



What is Collaborative Lesson Research?

Collaborative Lesson Research is a version of high quality lesson study, which provides an excellent structure for deep collaborative action research. Key elements of CLR include:

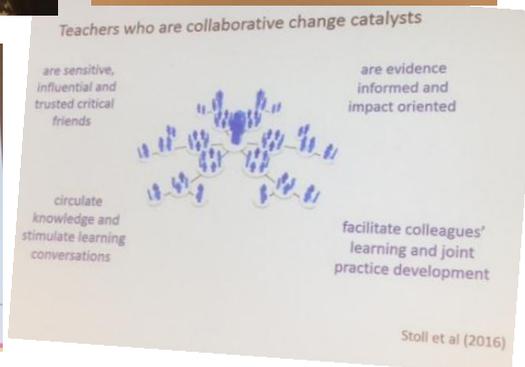
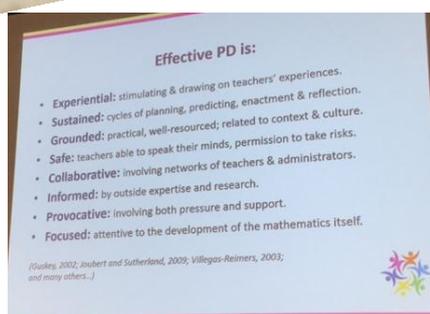
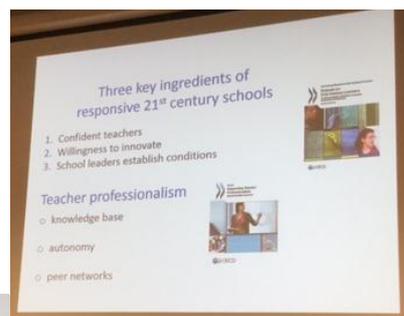
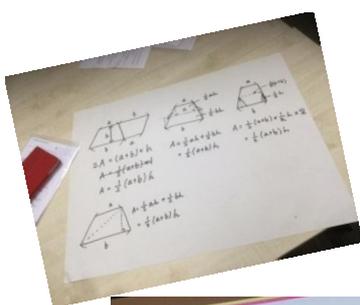
- Focussed research questions about classroom practices and learning
- Collaborative work within and across schools
- Links to research knowledge and outside expertise

It is a structure that ensures deep learning by teachers in their own classrooms, but connected to outside expertise in a sustained way. The term was proposed by Dr Akihiko Takahashi, a veteran maths teacher, who now teaches in the US and a well-known guru of lesson study both in Japan and globally. See the upcoming events section for his visit in December 2017 and his article <https://link.springer.com/article/10.1007/s11858-015-0752-x> to learn more.

Who are we? We represent an emerging community of like-minded educators (largely but not exclusively in maths) who believe that teachers should be given opportunities to become professional learners. Over 40 people from the UK have had the opportunity to participate in an intensive training programme on lesson study in maths in Japan in the past 5 years. Many of us have also had the benefit of working closely with Japanese maths educators in lesson study (to improve our teaching of problem solving), and have seen the impact CLR can have on maths teaching. We are convinced that our version of lesson study, Collaborative Lesson Research (CLR), provides a unique pathway of learning to teachers.

Collaborative Lesson Research Launch Conference

The CLR launch conference was held and hosted by the UCL Institute of Education Research and Development Network in London on July 10th. Attendees enjoyed keynotes from Professor Louise Stoll (London Centre for Leadership in Learning), Professor Geoff Wake (The University of Nottingham), Professor Keichii Nishimura (Tokyo Gakugei University) and Professor Becky Francis (IOE).



There was a packed agenda, with a variety of workshops covering a wide range of elements of Japanese lesson study. Notes, videos, blogs and report from the conference will be available on our website later next month.

Kyozai Kenkyu – central to collaborative lesson research

Kyozai Kenkyu is of fundamental importance in lesson study.

Central to the process is planning the lesson, but because of the nature of Japanese lesson study with its collaborative research focus this planning needs to be very detailed. Much more so than is usually the case in the U.K. The aim is to develop a lesson that provides insight into the nature of our inquiry to ensure that we have maximum opportunity to answer our research question for the lesson.

Sometimes we emphasise that *kyozai kenkyu* is research informed, but this is just the start. We need to bring to the discussion not only knowledge from the research literature about what is known about how students learn the topic at issue but also what we know about our own students, the resources available and also curriculum expertise.

The *kyozai kenkyu* process brings together a small number of teachers who use this knowledge to develop key moments in the lesson that will draw on student thinking, revealing different approaches and misconceptions, to guide carefully planned whole-class reasoning towards the desired learning. As part of this planning what will be shared as board work (*bansho*) and how the teacher will react to expected student responses will all be considered and documented. With such care taken over thinking it is not surprising that the process takes some considerable time.

Prof. Takahashi who is joining us for a week in December is recognised as an expert in collaborative lesson research in Japan and also internationally. Our Collaborative Lesson Research community is therefore very pleased that Professor Takahashi will lead our unique professional development events to provide more insight into the process and outcomes of *kyozai kenkyu*. Please join us.

To find out more visit our website: <http://collaborative-lesson-research.uk/> .

CLR in practice...

Every issue we will highlight some excellent practice somewhere in the country. If you'd like to be featured or would like to contribute to this section please contact us via email: info@collaborative-lesson-research.uk

Public Research Lesson, London

In July a class of thirty Year 9 students from Riverside School took part in a research lesson taught by their teacher (Chloe Hill) in a conference centre auditorium, packed with conference delegates. Although the setting was unusual, the research was real. The research team's starting point was Chloe's concern about her class; in multiple step maths problems, her students often just launched into solving problems without thinking about whether such an approach would work or not, often ending up stuck with no time left. She wanted her students to develop a higher order ability to assess what they are doing while solving problems – this became the research focus for the lesson study. The team invited Dominic Hudson from Derby, a senior teacher known nationally for his teaching in problem solving, to become their *Koshi*, the external facilitator/commentator. Through 4 meetings over the 2 months period and with intensive work in between, the team researched and read about teaching problem solving, selected a task (a context rich complex problem from Bowland Maths), worked on what the most likely student responses would be, and developed a lesson plan and resources to be used in the lesson. The result was a well-planned lesson ready up for observation by the conference, with a detailed lesson plan documenting all the background thinking. The conference audience also learned much more from the post lesson discussions that followed. The audience first participated in group discussions about what they observed, and whether the lesson plan could be improved to enhance student learning. A more formal Post Lesson Discussion was then conducted by a small group of observers experienced in CLR methods, at the centre of the auditorium, enriching the learning of the audience. The discussion ended with Dominic providing 'final comments,' which elevated the collective learning a step further. The day was a good reminder that the power of CLR lies in the deep level of learning both for the team and observers. The lesson plan, the video clips and other resources will be available shortly on the CLR website.



Collaborative lesson research in Sheffield

During the last year seven primary, one special and three secondary schools have taken part in Lesson Study to improve pupil outcomes in mathematics. The project was designed to emulate the components of 'authentic' Lesson Study and as such involved the contribution of a 'knowledgeable other' and the inclusion of the whole school including the headteacher. The outputs of this work were recently shared at a conference attended by project participants and over 100 teachers who were either involved or interested in Lesson Study.

Conference delegates particularly enjoyed the inputs of headteachers from the project schools that described the successes and challenges of the project. The project involved 120 teachers engaging in research led teacher professional development. Feedback from the headteachers indicated that this CPD is having a significant impact on teacher development in planning lessons particularly in the teaching of problem solving.

This work will continue as all the schools have now committed substantial resources to ensure that Lesson Study becomes a central part of their CPD programmes. This year more schools will join the project and a training programme for 'knowledgeable others' is being developed to support the lesson evaluations through their analysis of the planning and by providing a final commentary. For further information about this development contact Bob Sawyer at bobsawyer16@gmail.com

Recent Research

[Akiba, M \(2016\) Traveling Teacher Professional Development Model in *The Global and the Local*, p. 77 – 97, Sense Publishers](#)

A mixed-method comparative study examining the interpretation and adaptation of Japanese lesson study to act as a model of teacher professional development in Florida, the United States.

[ZDM Volume 48, Issue 4, July 2016, Improving teaching, developing teachers and teacher developers, and linking theory and practice through lesson study in mathematics: an international perspective](#)

A special issue that considers diverse cases of lesson study around the world.

News and Upcoming events: Guru of Japanese maths and Lesson Study (CLR) in London and Manchester in December 2017

Express your interest early to avoid disappointment!



We're extremely excited to announce that Dr Akihiko Takahashi, one of the global leaders in Japanese lesson study will be with us in the week of December 4. When Japan was looking for lesson study experts to revamp its own practice, Dr Takahashi was specially appointed as a Professor in Tokyo Gakugei University. He has been helping to introduce lesson study not only in Japan, but globally and has played key roles in a wide range of countries from the US, Singapore, Qatar to Ireland. Currently, he is (co-) leading a Gates Foundation-funded project to embed lesson study in schools in the US.

We are hosting two one-day events each with Dr Takahashi, in Manchester (on December 4th and 5th) and London (December 7th and 8th). On one of the two days, the target will be schools and teachers learning to undertake lesson study ("**teacher day**"), but with an eye on 'mastery.' Specifically, Dr Takahashi will showcase Japanese maths teaching through problem solving, a teaching practice in Japanese primary schools which has helped students develop a deep understanding of key maths concepts. He will also discuss how a school might implement lesson study school-wide. On the other day, Dr Takahashi will host a special workshop for those who aspire to lead lesson study in schools, particularly by becoming *koshi*/facilitator ("**koshi day**"). He will discuss their roles,

and go over the key preparation they are expected to undertake before the research lesson, what/how to observe, and how to prepare commentaries for the post lesson discussion.

For more information about these events please contact
Rosa Archer rosa.archer@manchester.ac.uk (Manchester events) or
Sarah Seleznyov s.seleznyov@ucl.ac.uk (London events)

Become a member of the CLR Network

Are you interested in setting up a lesson study in your school? Are you already participating in lesson study but need some support and guidance? Do you already run a successful lesson study programme?

Collaborative Lesson Research Network is for anyone engaged in lesson study in their setting. The network offers the opportunity for practitioners to find out about established lesson study groups in their area, support for establishing or improving lesson study and a forum for existing groups to share their practice, challenges, solutions and findings. We will also be collating contact details of potential *koshi's*, sharing upcoming CLR events and acting as the UK partners to the International Math-Teacher Professionalization Using Lesson Study (IMPULS) based at Tokyo Gakugei University.

To become a member of the network or for more information email: info@collaborative-lesson-research.uk