

CLIx Newsletter | November 2017

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The Connected Learning Initiative (CLIx) is a collaborative initiative of the TATA INSTITUTE OF SOCIAL SCIENCES, TATA TRUSTS and MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT). It is a bold and innovative effort that aims to improve the quality of education accessed by secondary school students and teacher professional development.

(clix.tiss.edu)

Voices from the Field

The Teacher Professional Development Face-2-Face Workshop in Reflective Mathematics Teaching took place from 6th to 11th November 2017 at Navodayay Vidyalaya Sangathan, Chhattisgarh. Here's what a participating Math teacher has to say about it...



"Today we learnt a lot about curriculum ,T pack and many more things to develop our teaching skillsThanks TISS - CLIx team."

- Hemant Chandrekar, Math teacher, 6th - 10th grades, Navodyay Vidyalaya Sangathan, Chhattisgarh

State updates for this month

Chhattisgarh

1. Sucessful completion of TPD Face-to-Face training in Jawahar Navodaya Schools in the following domains

(30.10.17 - 18.11.17):

- Communicative English
- Reflective Mathematics
- Interactive Science

Mizoram

1. Successful updation of servers with latest CLIx modules in 21 schools (10.11.17 - 20.11.17)

Rajasthan

1. TPD Face-to-Face for Astronomy Module on 27.11.17

2. Student Rollout of Astronomy Module will commence from 28.11.17

<u>Telangana</u>

1. TPD Face to Face in Warrangal, Vikarabad and Karimnagar districts in the following domains (20.11.17 -25.11.17):

- Communicative English
- Reflective Math
- Interactive Science

Blog of the month: Learning to Work with Friends (23.10.17 - 03.11.17)



While learning through computers is widely considered to promote an individualistic classroom culture where students learn from devices on their own, the Connected Learning Initiatives (CLIx) holds that 'peer learning' is one of the pillars of learning. How do we imagine peer learning panning out in the classrooms? What are the challenges we face on this front? These are some questions that I will explore in this blog post. My reflections are based on observations made in the classrooms of Mizoram in the months of October – November 2017. Read on

Connecting Technology

This section features the digital tools that have been created and are being used by the CLIx team to reinvent pedagogy for students and teachers. This month we feature the LOGO Turtle game designed for the Geometric Reasoning module in the Mathematics domain.

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Let's learn geometry in the world of LOGO turtle. LOGO Turtle is a free and open source tool for drawing various geometric shapes and developing logic to build them.

Hey, it just feels like I am telling a turtle what to do, but we are actually doing programming here, by giving commands for the turtle to move accordingly.

We have always made a square on paper in your geometry class, but here I can use the command of forward and right to make a square as above.

Connecting Research

This section features recent studies in the field of education published by our CLIx faculty who work in tandem with the Centre for Education, Innovation & Action Research (CEI&AR). This month we feature <u>Arindam Bose</u>'s paper "<u>Archaeology" of Measurement Knowledge: Implications for School Mathematics Learning</u>

This paper explores measurement knowledge that middle-graders from low-income families gain from out-of-school contexts and the implications of such knowledge for classroom learning. Work and other out-of-school contexts entail rich and diverse "funds of knowledge" about measurement. Such knowledge includes conceptual elements which may be fragmented or hidden, but if unpacked (archaeology) can support classroom learning. The out-of-school measurement-related experiences have been analyzed to show the underlying conceptual constructions and their diversity in terms of measures, systems of units, and measurement tools. The paper discusses possible connections between classroom learning and specific aspects of outof-school measurement knowledge using a characterization that marks such connection.

Connecting Innovation

This section is for teachers, parents, mentors, and anybody who is looking for innovative ways of or content for learning and teaching. This month we feature Euclidian Geometry and its innovator

Euclid was an ancient Greek mathematician from Alexandria who is best known for his major work, *Elements*. Although little is known about Euclid the man, he taught in a school that he founded in Alexandria, Egypt, around 300 b.c.e.

What is Euclidean Geometry? Euclidean Geometry is the Geometry of flat space. It is based on the work of Euclid who was the father of Geometry. He proposed 5 postulates or axioms that are the foundation of this mathematical branch of Geometry. The 5 postulates are:

1. It is possible to draw a straight line from any point to any point.

- 2. If you have a straight line it is possible to extend in any direction to infinity.
- 3. It is possible to draw a circle given any center and a radius
- 4. All right angles are equal (congruent).

5. If you have two straight lines, and a third line crossing them, and the sum of the interior angle measure of the two lines is less than two 90 degrees, then if you extend the lines,

they will eventually cross on that side.

In this video you will learn what Euclidean Geometry is, and the five postulates of Euclidean Geometry: https://www.youtube.com/watch?v=fv-mDpscZlo

Source: http://www.encyclopedia.com/education/news-wires-white-papers-andbooks/euclid-and-his-contributions

Our recent posts

• Observation and Feedback from Production in Mizoram (23.10.17 - 03.11.17)

Exposing students to media is a direct consequence of integrating technology into their classroom. The production team at CLIx works with the domain teams to shape this media in the most meaningful and accessible way. We also document the project as it unfolds and bring back stories from the field to share with the rest of the world. Read on

• J-WEL, a Laboratory for Education (09.10.17 - 12.10.17)

Abdul Latif Jameel-World Education Lab (J-WEL) has been setup at the Massachusetts Institute of Technology (MIT) to spark 'a global renaissance in education for all learners'. J-WEL leverages MIT resources through research, policy, pedagogy and practice by engaging a worldwide community of collaborators.

The inaugural J-WEL week was organized during Oct $9^{th} - 12^{th}$, October 2017 at MIT. In this blog post, CLIx TISS team members Sadaqat Mulla and Saurav Mohanty share their experiences from the pK-12 strand of the J-WEL week. Read on

Opportunities

- The Teacher Pages Innovator Fellowship 2017-2018
- <u>CLIx internships</u>
- <u>CLIx Faculty Fellowships 2016-2017</u>



The Connected Learning Initiative (CLIx) is a partnership between the Tata Institute of Social Sciences (TISS), Massachusetts Institute of Technology (MIT) and Tata Trusts. It is a bold and innovative effort to improve the professional and academic prospects of high school students from underserved communities in India. CLIx incorporates thoughtful pedagogical design and leverages contemporary technology, including online capabilities, to provide quality educational content and experiences at scale in the areas of English, Science, Mathematics and Values. As a platform for innovation in education, CLIx also supports the professional development of in-service teachers, making substantial contributions to teacher education in Indian languages. The initiative aims to reach approximately 1,100 schools and 1,11,000 students in Chhattisgarh, Mizoram, Rajasthan and Telangana during 2015-18, and also conduct professional development for approximately 5,090 teachers.



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