

CRITICAL REVIEW OF THE DEVELOPING TEACHER COMPETENCE THROUGH LESSON STUDY

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Abstract

Students who are expected in the educational process are the students who able to think critically and creatively, to solve real-life problems, responsible, and able to learn independently. Teachers who have professional competence become a necessity to produce students that are expected of the educational process. Consequently, need to be done various efforts to develop teacher competence continuously. Lesson study as one of the educational innovations is an alternative solution to optimize all efforts towards the realization of a professional teacher. This article presents about what, why, and how the teacher's profiles and competency; how to determine which teachers are competent in teaching; what, why, and how lesson study is implemented; and best practices implementation of lesson study in several countries.

Keywords: competency, teachers, implementation, lesson study

INTRODUCTION

An assumption that is supported by a research declared there is a significant correlation between lecturer' behavior and students' perceptions toward the students' achievement (Kozma, Belle, & Williams, in Jacob, 2002a: 2). Based on this statement, there is a fact that teacher or lecturer is an important figure to produce the students who able to think critically and creatively, to solve real-life problems, responsible, and able to learn independently

Ki Supriyoko (1999) states "theoretically, we could create the think logically; as follow: A nation that wants a competitive edge have to produce qualified human resources, and to produce the qualified human resources, it is needed education system that is relevant to the demands on progress. It is necessary to reform education system continuously, and the key of the successful of education reform is the teacher, as a central figure in the world of education itself."

The participant of the teacher in the era globalization and information technology is expected to be relevant to the development that is happening. Richard Dunne (Kartono, 2002: 109) refers to many factors that demand the teachers have professional competence, such as the growth in the acquisition of knowledge. This growth changes not because of the relation between employment and the world work, but also the increasing of the account for the costs of the education, the development of education and information technology. Those demand the teacher to improve their professionalism.

What is a teacher competency? What is lesson study? Can lesson study be used as an instrument to develop teacher competence? How

lesson study can be practiced? how lesson study is implemented; and best practices implementation of lesson study in several countries? This article presents about the questions above.

LITERATURE REVIEW

Teacher

Sato (2007), states that a teacher is competence in teaching and competence in learning. The profession of teacher is a combination of "the ability of a worker" and "ability as a proficient". Ability as a worker is the teachers' ability in communication, interacting with their students; questioning technique / motivates the students' interest and relates the students' opinions; she also has to pay attention to their students.

While, the ability as a proficient is the teachers' ability in field of knowledge, educational theory, instructional design, lesson theme selection, and the ability to develop the lesson based on the results of feedback of the students' interaction and she also able to introspect herself.

Jacob, C. (2007) defines that there are three features relate to the definition of the teachers, namely: (1) According to Jackson, the teacher is knowledgeable in decision makers. They understand their students, they are able to restructure the teaching materials and make it 'can be digested educative for their students, and know when to do what, (2) According to Berliner, metaphor teacher as the executive. It is useful to think about teachers. Metaphor teacher as executive is enough accurately because the teachers do the various executive functions in the class every day, and it is important, because this metaphor will support the teacher in developing their profession

(3) According to Hilliard, teaching is an essential human endeavor, such Actual human contact between a teacher and student.

As a consequence, the relationship between teacher and students determine whether teacher is able to teach and able to motivate the students to learn. The willingness of the teacher shares their ideas, values, and feeling, and democratic to their students can contribute in improving the quality of relationships between teachers and students.

Teacher Competency

There are many definitions regarding to the term of "teacher competence" can be expressed as follow:

- 1) Teacher Competency is pedagogical knowledge, abilities, skills, or position of professional that have values and is believed relate to the success of teaching practice. Competency is related to specific things that are known, or believed by the teachers, but not for the influence one attribute to other attributes.
- 2) Teacher Competency is a list of the competency of a teacher. The competency is a problem of the degree which a teacher has mastered pedagogic of competency itself, more critical for the overall decision making than another competency.
- 3) Teacher Performance is what teachers do at work to what to do. Teacher performance is specific to the work situation; relate to the teacher competency, the context which teacher works, and the teacher' ability to use their competency in giving thing at any time.
- 4) Teacher Effectiveness is the effect on student performance. The teacher effectiveness not only depends on the competence but also depends on the response of the students. If, the competence can not predict their performance in different situations, therefore, the effectiveness of the teacher must be defined and can only be assessed, in terms of students' behavior, not teacher's behavior (Jacob, 2002a: 1; Jacob, 2002b: 2).

Teacher Competence Based on the Holmes Group

According to the Holmes Group (Jacob, 2007), first" teacher competence" helping students to interact with the knowledge, skills taught. Therefore, "teacher competence" should have the relationships between knowledge, skills, and a solid professional. Second, students' learning is sine qua non of teaching. Thus, "teacher competence" will be familiar with the policies and practices are detrimental to the students and find the ways to help the students' difficulties in learning.

Teacher Competence According to Republic of Indonesia Legislation No. 14 of 2005 about Teacher and Lecturer

There are four competencies expected to be teacher competence, namely:

- 1) **Pedagogic competence** is the ability to manage learning that includes an understanding of learners, learning design and implementation, evaluation of learning, and the development of learners to actualize their potential. In detail the pedagogical competence include: (a) understanding the characteristics of learners from the physical aspects, social, moral, cultural, emotional, and intellectual; (b) understanding the background of the family and the community of learners and learning needs in the context of cultural diversity; (c) understanding the learners' learning styles and learning difficulties; (d) facilitating the development of potential learners; (e) mastering the theory and principles of learning and educational learning, (f) developing a curriculum that encourages student to involve in learning; (g) designing learning educate; (h) implementing an educational learning; (i) evaluating the process and outcomes of learning.
- 2) **Personality Competence** is a solid personality, stabile, mature and dignified to be models for students. These competencies include: (a) present themselves as being steady, stabile, mature, wise, and dignified; (b) present themselves as a good person and models for students and the community, (c) evaluate its own performance; (d) develop manner continuously.
- 3) **Professional competence** is the ability to master the material broadly and deeply that allows guiding learners get standards competency. This competency includes: (a) controlled substance and methodology of the scientific field of study, (b) control of the structure and field of study curriculum materials, (c) control and use of information and communication technology in learning; (d) organize curriculum areas; (e) improve the quality of learning through classroom.
- 4) **Social competence** is the ability to communicate with students, friends, staff, parents of students, and the environments effectively. By this competency, the teacher is expected to: (a) communicate effectively and empathetically with students, parents of students, friends, staff, and community; (b) contribute to the development of education in schools and communities; (c) contribute towards the development of education at the local, regional, national, and global; (d) utilize information and communication technology (ICT) to communicate and self-development.

Definition of Lesson Study

Lesson study is a translation of the two words, namely *Jugyo* means lesson or learning, and *Kenkyu* means study or assessment. Thus, lesson study can be interpreted as an assessment of learning activities. Lesson study has been developed in Japan since the 1900s and made an attempt to assess the learning activities through planning and observation activities to improve the quality of learning itself.

Lesson study that is very popular in Japan is *konaikenshu*, it was organized by the school and grown since the early 1960s. *Konaikenshu* also formed by two words, namely *konai* means in school and *kenshu* means training. So, *konaikenshu* can be interpreted as school-based in-service training or in-house workshop.

Hendayana (2007) gives the definition of lesson study as a model for professional development of educators through collaborative learning and assessment based on the principles of collegiality and mutual learning to build a learning community.

Chiew, C.M., Lim. CS, White (2005) suggests the following definition of lesson study as follows; "The lesson study is a process is a Japanese model of school based teacher professional development program that focuses on an examination of teacher's pedagogical practice either through direct classroom observation or through research lessons and case studies. It assumes that teacher learning and development will be more meaningful and effective if it is embedded in their everyday work, or in that of their colleagues. The core of lesson study program involved teachers working on focus lessons, a process which was natural, useful and easily sustainable by teachers. The program provided a comfortable forum for teachers to challenge ideas about their practice and the content that they taught."

RESULT AND DISCUSSION

The developing Teacher competence through Lesson Study

According to Cruickshank (1985), there are 6 ways to identify teaching competency, namely: (1) by studying the results of research on teaching skills in interaction with learners, (2) obtained from the educators' experiences as an expert, (3) inferred from the results of polling education stakeholders, (4) taken from the literature, (5) derived from various teachers' roles; (6) as a result of the analysis of teaching tasks at a level and a different curriculum.

"The two key features of lesson study are: (1) peer observation of classroom teaching which 'enhances pedagogical knowledge and skill through peer's review, critique, and collaboration (Shimahara, 1998: 456); (2) reflective practice

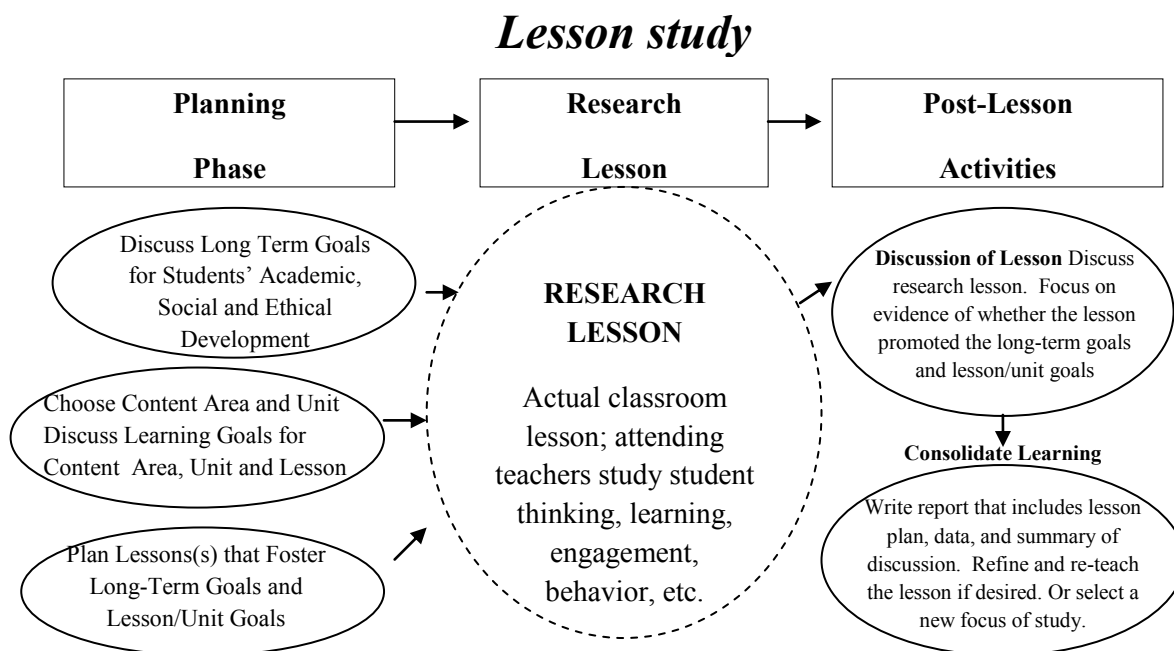
which offers a process for improving teachers' own instructional strategies (Fernandez & Yoshida, 2001)."

There are three phases that have to be done in activities lesson study; their activities include preparation of learning activities (plan), implementation (do), and reflecting on learning (see). Hendayana (2006) stated some important points to consider in implementing each phase in the practicing of lesson study, namely:

- 1) The preparation phase of learning activities of the study is to identify the problems of teaching and learning, developing lesson plans based on student learning activities with reference to the provisions of applicable curriculum and students' readiness levels, the selection of teaching materials, the application of specific instructional strategies, test specific learning model, and the determination of the teachers who will perform on the occasion of the implementation of learning.
- 2) The implementation phase of learning, the observer plays an important role to conduct observations will focus on the interactions that occur between teacher-student, student-student, student-teaching materials. In conducting the observation, the observer should be guided by questions such as, (1) was the learning objectives clear? Whether the activity was developed effectively contribute to the achievement of learning objectives?; (2) were learning steps developed with one to another? And whether it supported the students' understanding of the concept being studied?; (3) were the teaching materials used to support learning objectives that have been set?; (4) were the class discussions that helped the students' understanding of the concept being studied; (5) was teacher developed teaching materials according to students' ability level?; (6) were the questions that was asked by the teacher motivated and facilitated the students' ways of thinking?; (7) were the conclusions submitted in accordance with the learning objectives?, and (8) How did the teacher provide reinforcement achievement of student learning outcomes for the lesson?
- 3) The reflection phase of learning, the teacher acted as a model of learning activities to get the first opportunity to convey his impressions of the implementation of learning that has been done. After that, all observers who attended the learning activities were given the opportunity to give opinions, suggestions, and views related to the implementation of learning activities that have been carried out by the teacher models. The views presented by the observers should be submitted wisely, do not do destructive criticism of the teacher performance models, and trying to communicate the findings gained by referring to the observation that has been made. In the end, the main value of the learning

- 4) reflection activities is the establishment of a productive learning community that emphasizes collegiality, which was based on the principle of the creation of mutual learning.

Lewis (2004) tried to explain the 3 phases of lesson study through the following figure 1.



Picture 1 The Main Fase of Lesson study

There are some important things that must be done that the implementation of lesson study can be effective and able to contribute positively towards the development of professional teacher competence. Sato (2007) stated that there must be certain conditions that must be created to succeed the implementation of school-based lesson study, including:

- 1) All the teachers have a common vision, mission, policies, and philosophies of learning. All teachers should have a vision of the school that is a place for students to learn from each other, school is a place for teachers to learn to be professional, school is a place for parents to actively participate in learning activities. Furthermore, all teachers create lesson study in the school system, at least once a year every teacher opened the class (held open class), all teachers in every classroom at every hour of learning is actively providing early learning problems, students make observations, then present the results, and every teacher is expected to form a student group comprised of boys and girls in learning. In the context of the philosophy of mastery learning, the teacher must do level up effect on the child's education, see to it that all children without exception can participate in learning, building a teaching style, and the main job of teacher understands the students.
- 2) Conducting lesson study with leadership reference to two important agenda, namely: (a) in field of study, initial observations before the

meeting open class, and (b) make observations along with all the teachers, and held a sharing learning outcomes observation at least once a month. In reality learning is personal, complex, and sensitive. Not all learning run well so, it can be conclude that learning is similar to the drama without a plot. Likened, teacher is the producer of making drama, and the other is a spectator / observer of the play. An observer does not criticize or judge teachers.

- 3) The leadership as a leader in the implementation of lesson study.
- 4) The leadership invites the lecturer in the university as a supervisor lesson study activities.

The Experience of Implementation Lesson Study Program in the District Sumedang West Java Province (Indonesia)

Results of evaluation of lesson study program in the district. Sumedang showed the data and the facts as follows: (1) teacher was more willing to open themselves to observe and criticize, (2) the teachers model who are more confident and motivator / source of inspiration for his colleagues, (3) the teacher learned from the open lesson and implemented it in their schools, (4) teacher is more creative utilizing local materials to develop a student-centered learning, (5) students given the opportunity to creativity in mathematics and science, (6) the students are motivated and love to learn mathematics and science; (7) the function of

supervision of supervisors and school principals were actualized; (8) lecturer got the positive feedback for improvement of pre-service training program (Hendayana, 2007: 11).

The Experience of Implementation Lesson Study Program in Malaysia & Australia

Chiew, C.M., Lim. C.S., White (2005), "Despite the above challenges and constraints, the Lesson study research project participants of both New South Wales (Australia) and Malaysia have expressed positive feedback. From the group and individual interviews conducted at the end of the research, the participants listed the strengths of the Lesson study process as follows:

- 1) Through group discussions and observing other teacher teach, they gained and enhanced both their mathematics content knowledge as well as pedagogical knowledge.
- 2) Upon self reflection and advice from colleagues who observed their teaching, the participants were able to rectify their own teaching errors. Novice teachers, especially have the opportunity to improve themselves by observing and learning from the experienced colleagues the skills and techniques in teaching various concepts of mathematics.
- 3) Lesson study promotes a collaborative culture the enhances the professional collegial bonds within their mathematics staff.
- 4) Lesson study is a valuable professional development program. It was observed that participants have regarded the Lesson Study sessions as the venue to solve their teaching problems, and to develop their professional knowledge of mathematics teaching and learning.

The Experience of Implementation Lesson Study Program in Kep Banggai Prop. Central Sulawesi (Indonesia)

Sapa'at, A. (2007) stated that the lesson study as a post-training laboratory science teacher application is very useful for senior high school teacher Mansamat Kep. Banggai in Central Sulawesi. Lesson study is able to become a source for developing teaching competence, trigger the growth of the spirit of love for the teaching profession, rides experience to collaborate with colleagues, bring creative attitude in using learning methods are more varied in real situations, and able to build productive communities by promoting an attitude of openness, collegiality , and mutual learning.

The Experience of Implementation Lesson Study Program in Jepang

Lewis, C. & Tsuchida, I. (1998), "Research lesson are centered in the practice of ordinary teachers in ordinary classrooms. But their impact does not stop there because, at the same

time, a mechanism exists that allows these examples of good practice to be disseminated all over the country and thus contribute to the improvement of Japanese education. The impact of research lesson in Japanese education is: (1) improving classroom practice; (2) spreading new content and approaches; (3) connecting classroom practice to broader goals; (4) exploring conflicting ideas; (5) creating demand; (6) shaping national policy; and (7) honoring the role of classroom teaching."

The Experience of Implementation Lesson Study program in San Mateo-Foster City School District (United States of America)

Perry, R., Lewis, C., Akiba, M. (2002), "What are the implications of these early findings on the San Mateo-Foster City (SMFC) experience for lesson study practice and the broader enterprise of educational research in the U.S.? **Implication 1**, more models are needed of research that constructively contributes to innovations in progress. **Implication 2**, theory-building research on lesson study is needed. **Implication 3**, assessing "the effectiveness of lesson study" is problematic. **Implication 4**, rethink the types of educational research we value."

CONCLUSION

Lesson study is a model of professional development of educators through the assessment of learning at the same time is able to explore a lot of things related to students, teachers, learning, and leadership principals.

Lesson study is expected to build a groove in the form of "learning reform" → "improvement curriculum" → "teacher professional development" → "school reform". To be able to achieve this it is necessary to the development of leaders who will lead the School-Based Lesson study. Currently more question about Education, "What can be done for the current generation of the continuation of life of future generations as combatants in the future?" (Sato, 2007: 1).

Lesson study can be used as instruments of innovation as well as education to develop teacher competency. The concept of lesson study can be applied in various contexts of teacher competence development. The principal's role is very important in order to lesson study can be both effective and wide-ranging impact.

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