

“Growing A Learning Ecology”

Presented by

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Abstract

Right about the time when Singapore was embarking on its most extensive educational reforms under the slogan, *'Thinking Schools, Learning Nation'* in 1997, Professor Elliot Eisner of Stanford University compiled his seminal writings into a book entitled, *'The Kind of Schools We Need'*. In a chapter on *Educational Reform and the Ecology of Schools*, he viewed schools as robust institutions that are essentially resistant to change and any educational reforms which do not address the reformation of school ecology will fall flat because these will not go far enough to exert impact on where it really counts; the classroom. One of the most critical factors thwarting school reform is how most schools are structured to hinder rather than to help teachers reflect on their professional practice. He says, *'Teaching by and large, in both elementary and secondary schools is a lonely activity...they have little contact with other adults in the context of their classrooms...the result of professional isolation is the difficulty that teachers encounter in learning what they themselves do in their own classrooms when they teach. Classrooms, unlike the rooms in which ballerinas practice their craft, have no mirrors.'*¹ What seems critical therefore is the need to foster a school ecology that is conducive to the promotion of greater teacher dialogue and collaboration so as to engender within the culture a sense of teacher empowerment towards teachers learning about their own teaching and how this impacts on students' learning. The platform I chose in tackling the crippling effects of teacher isolation is the building of a Professional Learning Community through Lesson Study. In this presentation, I hope to give a glimpse of the professional development journey that our school undertook and outline the thinking and processes that has helped the school grow a learning ecology.

Dream Big, Start Small

The journey that our school undertook in Lesson Study began in 2008 with a pilot group of teachers. The Math department with the P5 level teachers piloted a Math Lesson Study Project after the Head of Department (HOD) and the Level Head (LH) attended a workshop by Prof Akihiko Takahashi on the topic and witnessed how a Math research lesson as well as its post-lesson discussion were

¹ Eisner, E. 1998, *The Kind of Schools We Need: Personal Essays*. Portsmouth, NH: HEINEMANN

conducted. They shared what they learnt with the P5 level teachers and guided them in a pilot project which the school undertook. The school also sourced for and collaborated with a consultant from NIE who provided guidance on the approach in conducting meaningful research lessons. The pilot group also collaborated with officers from Teachers' Network and MOE who observed their research lessons, acted as knowledgeable others and helped level up professional practice.

To create greater staff awareness of and buying in for Lesson Study, the team shared their pilot project with the staff during our annual Learning Fiesta where teachers share about lesson innovation. The Math HOD also introduced Lesson Study to the staff during the Strategic Planning session held in June 2008 and shared how Japanese & American teachers used Lesson Study to explore ways to improve teaching & learning in their classrooms. In November 2008, the school engaged the staff during the strategic planning sessions to review the effectiveness of existing professional learning platforms and persuaded the school to form Professional Learning Communities across the different levels and to adopt Lesson Study as a development tool to achieve our goal of being reflective practitioners.

Begin with the Necessary Ingredients

The transition from hearing and talking about Lesson Study to forming Lesson Study teams requires some initial planning and organization. Creating readiness is the first step in getting Lesson Study off the ground and investment of time is needed to ensure that the necessary ingredients are in place. The following ingredients are necessary for any effective school-based professional development to be implemented:

Willing and Engaged Teachers

The teachers must be willing to collaborate with their colleagues, to learn from each other to make changes to their teaching and try new ideas. Teachers may not be true believers at the start, but when School Leaders express understanding and engage them in dialogue and feedback frequently, many of the initial fears and reservations can be ironed out.

Plan Time for Collaboration

Time must be set aside for teachers to plan, observe and discuss the research lessons. The school leverages on the provision of a designated 1.5 hrs of Time-Tabled Time for teachers to engage in planning and discussions. For the implementation of the research lessons where teachers go into each others' classes to observe/ critique each other's lessons, the school created 2 blocks for each level, so that if half of the teachers are teaching a particular subject in class, the other half is free to observe the research lessons being conducted.

Resources and Support

A Lesson Study Champion who understands and values Lesson Study as a developmental tool is critical for sustainability. All Level Co-ordinators take on the role of Lesson Study Champions for their respective levels. Their responsibilities are to ensure that their level teachers have the resources and support they need and to provide the encouragement to their team members as they face the many challenges implementing Lesson Study.

An Action Plan

To put the necessary elements in place, the school developed an action plan. The expected outcomes are communicated to the staff and the Lesson Study team members consisting of facilitators, research teachers and observers were identified and their responsibilities outlined.

Getting Our Hands Dirty

Levelling Up Capacity

In the first term of the year, the school invited our NIE consultant to conduct a workshop on Lesson Study for the whole staff where he gave an overview of Lesson Study and the processes involved in a Lesson Study cycle.

Following that workshop, the various Heads of Department conducted a briefing on how Lesson Study is to be implemented as a school-wide programme when the Lesson Study action plan and the school's expectations were communicated to the teachers. A third workshop was conducted by officers from the Teachers Network on effective strategies in facilitating a post-lesson discussion.

Crafting a Research Theme

The Heads of Departments came together with the Level Co-ordinators to discuss and identify the research theme to ensure alignment with the school's vision and strategic goals as well as the desired outcomes of education. The research theme and the research focus are stated below. These were communicated to the staff and their feedback was sought before implementation.

Our Research Theme:

To develop confident pupils who enjoy learning and have the necessary skills & dispositions to thrive in future challenges

Our Research Focus:

Reasoning skills & Communication skills
(verbal and written skills)

The research theme and focus helped frame the scope of the Lesson Study and guided teachers in their planning and lesson delivery.

School-wide Participation

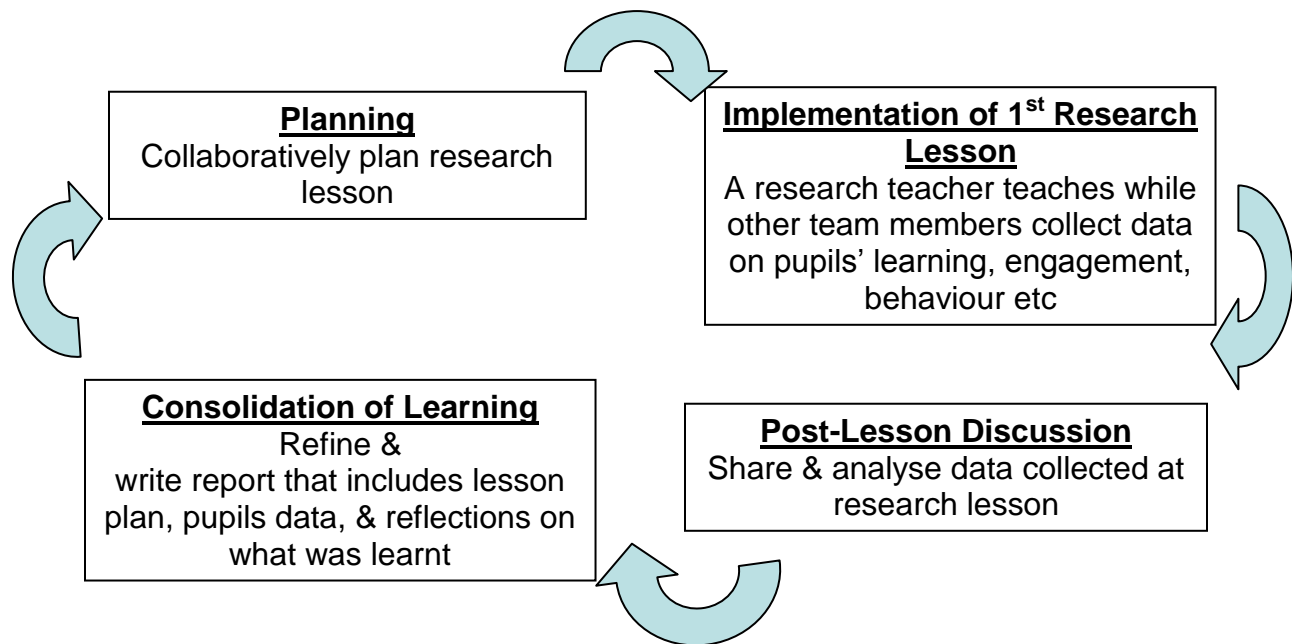
Lesson Study is implemented in all subjects, namely English, Math, Science and Mother-Tongue. All teaching staff are members of the Lesson Study community. 10 Lesson Study teams were formed in 5 EMS groups, 3 Chinese groups, 1 Tamil group and 1 Malay group.

Support from Knowledgeable Others

Master Teachers (Science, Chinese and Malay) were invited to take on the roles of knowledgeable others. These content experts were brought in to level up the professional dialogue during the post-lesson discussions by providing valuable instructional knowledge during discussions and offering fresh/diverse perspectives to the Lesson Study teams.

Lesson Study Cycle

There are 4 stages in the lesson study cycle.



- In the planning stage, the lesson study team works together to develop the plan for the research lesson. The research lesson plan represents their collective ideas and questions about teaching a certain topic. The school leaves it to the professional judgment of the Lesson Study team to identify the research topic. The research lesson plan need not be created from scratch. It can begin with an existing lesson. The team can use an activity from the teachers' guide or another source, adapting it to reflect their ideas and the needs of the pupils. It takes weeks to plan the instructional sequence, learning activities, key questions for pupils and anticipated pupils' responses. The lesson plan would also include the points of evaluation. These are questions to help the observers assess the pupils' progress throughout the lesson. The observers will use these points to document the pupils' learning.
- The central force in a research lesson is the research teacher and the level teachers who develop the research lesson. The observing teachers also play an important role. The third player is the knowledgeable others who may include the Principal, Vice-Principal, Heads of Departments, Senior Teachers, Master Teachers or NIE lecturers who possess in-depth

knowledge and sound pedagogical skills. As a school leader, it is important for me to lend my support and make time to attend the research lessons and act as a knowledgeable other during the post-lesson discussions. Prior to conducting the research lesson, the research teacher will email and meet up with the observers who are not in the planning team and explain the objectives of the research lesson and to highlight the points of evaluation. Pupils' seating plan, research lesson plan and checklist to collect data on pupils' learning and behaviour will be provided.

As observers, there are some procedural guidelines that they have to observe such as not engaging in side conversations during the lesson, refraining from interacting and teaching or assisting pupils in any way. Their role is to take notes and observe the pupils' engagement and learning throughout the whole lesson. The observers will take on researcher roles when they use the points of evaluation to guide their data collection. They take notes on individual pupil's responses, record interactions amongst pupils and between pupils and the research teacher. Pupils' common misconceptions and how the pupils construct their understanding are also recorded.

- During the post-lesson discussion, the facilitator expresses his/her appreciation to the team for their work and thanks the research teacher for inviting everyone into the classroom. The facilitator reminds the team on its goals and to refer to these goals in their comments. Team members are encouraged to base their comments on the evidence they have gathered during the observation.
- After completing the research lesson and the post-lesson discussion and reflection, the team will use the evidence they have collected and the proposed revisions to refine and improve the lesson. Although the school did not mandate that the teachers re-teach the refined lessons, a few of our teachers did carry out the refined lesson with their classes.

Sharing Portal

An online Lesson Study Sharing Folder was created to compile Lesson Study resources which included research lesson plans, teachers' observation notes, pupils' work, photos, videos, minutes of post-lesson discussion and group reflections. The online platform provides teachers with the avenue

to reflect on their learning, capture what they have learned and share their professional knowledge with fellow colleagues.

Reflection and Evaluation

The Lesson Study teams reflected on and reviewed the lesson study outcomes and effectiveness at the end of the year. A Lesson Study survey was also administered to validate both positive and negative outcomes that resulted from the lesson study processes. Through the survey findings, we identified areas for improvement as well as positive outcomes to determine Lesson Study's impact/effectiveness in building professional capacity and improving pupil learning.

Through the Lesson Study platform, classrooms have become the teachers' laboratory to critically examine their teaching effectiveness. Through the lesson study process, professional collaboration is fostered as teachers work together in groups to study and reflect on their professional practices. As teachers reflect, analyse, create action steps, evaluate, and share understandings with other teachers, they help each other hone their educational connoisseurship. This process is important not only in bringing about increased professional knowledge and skills in our teachers but also forging strong bonds of professional camaraderie and support; critical ingredients in a learning ecology.