ABOUT CLIx

The Connected Learning Initiative is an effort to bring global best practices to our country and looks at adapting educational innovations to the Indian context. Through CLIx, we aim to significantly improve the quality of high school education in Science, English, Mathematics and Values by creating opportunities for authentic and connected learning experiences using technology. This unique venture, seeded by the Trusts, will capacitate professional development for teachers and enhance the educational ecosystem to catalyze research in the high school space.

The Initiative provides engaging, hands-on, quality learning experiences in Mathematics, Sciences and Communicative English and digital literacy, integrated with values and 21st century skills. These resources are offered to students of government secondary schools in Chhattisgarh, Mizoram, Rajasthan and Telangana, in their regional languages.

A platform for innovation in education, CLIx supports the professional development of teachers, making substantial contributions to teacher education in Indian languages. Research activities and collaborations around CLIx nurture a pool of professionals from the fields of education, technology and science. Supported by an interconnected network of partners, institutions, public education systems, teachers and learning resources, CLIx offers a scalable and sustainable model of open education.

CLIx PARTNERSHIPS

Tata Trusts initiated the idea of building and implementing at scale, a technology enabled learning intervention for the Indian rural high school students. The Trusts' then invited MIT and TISS to build and design this program in partnership with a wide ranging group of organisations that brought in rich and varied experiences towards implementing this unique initiative.

SEEDED BY
• Tata Trusts

FOUNDING PARTNERS
• Tata Institute of Social Sciences
• Massachusetts Institute of Technology

GOVERNMENT PARTNERS
• Govt of Chhattisgarh
• Govt of Mizoram
• Govt of Rajasthan
• Govt of Telangana

DEVELOPMENT AND IMPLEMENTATION PARTNERS

• Centre for Education, Innovation & Action Research, TISS, Mumbai
• Centre for Education Research & Practice, Jaipur
• Comet Media Foundation, Mumbai
• Department of Education, Mizoram University, Aizawl
• Education Arcade, Massachusetts Institute of Technology, USA
• Eklavya, Bhopal
• Homi Bhabha Centre for Science Education, TIFR, Mumbai
• National Institute of Advanced Studies, Bengaluru
• State Council of Educational Research and Training (SCERT) of Telangana, Hyderabad
• Tata Class Edge, Mumbai
• UNICEF Chhattisgarh, Raipur

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CLIx LEARNING DIMENSIONS

THREE DOMAINS	Maths	Science	English

Integrating values & 21st century life skills

THREE GRADES	VIII	IX	XI

THREE LANGUAGES	Hindi	Telugu	English

DELIVERED THROUGH	Teachers	Devices	CLIx Platform

ACHIEVED THROUGH
- Real world projects
- Online text, audio, & video
- Interactive edu tech apps
- Hands-on activities & labs
- Discussion & community building

An initiative seeded by
TATA TRUSTS

Founding Partners
TISS
MIT Massachusetts Institute of Technology

QUALITY AT SCALE

In CLIx, quality learning is designed to take place at scale across the educational system. CLIx works with scale as a design input and uses an ecosystem approach towards long term sustainability.

Challenges facing students from rural areas who join high school include: weak foundations from primary school, unavailability of resources in their own languages, isolation and poor access to learning opportunities and lack of qualified teachers, particularly in Maths, Science and English.

In this context, CLIx addresses both curricular content and pedagogical approaches, to work with students and teachers and to deliver quality solutions at scale.

Quality education results in valuable learning by students and leads to further opportunities for education and work.

The concept of quality education embodies the principles at the core of CLIx.

ACTIVE AND AUTHENTIC LEARNING

Curriculum design and assessment that nurtures higher order cognitive development and consolidates learning in the mother tongue.

Valuable and powerful content knowledge
Knowledge and skills that contribute to capabilities and understanding.

Access to and interaction with peer groups and experts
Through such communication and interaction, circles widen and new opportunities arise.

Development of the self as a learner and social being
Reflected in values, attitudes, engagement, mutuality, responsibility.

Feedback and credible assessment
Helps the learner to get a perspective for further development

THE IMPACT OF CLIx

STUDENTS
Learning outcomes
- Proficiency in Communicative English
- Improved conceptual skills and proficiency in Science, Technology and Mathematics
- Digital literacy and 21st century skills
- Ethical values and life skills
- Widened career horizons

TEACHERS
Professional development
- Integration of ICTs into curriculum and teaching
- Participation in certified courses for Maths, Science, Communicative English and digital literacy
- Improved subject knowledge in Science and Mathematics
- Improved proficiency in English
- Improved classroom processes
- Participation in community of practice of teachers

SCHOOLS
Systemic enhancement
- Active use of Science labs
- Technology-enabled education in all subjects
- Strengthened competencies of high-school students
- Capacity building at local and state level
- Development of a local ecosystem of connected learning
- Improved access to ICT infrastructure in schools

STUDENT OFFERINGS IN 2016

Invitation to CLIx
Designed to experience connected learning and to learn digital literacy. 24 hrs

Mathematics
Concepts are made accessible through simulations and games to facilitate mathematical thinking and communication: reasoning, justification, conjecturing and creating proofs.
Geometry - 22 to 25 hrs

Value Education & Life Skills
Values, attitudes and beliefs are embedded in the curriculum and pedagogy of teaching values.

Science
Concepts in biology, chemistry and physics are understood using collaborative activities built around digital tools and hands on experimentation.
Force and Motion - 10 to 12 hrs

Communicative English
Listening and speaking skills through computer assisted language learning following task based language teaching, communicative language pedagogy, assessments and hands on experiences.
Year 1: 30 hrs, Year 2: 60 hrs

TEACHER'S PROFESSIONAL DEVELOPMENT

Building teacher capacity is integral to the CLIx vision. Teacher Professional Development courses will be offered in specific subjects to enable teachers to support the student modules. These courses will be certified by TISS, the premier university in India for applied social sciences.

During these courses, teachers interact with expert teacher educators and curriculum designers and share their classroom experiences both in person and online. In this process, they develop a research perspective on their work and teacher communities of practice are nurtured.

CLIx LOCATIONS

RAJASTHAN
- **300** SCHOOLS
- **1,200** TEACHERS
- **45,000** STUDENTS

MIZORAM
- **200** SCHOOLS
- **800** TEACHERS
- **30,000** STUDENTS

TELANGANA
- **300** SCHOOLS
- **1,200** TEACHERS
- **45,000** STUDENTS

CHHATTISGARH
- **300** SCHOOLS
- **1,200** TEACHERS
- **45,000** STUDENTS

Map of India with States - Single Colour by FreeVectorMaps.com

CLIx LEARNING LABS

CLIx activities use the existing Science and Computing labs in the schools where students carry out experiments and conduct hands-on activities and use tools and applications.
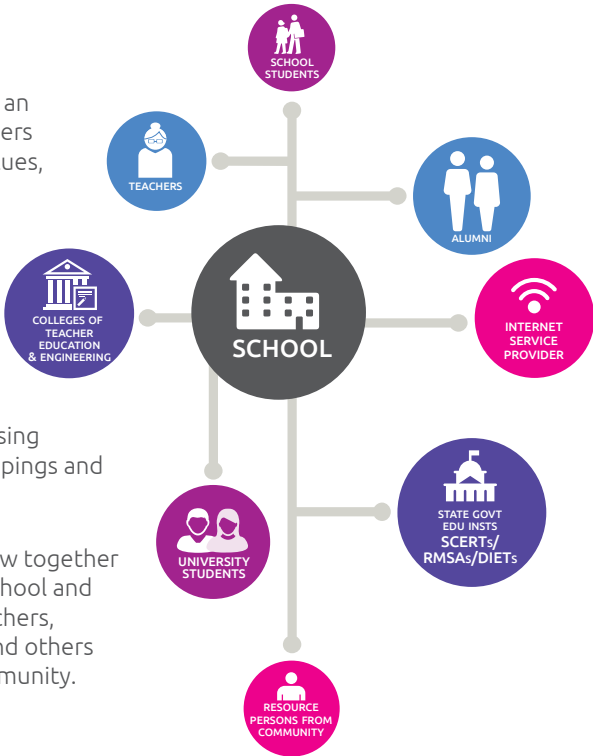
Ideally, these Learning Labs could be kept open before and after school hours for extended use by students. Students take Mathematics, Science and English, working both with teachers and in a self-paced manner, with technology.

ECOSYSTEM APPROACH

Ongoing CLIx processes are creating an ecosystem with a range of stakeholders committed to the Initiative's core values, especially:

- The CLIx conception of quality education
- Openness, a philosophy that emphasises transparency and free access to knowledge and collaborative outcomes
- Inclusion and social justice, addressing diversities of language, social groupings and geographies

The ecosystem approach aims to draw together interested persons, including high school and college students, school alumni, teachers, institutions, government agencies and others from the area into a networked community.

SCHOOL (ecosystem diagram)
- SCHOOL STUDENTS
- TEACHERS
- ALUMNI
- INTERNET SERVICE PROVIDER
- STATE GOVT EDU INSTS SCERTs/ RMSAs/DIETs
- RESOURCE PERSONS FROM COMMUNITY
- UNIVERSITY STUDENTS
- COLLEGES OF TEACHER EDUCATION & ENGINEERING

CLIx RESEARCH

Research is an integral component of CLIx, integrated into the multiple streams of ongoing activities. While it looks at impact, it also seeks to find answers to questions about student learning, curriculum development, teacher professional development, how innovations can become sustainable and how technology can create impact on scale.

CLIx PEDAGOGIC STRATEGIES

Classroom Activities
- Demonstrations
- Group work
- Whole class reviews
- Project work
- Peer discussions

Lab Activities
- Hands-on experimentation
- Data collection and analysis using ICT devices or applications

Review & Assessment
- Continuous comprehensive evaluation
- Built-in ICT assessments
- Integration with textbooks
- Homework

IT Enabled Activities
- Simulations
- Videos
- Educational games
- Data analysis and graphs