The Connected Learning Initiative (CLIx) is a technology enabled initiative at scale for high school students. The initiative was seeded by Tata Trusts, Mumbai and is led by Tata Institute of Social Sciences, Mumbai and Massachusetts Institute of Technology, Cambridge, MA USA. CLIx offers a scalable and sustainable model of open education, to meet the educational needs of students and teachers. The initiative has won UNESCO’s prestigious 2017 King Hamad Bin Isa Al-Khalifa Prize, for the Use of Information and Communication Technology (ICT) in the Field of Education.

CLIx incorporates thoughtful pedagogical design and leverages contemporary technology and online capabilities. Resources for students are in the areas of Mathematics, Sciences, Communicative English and Digital Literacy, designed to be interactive, foster collaboration and integrate values and 21st century skills. These are being offered to students of government secondary schools in Chhattisgarh, Mizoram, Rajasthan and Telangana in their regional languages and also released as Open Educational Resources (OERs).

Teacher Professional Development is available through professional communities of practice and the blended Post Graduate Certificate in Reflective Teaching with ICT. Through research and collaborations, CLIx seeks to nurture a vibrant ecosystem of partnerships and innovation to improve schooling for underserved communities.

CLIx LEARNING DIMENSIONS

- **THREE DOMAINS**
  - Maths
  - Science
  - English

- **TWO GRADES**
  - VIII
  - IX

- **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 & commun
    - unility-building

CLIx PARTNERSHIPS

- **SEEDED BY**
  - Tata Trusts
  - Tata Institute of Social Sciences
  - Massachusetts Institute of Technology

- **LED BY**
  - Tata Institute of Social Sciences
  - Massachusetts Institute of Technology

GOVERNMENT PARTNERS

- Govt of Chhattisgarh
- Govt of Mizoram
- Govt of Rajasthan
- Govt of Telangana

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THE IMPACT OF CLIx

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

STUDENTS

Learning outcomes

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

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 answer questions about student learning, curriculum development, teacher professional development, how innovations can become sustainable and how technology can create impact on scale. The following studies are being conducted at CLIx:

- Chhattisgarh, Mizoram, Rajasthan and Telangana: Baseline study and impact evaluation:
  - Innovation Diffusion Process: A case study of Connected Learning Initiative
  - Impact of technology enabled language learning in English Fluency, Listening and speaking skills through a technology enabled language learning programme facilitates fluency in English
  - Self-reflexivity, peer learning & autonomy promoted in a technology-enabled language learning programme
  - Teacher motivation and attitudes towards technology - enabled learning
  - Split classes in large student sized schools: A case study of two schools in Dhamtari
  - Students’ Geometric Reasoning: A comparison of blended versus non-blended pedagogies
  - Status of Science labs and their utilization in CLIx schools
  - Communities of Practice in Teacher Professional Development: formation, sustenance and best practices

CLIx OFFERINGS

STUDENTS

Invitation to CLIx
- Designed to give an experience of connected and digital learning
- Professional and Induction training
- Analyzing with Spreadsheets
- Drawing with Inkcape
- Organising with Mindmaps

Communicative English
- Learning listening and speaking skills through computer assisted and hands-on tasks based on communicative language pedagogy
- English Beginners: 11 weeks, 22 periods
- English Elementary: 11 weeks, 22 periods

Mathematics
- Simulations and games to facilitate mathematical thinking and communication
- Geometric Reasoning 1: 3 weeks, 12 periods in 8th grade
- Geometric Reasoning 2: 3 weeks, 12 periods in 9th grade
- Proportional Reasoning: 3 weeks, 12 periods
- Linear Equations: 3 weeks, 12 periods

Science
- Collaborative activities built around digital tools and hands-on experimentation to learn biology, chemistry and physics
- Motion: 5 weeks, 20 periods
- Sound: 4 weeks, 16 periods
- Astronomy: 3 weeks, 12 periods
- Atomic Structure: 4 weeks, 16 periods
- Health and Disease: 4 weeks, 16 periods
- Ecosystem: 2.5 weeks, 10 periods

TEACHERS

The Postgraduate Certificate (PGC) - Reflective Teaching in ICT (RTICT) - is designed as an in-service programme for teachers in the elementary (upper primary) and secondary school levels. This is a modular table for the credit-based programme.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ICT In Education</td>
<td>4</td>
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<tr>
<td>English Language Teaching</td>
<td>4</td>
</tr>
<tr>
<td>Reflective Mathematics Teaching</td>
<td>4</td>
</tr>
<tr>
<td>Interactive Science Teaching</td>
<td>4</td>
</tr>
<tr>
<td>Action Research/ Digital Portfolio</td>
<td>3</td>
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<tr>
<td>Values Development in Adolescents</td>
<td>2</td>
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<tr>
<td>Media in the Classroom</td>
<td>2</td>
</tr>
<tr>
<td>Hand-on learning through toy-making</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
</tr>
</tbody>
</table>

The blended programme is practice-based. Teachers will learn through face-to-face workshops, online courses, mobile-based Communities of Practice, and implementation of student modules.