

Exploring How to Develop Project Based Learning on Governmental Seminar of Professional Development for Teachers as University Lessons

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This study is an action research by university lecturers in order to develop Project Based Learning (PBL) on 'Governmental Seminar of Professional Development for Teachers'. The study is conducted by a team of two members in the same university department. The department is one of the teaching professional schools, which was set up in 2015 in the large education university in Japan. Then, it has been required to develop good curriculum and pedagogy as a new department in the last two years. Therefore, the study is the process of collaborative work with university lecturers and the students.

The recent teacher education policy of the Japanese central government is focusing on the expansion of teaching professional school system. One of the main themes of teaching professional schools is professional development for enhancing practical capability of teachers. As PBL is useful pedagogy for teaching professional schools as an active learning, the research team designs a curriculum of lessons for students to plan, prepare and implement a forum for present school supervisors and inspectors. So the forum is set as a purpose of the lessons for the team to make it succeed.

In the academic point of view, we are able to find limited number of researches on the subject of school supervisors and inspectors, such as Chichibu (2015, 2017), who has been the advisor to the forum from the beginning. It is clear that this academic area is in an unexplored field. As there is rarely a forum specialised for present school supervisors and inspectors even in nationwide, we understand that it is worth establishing and developing the forum for educational community.

The research team of university lecturers has two members who are having teaching experiences. In addition to that, one of us is having the experience of local supervisor, as to be a teaching practitioner in the university. Another (presenter here) is rather a researcher. Therefore the students are able to get both practical and theoretical advices from both university lecturers. As the lessons are in team teaching style, the lecturers regularly have one hour meetings before every lesson for fulfilling and finalising curriculum.

The students are separated into three teams due to kinds of tasks, and each teams prepare the forum and gather information of local governmental seminars of professional development for teachers in the regional areas around the university. Then the students share all the information they gather, in order to use the information for planning the forum. The lessons require students various administrative work and high communication skills in their team work. As many of the students will become school supervisors and inspectors in local educational governments, all the work in the lessons are practical and useful for them. University lecturers play as managers in a local education government in addition to be lecturers giving associate theories and frame works.

As the study is an action research of the university lessons, it shows the process of the lessons from

preparation to reflection, and concludes significant findings including accumulated strengths and weaknesses since the first forum started in 2015. Then the study suggests ideas to change lessons better for the next forum. As the forum in this year is the third, many of local education governments recognise it as a good opportunity to share their experiences each other. So the forum is pleasant for them to join. That is one of the outcomes which we expect as the most effect.

Research and Development of Neoclassical Thai Lady Curriculum by using Lesson Study through Professional Learning Community in Rajinibon School, Thailand

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The purposes of this research were to integrate Lesson Study (LS) through Professional Learning Community (PLC) into the research and development process of Neoclassical Thai Lady Curriculum, and study the effects of LS through PLC on student learning, teacher competencies, and the context of School as Learning Community (SLC). The research site was Rajinibon School and the population was 164 teachers and 2,927 students in 2016. The two research phases were as follows:

Phase 1: Integrate LS through PLC into the curriculum

LS through PLC was integrated into the implementation stage of Neoclassical Thai Lady Curriculum which was student identity based curriculum, and set as teacher task in the instructional development cycle. PLC members consisted of model teacher, buddy, school administrator as coach, supervisor as mentor, and co-learners. They did LS focusing on improving student learning through 3 steps:

(1) Analyse and Plan: model teacher analyzed the student identity indicators which related to the content indicators, and integrated into active learning instructional plan, then sharing ideas with buddy, PLC members, respectively.

(2) Observe: PLC members observed model teacher's class in order to collect students' learning evidences.

(3) Reflect and Redesign: PLC members collaboratively investigated the students' learning by using the observed evidences, which lead the model teacher got positive feedback and suggestions necessary to redesign the instructional plan.

Phase 2: Study the effects of LS through PLC

Data were collected by using student self-development reports, learning behaviour observation forms, lesson study logs, and reflection logs. The data were analysed using descriptive statistics and content analysis. The results were as follows:

2.1 Student learning

2.1.1 Student identity: the highest average score was the 1st strand: Exquisite Thai Lady at 'very good' level, followed by the 2nd strand: Thai Lady of the House at 'good' level, the 4th strand: Self-developed Thai Lady, and the 3rd strand: International Literate Thai Lady at 'fair' level, respectively.

2.1.2 Active learning behaviours: the most frequently found behaviour in learning environments was searching for information and creating learning evidences at 'Always' level, followed by collaboration and asking questions at 'very often' level, knowledge construction, and knowledge communication at 'sometimes'

level, respectively.

2.2 Teacher competencies: the highest average scores were curriculum competency at ‘very good’ level, followed by instructional competency and assessment competency at ‘good’ level, and classroom management competency at ‘fair’ level, respectively.

2.3 The context of SLC

2.3.1 Shared Values and Norms: every teacher was conscious of the value of student identity: Classical Thai Lady among the world of changes in the 21st century.

2.3.2 Collective Focus on Student Learning: every teacher was conscious of the common aim to improve student identity: Neoclassical Thai Lady which leads to the use of LS focus on integrating student identity indicators into active learning instructional management.

2.3.3 Collaboration: most of the teachers had changed the way of working from ‘single’ to ‘PLC’ which leads to both teachers and students being conscious of the values of collaborative thinking and practice on working effectiveness, self-development, and good relationships.

2.3.4 Reflective Inquiry: key success factors were audiovisual data of students’ learning behaviours and questioning skills of coaches and mentors.

2.3.5 Coaching and Mentoring: key success factors were the curriculum and pedagogy expertise, and respectfulness among PLC members.

Lesson Study and Its Impacts on Curriculum Revisions: What Can We Learn from the Japanese Case?

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According to Japanese mathematics educators, lesson study is a part of a feedback mechanism to inform curricular revisions. The learning from lesson study informs the revision of the Japanese National Course of Study (NCOS), which takes place about every 10 years. In turn, when there are changes in the NCOS, various lesson study groups explore how effectively implement the proposed changes. The outcomes from those groups are disseminated through public open houses, teacher conferences, and publications, and they will inform the further revisions of the NCOS.

Lesson study also informs the revisions of commercially produced textbook series, which are revised much more frequently than the NCOS. While the NCOS specifies the grade placement of specific topics, how those topics are presented, explored and developed are determined by the authoring teams of textbook series. In an earlier study, Japanese elementary mathematics textbook series from 1958 through 2012 were examined to see how the particular series has changed over those years, which corresponded with the time in which Japanese mathematics teachers transformed mathematics teaching from teacher-centered instruction to *mondai kaiketsu gakushu* (teaching through problem solving). That study revealed that Japanese textbooks indeed changed over the years to reflect more closely the features of the teaching-through-problem-solving style lessons. However, the previous study could not attribute those changes to lesson study.

As a follow-up study, I have been examining lesson study reports and other publications ‘ books and journal articles written by lesson study groups ‘ to see how lesson study might have affected the changes in the Japanese elementary mathematics curriculum. In the study, I am also trying to identify external factors that might supported lesson study to inform and influence curricular revisions in Japan. At WALS 2017, I will share the preliminary findings from this follow-up study. It is hoped that the findings will be useful to those outside of Japan who are trying to implement lesson study as a mechanism for a systematic improvement of mathematics education in their regions. It is also hoped that the feedbacks from the session will further refine the study.