

Lesson Study: a handbook

Pete Dudley

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*This booklet is a guide on how to use **Lesson Study** to **develop** and **refine** teaching, learning and teacher practice knowledge.*

The booklet will help you in:

- *getting lesson study going in school,*
- *planning, teaching and analysing the research lesson*
- *involving pupils in the process*
- *passing on to others the new practice knowledge you have gained in your lesson study.*

Lesson Study (LS) is a highly specified form of classroom action research focusing on the development of teacher practice knowledge. It has been in use in Japan since the 1870s. LS therefore pre-dates action research as we know it in the West, by some 70 years.

LS involves groups of teachers collaboratively planning, teaching, observing and analysing learning and teaching in 'research lessons'. They record their findings. Over a cycle of research lessons they may innovate or refine a pedagogical approach which will be shared with others both through public research lessons, and through the publication of a paper outlining their work.

LS only started to become popular in the west this century, following the success attributed to it by US researchers in developing deep teacher knowledge of both pedagogy and of subject amongst Japanese teachers which leads to high standards of educational attainment by Japanese pupils when compared with those of comparable groups of pupils in the US (Stigler and Hiebert, 1999; TIMSS., 1999).

In East Asia LS is now in use beyond Japan in countries such as Singapore, Hong Kong, and China. In the West it is in use in countries including the US, the UK, Sweden and Canada.

Lesson Study has been used successfully in this country to improve teaching techniques and pupil progress in core subjects in primary and secondary universities and to develop broader pedagogic approaches such as assessment for learning (AfL). During a Lesson Study cycle a small group of teachers (or even a pair) will:

- Use the data they have gathered from day to day and periodic assessment to agree a focus for the pupil learning and progress.
- Jointly identify a teaching technique to develop or improve which addresses that need (See Fig. 1 Page 4)
- Identify around three 'case pupils'. Each should typify a group of learners in the class – for example high, middle or lower attaining in the strand being taught and developed.
- Jointly plan a 'research lesson' which both uses develops and closely studies the effects of this new approach –.and keeps in mind the three case pupils..

- Teach and jointly observe the research lesson focusing on the case pupils' learning and progress. They may repeat and refine this over several lessons. Not all these need to be observed research lessons.
- Interview the case pupils to gain their insights into the research lesson.
- Hold a post research lesson discussion analysing how the case pupils responded to the technique, what progress they made, what evidence of learning or of difficulties with learning they displayed and what can be learned about the way the teaching or learning approach is further developed – next time.
- Formally share the outcomes with a wider audience of other teachers – in a presentation, by demonstration or by coaching.

Guidance for each of these stages is unpacked in the sections of this booklet. This draws on what we know about how lesson study has worked in schools and colleges in England and overseas.

The final two sections provide ideas on how school leaders can

- a. Create time for lesson study and building it into school systems
- b. Use leading teachers to support and develop the professional learning from Lesson Study and using the lesson study model as a platform for in-school coaching

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a. Why conduct a Lesson Study?

Panel 1.

Lesson Study works .. because it helps teachers to:

- see pupil learning occurring in much sharper detail than is usually possible
- see the gaps between what they had assumed was happening when pupils learned and what it actually happening
- find out how to plan learning which is better matched to the pupils' needs as a result
- do all this in the context of a supportive teaching and learning community which is strongly committed to helping pupils to learn and to the professional learning of the members of the group. (Dudley, P. 2011a)
- Take these abilities into their teaching

Dudley, P (2011) Lesson Study: what it is, how and why it works and who is using it, www.teachingexpertise.com

The simple fact is that successful teachers are largely blind to much – perhaps even to *most* - of what of what is happening in their classrooms. This is *not* a failing! It is the result of processes that have enabled them to become successful teachers.

I will explain what I mean. Classrooms are amongst the most complex working environments in which any professionals have to operate. The amount of information that is generated by 30 or more learners engaged in lesson activities over the course of an hour or so is vast. So is the speed at which the information comes at a teacher; in fact the Japanese say that 'a lesson is like a swiftly flowing river' (Lewis 1999).

Researchers have studied how teachers cope with this complexity and speed. Wragg et al., (1996) found that teachers who survive their first three years and become good teachers do so because every time they discover a new way of managing a teaching situation that has presented a challenge to them, they rapidly internalise the practice knowledge they gain in a form that can be drawn upon unconsciously when it is next needed in the classroom. Practice knowledge in this form is not something a teacher is often conscious of knowing. It is tacit. Like our knowledge of how to ride a bicycle, it only manifests itself when it is needed and it is very difficult to put into words.

Unlike surgeons for example whose practice knowledge is recorded in great detail and made accessible to others and replicable, teacher practice knowledge tends to stay with the teacher who discovered it and who is usually unconscious of its existence. Because teachers tend to practice in isolation as lone professionals with their classes, other teachers seldom get an opportunity to see others' tacit knowledge manifested in action. When a teacher's practice is observed by another professional it is more likely to be in the context of some form of appraisal or judgement of performance than in a context of professional learning and in such contexts teachers tend to play safe with the practices they put on view.

Unlike most animals, human beings have learned to deal with high volumes of information by filtering. For example, we actively pay attention to a tiny proportion of the sounds that we technically 'hear'. We have evolved methods of filtering out extraneous

information and paying attention only to what is important or very unexpected. These filtering mechanisms have enabled us to focus on and process what we have identified as important in achieving our goal. In the classroom, we do the same. We focus on the most critically important aspects of what is happening at any one time filtering out a lot of extraneous events and information. We deal swiftly with new knowledge gained that we have deemed important by storing it immediately in tacit form. All this leaves our conscious working memory freer to deal with the next important things we have prioritised in the complex and swift environment of the lesson.

Lesson Study helps experienced as well as inexperienced teachers to learn. Because, through the processes of joint planning, joint observation, joint analysis we have to imagine learning together, we get to see aspects of pupil learning through the eyes of others as well as our own and we compare actual learning observed in the research lesson with the learning we imagined when we planned it. This forces us to become conscious of things we would normally not be conscious of either because we would filter it out or because it would be dealt with through our tacit knowledge system.

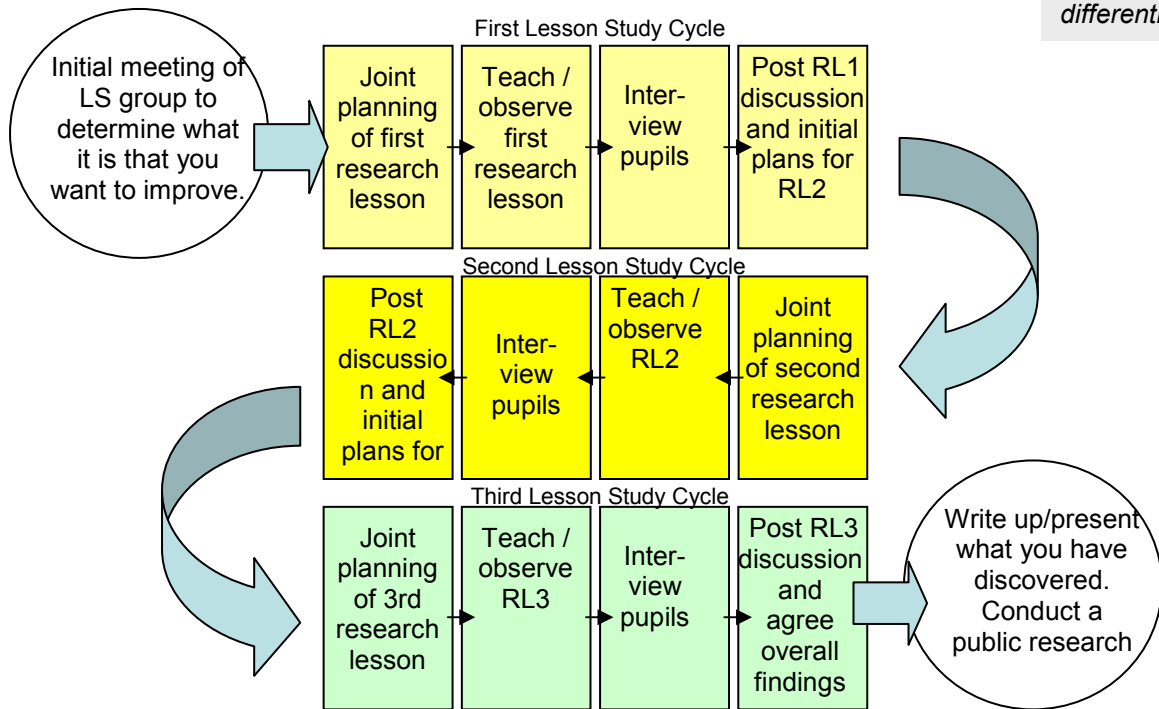
Many people who have used Lesson Study have said that focusing on and thus becoming more aware of the learning needs and behaviours of individual case pupils somehow makes them more aware of the individuality of all their pupils. So instead of teaching to a 'middle' with groups of high and lower achieving pupils on either side, Lesson Study helps teachers to be more aware of the needs of individuals in their subsequent teaching but seemingly without being overwhelmed by the experience.

My research (Dudley, 2011b) indicates that this may be as a result of the fact that the reflexive, recursive and collaborative experience of Lesson Study helps the experienced teacher, a teacher who successfully utilises her ability to filter complex classroom information, to select some of these filters and to switch them off. This allows, in a controlled way, aspects of classroom information that relate to the pupil learning in focus, to become visible that would otherwise have been filtered out. Lesson Study seems to help teachers to learn how to switch these filters off when all their prior experience has taught them that success lies in switching them on.

b. Getting Lesson Study going

A Lesson Study consists of a cycle of at least three 'research lessons' that are jointly planned, taught/observed and analysed by a Lesson Study group. (See Fig. 1 below).

Fig 1 The Lesson Study process



© Bethlehem University 'Centre for Excellence in Teaching and Learning' Learning Toolkit: Lesson Study, Dudley, P., (2011)

What has worked well

Choose a group of teachers – **three works well** – who are likely to enjoy the challenge of starting up a new professional learning approach in the department. Lesson Study works well when there is at least one member of the senior team involved and the teachers have a mix of teaching experience.

Hold a meeting with them to set out expectations and ground rules which enable people to feel free to **take risks** and not feel they are under scrutiny. In a lesson study all members of group are of equal status – as professional learners.

Develop some parameters which are based on identified school or class / year group needs. (For example to develop the use of discussion for learning in group work sessions).

Notes

Use common LS formats for lesson planning, observation or analysis. (Examples you can use are in this booklet)

Give teachers *dedicated* time (an hour at least) to plan the first research lesson.

Protect their time on the day of the research lesson and make sure they can have a post lesson discussion immediately or soon after carrying out the research lesson.

Take an active interest in how the process is going.

Make sure the LS group has dedicated opportunities to share what they have developed with other colleagues – a staff meeting, a coaching opportunity.

Use these members of the group as lesson study champions in the faculty to convene and develop the next Lesson Study groups.

c. & d. Planning the first Research lesson and identifying the ‘case pupils’

‘Focusing down on the case pupils has enabled a number of really important things to be revealed’

What has worked

Agree which class you will conduct the first research lesson in and then identify three pupils who reflect different groups of learner in the class – pupils who are making good, average or below average progress either in a cross curricular skill such as academic writing, or in a subject specific aspect of learning.

Agree the level each pupil is working at in the focus area of this session.

Write out in full *exactly* what you want each pupil to be able to do by the end of the research lesson. (You can use the planner on page 6).

Plan each stage of the lesson with particular attention to the sequence where you use the teaching technique you are refining or planning. Note down what you hope the response of each case pupil will be. What will each pupil do at this point to evidence their progress?

Identify as carefully as you can: what resources will be used and how, what you will write on the board and indicate timings for the lesson stages.

Agree who will focus their observations on which case pupil(s). It helps to have some rules to ensure you don’t all gather data about two pupils and miss the third.

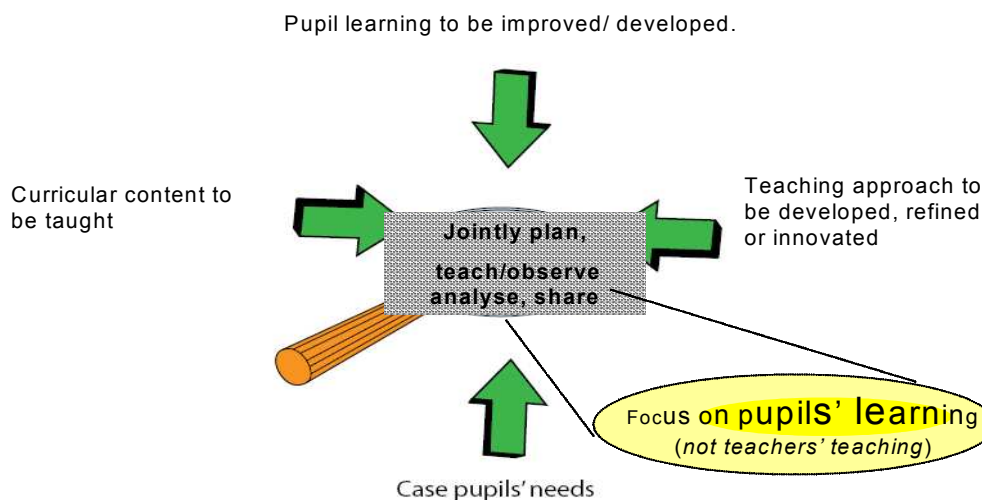
A lesson study planner is provided on page 6. It should be enlarged to A3 for use. Each lesson study group member should have a copy at the start of the lesson because it also serves as an observation annotation sheet and the basis for the post lesson discussion.

Notes

Case pupil A Name

Success criterion for this focus
By the end of the sequence Pupil A will (describe what they will do to demonstrate progress in the identified learning goal in the lesson)

Additional notes



e. Teaching the first research lesson

What works

Use the research lesson planner on the following page to plan the research lesson. It works best blown up to A3. It also acts as the observation sheet (if photocopied and provided to the observers in the research lesson) and is the key point of reference for the post lesson discussion.

Take real care over the joint assessment of the stages which the three case pupils are working at. You can make reference to the Assessing Pupil Progress materials. It is really important that the group clearly writes what they want each pupil to be able to do in the focus strand by the end of the lesson and what they will be looking for as evidence of this.

Because the research lesson is jointly planned, it is jointly owned by the group. This means the focus for the observers is less on the teacher and more on the learners – the focus pupils. They should try to start each observation as if zoomed-in on the focus pupil and then pan back to allow a bigger group or the whole class to come into frame.

Observers should try to capture the focus pupils' responses at different points in the lesson – and how they match or differ from what was predicted at that stage. Note also any critical incidents. If there is a common pattern (e.g. all focus pupils misunderstand something in the same way) note it in the right hand column.

Note the time against each annotation if you can.

At the conclusion, look for the evidence of progress for each pupil against what was planned and the extent they are achieved. What are key points for the next lesson for the focus pupils, their groups or the class? What might you want to ask them in their post lesson interview? Jot this down in 'initial thoughts' at the bottom of the page.

Notes

'What's very powerful is that people felt that because they'd planned together, it made it okay if it went wrong..'

What this research lesson is aiming to teach (it may be a section of a longer teaching sequence)

What teaching technique is the research lesson aiming to develop? *We are improving...*

Current attainment and success criteria Describe what you are looking for from them by end of lesson in the identified aspect	Case pupil A Success criterion for this focus		Case pupil B Success criterion for this focus		Case pupil C Success criterion for this focus		Patterns / issues
	How you hope case pupil(s) A will respond	How they are observed to respond	How you hope case pupil(s) B will respond	How they are observed to respond	How you hope case pupil(s) C will respond	How they are observed to respond	
Stage ... (approximate time)							
Stage ... (approximate time)							
Final stage ... (approximate time)							
What were they able to do? (What progress have they made and how do you know?)							
Initial thoughts							

f. Interviewing case pupils after the lesson

What works

In the UK lesson study groups often interview the focus pupils after the research lesson to gain their perspectives on what worked for them, what they felt they learned and how they think lesson could be changed if it were taught again to another class in order to make it work even better.

The interview should be short (no more than 5 minutes) and can be done with all the case pupils in a group or individually.

Try to conduct the post lesson pupil interview at the first opportunity – ideally at the end of the lesson.

Try to capture some of their exact words in your notes.

Some people conduct the post research lesson pupil interview with other pupils but who are in the same three learner groups as the case pupils. This can help triangulate findings – but it can also complicate the data set.

Notes

...they [pupils] begin to take ownership of the whole learning process, they take responsibility for it and also they're helped. It's amazing because ... they're engaging with us, in helping us to help them to learn. Incredible stuff really, incredible stuff!

Suggested questions for a post lesson interview with the case pupils

What did you enjoy most about that lesson?

What did you learn?
(What can you do now that you could not do. What can you do better? How is it better?)

What aspect of the teaching worked best for you?

If the same lesson is being taught to another group what would you change. Why would you change that aspect?

g. The post research lesson discussion

What works

Come together as soon as you can after the Research Lesson (and certainly not later than 24 hours afterwards). You may wish to review the following qualities of a successful post Research Lesson discussion.

- (a) Openness to critical viewpoints and suggestions
- (b) Fidelity to observed data and no excusing failure
- (c) Viewing the post lesson discussion as a joint learning opportunity
- (d) Clear goals and questions from the plan/observation sheet
- (e) A designated 'moderator' for the discussion (a chair who can lead the discussion positively,) a role that can be combined with that of
- (f) 'Adviser,' (final commentator) whose role it is to capture the learning distilled from the discussion, in order that it can be acted upon by the group and others beyond the group. This person may be external to the school (Takahashi, 2005).

The most important thing to remember though is that the flow of analysis needs to start with the observations made of the case pupils' (and other pupils') learning before it addresses the teaching (See Fig 3 below). This preserves the focus on student learning and on teacher learning from this and reduces the tendency for lesson observation discussions to become feedback on teaching (which teachers can feel is judgmental in nature and not conducive to teacher learning (See Fig 3 below).

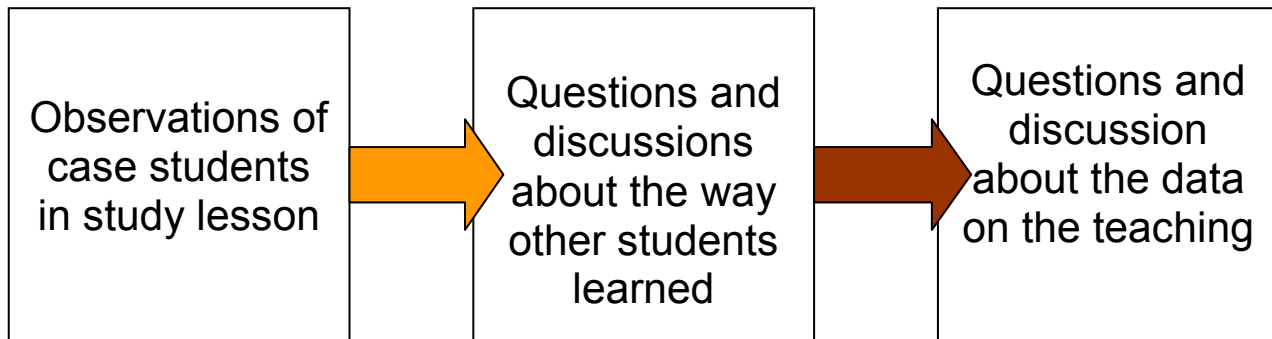
Notes

'...it's amazing how much you learn by explicating your ideas, so in challenging me, I have to justify why I think we should do this in this particular way and through that it really strengthens your own knowledge and gets you to a place you could not get on your own'

Sign and date the record.

Keep the notes in a professional learning log in the staffroom.

Fig. 3. Post Research Lesson Discussion Flow



The exemplar record below can be used to capture the post lesson discussion.

Post Lesson Discussion record			
	Case pupil A	Case pupil B	Case pupil C
What progress did each pupil make? Was this enough? What about others in the group of learners they typify?			
How did the technique being developed help or hinder? (Maybe a bit of both) What surprises were there?			

What aspect(s) of the teaching technique could be adjusted next time to improve the progress of each	<ul style="list-style-type: none"> • • •
So what should we try next time?	<ul style="list-style-type: none"> • • •

Initials

Date

h. Formally sharing the outcomes with other professionals

What works

Arrange an opportunity ahead of the lesson study for the group to share with colleagues what they have done, learned and refined - especially in the key teaching technique being developed. If people know in advance that they will have to share their findings with others, then they will bear this in mind throughout the proceedings. This helps the lesson study group keep their thinking and their findings clear, more useable and replicable by others.

Video snips of the research lessons and digital photos embedded in PowerPoint presentations are a popular way of conveying lesson practice and processes. (You will need to ensure you have a school policy on use of video and photos in place).

Arrange opportunities for members of the lesson study group to work with other teachers in order to help coach the pedagogic technique they have evolved, adapted or refined.

Remember that articulating and explaining practice and

Notes

'Because the typical sort of teacher is extremely busy, they want to see that what you're putting forward is going to be of use to them and so little snippets, with a video is really helpful for that..'

making it visible to others

- (a) helps those learning from their peers improve their practice
- (b) improves the performance of the person doing the explaining or coaching.

This is because it makes visible what is often tacit knowledge of practice - which teachers use but never express. Articulating this helps them become more aware of their knowledge themselves and therefore more able to improve it further.

Celebrate and value what has been learned and shared.

Create a 'learning wall' in the departmental common room where a lesson study group can display their work – photos, notes, observations, discussion outcomes, pupil interviews and tentative conclusions. This creates lots of staffroom talk about professional learning long after the formal sharing is over.

i. Creating time for lesson study and building it into school systems

What works

Lesson study is very good value for money if you genuinely create opportunities for its outcomes to feed into the practices of those involved in the study and others in the school.

Some heads have created dedicated professional learning time when lesson study groups plan and analyse their lessons from time normally allocated to professional development and management.

Judicious use of PPA time, specialist teaching time, staggered timetables or break times and any other means which allow some teachers to be free to talk together, can create opportunities for planning or post lesson discussion which do not always demand supply cover.

Heads of department can build Lesson Study into their school teaching and learning policy by creating a staff professional learning policy. These gives teachers and others entitlement to professional learning and CPD opportunities which include the models now recognised

Notes

'...what I've been surprised and really pleased about I think is that people who normally close the door and get on with what they do in a lesson, have suddenly thought 'Oh hang on, this is good for me, within my lesson. It's good for the kids within my lesson, it's practical, I'm doing something. And they've really got on board. And that's been remarkable in our place..'

as having most impact on classroom practice. (See page 1).

One example of linking Lesson Study with performance management productively was achieved by treating participation in lesson study and sharing of the outcomes with colleagues - as a component of performance management. Staff involved felt that with lesson study they improved areas where they felt less confident rather than *playing safe* in an area of relative teaching strength.

It is important to keep lesson study separate from performance monitoring.

Some lesson study groups demonstrate the techniques they develop to other teachers in a public research lesson. Here pupils stay behind after school and the lesson is taught in the hall in front of an invited audience from neighbouring universities. A lively discussion follows. This is popular in Japan.

j. Using LS coaches to support and develop the professional learning from Lesson Study and using the lesson study model as a platform for cross departmental or school to school coaching

What works

Leading teachers or consultants can support the lesson study process if they:

Notes

- Demonstrate a technique in the school immediately to other teachers prior to a lesson study cycle beginning.
- Join a lesson study group as they plan a research lesson and contribute ideas and suggestions.
- Sit with a lesson study group and discuss the research lesson they have prepared – contributing to suggestions about how the pedagogic technique could be developed
- Join a research lesson as an observer (with equal status) and participate in the post lesson pupil interview and discussion.

Subject leaders can play a similar role – especially if they have participated in a lesson study cycle themselves and become a champion in school.

Additional interest and value can be created around lesson study if it is used by teachers to develop a portfolio to evidence particular teaching standards, or to contribute towards professional or academic qualification or recognition.

When your teachers have developed some practice which has had a clear impact on learning and progress of pupils and which you think others would be interested in – log the practice as a case-led study at

www.lessonstudy.co.uk

This is a website designed to help practitioners search for and share practice in classrooms and school improvement which have worked in one place and could work elsewhere.

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