and Work books time?	
9	Do you have smart boards/tool kits/…. In the class?	

S.No	Particulars	Detail
10	Have you attended EE training for each term -all subjects? – How many – numbers?	
11	Do you have any challenges?	
12	Normally how much time is spent on prayer and attendance?	
13	How will you prioritise the classes every day for subjects, Tamil, English and Maths	
14	How will you teach for each level of Students (Arunbu, Mottu and Malar)	
15	If you are teaching for Arumbu, how will pay attention to the remain class	
16	Practical difficulties in teaching Page number Lesson number Exercise Number Colour/Pictures	
17	What are the Challenges faces by the teachers; a). Training b). Teaching c). Book- Students text book, work books and Teachers Hand Books d). Levels – Arumbu, Mottu, Malar e). Students Strength f). Infrastructure- Classroom	

S.No	Particulars	Detail
	g). Regular/Temporary – Salary h). Parents role (H.W.)	
18	Usage black board by the students	
19	Have you encouraged peer learning	
20	Distance between your school and residence and mode of transport	
21	What is your opinion about Ennum Ezhuthum?	
22	Opinion about teaching Learning Material of Ennum Ezhuthum	
23	Have you developed any new methodology, what is it? or are you recommending any practiced methodology in TN or anywhere? what is it?	
24	Your opinion about present FA(A), FA(B)and Summative Assessment of all terms	
25	Mobile based uploading – time taken	
26	Have you identified any problem in assessment tool given by Ennum Ezhuthum?	
27	How will you compensate the Teachers' leave / students Leave and other administrative work time deviated from teaching?	
28	How will you handle large strength students and heterogeneity? In a classroom	
29	Time Allocation	

Appendix Table 2.3: Assessment of Teachers Personal Opinion about the Ennum Ezhuthum

S.No.	Questions to be discussed	Remarks
1	Are teachers receiving adequate training and support to effectively implement the Ennum Ezhthum program in the classroom?	
2	How well do teachers in Tamil Nadu understand the goals and methods of the Ennum Ezhthum program?	
3	What is the difference between the text books provided by TN Government and to the workbooks provided thro' Ennum Ezhthum program?	
4	Are all the lessons and techniques provided in the Tamil Nadu Textbooks have been integrated in the workbooks provided thro' Ennum Ezhthum program?	
5	Is it a supporting material? Or replacement of textbooks?	
6	To what extent did teachers utilize the designated teaching aids and learning materials (provided with textbooks or additional kits) in their classrooms?	
7	Have you spent sufficient time for teaching beyond the training activities	
8	How well are teachers adapting the Ennum Ezhthum program to fit the needs of their students?	
9	To what extent are the principles of Ennum Ezhthum being translated into practical teaching methods in classrooms?	
10	For the self-assessment date, can you provide a breakdown of time spent on each activity as specified	

S.No.	Questions to be discussed	Remarks
	in the THB/training module?	
11	Are the activities and exercises within the Ennum Ezhthum materials appropriate for the age and developmental stage of the students using them?	
12	How well do the content and approach of the Ennum Ezhthum textbooks and workbooks reflect the program's goals and methodology?	
13	Do the materials provide enough scaffolding or additional support for students who might struggle with the presented level of difficulty?	
14	In monograde/multigrade classes, are there documented methods for tracking the level of individual attention provided to students categorized as Arumbhu, Mottu, and Malar?	
15	Within monograde/multigrade classes, are there documented methods for recording how much individual attention is given to students categorized as Arumbhu, Mottu, and Malar, and if so, what type of evidence is used for this documentation?	
16	Have teachers been provided with specific strategies for differentiating instruction to meet the needs of Arumbhu, Mottu, and Malar students in the classroom?	
17	Have teachers received training on how to adapt their teaching approach to effectively cater to the individual needs of Arumbhu, Mottu, and Malar students?	
18	Do teachers employ different teaching methods or	

S.No.	Questions to be discussed	Remarks
	materials when working with students categorized as Arumbhu, Mottu, and Malar?	
19	Are teachers aware of any strategic variations recommended for handling students with different learning abilities (Arumbhu, Mottu, Malar) in the classroom?	
20	Are the teachers having sufficient time to the use of prescribed teaching aids and materials as outlined in the Ennum Ezhthum program guidelines?	
21	Did teachers primarily rely on the provided teaching aids and materials, or did they supplement them with other resources?	
22	How the standard of learning of the students are assessed: during the class by asking questions? (or) by answer sheet of the workbook	
23	Is there any specific techniques followed for slow learning students? If yes, please specify in brief	
24	How much of the total class time was dedicated to activities like correcting student work or completing administrative tasks outside of direct instruction?	
25	What is your opinion on FA &SA?	
26	Is there any alternate method for assessing the standard of learning other than of EE?	
Any other information in this programme –please mention:		

Appendix-3

Appendix Table 3.1: Teacher Assessment Statement Questions about Ennum Ezhuthum (EE)

No	Statement	Detail
1	Teacher graduate: Monograde/Multigrade	
2	Years' Experience	
3	In charge of 1st std	
4	Number of students	
5	Tool kits are available as per number of teachers handling 1-3 classes	
6	Number of trainings attended by the teacher	
7	Following prescribed timetable	
8	1st std Standard students are in appropriate level	
9	No grouping of students	
10	But teaching as per level	
11	Content is high, and not possible to complete the module / a day activity as per THB schedule	
12	Individual attention not possible	
13	Completing Students Work Book (SWB) is our priority and correction and no scope for joyful teaching	
14	Prayer and attendance take 30-40 min	
15	Work to bring absentees takes time	

No	Statement	Detail
16	Students take time to shift between books and to turn to appropriate pages. Should help students	
17	Switching between levels is time consuming	
18	THB -kit material sizes are very small; paper quality is not good. SWBs are becoming pieces of paper in the first term itself.	
19	Writing on low level board to be encouraged	
20	Platform speaking encouraged	
21	Outcome: reading and English improved	
22	App based assessment is difficult to conduct	
23	English modules are difficult to complete	
24	More number of Comprehensions in English SWBs, difficult to complete	
25	No scope to memorise, speak and ensure pronunciations and less time for revision	
26	Math, not systematically designed, difficult to ensure cumulative learning	
27	Too much of data filing	
28	Suggestion: single book with exercises, logical continuity, reduce content, too much of training	
29	Clear about EE and supports it with changes for 1st and 2nd class only after major revision	

No	Statement	Detail
30	Infrastructure is poor	
31	HM not effective	
32	Large class size is difficult to manage	
33	Assessments take more than a day	
34	Notebook correction not done	
35	less than 50% of Parents are supporting/assisting students	
36	Always busy and no job satisfaction	
37	Teaching with many books is difficult	
38	Attending to Arumbu only	
39	More exercise less time for teaching- learning process	
40	Parents demand homework	
41	Chalk and talk best method, more time to ensure learning, old method is good,	
42	FAs not needed	
43	Wrong classification of students as Arumbu, motto, malar	
44	Training is about what to do and follow what has been instructed to do. Leaves little scope for creativity	
45	Special worksheet for home work can be given	
46	Allow teachers to construct their own pedagogy	

No	Statement	Detail
47	Better books are in the market	
48	Big class is difficult to handle	
49	Increase number of questions in the FAs and SAs.	
50	Mono grade is better than multigrade	
51	Appropriate furniture for multigrade not available	
52	Honestly speaking - EE has less than half of the content of the TN textbooks and time spent for teaching is between 15- 20 minutes in the entire 90 minutes of the class	
53	Contents are not attractive for first std and 2nd std	
54	10 min - assembling in groups, 15 min - motivation, 15 min - content delivery, 10 min -activity, 20 min - WB, and 20 min – correction.	
55	HOTS- higher order thinking skills - missing	

Appendix 4

Comments by School Education Department

"Teachers' Time on Task in Government Elementary Schools in Tamil Nadu: Evaluating the new pedagogical approach 'Ennum Ezhuthum"

S.No.	Observation	Response
1.	4.1 Allocation of time for curricular and extra-curricular activities The variation in duration of instruction of the three subjects as well as variation in the number of subjects taught in a day across schools are pointers that the learning outcomes should differ between schools in different schools.	The activities have been structured and scheduled based on the total number of working days and instructional periods. Additionally, buffer days have been incorporated at the end of each module starting from Year 2 to accommodate any unforeseen delays.
2.	4.2 Class Strength A multi-grade class of first and second standards, will have two options with two grades students and a multi-grade class of all the three standards, the variations in students by grades and levels make the classroom difficult to manage. The multi-grade teachers with large number of students in a classroom do face more challenges than others.	One of the primary objectives of the Ennum Ezhuthum Scheme is to support the effective management of multigrade classrooms while reducing the workload on teachers. The level-based learning materials are specifically designed to assist teachers in handling students across different learning levels efficiently. These materials allow students to work independently using level-appropriate workbooks, requiring minimal teacher intervention, particularly when the teacher is focused on another

		grade. Even in classrooms with higher student strength, the pedagogy is structured to ensure that students across all levels are engaged with level-specific activities aligned to learning outcomes (LOs). Additionally, the Teacher's Handbook provides relevant activities and appropriate teaching-learning materials (TLMs), enabling teachers to manage multigrade classrooms with ease.
3.	4.2 Infrastructure The teaching aids, display materials and platform for training in oration and arts, make the classroom clumsy with little space for children and teachers to move around. Several classrooms in Chennai need renovation and some need demolition and new buildings.	Classrooms do not need to accommodate all learning corners simultaneously. With proper planning using the Teacher's Handbook, teachers can determine which corner to set up based on the day's learning objectives. This ensures an organized and focused classroom environment.
4.	4.2 Seating and other issues in classroom The time taken for prayer, attendance and for contacting parents of absentees is more than the allotted time for these activities and this reduces the time for instruction as we noted in the previous section...... EE requires seating and	There's sufficient time allocated for administrative tasks and the teachers are expected to manage their time effectively. It is repeatedly instructed that teachers need not group students according to their learning levels during activities. It is the complete autonomy of teachers to decide to group the students while doing their workbook exercises if necessary. However, students can

	grouping of students for each subject as per the levels of learning. Often students are confused about the changing the groups for each subject and sometimes they are unwilling to change the group and seating arrangements.	complete their workbooks while seated with peers of any learning level. Grouping by level is primarily intended for the teacher's understanding, rather than the students.
5.	**4.2 EE textbooks and Workbooks** Students are not able to open the appropriate chapters in textbooks and workbooks simultaneously. Use of many teaching learning materials sometimes is confusing and unnecessary. The use of several textbooks and workbooks in a multi-grade classroom is impossible. Regarding Math, "Math activities are not systematically designed, lack continuity, and difficult for the students to understand the logic and recollect the steps for calculations" observed a teacher. Teachers suggest improvements in Math textbooks and workbooks, including the font and its size. There is a need to redesign the Math textbooks and workbooks both in terms of contents and	Everyday exercises are planned in such a way that there is no overlapping of textbook and workbook exercises on the same day. The students will be engaged with either a textbook or workbook in a day. The teachers who use Teacher's Handbook effectively have a clear idea as to when to use the textbook and when to use the workbook for doing exercises. Additionally, students are encouraged to complete only exercises at their level, rather than attempting all exercises. Initially, in the first year of implementation of EE, there were only level-based workbooks which primarily focused only on the LOs prescribed on the syllabus. However, from year two, based on teachers; feedback, it was decided to integrate the textbooks along with the level-based workbook. Every term teachers share their feedback and suggestions and based on it, relevant course

		exercises for practice.	corrections are being made. every term.

exercises for practice.

The time taken for correction of workbooks considerably reduces the time for effective teaching.

The process of EE is quite mechanically carried out following the instructions given by the teacher trainers. The process of building personal bond with the student is lost in this process.

Rather returning to the old system of chalk and talk is also preferred by some of the teachers. Memory, recall, loud reading and writing are important exercises which the present set of students are not adequately exposed to, according to teachers. Both the teaching process and the assessment systems should give equal importance to teaching and assessing all the three skills of listening, reading and writing.

corrections are being made. every term.

Ennum Ezhuthum Math activities and workbook exercises are designed in coherence with syllabus and textbook content. For example, Arumbu students learn one to one correspondence before knowing numbers. Activities are designed such that they learn more or less before learning bigger numbers and smaller numbers. Similarly, Mottu students learn two digits numbers before learning the number names. Moreover, they learn number comparison only after comparing real objects. In the same way, Students learn Basic operations on numbers only after knowing numbers. First they learn addition on single digits. They learn addition without regrouping, then addition with regrouping. Malar level students Learn repeated addition first, and then multiplication. They learn repeated subtraction, equal grouping and equal sharing before learning division. Thus, activities are arranged as Pre-number concepts, numbers, place value, comparison, addition, subtraction, repeated addition, repeated subtraction, multiplication, division and problems based on life situations. It is evident that activities and

| | | exercises are arranged in logical sequence which helps in better understanding of the concepts by the students. This suggests that restructuring of the workbook is not needed. Number identification and basic operations are taught based on day to day life situations where students get hands-on experience. This helps students understand the logic and recollect the steps for calculation. Workbook exercises are given to strengthen the learning objectives of the textbook. Exercises are given such that students recollect the concept learnt in the previous term. Calculation steps are broken down to smaller steps and various methods are given to choose as per the students' understanding. Exercises and activities to reinforce concepts learnt are provided which helps the students to recollect the concepts. Teachers can check the workbook exercises and give feedback to the students in the buffer time provided. Readable and child friendly font is used in appropriate size. (12 for THB and 14 for workbook) |
| | | There is flexibility in the completion of activities, allowing for any delays to be accommodated by carrying over activities to the following day. Furthermore, designated time for |

| | | | revision has been allotted for each subject at the end of every term.

From the research itself, it is evident that absenteeism is reduced and the students love coming to school. This shows that there is deep bonding between students and teachers, school and parents. Moreover, all the activities in the THB are designed in such a way that there is an active participation of all the students and the teachers together. The classrooms after the inception of EE are no longer teacher-centric and are student-centric with more adequate activities for teacher and student to work in collaboration. The students feel fearless to approach and interact with teachers. Activities like Speak for a Minute, En Medai En Pechu have boosted the confidence of students.

There is a set of learning outcomes for each unit for each level in which, recall, loud reading and writing practices are sufficiently included along with other core competencies like speaking, critical thinking, logical thinking, creative writing, etc. Moreover, language learning is based on skill development and mathematics is application-oriented. Hence, more focus on language is given to the acquisition |

		of skills rather than memorization of facts and concepts.
6.	4.2 EE Pedagogy Many teachers told us the pedagogy techniques learnt in the training classes were difficult to practice in the classroom, mostly for want of time. Teachers want to discontinue the rigidity in classification of students and the rigorous academic schedule. Instead, they suggest that good training on EE followed by well guided autonomy for the teachers will improve learning outcomes of students.	The State Level Trainings are given by the EE content creators themselves diligently and effectively. However, there could be some transmissional loss and miscommunication in cascading. Still, supporting resources like video scribes of modules, classroom demo videos, training powerpoints are provided to bridge the transmissional loss. In addition, provision for teachers to get their doubts clarified in real-time are facilitated through the Telegram groups. Apart from this, with effective monitoring of EE trained officials, cascading could be more effective. Formative assessments (a) are integrated into classroom activities and do not require separate execution. Teachers can assess students' progress as they engage in activities. The frequency of online formative assessments (b) has been reduced from weekly to monthly. If a teacher recognizes that a student is ready to advance, they may allow the student to attempt the next level of workbook exercises and assessments. After summative assessments, students' levels are updated based on their performance.

| 7. | 4.2 Assessment Process

Mobile app-based assessments are difficult to administer. Teachers must prompt the students to reply, otherwise they go without answering the question even if they know the answer. Too much of work on data filing is also resented by many teachers. | The teachers are given a tab and adequate ICT training to ensure the difficulty is reduced. The teacher's burden of preparing the questions, correcting the answers and recording the marks registers manually is reduced by the introduction of digital assessment and data entry. It also ensures that continuous evaluation of the process and progress of students are done periodically and helps to check if the learning outcomes are achieved. Furthermore, the collected data gives direction and clarity on remediation and course correction. Additionally, it allows the leadership to monitor and evaluate the effectiveness of the programme on a regular interval and make steps towards improvement. |

In conclusion, encouraging teachers to maximize the use of Teacher Handbooks (THBs) for classroom activities will lead to better outcomes. Continuous monitoring and timely support from academic and administrative officials will further ensure the program's successful implementation.

Evaluating 'Ennum Ezhuthum'

A Study on teachers' Time-on-Task with the new pedagogical approach in Government Elementary Schools in Tamil Nadu

This study offers an insightful evaluation of the *'Ennum Ezhuthum'* program and its impact on primary education.

Utilizing the proven **'time on task'** methodology, data was gathered through self-reported forms from nearly 200 teachers acress Chennai and Tiruvallur, alongside in-depth intervicws with 50 educators. By examining key components such as content suitability, pedagogical techniques, teacher training, and resource availability, this research provides an essential foundation for further comprehensive analysis. While this study is concise in its scope, its findings illuminate critical issues and set the stage for extensive future research.