

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.

[\(clix.tiss.edu\)](http://clix.tiss.edu)

## Voices from the Field

On request of the Government of Chhattisgarh, CLIX conducted a 2 day Digital Literacy orientation programme with hostel wardens in the districts of Ambikapur (21st -22nd December '17), Bilaspur (29th-30th December '17) and Bastar (5th - 6th January '18). Here's what they had to say....



2 दिन की ट्रेनिंग बहुत अच्छी थी कम समय में भी बहुत कुछ सीखने को मिला।  
पर टाइम कम होने से विस्तार से पर संभव न हो पाया।

कंप्यूटर में मैंने जीमेल आईडी, (Gmail id) मन मानचित्र, इंक्स्केप और लिब्रे  
ऑफिस (Libre office) में डॉकमेंट्स सीखा। ये जानकारी के लिये धन्यवाद।  
सब जानकारी बहुत महत्वपूर्ण है।

## State updates for this month

### Chhattisgarh

1. CTE terms of reference submission (12.01.18 - 26.01.18)
2. Annual Work Plan for 2018 -19 submission

### Rajasthan

1. Revalidation workshop (03.01.18 - 05.01.18)

### Mizoram

1. CLIX - RMSA meeting in CLIX Mumbai(19.01.18)

### Telangana

1. Rollout initiation in 23 schools
2. SCERT lab setup (12.01.18 - 26.01.18)

## Blog of the month: A TREAT for Writers (15.01.18 – 19.01.18)



*An action research project needs time and space to present our insights to the world in various fora such as*

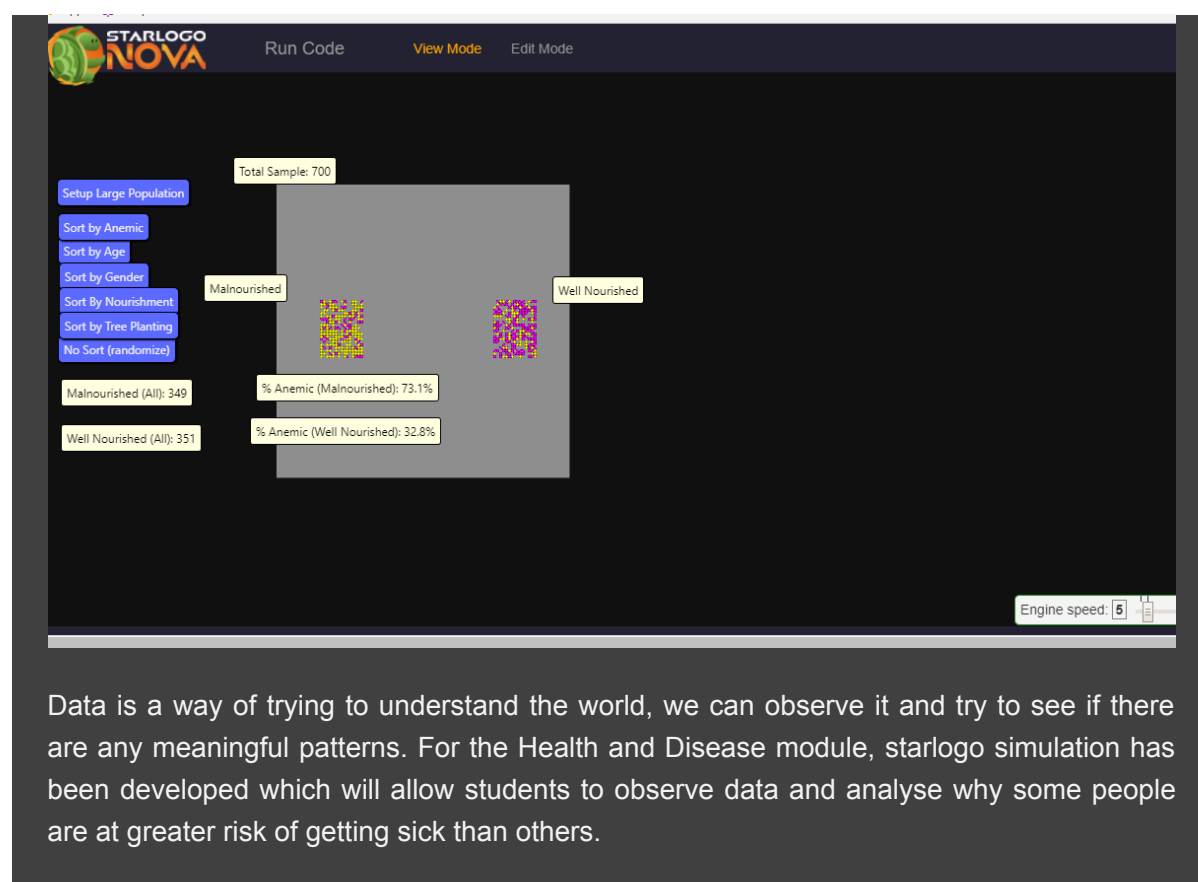
conferences and publications. Albert Camus said: "In order to understand the world, one has to turn away from it on occasion." So it was that 23 members of the CLIX team decided to retreat to better understand and represent our world and were eager to share the many insights gleaned from both the processes and the impact. [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 Starlogo stimulation tool designed by our Science team to help us better understand Health and Diseases.

---



## 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 Prof. [Shamin Padalkar](#)'s paper [Models as Feedback: Developing Representational Competence in Chemistry](#)

Spatial information in science is often expressed through representations such as diagrams and models. Learning the strengths and limitations of these representations and how to relate them are important aspects of developing scientific understanding, referred to as representational competence. Diagram translation is particularly challenging for students in organic chemistry, and although concrete models greatly help in solving diagram translation problems, most students do not use models spontaneously. In 2

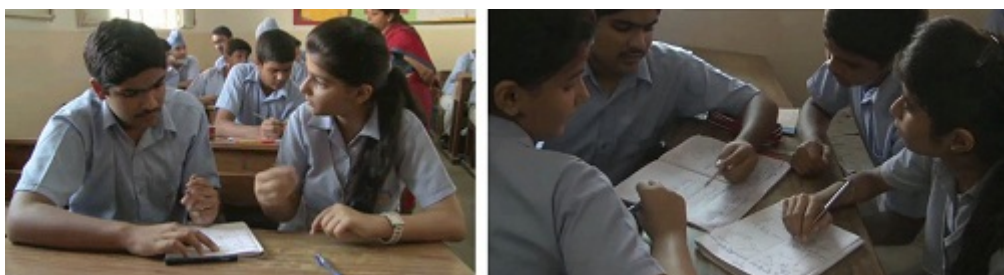
experiments, we examined the effectiveness of instructional interventions for teaching diagram translation using models. In Experiment 1, students drew diagrams and checked their accuracy by attempting to match concrete models to their solutions (model-based feedback). The instruction helped students in the experimental group to identify their mistakes, understand the usefulness of concrete models, and led to large improvements in performance, compared with a control group. To examine whether feedback, the opportunity to match models, or both was the critical aspect of the intervention, in Experiment 2, 1 group was provided only verbal feedback (by a tutor) and another group matched diagrams and concrete models, but not in the context of receiving an evaluation of their pretest performance. Feedback alone did not improve performance relative to a control group, but the opportunity to match models and diagrams improved performance relative to control. The results indicate that using models as feedback is an effective way of training representational competence in the domain of organic chemistry and more generally in science, technology, engineering, and mathematics disciplines. [Read on](#)

---

## 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 a case study on think-pair-share technique to learn elements, compounds or mixture

Think-pair-share involves setting a task for students to do on their own. The task could be some simple true/false questions, matching words with definitions, or putting a set of instructions into order. Once they have had about five minutes to do the questions on their own, students compare notes with a partner. In Case Study 1, the pairs share their answer with another pair (Figure 1).



**Figure 1** Students are asked to work in pairs to solve a problem. They then compare their solution with another pair.

### A training session that uses the think-pair-share technique

*Mr Singh attended a training session at the local DIET. Instead of sitting and listening to the trainer, the group were asked to take part in a number of activities. He then tried this activity with his students.*

Last week I attended a training session at the DIET. It was much better than usual because we had the opportunity to try out the activities that we were being told about. The trainer drew nine diagrams on the blackboard. We had to label each diagram as an element,

compound or a mixture. I was worried! I am a biology teacher and I could not remember much about this topic. The trainer encouraged us to guess if we weren't sure.

We then compared notes with the person next to us. The person next to me was Anju, a physicist, so she wasn't very sure either. I changed some of my answers and she changed some of hers, and eventually we agreed on the answers. Then we shared them with another pair. I realised that I had been correct about 'E' – I thought it was an element but couldn't explain why. Anju had convinced me that it was a compound because it contained molecules. Shanka, in the next group, explained that it was an element because all the atoms were the same. Finally, the four of us compared our results with another four and found that we agreed.

I realised that I had learnt quite a lot during the exercise as a result of talking to my colleagues. And nobody else in the class knew how I did at first, so I did not feel embarrassed about how little I knew!

A few days later, I was teaching chemical reactions to Class X. I asked them for the definition of an element. Only three people put their hands up and the first one I asked got it wrong, so I did the pair work exercise with them. It took a mere 15 minutes, and although we did elements, mixtures and compounds in Class IX, some of them did not do very well in the exam. I am sure they will find 'chemical reactions' easier now that they understand the underlying ideas. I watched them carefully and listened to the discussions. Susamma understood very well, but Rahanna struggled. I will make sure that they sit together when we do chemical formulas, so that Susamma can help Rahanna.

Source: <http://www.tess-india.edu.in/learning-resource-631?section=4>

---

## Our recent posts

- **A TREAT for Writers (15.01.18 – 19.01.18)**

*An action research project needs time and space to present our insights to the world in various fora such as conferences and publications. Albert Camus said: "In order to understand the world, one has to turn away from it on occasion." So it was that 23 members of the CLIX team decided to retreat to better understand and represent our world and were eager to share the many insights gleaned from both the processes and the impact. [Read on](#)*

- **CLIX Participation in epiSTEME Conference (05.01.18 – 08.01.18)**

*The epiSTEME series of biennial conferences is a series of international conferences to review research on Science, Technology and Mathematics Education. The seventh conference in the epiSTEME series took place from 5 to 8 January 2018 at the Homi Bhabha Centre for Science Education, TIFR, Mumbai. The theme of this year's conference was discipline-based education research (DBER) at the undergraduate level.*

- **Breeding Confidence!**

*We techies at CLIX (Satej, Rachana, Kedar and I) decided to be Santas to the researchers and give them*



*Sirohi data as their Christmas present. We visited 15 CLlx schools in Sirohi district from 11–15 December as observers. Wearing the spectator's hat, we enjoyed the intricacies of a CLlx classroom. As first-time observers, we keenly noticed the behaviour in the various CLlx classrooms.*

---

## Opportunities

- [Positions advertised at Centre for Education, Innovation and Action Research \(CEI&AR\)](#)
- [The Teacher Pages Innovator Fellowship 2017-2018](#)
- [CLlx internships](#)
- [CLlx Faculty Fellowships 2016-2017](#)



The Connected Learning Initiative (CLlx) 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. CLlx 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, CLlx 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.



Share



Tweet



Forward

© 2015-2016 TISS and MIT, [Creative Commons Attribution 4.0 International License](#).

**Contact us :**

+91 22 25525002/3/4 | [clix.tiss.edu](mailto:clix.tiss.edu)

**Our mailing address is:**

[contact@clix.tiss.edu](mailto:contact@clix.tiss.edu)

Want to change how you receive these emails?

You can [update your preferences](#) or [unsubscribe from this list](#)