CLIx Implementation

Implementation Process

The two key elements of CLIx implementation are School Preparation and Support: School ICT labs readiness and maintenance, meeting certain specifications of hardware and networking and functionality, installation of the CLIx platform and modules and School timetable scheduling to enable students to use the ICT lab regularly and ongoing technical support to teachers/schools such as maintenance of labs, technical troubleshooting etc.
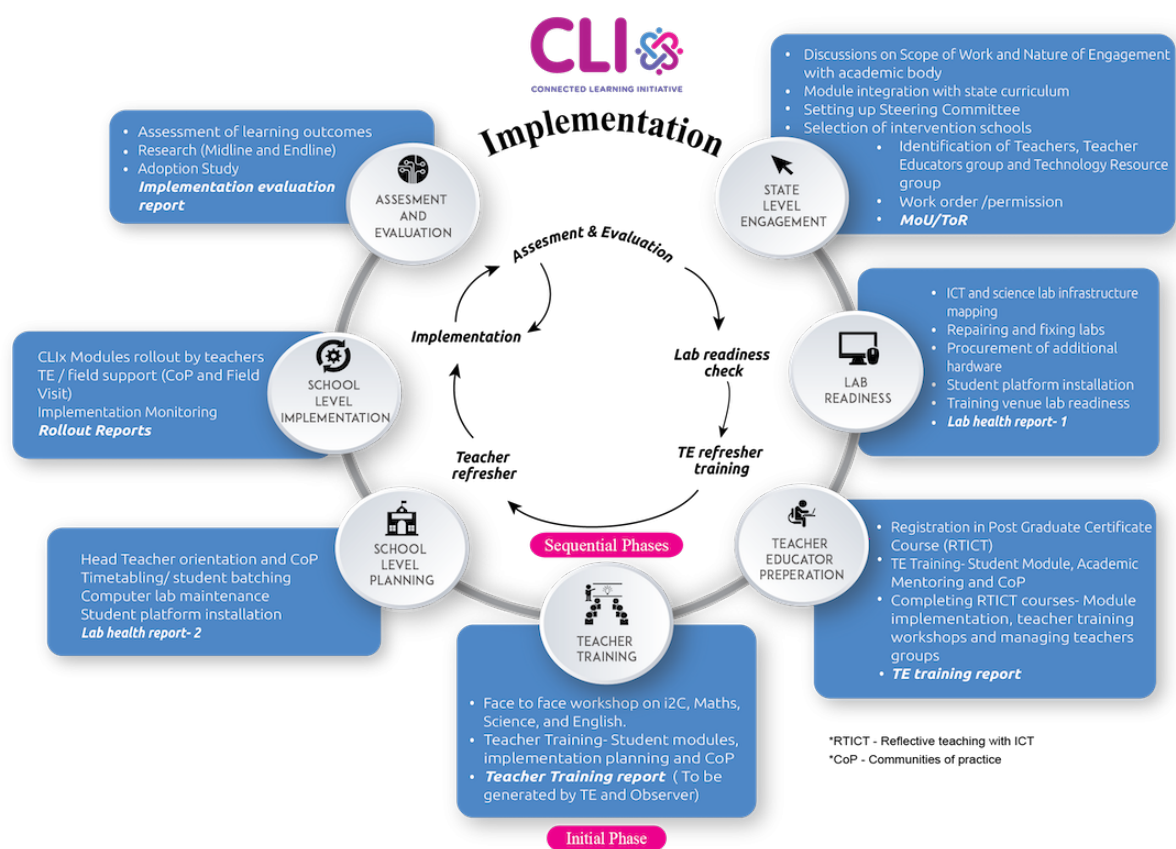

Fig: Implementation Process

The detailed implementation process is outlined below:-

1. **School Lab Readiness**
2. **Teacher Training and Teacher Educator Preparation**

3. **School Level Preparation(New name needs to think of, seems confusing with the readiness)**
4. **Community of Practice**
5. **School Level Implementation**
6. **Assessment, Monitoring and Evaluation**

School Lab Readiness

1. School computer and science lab infrastructure mapping

- Identification of schools where intervention needs to take place to be carried on in consultation with the District Education Office.
- School mapping tool to be made in consultation with the research team which includes the components of Lab availability and infrastructure, Teacher professional development details etc.
- Release of orders from SCERT/DEO for the visit to schools to carry out school mapping activity.
- Create a suggestive list for the procurement of the materials post mapping activity.

2. Purchase & procurement

- A suggestive list of the materials to be shared with the SCERT/SSA to insist state authority to purchase and procure the items.
- To chalk out another strategy in the case, the state delays the procurement of the items through other funding agencies.
- To keep checks and balances of procurement of items received by vendors through different SOPs for maintaining quality and efficiency.
- Disbursement of the items at various intervention sites with the help of external vendors.

3. Computer lab readiness and Installation of CLIx modules in school

Teacher training and Teacher Educator preparation

1. Identification of Subject wise teachers

- In consultation with the state and TPD team, a concept note to be prepared for inviting the interested teachers
- In case the number of interested teachers is too many, a selection of the teachers need to take place.
- An acknowledgment of the selection of teacher educators to be sent through the implementation team in consultation with the state.

2. Face to face workshops-Planning (Click here for more details)

- Coordination with state government officials and confirm the available dates for teacher training with formal approval.
- Coordination with the Training Centres and lock the dates
- Communicating the dates to all concerned persons including teachers, headteachers through DEO/SCERT
- Communicating the dates to the resource persons for their preparation(TPD Team, Domain teams, Technology team)

The requirements for the workshop needs to be chalked out in discussion with all the teams. The **broad requirements** are hereby provided:-

1. Technology Requirements:

- According to the number of workshop participants, preferably the lab must have a 1:1 Teacher: Device ratio. But if it is difficult, 2:1 Teacher: Device ratio can be managed if the lab can accommodate participants with some space for movement.
- The devices (computers) must be in good working condition with Ubuntu (preferably) or Windows OS.
- The devices (computers) must be ready with Chrome 49+ installed.
- Good Internet connection for the devices(computers)
- A projector must be present
- Proper sound system with mic must be present

Note - The technology requirements have to be met and made sure by the implementation team. If it couldn't be met, the technology team has to suggest alternatives. The project management team will support the implementation team for the arrangements.

2. Stationary Requirements

- Whiteboard with board markers
- Chart papers, sketch pens, pencils, erasers, scissors, cellophane tapes, stapler, stapler pins, post-it's, name tags, A4 papers, etc.
- Attendance sheets
- Brochures, posters, etc.
- State board textbooks

## 3. Furniture Requirements

- Chairs, Teacher tables

Fig: Teacher training session in Telangana
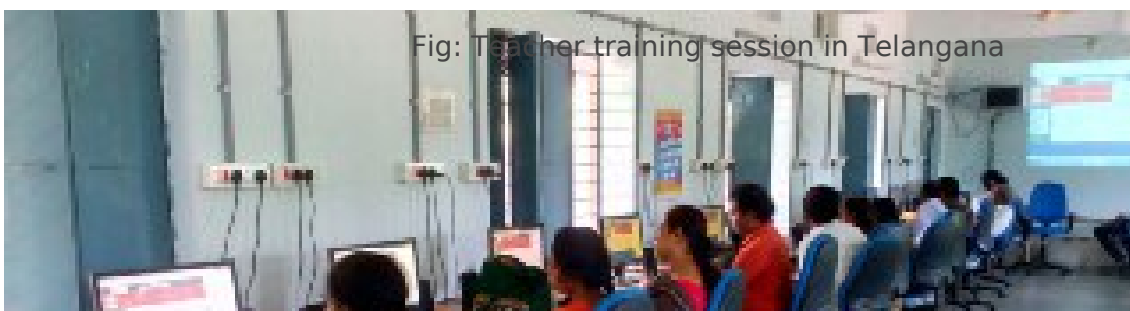
Note 1 - The furniture requirements will be arranged by the training center in coordination with the implementation team.

Note 2 - Domain-specific material Requirements will be managed by the domain teams in coordination with the implementation team and project management team.

Note 3 - Any free classroom/ science lab/ work area to do hands-on activities if required by the domain teams, it should be arranged by the training center in coordination with the implementation team.

Community of Practice

- Academic support for Teachers
- Continuous online interaction of teachers with experts and peers

Fig: English domain teacher CoP group

Managing CoP Groups
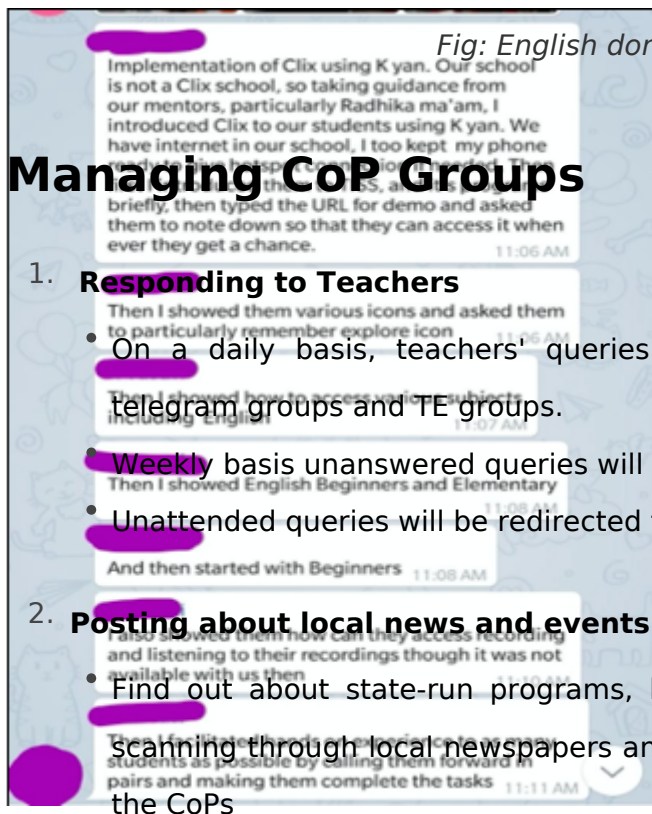
1. **Responding to Teachers**

   - On a daily basis, teachers' queries will be answered on all the COP teacher telegram groups and TE groups.

   - Weekly basis unanswered queries will be answered or directed to the COP manager.

   - Unattended queries will be redirected to COP Manager for follow up.

2. **Posting about local news and events**

   - Find out about state-run programs, local events and news related to education, scanning through local newspapers and newsletters and post in a timely manner on the CoPs

3. **Posting announcements and monthly newsletter**

   - Circulating Central, State and/or CLIx newsletters in the telegram groups on a monthly basis featuring the week's best reading on engagement, latest engagements- related research, and lists of upcoming events, workshops, etc.

   - Video messages by the field team will be circulated on a monthly basis in the telegram groups.

4. **Posting during school visits**

- Feedback will be taken from the school headmasters and teachers during school visits and this will be updated on internal team groups.
- Field team members must share photographs and a brief description of their school visit, description of the external field visitor/organization and purpose should be mentioned on all the state CoP groups within two days of the school visit,
- Members visiting the schools should take permission from the headmaster for taking photographs.
- The photographs of school visits shared should include ICT labs, students working on the computers, teachers facilitating the subject, etc.
- Supporting Teacher Educator for the transaction of modules

(for more details click here)

Implementation

There can be **three approaches** for the implementation at school level:-

1. Separate workshops for teachers and students -
2. Combined workshop for students and teachers. - An overall CLIx platform and module orientation followed by their queries concerns and clearing the doubts. This ideally should be the case if at least one CLIx teacher is present consistently in that school for a long time.
3. Hands-on training - Teachers and students together exploring the modules after a brief introduction to the platform and modules.

We can follow any of the approaches but still have to follow certain steps which are specified as below:-

1. Fixing prior appointments with Headmaster of the school and concerned CLIx teachers.
2. Going to school, orienting Headmaster and Teachers.

| Heading to the ICT/ Computer Lab.+ gathering the teachers & students |
|---|
| Discussing the following agenda:

• Introducing ourselves to students and teachers.
• Introduction of basic computers and CLIx to students.
• Start with the basics of the computers - as this varies from school to school, some students already knov |

- **Introduction to Computer Lab Requirements**
- **Ports & Purpose**
- **Starting Pre - Rollout of the CLIx module**
- **Starting Subject module rollout**

Introduction to Computer Lab Requirements

CPU, monitor, keyboard, mouse, D-Link(switch), power cables, power switches, LAN cables, NCom
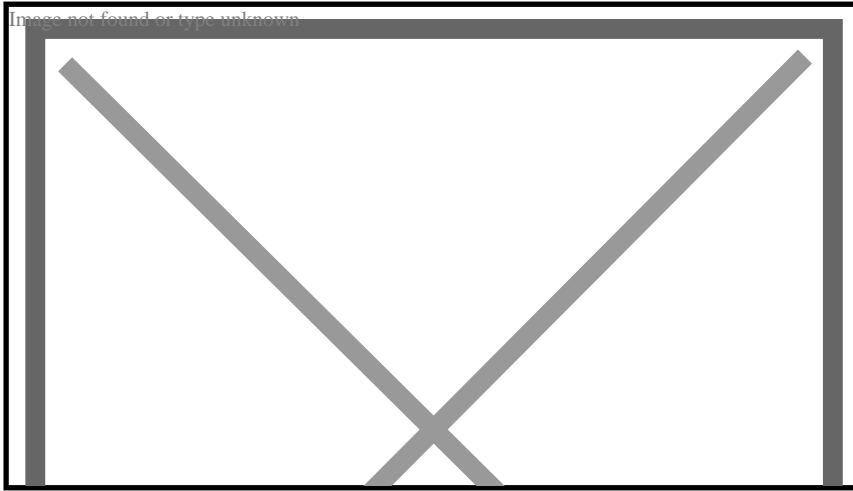
(Credits: Picture showing the computer and connections)

4. Registration of the student participants and distributing their user ids in the register.

Selecting Student leaders (both girls and boys)

Checking Technical aspects of lab

1. Electricity
2. Server - Most of the time the server is taken to HMs office room - Bringing it back to the lab.
3. Explaining the problems with hardware connections, wires, and switches by drawing computer lab structures with connections.

- Explaining each port on the CPU backside.

Ports - Purpose

| Ports	Purpose
Mouse & Keyboard	Mouse & keyboard connections
HDMI	For connecting using HDMI to VGA
Video port Connections	• CPU to Monitor • CPU to Projector • Monitor to Ncomputing device.
USB Port	For connecting pen drives and USB keyboard &
LAN Port	For connecting LAN cable insert connections
Audio Port	for speakers & Headphones connections

(Credits: Explaining about LAN connections and giving theoretical notes.)

1. Internet: Explaining and hands-on training to the student leaders and also the students present in the lab.
2. Explaining the importance of batching during rollout to teacherss and students.

Starting Pre - Rollout of the CLIx module

1. Orienting students and teachers to the CLIx platform - on the projector if the school has a projector.

2. We explained about differences between digital class, ROT (MANA TV) and CLIx.

3. CLIx is the interaction between Students and Teachers (Hands-on Learning and Peer Group Learning).
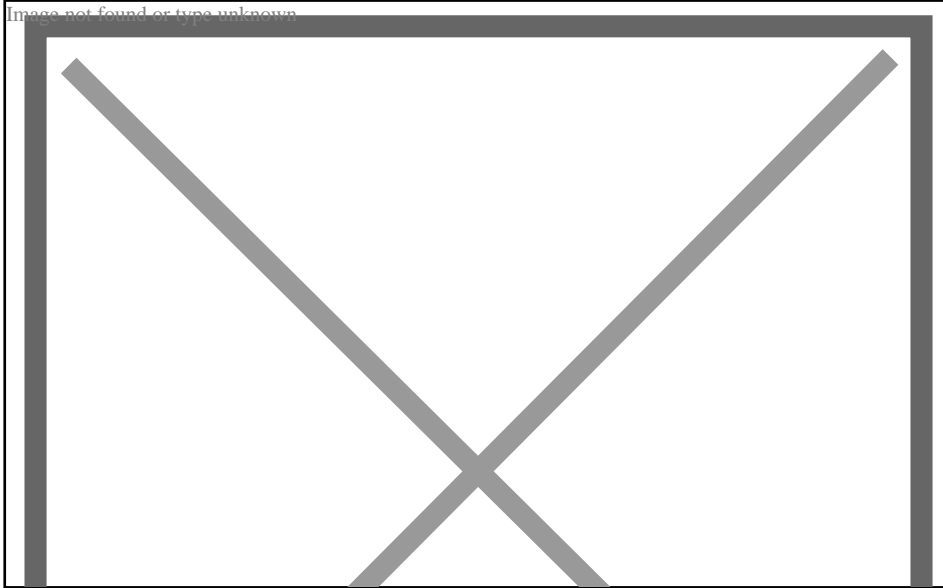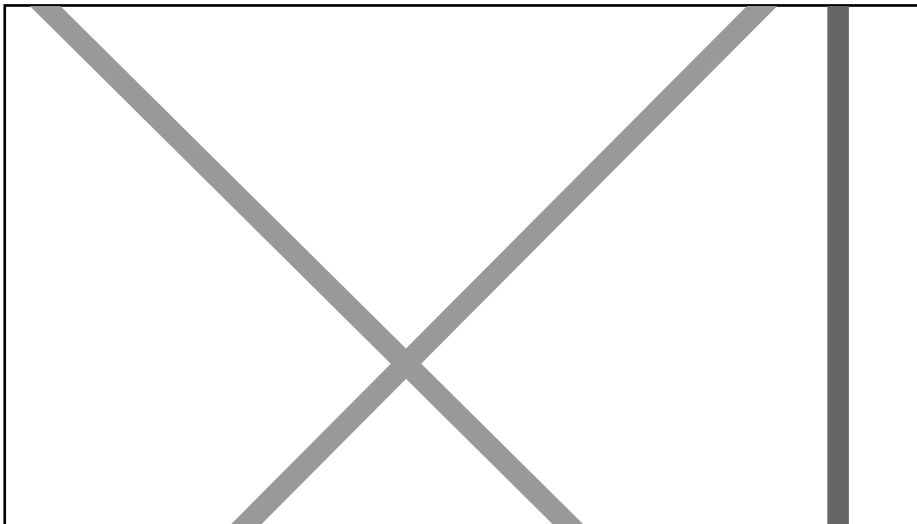

(Credits: Orienting CLIx platform on the projector to both students and teachers)

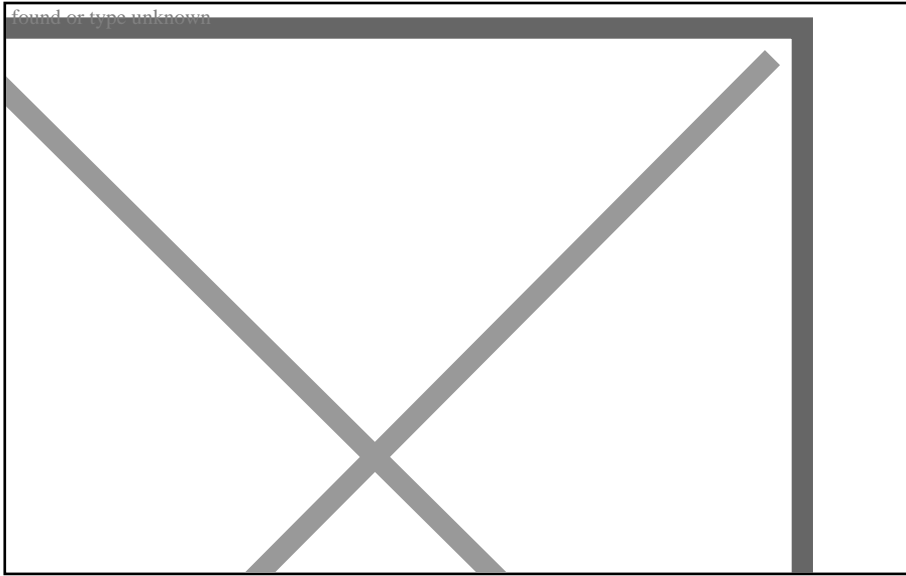4. Clearing the doubts of the students and teachers regarding platform navigation.
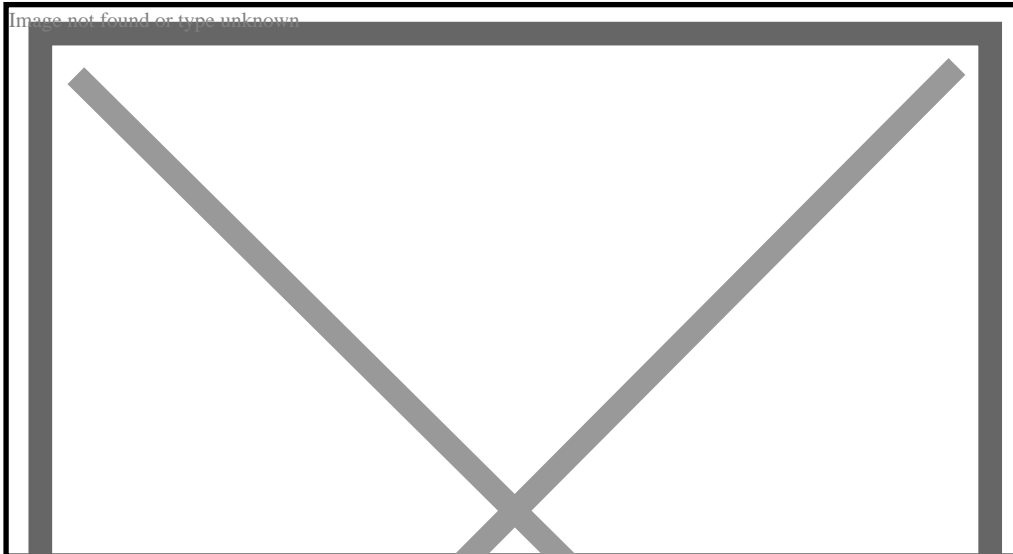
(Credits: Explaining how to navigate CLIx platform)

5. Pairing the students and asking them to start the pre - CLIx survey.

Starting Subject module rollout

1. Teaching them how to add buddy

(Credits: Field team explaining adding buddy)

2. Asking the teacher to take the lead to explain the subject modules.

3. Students are shown the language settings so in case don't understand words they can interchange betwee

4. Discuss with the teacher how the CLIx modules are done before and how they are planning to do it here

5. Discuss the importance of Telegram - COP to teachers.

6. Add the teacher into CLIx to telegram - ask them to post a picture immediately in the group.
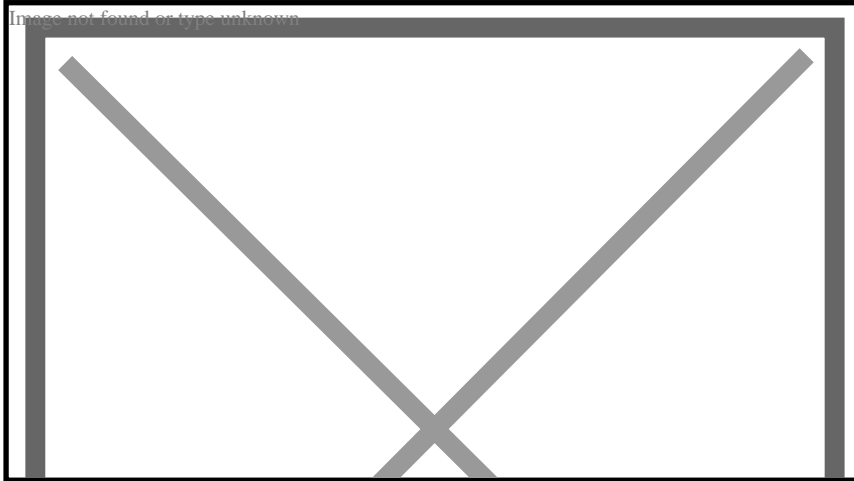
**(Credits: students after batching exploring CLIx on the projector)**

7. Explain the batching system to the teacher - explaining different batching strategies to the teacher and a

   Eg.

   If one batch participates in rollout another batch playing games / watching Digi classes /exploring Cl
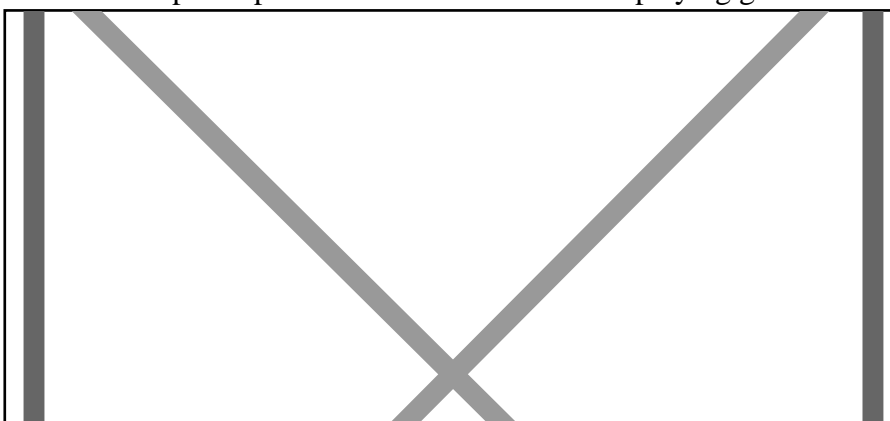
Discussing the importance of offline activities and - giving them examples from the past how teachers have g
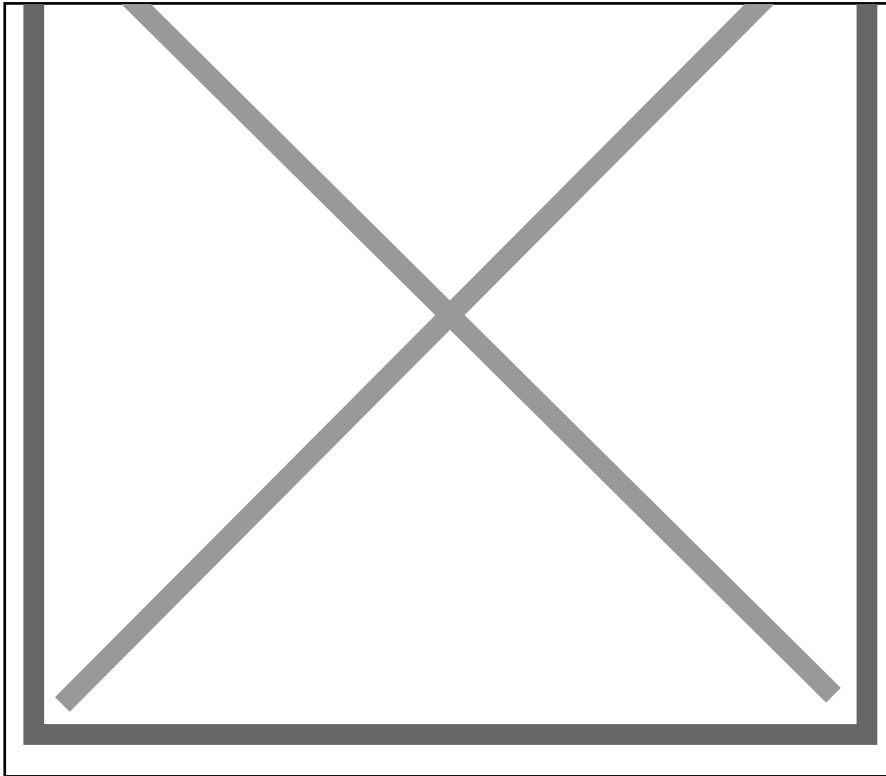
(Credits: Teacher doing the offline activity in class)

Discussing the importance of the individual apps on the platform with teachers and how these apps help in le

Finish the rollout and gather the students to explain to them how to switch off the systems.

Grouping students, assigning roles to them. (one or two students to take responsibility for the headphones ar
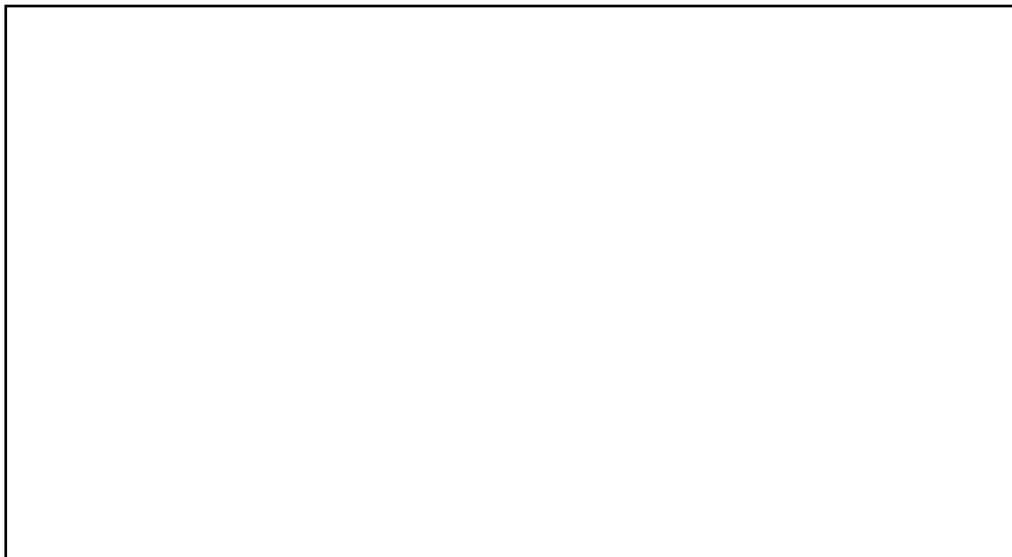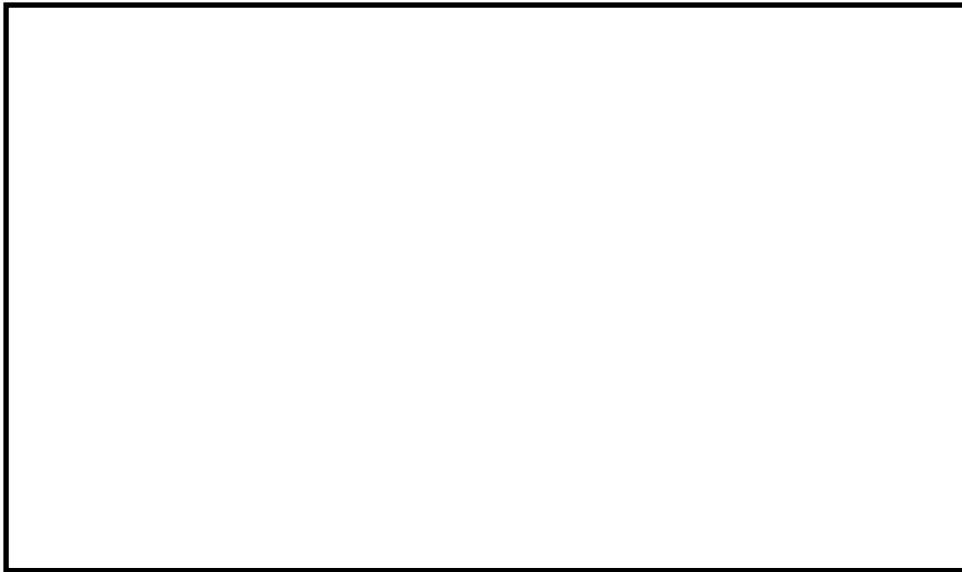
(Credits: Roles being assigned to students after the rollout)

Lab maintenance

- Maintain Lab Cleanness - explaining to them the importance of cleaning their computer lab.
- Checking power switches (ON/OFF) during entry and exit of the lab.
- Checking CPU & Monitor & D-link ON/OFF buttons during entry and exit.

Take feedback from the headmaster, teacher, and students.

(Credits: Discussion with teachers about CLIx)

Ask the teacher about the next rollout and remote monitoring.

Assessment, Monitoring & Evaluation

The implementation monitoring tool was designed to capture the state of implementation and adoption of the CLIx program in schools over a period of time. A monitoring framework enables us to:

- Track the extent to which the CLIx intervention has been implemented in schools, districts, and states.
- Make evidence-based decisions for course corrections to strengthen the intervention
- Conduct research on impact in schools with varying levels of implementation or adoption
- Provide information to the states so they can plan actions accordingly.
- Provide data to stakeholders, thus increasing their participation as well as providing transparency and accountability for the project
- Create a model of the processes and trajectories of implementation at scale in diverse field contexts.

(An Image of the process of the IMT needs to be added)

1. Data Collection - Every time a CLIx member visits the particular school.
2. Analysis of the Data - Following data collection for each school, a visualization of the state of implementation/adoption to be created from the scores received in each of the five areas using the macros that will be provided to them. Areas of concern will be flagged, so that field resource personnel are alerted to issues that may need immediate attention. The data can be aggregated at the school, district, or state level to enable reporting to appropriate stakeholders.
   1. Technical support and Lab Maintenance
   2. Extent of implementation
   3. Teacher Professional Development

4. Shifts in beliefs and pedagogic practices of teachers