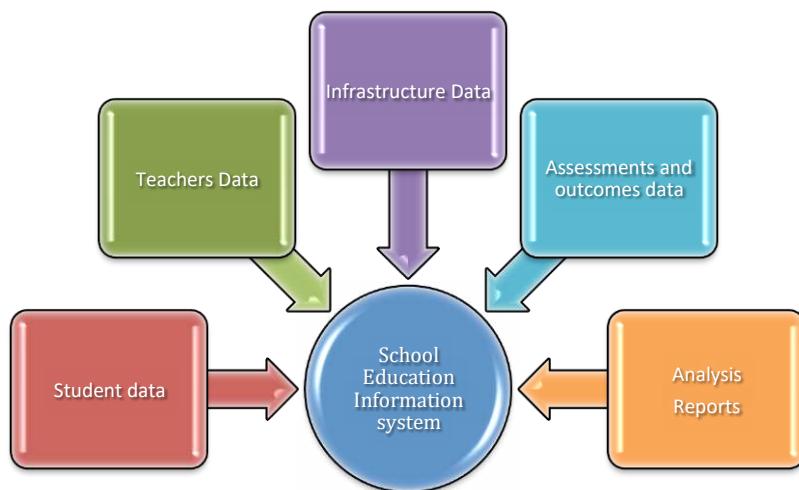


## Progress of Work: SSA-IITM collaboration

### February 2019

Centre for Technology and Policy (CTaP) at IIT Madras entered into a three year MoU with the Dept. of School Education, Government of Tamil Nadu. As part of the MoU three main areas were identified for CTaP's intervention: (1) to provide support for strengthening collection and organization of data regarding school education system; (2) to identify areas and devise strategies for enhancing the quality of school education and (3) to provide a summary report of the status of school education at the end of the period (2021). Since its inception the following activities have been carried out:

**1. Regarding collection and organizing data:** CTaP organized a series of meetings with the officials of the Dept. to understand the present system and suggest ways of improving it. These meetings were with a cross section of official across various sections in the Dept. As a follow up of these meeting, three brain storming sessions were organized, one at IIT Madras, another at the Anna Central Library and the third one at the SSA State Project Director's office Chennai. It was felt that even though there exists large quantities of data, the present form of its organization often poses hindrances for the users, especially for policy makers. We proposed the following broad heads under which data could be organized for its easy retrieval and processing.



In order to organize and analyse data, our support has been on two directions: (a) Advising on and creating the necessary software and (b) identifying data gaps and methods for improving data collection. The following work has been initiated and is at various stages of completion:

- Identification of the gaps in students data
- Analysing and testing of various forms of updating and integration of dynamic data
- Organizing and analyzing teachers data
- Creation of a dashboard of Pupil-Teacher Ratio of a sample district

- Scaling up of the dashboard for all the districts of the state
- Identifying methods to assess the work-load of teachers
- Exploring the possibility of a dynamic time-table across schools
- Development of the software for dynamic time table

Fig. 1. Snapshot of the dashboard on Pupil-Teacher Ratios

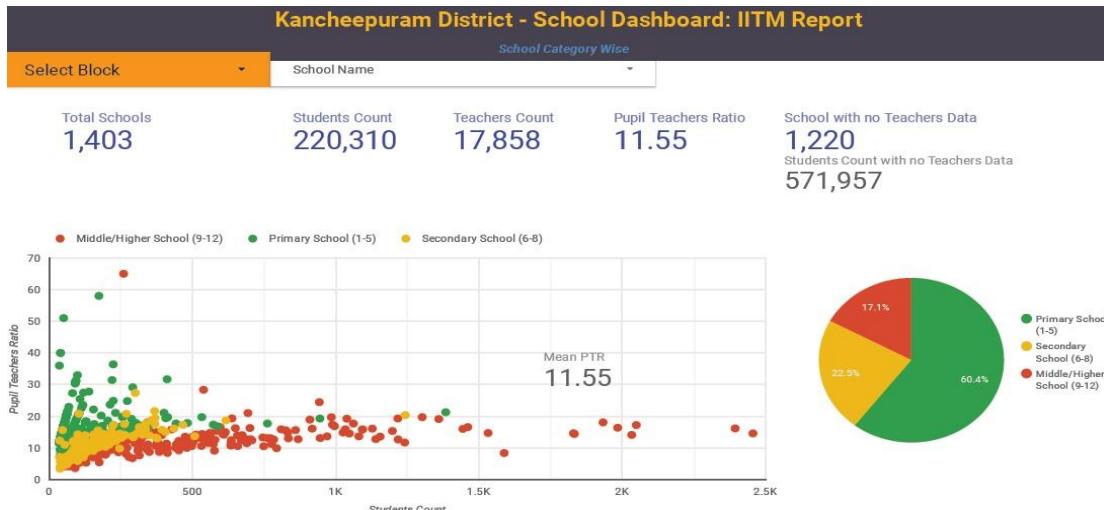


Fig 2. Snapshot of time-table for capturing teacher's work load

**b. Class Time Table**

Dropdown to list Class, Section and term, and based on selection, the time table for the Class for a week is to be displayed. It should be printable for a class or for the school.

Field	Field Type	Options
Term	Dropdown box	Term 1, Term 2, Term 3
Class	Dropdown box	All Classes in the School
Section	Dropdown box	All sections belonging to that class

**OUTPUT SAMPLE FOR SELECTED CLASS**  
**CLASSROOM TIME TABLE**

	1	2	3	4	5	6	7	8
Time	9 - 9.45	9.45 - 10.30	10.30-11.15	11.15 - 12.00	12.30 - 1.15	1.15 - 2.00	2.00 ~ 2.45	2.45 - 3.30
Monday	Science Siva	Tamil Rani	Tamil Rani		English Raja	English Raja		
Tuesday	English Raja	Science Siva				Tamil Rani		
Wednesday	Tamil Rani	Tamil Rani	English Raja	Science Siva				
Thursday						Science Siva	Science Siva	English Raja
Friday	Science Siva	Science Siva	Tamil Rani	Tamil Rani			English Raja	

**TEACHER SUMMARY**

Teacher	Subject	Periods
Siva	Science	7
Rani	Tamil	7
Raja	English	6
Total Periods for the week		20

**2. Efforts on quality enhancement:** As part of our efforts for enhancing the quality of education in Tamil Nadu the following activities have been undertaken:

- Consultation workshop with the science teachers, especially physics teachers on technology enabled learning
- Conducted a baseline achievements test for 4000 students of 11<sup>th</sup> std. across three districts in Physics
- Each school was provided feedback on the performance of students
- Developed a proto-type of a Tablet application for problem-solving in physics for 11 std students

- Piloted the proto-type by conducting three-day physics learning workshop across selected schools in both rural and urban locations
- Conducted intensive discussions about the contents of the tablet application with teachers of Physics in selected schools
- Expanded the contents of the application after consultations with teachers and students

**Fig.3. A snap shot of students using the Tab based App for Physics (11<sup>th</sup> std., Govt School in Ponneri; and Discussion with School Teachers (Chengleput)**



We had the privilege of presenting our preliminary results of data analysis to the Hon. Minister for School Education (Govt of Tamil Nadu) and state officials. During the discussion, the Minister considered following interventions:

- a. Consolidation of some primary schools and provide transport
- b. Re-deployment of teachers within the same block.
- c. Middle Schools ideal for introducing strategies to enhance quality of education
- d. Teachers on rotation for some specific subjects
- e. Develop New metrices to examine work-load of teachers- student hours

### **3. Way Forward:**

3.1. By the end of Feb. 2019, we shall complete construction of all dash-boards that could be used at school level/block level and district level, and also at state level, for all government School;

3.2: Based on the feed back obtained from the pilot surveys conducted in various schools so far, we shall be working on the next version of the Contents of the App being developed for augmenting the learning processes. We plan to involve students of our Btech programme at IITM, and later shall involve the teachers of the TN school education system. We shall try to cover the syllabus of science subjects from 8<sup>th</sup> till 11<sup>th</sup> Standard during the current year.

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