Quality OER at Scale in India
The Curriculum, Interactive Tools and Platforms of the Connected Learning Initiative
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April 24, 2018
An initiative seeded by

TATA TRUSTS

Connected Learning Initiative

MIT

Inter-University Centre for Astronomy and Astrophysics

National Institute of Advanced Studies

An Ecosystem Of Partners
State Governments, Civil Society Organisations, Universities, Research Institutes, Philanthropic Organisations, Schools

Government of Mizoram

Government of Rajasthan

CERP Center for Education Research & Practice

Greater Deeds Remain

State Council of Educational Research & Training

Government of Telangana

Eklavya
CLlx – The Connected Learning Initiative

Quality at Scale

**Students**
Improve the professional and academic prospects of high school students

**Teachers**
Improve teacher education and transform teacher practice

**Platform**
“Platform” for curriculum, professional development of teachers, research and innovation in education

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CLIX as of December 2017

RAJASTHAN
- Proposed Reach: 300
  - Schools: 300
  - Teachers: 1,000
  - Students: 33,000
- Current Reach: 101
  - Schools: 101
  - Teachers: 248
  - Students: 13,277

MIZORAM
- Proposed Reach: 200
  - Schools: 200
  - Teachers: 800
  - Students: 15,000
- Current Reach: 30
  - Schools: 30
  - Teachers: 154
  - Students: 4400

TELANGANA
- Proposed Reach: 300
  - Schools: 300
  - Teachers: 1,800
  - Students: 36,000
- Current Reach: 300
  - Schools: 300
  - Teachers: 1,589
  - Students: 10,080

CHHATTISGHARH
- Proposed Reach: 300
  - Schools: 300
  - Teachers: 900
  - Students: 27,000
- Current Reach: 47
  - Schools: 47
  - Teachers: 139
  - Students: 4680

*Current reach as of December 2017
CLix LEARNING DIMENSIONS

THREE DOMAINS
- Maths
- Science
- English

Integrating values & 21st century life skills

TWO GRADES
- VIII
- IX

THREE LANGUAGES
- Hindi
- Telugu
- English

DELIVERED THROUGH
- Teachers
- Devices
- CLix Platform

ACHEIVED THROUGH
- Real world projects
- Online text, audio, & video
- Interactive edutech apps
- Hands-on activities & labs
- Discussion & community building
Activating ICT Labs & Hands-on Learning
CLIX and Open

Open content, open source, open pedagogy
To reach the scale needed, the processes, curriculum and tools developed by CLIx must be readily usable by others (in India).

The project is using “OER Release” to describe a release of CLIx products for others to use as if they were “Open Educational Resources”.

The OER Release will include:
- Software platforms (e.g., gStudio / CLIx Platform, Unplatform)
- Interactive tools (e.g., Police Quad, Open Story Tool)
- CLIx modules (e.g., English Beginner, Geometric Reasoning)
- Teacher Professional Development materials
5R Activities

- **Retain** - the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)
- **Reuse** - the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)
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License

Content modules, Teacher Professional Development materials

**CC BY-SA**
Typical "open" CC license in India

**CC BY**
Recommended by Creative Commons
*Commercially friendly
No copy-left condition, most interoperable
*Required by Grant

Software Platforms, Interactive Tools

**AGPL**
“Protects” original developer’s commercial interest, can commercialize but must share

**MIT License**
*Commercially friendly
No copy-left condition, very interoperable
• New to OER, some new authors
• What’s possible? Khan Academy, PhETs, Logo, etc.
• Reuse existing & contextualize for curriculum—or—design new?
  o Nuance of licenses
  o Much of traditional Indian OER used in printed materials (textbooks and workbooks)
  o Attribution, format
Open Pedagogy

- Contemporary pedagogies
  - Changing expectations about teacher pedagogy
  - Curriculum & learning experiences...move rote to active learning
  - Learner and teacher empowerment...teacher exploration of learning materials, mostly lightly guided teaching experiences

“strong philosophical beliefs”
CLlIx’s OER Release
CLIX Modules

- Websites to explore modules
- “ePub” of module distribution
  - Core learning materials are accessible, renders in some ePub readers
  - ~50-500MB compressed (zip) file with module content as HTML,
- ePub(s) + Unplatform distribution
  - Some (but not all) learning activities are accessible (some are specific to gStudio)
  - ~2GB compressed (zip) file loaded into Unplatform as a player, which also allows access to some (but not all) of the interactive tools
  - Ubuntu, Mac, Windows versions
- CLIX Platform with all modules and interactive tools distribution
  - 45-60GB Virtual machine with all modules and interactive tools
  - CoreOS installation

Reusable, Revise, Retain, Remix, Redistribute
Editable HTML, and media

LMS with edit & authoring capability

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How to get CLIx software & content?

Well…

• Some software is available now via Github: Unplatform, Open Educational Assessments (players and authoring), Open Story Tool, Run Kitty Run, Video Player

• Rest of software should be available by ~August 2018: gStudio / CLIx Platform, math and science interactives, runtime of StarLogo NOVA

And…

• Curriculum modules and Teacher Professional Development materials should be available by ~August 2018 from the CLIx website clix.tiss.edu
Missed Opportunities

- Using most open licenses
- Authoring workflow & CMS—easier revision, retention
  - OERPub
  - Google Docs -> translator -> (customized) ePub3 -> player platforms
  - Strong structure in production (well formed HTML) and a true Content Management System
- Having versions available for you!*

* You’re more likely to be able to use the process and software rather than the curriculum modules as they’re highly localized to the Indian context.
Thank You!