

Transforming Practice through Pre-service Recognition: An Innovative Use of Lesson Study in the Philippines¹

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Abstract: This study examines Lesson Study as an innovation at the Faculty of Education of Catanduanes State University, Philippines. Fourth year students are observed in the field during their student teaching and the best student teachers are selected to participate in an event called Macro-Demonstration Teaching. This event is a university acknowledgement of teaching as a profession and allows the entire Faculty of Education to celebrate its top performers. Results of 177 surveys show that this event encourages pre-service educators to want to apply the concepts observed in the Macro-Demonstration Teaching in their own future classrooms. Furthermore, comments from the observers reflect that the event encourages a feeling of solidarity for the professionalism of teaching. General applications for the professional development of teachers will be suggested by comparing Droese's (2010) findings on lesson study in the U.S. as a mechanism for organizational change and the CSU teaching practice of early recognition of quality teachers during pre-service training. The implications of this study suggest ways for not only educators in the Philippines but also educators in Japan to create opportunities for transforming current practice through an innovative use of Lesson Study.

Keywords: Lesson Study, Pre-service training, Philippines, teacher professionalism, innovation

1. Research Background and purpose

Lesson Study remains an integral form of in-service training 130 years after its introduction into the Japanese school system. In recent years, it has been exported to various countries through substantial efforts by JICA. The use of lesson study internationally has met with great success, some failures, and as found in this research study--reinvention.

By thinking of Lesson Study as an innovation,

it becomes possible to identify key factors that will increase adaptation as well as the ability to recognize barriers to its success. Lewis, Perry, & Hurd (2004) point out that "many promising innovations die because their viable features are implemented ritualistically, without a clear grasp of how they relate to instructional improvement." It is thus of paramount importance to understand the innovation not only at a surface level but to analyze how it can be linked to instructional improvement.

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Droese (2010) examined Lesson Study in the U.S. at which time 34 states had at least one active Lesson Study project underway. She found that Lesson Study “produces a mechanism for self-sustaining, generative change. The practice of Lesson Study became a vehicle for double-loop learning, individual learning, and for organizational learning” (p. 117). Through her extensive research at three schools, Droese records how Lesson Study contributes to the creation of a professional learning community. Although each school faced various barriers and complications in implementing Lesson Study, “the end results—better lessons, deeper content, improved teacher collaboration, improved student learning, and a renewed enthusiasm for teaching—were common to all three schools” (p. 100).

Lesson Study has also met with some success in the Philippines. Reporting on the University of the Philippines National Institute for Science and Mathematics Development (NISMED) program from 2006-2012, Ronda (2013) finds that “all the teachers in the lesson study group said that they used the strategies learned during the lesson study to teach the succeeding topics but went back to their old way of teachings. This shows that there is a need to find ways of sustaining teachers in their effort to improve their own teaching.” It would appear through this example that the innovation of Lesson Study while effectively practiced did not result in the level of adaptation found in the U.S. study.

In another report on the use of Lesson Study for teaching science in the Philippines, Laynesa, Miraña, Huerno, Ruiz & Nacario (2013) conclude that “the positive response of the teachers under study signifies that the approach is possible in the Philippines. Eventually, teachers will regard the practice as a normal or ordinary occurrence” (p. 58). However they are quick to point out that Lesson Study is not yet widely in use in the Philippines and initial barriers to its implementation included negative feelings experienced by the teachers at the onset.

Based on the above research, the authors of this study decided to examine Lesson Study as an innovation in the Philippines. The research questions were as follows: 1) What innovation characteristics relate to the adoption of Lesson Study in the Philippines? and 2) What is the affective response to the adoption of Lesson Study?

2. Theoretical framework

The theoretical framework for this study corresponds to the work done by Richardson (2011) who found that framing a study “around Rogers’s (2003) model of the diffusion of innovations theory …the five innovation characteristics (e.g., relative advantage, compatibility, complexity, observability, and trialability) offer a systematic approach through which to analyze and understand the adoption of a particular ICT innovation in a specific national context” (Richardson, 2011, p. 13). Although the current study does not relate to information communication technology (ICT), it was assumed that the same theoretical framework could apply. The innovation to be studied is the Japanese concept of Lesson Study within the specific national context of the Philippines.

According to Rogers (2003) for successful adoption of an innovation, it must be seen as a better idea than the current status quo (relative advantage); consistent with one’s values, experiences and needs (compatibility); perceived to have an easy enough level of complexity to master successfully (complexity); able to provide observable results (observability); and have the ability to be practiced (trialability).

The Japanese concept of Lesson Study consists of a cycle of learning activities to be done collectively among the teachers in the lesson study group. The first stage consists of goal setting, followed by planning and then the actual teaching. The teaching is observed by members of the lesson study group and the lesson is analyzed and reflected upon. This leads to the next phase where the lesson is revised and the cycle is repeated. This study will examine Lesson Study as an innovation and thus will examine how the above-defined cycle has been adopted within the new cultural setting of the Philippines.

3. Research Method

The specific location in the Philippines for this study was the rather remote island of Catanduanes. There was a strong JICA presence on this island in the early 1990s, culminating with the building of a math and science wing at Catanduanes National High School in 1995. During this time, Lesson Study

was introduced as a means to improve math and science education. However, JICA has since shifted their focus from education projects in this area to concentrate on weather forecasting as the island of Catanduanes is quite prone to typhoons due to its easternmost location.

These factors provided a unique opportunity to assess how the innovation of Lesson Study fared in a geographically isolated area after its initial introduction. The research from this study would thus determine what happened to the innovation of Lesson Study over the course of nearly two decades of non-intervention by JICA.

The first on-site visit to Catanduanes occurred in August of 2013. The researcher observed and interviewed teachers at Catanduanes National High School as well as Catanduanes State University. Although many classes were also observed, there was no Lesson Study planned or implemented during this time.

However, while at Catanduanes State University (CSU), the researcher learned of an event called Macro-Demonstration Teaching that occurs annually in February. This event follows the cycle of Lesson Study. In the goal setting stage, Professors of the Faculty of Education work with student teachers to set the goals for their lesson. In the planning stage, student teachers prepare their syllabus and then their actual teaching in the field is observed. After analyzing and reflecting upon the lessons observed, the top students are selected to participate in a demonstration event held at CSU in front of the entire Faculty of Education. This event can be seen as a second cycle of Lesson Study. The selected demonstrators set goals and plan for their actual teaching working with faculty and fellow demonstrators. For the actual teaching, K-8 students are brought in from the affiliated laboratory school on the CSU campus. The selected student teacher then gives an actual lesson to these students for CSU students and faculty to observe. Copies of the lesson plan are given to all observers and analyzing and reflecting occur through debriefing in regularly scheduled classes after the event. As this event appeared to follow the Lesson Study process, it was decided that the researcher would return in February of 2014 to observe the Macro-Demonstration Teaching event and conduct a survey

of participant observers at that time.

A 30 item survey was designed based largely on Richardson's (2007) original study of ICT as an innovation. The words Lesson Study were substituted for ICT and some items were rewritten in the future tense as the innovation of Lesson Study was being observed by students as pre-service training and they were not yet practicing teachers. Each item asked for a response of Strongly Disagree (1); Disagree (2); Neither Agree nor Disagree (3); Agree (4) or Strongly Agree (5).

The actual items being assessed corresponded to the following innovation categories: 4 items on relative advantage; 2 items on compatibility; 4 items on complexity; 6 items on observability; and 2 items on trialability. As in Richardson's (2007) study, there were also 5 items each on behavior and attitudes and 2 items on voluntariness.

In addition to these 30 stated items, there were three questions requiring a written response. The first asked how many times the event had been observed, the second asked in what role the observer participated, and finally to assess an affective response to the use of Lesson Study, the respondents were asked to write their deepest impression of the event.

The researcher returned to CSU in February 2014 to video-tape and observe the Macro-Demonstration Teaching event. 13 student teachers taught demonstration lessons of sixty minutes each over two consecutive days. The following subjects were observed: Math (1st, 2nd, and 3rd grade); Science (4th, 7th and 8th grade); English (3rd, 5th and 2 6th grade classes); Filipino (3rd and 4th grade) and Health (7th grade).

200 surveys were distributed at random and completed by 177 respondents. The researcher also attended Principles of Teaching courses over the two days following the Macro-Demonstration Teaching to observe the debriefing process. Upon return to Japan, both the quantitative and qualitative data were recorded and analyzed.

4. Findings and Interpretation

A cursory glance of the survey data showed that a large majority of respondents had marked multiple responses as strongly agree (5). It is unclear why this occurred but perhaps respondents

wanted to give a good impression to the researcher. Nevertheless, analysis was completed and the mean and standard deviations for each item is recorded in Table 1. The analysis verifies the initial impression and further analysis of the quantitative data was therefore not conducted.

It would appear however that respondents read each item carefully prior to selecting a response. For example, looking at the results for voluntariness, the

first item stated "I am required to do lesson study at my school". The second item read "Although it may be helpful, using lesson study is not mandatory in my job." If respondents are required to do lesson study ($M=4.5/SD=0.8$) than the "correct" response to the second item would be disagree (2) or strongly disagree (1). As can be seen in the data, the response to the second item was indeed $M=2.1/SD=1.3$.

Table 1: Mean and Standard Deviation for Survey Items

	M/SD	M/SD	M/SD	M/SD	M/SD	M/SD
Relative advantage	4.8/0.4	4.8/0.4	4.3/0.7	4.4/0.7		
Compatibility	4.6/0.5	4.6/0.5				
Complexity	4.6/0.5	4.0/0.9	3.9/0.7	4.0/0.7		
Observability	4.0/0.7	4.2/0.7	4.2/0.6	4.1/0.7	4.5/0.6	2.4/1.1
Trialability	4.2/0.7	4.1/0.7				
Voluntariness	4.5/0.8	2.1/1.3				
Behavior	4.2/0.8	4.1/0.8	1.7/0.9	4.3/0.7	3.6/1.1	
Attitudes	4.7/0.4	4.7/0.5	4.6/0.4	4.4/0.6	4.3/0.6	

This can also be seen in the responses to the items on behavior. The first item stated "I use all of the skills I observed in lesson study" ($M=4.2/SD=0.8$) and hence the response to the third item, "I never use any of the skills I observed in lesson study" ($M=1.7/SD=0.9$) would show coherence. The fifth item asked "I will use the skills I gained from lesson study differently than I observed" and produced a mean of 3.6 corresponding to "Neither Agree nor Disagree". As the event is done as a part of pre-service training, this response shows that observers cannot answer the question at this time.

A final example would be the fifth and sixth items under observability. Item five stated "I have seen other teacher trainers using lesson study" ($M=4.5/SD=0.6$) which corresponds to the response for item six, "People who use lesson study are not very visible in my teacher training college" ($M=2.4/SD=1.1$).

It would thus appear that a large majority of the respondents hold Lesson Study in high esteem. This is verified by the response to the first two items in relative advantage: 1) Using lesson study improves/would improve the quality of the work I do and 2) Using lesson study enhances/would enhance my effectiveness on the job. Both of these items received the highest ranking for the survey at $M=4.8/SD=0.4$. The second highest ranking items were under attitudes

and read "Using lesson study is a useful teacher strategy" ($M=4.7/SD=0.4$) and "Using lesson study is a useful teacher training strategy" ($M=4.7/SD=0.5$).

Based on the quantitative analysis, the answer to the first research question of this study 1) How do Rogers (2003) innovation characteristics relate to the adoption of Lesson Study in the Philippines? did not produce significant findings and this avenue of inquiry was not continued.

The second research question for this study, 2) What is the affective response to the adoption of Lesson Study? however produced very interesting results. 167 handwritten responses were analyzed and the following key words appear the number of times in parentheses: help (24); strategies (22); gain (15); inspire (13); field (12); knowledge (11); skills (9); confidence (7); profession (6); meaningful (4) and proud (3). Some complete responses are listed below:

I am proud because I belong in this institution and inspire to do so. (3rd year observer)

About the macro-demonstration teaching through that activity I could be able to acquire others skills and strategies of teaching and through that

I am looking forward for next year demonstration teaching so I hope I am one of them (3rd year observer)

It molded my confidence and served as an inspiration to other students (macro demonstrator)

I am very grateful that again our college conducts the macro student demo teaching that serve as our training ground when we have our off campus journey (3rd year observer)

Life-changing in a way that it motivates me more to do better than I am now and assured myself that this (teaching) is the right track for me. It is indeed a noble way to do good things to others without expecting much from return. (3rd year observer)

Some respondents impressions of Macro-Demonstration Teaching

Similar affective responses were found by Droese (2010) with teachers speaking of pride (p. 56), developing a sense of themselves as professionals (p. 57) and that “teachers not involved in Lesson Study admired those who were involved” (p. 59). The comments from those observing the Macro-Demonstration Teaching would suggest similar affective responses are present. What remains to be seen however is if the concept of Lesson Study as a whole is being understood as a mechanism for organization change as found by Droese (2010) or if students are just commenting positively on the lessons that they have observed.

The qualitative data also support the findings of Stein & D’Amico (2002) who conclude that “teachers learned to embrace good teaching and to value the process of becoming a good teacher by participating in a community of adult professionals who hold teaching in high esteem” (p. 1339). Although the majority of respondents at CSU are still students rather than adult professionals, the data still suggests that by participating in Macro-Demonstration Teaching, they are inspired to become good teachers and value that process.

This heightened awareness of professionalism was also cited by Stigler & Hiebert (1999) who found that “through the process of improving lessons and sharing with colleagues the knowledge they acquire, something remarkable happens to teachers: They begin viewing themselves as true professionals. They see themselves as contributing to

the knowledge base that defines the profession. And they see this as an integral part of what it means to be a teacher” (p. 126-7).

5. Discussion of the Findings

While the results of the data would thus appear very optimistic, Wagner (2003) found that while lesson study provides unique opportunities for pre-service teachers, they do not always incorporate this knowledge into practice. How then can the results of this study be linked to the current research to ensure a more successful adoption of Lesson Study as an innovation for developing professional learning communities?

Ronda (2013) found that initially Filipino teachers were upset by the debriefing process and “while they appreciated lesson study and the teaching method learned from it and have tried it with two more topics, they said they have gone back to their old way of teaching because they were trying to cover the syllabus”. Droese (2010) however points out that “teachers identified a shift from seeing debriefing as criticism of the teacher to a growth in trust among colleagues, a willingness to admit when they did not understand a concept in the curriculum, and to ask for assistance, an increased awareness of student thinking and an increased ability to assess student learning needs” (p. 33). Could there be a way to connect the enthusiasm found for Lesson Study at the pre-service level, to ensure teachers continue to practice Lesson Study?

Desimone’s (2009) conceptual model for studying the effects of professional development can be seen in Figure 1. Lesson Study contains each of the core features of professional development. Content focus, active learning, coherence and duration are achieved through the first stage of Lesson Study when lesson planning, writing, selecting of activities and strategies are confirmed. The collective participation occurs in observing the actual teaching of the lesson whether in an in-service training or pre-service training. This results in increased teacher knowledge and skills and a change in attitudes and beliefs. However, when used in pre-service training, it remains to be seen if this indeed results in a change in instruction and improved student learning.

Ronda (2013) found that Filipino teachers did

change their instruction and that this resulted in improved student learning. She reports that "in Cycle 1, the teachers were more focused in getting the lesson right. In Cycles 2 and 3, they are slowly developing the habit of looking at the students' solution, difficulties, and reasoning from the point of

view of the students' previous knowledge, that is, the teachers are now becoming more aware of changes in their students' thinking." It would appear however that this process is seen as time consuming and hence teachers revert back to their former style of teaching.

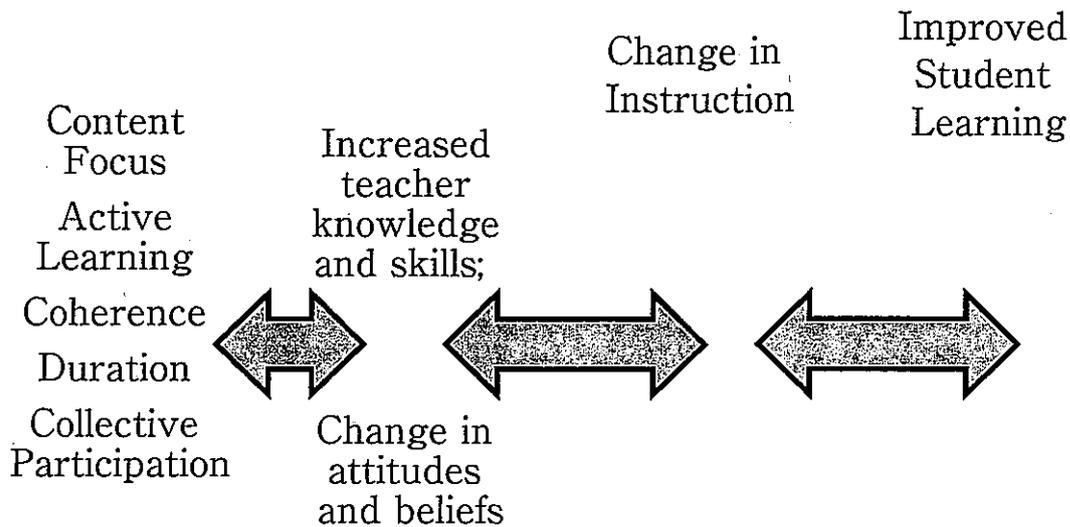


Figure 1: Adapted from Desimone's (2009) Core Features of Professional Development

Ronda (2013) also states that "it appears (and the teachers themselves admitted)...when they plan their lesson for a topic, the teachers do not consider how it links with other lessons and how the activities may be connected. They also do not factor in much how students think and learn a particular concept and the reason behind their difficulties when they plan the lessons." This aspect was also observed by the researcher at the Macro-Demonstration Teaching.

Without question, the CSU Macro-Demonstration student teachers spent an incredible amount of time preparing for their demonstration. Materials were exquisite, prior to the lesson a video of the student teacher providing their philosophy of teaching was shown, and the student teacher entered the auditorium amongst applause from both the waiting students and CSU student and faculty observers. However, this was the first time for the student teacher to meet the students and it can be assumed that the lesson was not planned in connection with other lessons. Although there were hundreds of CSU

student observers, they did not appear to have been given specific tasks to perform during the Macro-Demonstration Teaching event. After the first few minutes of a lesson, some observers would begin chatting with their friends and due to the size of the auditorium it is questionable if student responses could be heard properly.

This was confirmed in the classroom observations after the Macro-Demonstration Teaching event. Unlike the traditional Lesson Study process, the student teacher was not present at the debriefing and the teacher discussed the lesson plan with the students. While it was possible to refer to collective memory of the event, there was no assessment of difficulties students faced in understanding the lesson. It would appear that an integral part of Lesson Study, the careful observation of individual students being taught has been bypassed. This could easily be rectified by assigning the student observers specific students to watch during the demonstration and by providing guided questions for observation.

By incorporating Macro-Demonstration Teaching into the pre-service curriculum as seen at CSU, Filipino student teachers are gaining a sense of pride, professionalism and inspiration from their learning community. This is an invaluable experience and as one observer noted, "life-changing". However, can this event be called Lesson Study? Certainly the event by itself cannot. But the cycle through which the student teachers participate prior to selection as Macro-Demonstrators, and the second teaching of the lesson during the event with subsequent debriefing at some level does appear to be a form of Lesson Study.

There are thus two major implications from this study. First, in this specific context of the Philippines, Lesson Study as a form of pre-service training appears to have the potential of transforming current practice if more careful detail to observation practices and the debriefing process are incorporated. Additionally, by building upon the affective positive responses to the Macro-Demonstration Teaching, an appreciation for Lesson Study as not only an in-service teacher training but a life-long professional development tool might also be achieved.

The data from this study shows that instilling feelings of pride, inspiration, and professionalism in the pre-service teacher through a Macro-Demonstration Teaching event results in a deeper appreciation for planning a lesson that is to be observed and reflected upon by others. What remains to be seen is if indeed when these students become teachers they continue to utilize the strategies and skills learned in the pre-service training as cycles of Lesson Study to be conducted with colleagues and hence change their instruction practices to result in improved student learning. This could easily be monitored by the Faculty of Education at CSU and it is the hope of the researcher that this will indeed transpire and that future research will be conducted on the long-term impacts of pre-service training through more clearly defined Lesson Study.

The second major implication of this study is that a Japanese innovation, Lesson Study, has undergone a major revision in a different cultural setting which has resulted in serving a purpose different than the original intent of Lesson Study. It is highly unlikely that a Japanese in-service teacher trainer would find Lesson Study as "life-changing". But instilling pride in teachers for their chosen

profession is an issue that needs to be addressed in Japan where so many young people burn out in the first few years of teaching and mental and stress related illnesses are the cause of extended leave for many practicing teachers. While Japanese teachers may find the theatrical large scale production of the reinvented Lesson Study (Macro-Demonstration Teaching) uncomfortable or embarrassing, there could be multiple ways for Japanese instructors to rethink Lesson Study to produce affective responses similar to those reported by the students at CSU. It would seem advantageous looking at the results of this study, to consider ways to transform practice in Japan through more innovative uses of Lesson Study as a form of pre-service recognition.

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