

## STRATEGIES FOR ESTABLISHING NETWORKING WITH PARTNER SCHOOLS FOR IMPLEMENTING LESSON STUDY IN INDONESIA

Nurwidodo<sup>1\*</sup>, Sumar Hendayana<sup>2</sup>, Iin Hindun<sup>1</sup>, and Eri Sarimanah<sup>3</sup>

<sup>1</sup>Biology Education Department, Faculty of Teacher Training and Education, University of Muhammadiyah Malang, East Java, Indonesia

<sup>2</sup>Chemistry Department, Faculty of Mathematics and Sciences Education, Universitas Pendidikan Indonesia, West Java and Indonesian Association of Lesson Study

<sup>1</sup>Biology Education Department, Faculty of Teacher Training and Education, University of Muhammadiyah Malang, East Java, Indonesia

<sup>3</sup>Faculty of Teacher Training and Education, Pakuan University, Bogor, West Java, Indonesia

\*corresponding e-mail: nurwidodo88@yahoo.com

### ABSTRACT

*Lesson Study for Learning Community (LSLC) contains two terminologies underpinning one another. There are many difficult challenges when the plan to create LSLC surfaces. Therefore, strong motivation and precise implementation strategies are of urgency. One of the ways is by developing networking of LSLC between universities and partner schools. The LSLC program will become powerful when it is done collaboratively in a form of strong partnership connected by networks. Writing this article aims to describe strategies for establishing networking with partner schools for implementing lesson study in Indonesia. This review article uses literature comparison study methods and use content analysis. In order for LSLC to manifest and become successful, resourcing and utilizing the partnership with schools are required. In a partnership with schools in order to implement LSLC, both parties must share the same need, which is facing the challenge with the willingness to cooperate for solving the problem. Cooperation with partner schools needs to be nurtured to become networking so that the benefits and the spirit of cooperation in solving problem double fold. Networking with partner schools can be implemented and can function well when the management of this networking conforms to shared needs, nurtures cooperation and mutual respect, gives and takes equally, and also promotes fair acceptance, support, independence, and discipline.*

**Keywords:** *Learning community, lesson study, networking*

© 2018 Department of Biology Education, FTTE, University of Muhammadiyah Malang, Indonesia

### INTRODUCTION

Lesson Study originating from Japan has spread worldwide: Asia, Europe, Africa, Australia, and even America. Lesson study was introduced in several countries through collaboration Japan International Cooperation Agency (JICA) with the local government (Burghes & Robinson, 2010; Matanluk, Johari, & Matanluk, 2013). It originated in Japan from Japanese Language “Jugyokenkyuu” (Kanauan & Inprasitha, 2014; Lucenario, Yangco, Punzalan, & Espinosa, 2016).

Lesson study has been practiced since the 1890s or over a century by Japanese teachers (Masaaki Sato, 2014; Syamsuri & Ibrohim, 2011). It has spread internationally since the late 1990s, leading to an establishment of the

World Association of Lesson Studies (WALS) in 2006 with 7 founding member countries and council members representing 11 countries around the world (Akiba, Howard, Wilkinson, & Whitacre, 2015; Akiba & Wilkinson, 2016). In WALS International Conference 2016 in Exeter University-London at least 35 countries have called in for participation (Nurwidodo, 2016). Many countries in their attempt to transfer the Japanese model have developed their own perspectives on lesson study based on indigenous school cultures, educational context, and needs (Arani, Fukaya, & Lassegard, 2010; Cajkler, Wood, Norton, Pedder, & Xu, 2015).

Lesson study has been known well in Indonesia due to the dissemination, implementation, expansion, and implication since the early 2000s (Suratno, 2012; Towaf,

2016). The quick spread in Indonesia shows that Lesson Study is not only accepted as a critical profession coaching scheme, but also has been developed intensively and acquired support from many parties (Asari, 2017; Wahyuningtyas, Ratnawati, & Adi, 2015; Widiadi & Utami, 2016). There are a great number of education practitioners from diverse groups who are in favor and some others are against the implementation of lesson study and its benefits in improving the quality of education. This has been the biggest challenge for Lesson Study scholars in the field (Bjuland & Mosvold, 2015; Hadfield & Jopling, 2016).

What is exactly a Lesson Study? Lesson Study is a teacher profession coaching scheme (in-service training) which is conducted through assessment of learning by means of continuous collegiate collaboration in order to achieve improvement in the process and outcomes of learning. In general, teachers refer lesson study as learning through three stages, namely plan, do, and see (Liliawati, Setiawan, & Efendi, 2008). This definition is the most popular one amongst teachers who are still unfamiliar with lesson study (Nurwidodo & Hindun, 2014). Lesson study is not only an epistemology (implementation procedures) nor merely (plan, do, and see), but also an ontology and axiology. Ontology wise, lesson study is an assessment of learning which is done collaboratively and collegially; while axiology wise, lesson study aims to improve the quality of learning process and outcomes (Nurwidodo, 2016).

Lesson study in Indonesia in the first ten years emphasized more in the practical procedures (plan, do, and see) (Nurwidodo, 2012; Rofieq, Husamah, Wahyuni, Hindun, & Purwanti, 2016; Wahyuningtyas et al., 2015). Furthermore, the emphasis was also put on the management system which used project-based approach. The two-caused side effect, which is the “lesson study’s bad image”. Lesson study became psychological burdens for model teachers (Nurwidodo, 2017). While the implementation seemed to cost too much money and the focus of study lesson became obscure because it tended to focus on the formal procedures. The assessment of materials and students' learning process of materials with the higher level of complexity was hardly paid attention to. Based on this consideration, a new approach to implementing lesson study needs to be performed. The new approach in implementing lesson study is known as Lesson

Study for Learning Community (LSLC) and one of the manifestations of this project is called Lesson Study Club.

LSLC is a new concept coming about from the latest development of lesson study. This development moving towards Learning Community is based on the demand of achieving quality in all aspects of its implementation. Lesson Study needs to be performed autonomously by its activists. The automatic motivation from the activists (scholars) is the key factor because a strong personal motivation will overcome all challenges ahead. With strong personal motivation, the burdens of funding will be alleviated. There will be no need for the formal approach (as the core of the activity) in implementing Lesson Study. The manifestation of learning society is the goal of LSLC (Mustadi, 2015; Nurwidodo, 2016; E. Saito et al., 2015; Eisuke Saito & Sato, 2012; Masaaki Sato, 2014).

There are six reasons for the importance of implementing Lesson Study for Learning Community in schools. First, it is necessary for the maintenance of continuous professionalism in the workplace (on the job training). Teachers are deemed to be able to work as professional forces and are required to continuously learn (learning teachers). Even if the education and learning theory have all been mastered, teachers may not stop learning and in fact have to keep the spirit of learning in their heart (Hendayana, 2016). Learning theory which has been acquired needs to be updated and developed by practice. Lesson Study is a forum suitable for those need and spirit. Lesson Study centers in the learning spirit to become teacher facilitator. This learning spirit is not only important for model teachers but also all observers. Whoever is involved in Lesson Study needs to have this learning spirit, not only the teaching one (R. Suzuki, 2017).

Second, there is a need for autonomy and discipline. Autonomy in performing Lesson Study means autonomic freedom in motivation and practice aspects. Joining the Lesson Study means that teachers should be free of pressure from external parties, even if it comes from their superiors. The individual freedom approach results in participation (Arani et al., 2010; Dudley, 2011, 2013; Dumitrascu & Horak, 2008; Ishii, 2017; Jung et al., 2015; Ponte, 2017; Towaf, 2016). Internal motivation is more dominant to become the precursor to

participation. The main willingness in involving in Lesson Study is for learning, learning from students' learning method, and learning to become a good facilitator (Suzuki, 2017).

Third, the principle of the fulfillment of students' rights in learning shows that students have the right to receive quality learning process. Quality learning is a learning process in which learning is not solely activating one sense or experience window, for instance, learning through listening while teacher gives the continuous lecture. Learning is a process which happens within students' minds, and therefore, all possible potentials need to be involved. Active learning is the ultimate goal which has been known since long ago, but often the implementation is neglected. A quality Student Active Learning (SAL) is a learning method to fulfill students' learning rights. The principle of fulfilling learning rights means teachers and the school must not leave a single student behind (Cerbin & Kopp, 2006; Chiew, Dali, & Lim, 2016; Ishii, 2017; C. C. Lewis, 2013; Lucenario et al., 2016; Murat, 2014).

Fourth, the collaborative principle or better known as dialogue. Through collaboration, a more productive learning process and outcomes can be achieved. The collaboration can happen in three stages; first, the collaboration between students and the learning materials (dialogue); second, collaboration between students in learning groups; and third, collaboration of students and bigger group or class in which teacher functions as facilitator (Asari, 2017; Burghes & Robinson, 2010; Nurwidodo & Hindun, 2014; Eisuke Saito & Sato, 2012). Collaborative learning theory from Russian psychiatrist (Vygotsky) indicates that through collaborative learning, the ability of students improves as suggested by the zone of proximal development (ZPG). Learning does not take place in a vacuum, but in the real world where collaboration is needed (Eisuke Saito & Sato, 2012; Masaaki Sato, 2014).

Fifth, the principle of openness. Learning should be open and can be likened to a garden of which beauty can be enjoyed by anyone. Learning is not only for teachers and school to own. Learning can be witnessed by anyone. In Lesson Study, there is an openness procedure which requires learning to be accessible for anyone to witness, including parents. Open learning is beneficial in giving accountability to the society (Burghes & Robinson, 2010; Dudley, 2011, 2013; Nauwerth, 2015; Nurwidodo

& Hindun, 2014; O'Brennana, Bradshawa, & Furlongb, 2015)

Sixth, learning must be of good quality. Learning can change visible (practice) and non-visible (knowledge, attitude) behavior. In the process of changing, teacher's role in learning is to guide the changes to move towards improvement of quality, from not knowing to knowing, from unskillful to become skillful, and from indifference to positive mind. The quality of learning can be achieved through the implementation of collaborative learning, as stated by Piaget and Lev Vygotsky who provide the theoretical foundation for quality learning.

Quality learning practices can be learned from other countries (Towaf, 2016; Triyanto, 2016; Widiadi & Utami, 2016), especially Japan. Quality learning from Japan is a reference because Japan is the home of Lesson Study. The steps from this model include apperception, group work exposure, reflection, class assignment exposure, and individual assignment exposure in order to give chances for students to scaffold their knowledge (Leavy & Hourigan, 2016; Eisuke Saito & Sato, 2012; Masaaki Sato, 2014).

Based on the various descriptions that have been done writing this review article aims to describe strategies for establishing networking with partner schools for implementing lesson study in Indonesia. This review article is expected to be a reference in improving the quality of education in Indonesia, especially in improving the quality of learning through LSLC. This article is also expected to be a consideration and reference of education actors in succeeding LSLC implementation effort.

## METHOD

Writing this article use literature comparison study methods and use content analysis. Literature comparison study is conducted to reveal the various theories and information relevant to the problems being faced or studied (as the material of the formulation of the problem and the discussion) Literature comparison study used is to study a number of primary literature, namely journal (print and online), report research, proceedings, activity reports, books, newspapers and other sources of literature, valid and reputable, in order to obtain information that supports or required.

Stages in the literature comparison study refers to Zed (2008) and Khatibah (2011) that

there are four steps to be taken, namely (1) preparing tools in the study, in the form of pencils/ballpoints, blocknotes, and personal computers connected with internal network; (2) to compose a working bibliography, in the form of a record of key and important references to be used in writing; (3) set the time, focus the work (this is very personal because it depends on someone to take advantage of the time available); and (4) read, take notes, and compose the writing.

Data analysis using paradigm qualitative content analysis. Presentation of data using the method of informal presentation. The method of informal presentation is a method of presenting data in the form of the formulation with words/regular phrases that fit the linguistic rules. In presenting the data, the authors include excerpts from the various references used, in the form of analytical results, which are narrated and illustrated based on a summary of information protocols for each topic analyzed (all done with the context of critical thinking and in-depth analysis).

## RESULTS AND DISCUSSION

### Partner Schools

In Indonesia, Lesson Study develops through Indonesian Mathematics and Science Teacher Education Project (IMSTEP) in 1998-2003. The project was then followed by IMSTEP Follow Up (2003-2005) and Strengthening In-Service Teacher Training in Education of Mathematics and Science (SISTTEM) program (2006-2008). Since 2006, Lesson study has officially become government's program. The expansion of Lesson Study implementation in Indonesia was followed with PELITA program (2009-2013). Lesson Study in Indonesia is now coordinated by Institute of Teachers' Education (*Lembaga Pendidikan Tenaga Kependidikan/LPTK*), the implementer of IMSTEP up to *Peningkatan Kualitas* (PELITA) program or Program for Enhancing the Quality of Junior Secondary Education. The initial aim of Lesson Study in Indonesia was to improve the quality of Mathematics and Science education in Indonesia. However, Lesson Study can be adapted by other subject disciplines, both Math and Science and non-Math and Science (Ibrohim, 2014; Mustadi, 2015; Syamsuri & Ibrohim, 2011).

Upon the completion of this program, the dissemination of Lesson Study is carried on up to present. The dissemination of Lesson Study is supported by the Directorate General of the Bureau of Learning and Student Affairs and the Human Resource Department, Directorate General of Higher Education of the Ministry of Research and Technology. The implementation and dissemination of Lesson Study in Indonesia are tracking on the correct path. Started with socialization, the program is followed by workshop and implementation by LPTK's study program which received Lesson Study funding in the first year. This is then disseminated to other study programs in the second year and further disseminated to partner schools in the third year. This way, the development of Lesson Study in Indonesia is always started by the university which is then disseminated to teachers in partner schools and/or laboratory schools. The dissemination to partner schools in the third year is recommended so that each LPTK acquires the support of policies and funding from the local Education Agency in the regent/town or regional office.

Lesson Study is a teaching profession coaching scheme which is conducted through assessment of collaborative learning in order to improve the quality of education (Motoko Akiba & Wilkinson, 2016; Chiew et al., 2016; Dumitrascu & Horak, 2008; M. Inprasitha, 2015; N. Inprasitha, 2014; Manabu Sato, 2014; Tall, 2008; Thinwiangthong & Inprasitha, 2014; Wolf, 2007). An educator is a lecturer in a university or teacher in a school (elementary or secondary). If improvement of education quality is already started in university, it needs to be disseminated to elementary and secondary schools so that the quality improvement can be spread evenly in all levels of education (Chikamori, Ono, & Rogan, 2013; Coe, Aloisi, Higgins, & Major, 2014; Iksan & Rahim, 2017; Jung et al., 2015; Mustadi, 2015; Ono & Ferreira, 2010; Tan-Chia, Fang, & Chew Ang, 2013; Triyanto, 2016). Improvement of education quality should have been strengthened from elementary and secondary levels because elementary and secondary levels are the foundation for further education (Kandowangko, Zakaria, & Yunginger, 2014; Y. Suzuki, 2014). As the foundation of education, these two levels need to be strengthened first and foremost in order to be able to support the demand for quality education in higher education/university.

Lesson Study significantly concerns on the improvement of learning quality, which is the core of education quality (Nurwidodo, 2017).

Lesson Study dissemination scheme is appropriate considering the motivation in dissemination to all levels of education (Jung et al., 2015; Ono & Ferreira, 2010; Takahashi & McDougal, 2016). Therefore, partner schools should be in the same perception. They should take part in the Lesson Study program (Asanuma, 2012; Coe et al., 2014; C. C. Lewis, 2013; Lucenario et al., 2016; E. Saito et al., 2015). Lesson Study is a program in which all levels of education are responsible for it. The dissemination in the school which is scheduled in the third year is based upon the consideration of education practitioners and experts, which is central in the implementation of Lesson Study and needs to be prepared in advance. LPTK partner schools in the dissemination of Lesson Study can be in the level of elementary/Islamic elementary, junior high/Islamic junior high, or high/Islamic high schools.

Partner schools are given the freedom to choose the implementation of lesson study scheme, just like in Japan. Schools can choose between school-based lesson study (*Lesson Study Berbasis Sekolah/LSBS*) and Subject Teachers' Working Group (*Sekolah Guru Mata Pelajaran/MGMP*)-based Lesson Study. It is highly recommended that schools choose LSBS so that the responsibility to conduct socialization workshop and the implementation can take place in the respective school. The consequence is that all teachers are responsible for having the knowledge, skills, and commitment to implementing Lesson Study. With LSBS, all subjects of study are given the same responsibility to implement Lesson Study. In LSBS, the school management needs to give full support (Budianti, 2014; Hermawati & Riandi, 2014; Miharja, Hindun, Wahyono, Nurwidodo, & Susetyarini, 2017; Noor & Kaniawati, 2014; Suratno, 2014). However, when such possibilities cannot be achieved, schools need to choose MGMP-based Lesson Study, in which it only requires the certain subject of study which is managed together and is the part of Lesson Study piloting implementation (Hendayana, 2016).

Teachers at the school are associated with local regional Education Agency. The involvement of the agency is thus the key to the success of lesson study implementation in the partner schools. The funded universities are

required to conduct coordination with the local Education Agency so that financial and policy support can be given.

The involvement of LPTK Lesson Study implementer and schools must be built on the basis of the mutual and dependable relationship. Ideally, the partnership of universities with partner schools in implementing Lesson Study transforms into the blessing and is done for acquiring grace. Therefore, Ngang and Sam (2015) state that in the stage of implementation to schools, financial and policy supports need to be acquired from local Education Agency as the head organization of the schools.

Partner schools ideally have the same needs in improving the quality of education as well as for other partnership programs. In the education quality improvement program, partner schools through their teachers are required to become the innovators in the learning process. Furthermore, partner schools are also responsible for improving the quality of learning and national education (Nurwidodo, 2016). The presence of LPTK universities with Lesson Study program is in line with the improvement needs of partner schools. The partnership between LPTK universities and partner schools can be further developed by making use of lesson study academic documentation in the form of academic journals written by involved teachers and published in seminars of Lesson Study implementation which is also allocated from the LSLC funding.

Partnership in the implementation of Lesson Study needs to be continuous even if the funding has ended. The strategy required for the continuity of partnership in Lesson Study with partner schools are; first, to make Lesson Study as the overarching research activity and community service in LPTK; secondly, to nurture the good relation with schools in order to autonomously implement Lesson Study as a part of teachers' coaching program through in-service scheme; third, to maintain good relation with Education Agency office and serve as an effort to gain policy and financial supports so that Lesson Study that is synergic with the Education Agency programs can be expanded and strengthened to be a culture of quality improvement in its work locale. Fourth, it is possible that the development of the partnership with private parties possessing Corporate Social Responsibility (CSR) allocated for education program especially Lesson Study can be manifested. The experience of some activists in

partnering with Sampoerna Ltd., Djarum Kudus Ltd., Pertamina Ltd. and others are concrete examples of utilizing CSR in expanding the implementation of Lesson Study (Nurwidodo, 2017).

### **Strategies for Building Lesson Study Network with Partner School**

There is a shared need felt by all education institutions in Indonesia; that is the need to improve the quality of education in Indonesia. This problem of improving quality of education is a national problem which needs to be solved together. Regarding the severe decrease of education quality, Mrs. Sri Mulyani Indrawati, a senior minister in NAWACITA cabinet (Indonesian Minister of Finance), suggested that it takes 70 years to solve education problems in Indonesia, which center in low-quality education (CIPS, 2017). Meanwhile, national activists and experts of Lesson Study who are associated to Indonesian Association of Lesson Study or *Asosiasi Lesson Study Indonesia* (ALSI) led by Sumar Hendayana, Ph.D. (lecturer at Universitas Pendidikan Indonesia) conclude that by implementing Lesson Study, it is expected that the time will be lowered by 50%. This means that it takes 30 years to achieve the expected quality standard. This conclusion surfaced after conducting practices of Lesson Study in regions around Indonesia and enriching the implementation of Lesson Study by reflecting references from around the world.

Reduction of time from 70 years to 30 years in such a difficult and substantial task is a prestige which can only be achieved when the implementation of Lesson Study is massive and intensive. In order to make it happen, there are prerequisites. The work to improve the quality of learning is a big task and challenges all schools in Indonesia. There is no way that the work is not done collaboratively. The catch gained by individual fishing is not as beneficial as that by using the net. In other words, there is a multiplication effect of net fishing. Networking is a functional relation scheme of components which are aimed to achieve goals by cooperation.

Networking can be built when members of a network hold similar importance. Networking of partner schools in Lesson Study is built on shared need, which is to tackle problems which become the needs of the whole participants. They are facing the same enemy, namely the

problem of quality learning process and outcomes, which is the core of education quality. The enemy is real and can be likened to an iceberg in which what appears at the tip is merely the little part of it, while the underlying part is much bigger and robust. It is not easy to tackle this problem. The problem is a result of a chronic accumulation of little issues which then become unhandled and piled up like an iceberg that has sunk the giant ship Titanic (Nurwidodo, 2017).

A quality education process is a culture and it is nurtured through knowledge elements, attitude, and behavior which manifest into habits. Good quality habit, independence, and discipline must be developed since elementary and secondary education, strengthened by the support from the community and environment so as to become a culture (Lim, Lee, Saito, & Haron, 2011). The shaping of the quality learning process is a shared need which promotes the importance of collaboration in a networking of lesson study with partner schools.

Networking is commonly implemented in many aspects, such as electrical network, computing network, social network, and other types of cooperation. In the field of education, MIPA Net or Math and Science networking are established. In national Lesson Study program, LSLC is now manifested in the form of the workgroup (club). ALSI initially is a networking program and is responsible for consolidating the performance of lesson study activists in Indonesia. The role is manifested through cooperation between education institutions which are gathered in International Conference of Lesson Study (ICLS). ICLS conducts annual conference and is now reaching its 8<sup>th</sup> series. The 9<sup>th</sup> series is taking place at Pakuan University, Bogor-West Java. ALSI with its ICLS is a form of strategic networking which can be utilized to improve the effort in achieving both individual and organizational goals.

The existence of networking in the application of LSLC can guarantee the right of all students to get high-quality learning. Implementation of LSLC will accustom teachers to do lesson design first, either individually or in groups with colleagues and accustomed to analyzing lesson learned after doing the open lesson. This will certainly lead to teacher professionalism can continue to grow, sustainable, and independent (Erna,

Tejawati, Achmadi, Manalu, & Desvita, 2016). Good networking will ensure that LSLC is an effort to build school collegiality between teachers and teachers, and between teachers and students (Damayanti, Saruman, & Irwan, 2017).

Networking with partner schools is the best measure of implementing successful Lesson Study (Damayanti et al., 2017; Jung et al., 2015; Wolf, 2007). The choice to network is in accordance with the philosophy of Lesson Study which takes side in collaborative approach instead of the competitive one, collegial instead of individual oriented (Asanuma, 2012; N. Inprasitha, 2014; C. Lewis, 2004; Eisuke Saito & Sato, 2012; Manabu Sato, 2014; Wahyuningtyas et al., 2015; Wolf, 2007). In order to build the sustainable network capable of achieving victorious goals, strategies are required. Strategies for nurturing the network with partner schools involve mutual respect, co-dependence, and cooperation.

## CONCLUSION

LSLC is a shared need of educators alike which aims to improve the quality of learning as the core of quality education. LSLC must be directed for faster, economical, and rooting improvement of education quality as the best practice. In order for LSLC to manifest and become successful, resourcing and utilizing the partnership with schools are required. In a partnership with schools in order to implement LSLC, both parties must share the same need, which is facing the challenge with the willingness to cooperate for solving the problem. The problem of low-quality education and education inequalities are challenges and the beginnings which can trigger the motivation to cooperate. Cooperation with partner schools needs to be nurtured to become networking so that the benefits and the spirit of cooperation in solving problem double fold. The manifestation of the robust and progressive network becomes the answer for solving the national problem which has become chronic, namely the poor quality of education. Networking with partner schools can be implemented and can function well when the management of this networking conforms with shared needs, nurtures cooperation and mutual respect, gives and takes equally, and promotes fair acceptance, support, independence, and discipline.

This article, of course, is just one of the first views or suggestions on how strategies of

establishing networking partners partner schools for implementing lesson study in Indonesia. In the future, more studies, studies, and discussions are needed to maximize the implementation of this issue.

## REFERENCES

- Akiba, M., Howard, C., Wilkinson, B., & Whitacre, I. (2015). *Lesson study policy and practice in Florida: 2014 findings from a statewide district survey*. Tallahassee, FL: Florida State University. Retrieved from <http://www.lessonstudy-network.com/wp-content/uploads/2017/02/Lesson-Study-District-Survey-Report-2015.pdf>.
- Akiba, M., & Wilkinson, B. (2016). Adopting an international innovation for teacher professional development: State and district approaches to lesson study in Florida. *Journal of Teacher Education*, 67(1), 74–93. <https://doi.org/10.1177/0022487115593603>
- Arani, M. R. S., Fukaya, K., & Lassegard, J. P. (2010). “Lesson Study” as professional culture in Japanese Schools: An historical perspective on elementary classroom practices. *Japan Review*, 22, 171–200. Retrieved from <http://www.jstor.org/stable/pdfplus/25791346.pdf?acceptTC=true>
- Asanuma, S. (2012). Lesson study and curriculum politics in contemporary Japan. *Asia Pacific Journal of Educational Development*, 1(1), 25–32. <https://doi.org/10.6228/APJED.01.01.03>
- Asari, S. (2017). Sharing and jumping task in collaborative teaching and learning process. *Didaktika (Jurnal Pemikiran Pendidikan)*, 23(2), 184–188. Retrieved from <http://journal.umg.ac.id/index.php/didaktika/article/view/28>
- Bjuland, R., & Mosvold, R. (2015). Lesson study in teacher education: Learning from a challenging case. *Teaching and Teacher Education*. <https://doi.org/10.1016/j.tate.2015.09.005>
- Budianti, T. (2014). Lesson study: A non-instantaneous valuable experience. In S. Hendayana, A. Supriatna, P. Purnawarman, T. Suratno, & A. T. Rahman (Eds.), *WALS International Conference 2014* (pp. 1001–1006). Bandung: Indonesia University of

- Education & WALS.
- Burghes, D., & Robinson, D. (2010). *Lesson study: Enhancing mathematics teaching and learning welcome to CfBT education trust*. Berkshire, UK: CfBT Education Trust. Retrieved from [http://webfronter.com/bexley/maths/menu2/Frontpage\\_files/Subject\\_Leaders/images/2LessonStudy\\_v9\\_Web\\_.pdf](http://webfronter.com/bexley/maths/menu2/Frontpage_files/Subject_Leaders/images/2LessonStudy_v9_Web_.pdf).
- Cajkler, W., Wood, P., Norton, J., Pedder, D., & Xu, H. (2015). Teacher perspectives about lesson study in secondary school departments: A collaborative vehicle for professional learning and practice development. *Research Papers in Education*, 30(2), 192–213. <https://doi.org/10.1080/02671522.2014.887139>
- Cerbin, W., & Kopp, B. (2006). Lesson Study as a model for building pedagogical knowledge and improving teaching. *International Journal of Teaching and Learning in Higher Education*, 18(3), 250–257. Retrieved from <http://www.isetl.org/ijthe/>
- Chiew, C. M., Dali, M. H., & Lim, C. S. (2016). Implementation of lesson study as an innovative professional development model among Malaysian School Teachers. *Malaysian Journal of Learning and Instruction*, 13, 83–111. Retrieved from <http://mjli.uum.edu.my/images/pdf/n13mjl/5implementationnn.pdf>
- Chikamori, K., Ono, Y., & Rogan, J. (2013). A lesson study approach to improving a biology lesson. *African Journal of Research in Mathematics, Sciences, and Technology*, 17(1), 14–25. <https://doi.org/10.1080/10288457.2013.826967>
- CIPS. (2017). Empowering parents key to children's futures as Indonesia celebrates national education day. Jakarta: Center for Indonesian Policy Studies (CIPS). Retrieved from <https://cips-indonesia.org/en/publications/empowering-parents-key-childrens-futures-indonesia-celebrates-national-education-day/>
- Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014). *What makes great teaching?: Review of the underpinning research. Project Report, Sutton Trust, London*. Durham. Retrieved from <http://www.suttontrust.com/researcharchive/great-teaching/>
- Damayanti, S., Saruman, N., & Irwan, I. (2017). Inovasi perencanaan pembelajaran guru sebagai upaya meminimalisir permasalahan belajar siswa. In A. Syarif, S. Syainuddin, M. Ikram, N. Hartono, N. Nirisal, & F. Basir (Eds.), *Prosiding Seminar Nasional* (Vol. 3, pp. 1–7). Palopo: Universitas Cokroaminoto Palopo. Retrieved from <https://journal.uncp.ac.id/index.php/proceeding/article/view/768>
- Dudley, P. (2011). *Lesson study: A handbook. Lesson Study UK*. Retrieved from [http://lessonstudy.co.uk/wp-content/uploads/2012/03/Lesson\\_Study\\_Handbook\\_-\\_011011-1.pdf](http://lessonstudy.co.uk/wp-content/uploads/2012/03/Lesson_Study_Handbook_-_011011-1.pdf)
- Dudley, P. (2013). Teacher Learning in Lesson Study: what interaction-level discourse analysis revealed about how teachers utilised imagination, tacit knowledge of teaching and freshly gathered evidence of pupils learning, to develop their practice knowledge and so enhance. *Teacher and Teacher Education*, 34, 107–121. <https://doi.org/10.1016/j.tate.2013.04.006>
- Dumitrascu, G., & Horak, V. (2008). Lesson study: A site for teachers' professional growth and use of instructional innovations in ELL classrooms. In *Capital Lesson Study Conference*. Sacramento, CA. Retrieved from <http://www.csus.edu/mase/cclsc08/proceedings.htm>
- Erna, M., Tejawati, D., Achmadi, A., Manalu, L. F., & Desvita, M. E. (2016). Lesson study sebagai learning community untuk meningkatkan kompetensi profesionalitas peserta program pendidikan profesi guru kimia FKIP Universitas Riau. *Jurnal Pendidikan Kimia*, 1(2), 34–43. Retrieved from <https://ejournal.unri.ac.id/index.php/JPKUR/article/view/4023/3907>
- Hadfield, M., & Jopling, M. (2016). Problematizing lesson study and its impacts: Studying a highly contextualised approach to professional learning. *Teaching and Teacher Education*, 60, 203–214. <https://doi.org/10.1016/j.tate.2016.08.001>
- Hendayana, S. (2016). *Reflection of open lesson at MTs Muhammadiyah 1 Malang*. Malang, Indonesia: University of Muhammadiyah Malang.
- Hermawati, T., & Riandi, R. (2014). The supporting of school-based lesson study (LSBS) to teacher performance appraisal (PKG) and teacher's continuous professional development (PKB) in

- SMAN 9 Bandung. In S. Hendayana, A. Supriatna, P. Purnawarman, T. Suratno, & A. T. Rahman (Eds.), *WALS International Conference 2014* (pp. 354–358). Bandung: Indonesia University of Education & WALS.
- Ibrohim, I. (2014). *Lesson study: Praktek dan pengalaman di Indonesia*. Malang, Indonesia: UM Press.
- Iksan, Z., & Rahim, M. (2017). Reflections on teaching and learning of mathematics through lesson study and video critique. *Advances in Social Sciences Research Journal*, 4(1), 50–61. <https://doi.org/10.14738/assrj.41.2499>
- Inprasitha, M. (2015). An open approach incorporating lesson study: An innovation for teaching whole number arithmetic. *Conference Proceedings of ICMI Study 23: Primary Mathematics Study on Whole Numbers*. Retrieved from [https://repository.nie.edu.sg/bitstream/10497/17100/1/ICMI-2015-448\\_a.pdf](https://repository.nie.edu.sg/bitstream/10497/17100/1/ICMI-2015-448_a.pdf)
- Inprasitha, N. (2014). Perceptions on professional development of supervisors in the non-project and project schools using lesson study. *Procedia - Social and Behavioral Sciences*, 116, 2069–2073. <https://doi.org/10.1016/j.sbspro.2014.01.521>
- Ishii, K. (2017). Active learning and teacher training: Lesson study and professional learning communities. *Scientia in Education*, 8, 101–118. Retrieved from [www.scied.cz/index.php/scied/article/viewFile/734/376](http://www.scied.cz/index.php/scied/article/viewFile/734/376)
- Jung, H., Kwauk, C., Nuran, A., Perlman Robinson, J., Schouten, M., & Islam Tanjeb, S. (2015). *Lesson study (Scaling up peer-to-peer learning for teacher in Zambia)* (Universal). Washington D. C.: The Brookings Institution. Retrieved from <https://www.brookings.edu/wp-content/uploads/2016/07/FINAL-Lesson-Study-Case-Study.pdf>
- Kanauan, W., & Inprasitha, N. (2014). Collaboration between inservice teachers and student intern in Thai lesson study. *Procedia - Social and Behavioral Sciences*, 116, 28–32. <https://doi.org/10.1016/j.sbspro.2014.01.163>
- Kandowanko, N. Y., Zakaria, P., & Yunginger, R. (2014). The implementation lesson study in assistance for primary teachers on developing devices learning at elementary school. In S. Hendayana, A. Supriatna, P. Purnawarman, T. Suratno, & A. T. Rahman (Eds.), *WALS International Conference 2014* (pp. 198–202). Bandung: Indonesia University of Education & WALS.
- Khatibah, K. (2011). Penelitian kepustakaan. *Jurnal Iqra'*, 5(1), 36–39. Retrieved from <http://repository.uinsu.ac.id/640/1/%285%29PENELITIAN%20KEPUSTAKAAN.pdf>
- Leavy, A. M., & Hourigan, M. (2016). Using lesson study to support knowledge development in initial teacher education: Insights from early number classrooms. *Teaching and Teacher Education*, 57, 161–175. <https://doi.org/10.1016/j.tate.2016.04.002>
- Lewis, C. (2004). Does lesson study have a future in the United States? *Journal of Social Science Education*, 3(1), 115–137. <https://doi.org/10.4119/UNIBI/jsse-v3-i1-967>
- Lewis, C. C. (2013). *How do Japanese teachers improve their instruction? Synergies of lesson study at the school, district and national levels. Commissioned Paper: The National Research Council Board on Science Education*. Retrieved from [https://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse\\_084385.pdf](https://sites.nationalacademies.org/cs/groups/dbassesite/documents/webpage/dbasse_084385.pdf).
- Liliawati, W., Setiawan, A., & Efendi, R. (2008). Profile ability of teacher in reflection activity at lesson study programme. In *International Conference on Lesson Study*. Bandung: Faculty of Mathematics and Science Education, Indonesia University of Education.
- Lim, C., Lee, C., Saito, E., & Haron, S. S. (2011). Taking stock of lesson study as a platform for teacher development in Singapore. *Asia-Pacific Journal of Teacher Education*. <https://doi.org/10.1080/1359866X.2011.614683>
- Lucenario, J. L. S., Yangco, R. T., Punzalan, A. E., & Espinosa, A. A. (2016). Pedagogical content knowledge-guided lesson study: Effects on teacher competence and students' achievement in chemistry. *Education Research International*, 2016, 1–9. <https://doi.org/10.1155/2016/6068930>
- Matanluk, K., Johari, K., & Matanluk, O. (2013). The perception of teachers and

- students toward lesson study implementation at rural school of Sabah: A pilot study. *Procedia - Social and Behavioral Sciences*, 90, 245–250. <https://doi.org/10.1016/j.sbspro.2013.07.088>
- Miharja, F. J., Hindun, I., Wahyono, P., Nurwidodo, N., & Susetyarini, E. (2017). Lesson study based learning practical development for prospective teacher in higher education. In *Proceeding Abstract of WALIS International Conference 2017* (p. PP-155). Nagoya, Japan: World Association of Lesson Studies. Retrieved from <http://www.walis2017.com/program/program/pdf/pp-d13.pdf>
- Murat, P. (2014). Effects of lesson study on science teacher candidates teaching efficacies. *Educational Research and Reviews*, 9(6), 164–172. <https://doi.org/10.5897/ERR2013.1700>
- Mustadi, A. (2015). Fundamental school reform through lesson study for learning community (LSLC): A study of collaborative learning in Indonesia and Japan. In S. M. Saleh & S. Sudiyono (Eds.), *International Conference on Fundamentals and Implementation of Education (ICFIE) 2014* (pp. 87–95). Yogyakarta: Yogyakarta State University Press. Retrieved from <http://eprints.uny.ac.id/24993/1/D-10.pdf>.
- Nauerth, D. A. (2015). *The impact of lesson study professional development on teacher self-efficacy and outcome expectancy*. Kansas State University. Retrieved from <http://krex.k-state.edu/dspace/handle/2097/19048>
- Ngang, T. K., & Sam, L. C. (2015). Principal support in lesson study. *Procedia - Social and Behavioral Sciences*, 205, 134–139. <https://doi.org/10.1016/j.sbspro.2015.09.040>
- Noor, S., & Kaniawati, I. (2014). Teacher performance and student motivation improvement through school-based lesson study (LSBS) in SMA Negeri 1 Cipeundeuy Kabupaten Bandung Barat. In S. Hendayana, A. Supriatna, P. Purnawarman, T. Suratno, & A. T. Rahman (Eds.), *WALS International Conference 2014* (pp. 290–293). Bandung: Indonesia University of Education & WALIS.
- Nurwidodo, N. (2012). Increase sensitivity of environmental problems on students and its implementations to build a research proposal through group investigation. In A. Kikuchi (Ed.), *1st International Conference on Multiple-governance in Islam, Environmental Development, and Conservation*. (pp. 51–56). Johor, Malaysia: Water Research Alliance, Universiti Teknologi Malaysia. Retrieved from [http://ienv.web.fc2.com/env.islam/Foundation\\_8\\_nurwidodo.pdf](http://ienv.web.fc2.com/env.islam/Foundation_8_nurwidodo.pdf)
- Nurwidodo, N. (2016). Lesson learned lesson study for learning community at Batu City East Java. In *WALS International Conference 2016*. London: WALIS.
- Nurwidodo, N. (2016, September 20). Mendorong lesson study menuju learning community (LSLC). *Malang Post*.
- Nurwidodo, N. (2017). *Reflection on open lesson at SD Muhammadiyah 04, Batu city*. Batu, Indonesia: University of Muhammadiyah Malang.
- Nurwidodo, N., & Hindun, I. (2014). Increasing students sensitivity toward environmental problems and it's implementation to building research proposal trough project based learning (Pjbl). In S. Hendayana, A. Supriatna, P. Purnawarman, T. Suratno, & A. T. Rahman (Eds.), *WALS International Conference 2014* (pp. 1023–1029). Bandung: Indonesia University of Education & WALIS.
- O'Brennana, L. M., Bradshawa, C. P., & Furlongb, M. J. (2015). Influence of classroom and school climate on teacher perceptions of student problem behavior. *School Ment Health*, 6(2), 125–136. <https://doi.org/10.1007/s12310-014-9118-8>
- Ono, Y., & Ferreira, J. (2010). A case study of continuing teacher professional development through lesson study in South Africa. *South Africa Journal of Education*, 30, 59–74. <https://doi.org/10.1.1.917.3550>
- Ponte, J. P. da. (2017). Lesson studies in initial mathematics teacher education. *International Journal for Lesson and Learning Studies*, 6(2), 169–181. <https://doi.org/10.1108/IJLLS-08-2016-0021>
- Rofieq, A., Husamah, H., Wahyuni, S., Hindun, I., & Purwanti, E. (2016). The improvement of comprehension on biology research methodology through

- writing research proposal retrospectively by combining classroom discussion and collaborative working group in lesson study. In D. Rochsantiningsih (Ed.), *Proceeding of International Conference on Teacher Training and Education 2015* (Vol. 1, pp. 94–100). Surakarta, Central Java, Indonesia: Faculty of Teacher Training and Education, Sebelas Maret University. Retrieved from <http://www.jurnal.fkip.uns.ac.id/index.php/ictte/article/view/7549/5400>
- Saito, E., & Sato, M. (2012). Lesson study as an instrument for school reform: A case of Japanese practices. *Management in Education*. <https://doi.org/10.1177/0892020612445101>
- Saito, E., Watanabe, M., Gillies, R., Someya, I., Nagashima, T., Sato, M., & Murase, M. (2015). School reform for positive behaviour support through collaborative learning: Utilising lesson study for a learning community. *Cambridge Journal of Education*, 45(4). <https://doi.org/10.1080/0305764X.2014.988684>
- Sato, M. (2014). *Future perspectives of school as learning community: Towards networks of "Republic of Learning" inside and outside of nations*. Retrieved from <http://school-lc.com/wp-content/uploads/Future-Perspectives-of-School-as-Learning-Community.pdf>
- Sato, M. (2014). Lesson study untuk meningkatkan profesionalisme guru: Sekolah sebagai learning Community. In A. Mustadi (Ed.), *Prosiding Seminar Nasional Pemantapan Implementasi Kurikulum 2013 dalam Pendidikan Sekolah Dasar* (pp. 1–8). Yogyakarta: Program Studi Pendidikan Dasar Program Pascasarjana Universitas Negeri Yogyakarta dan Indo Media Pustaka.
- Suratno, T. (2012). Lesson study in Indonesia: an Indonesia University of Education experience. *International Journal for Lesson and Learning Studies*, 1(3), 196–215. <https://doi.org/10.1108/20468251211256410>
- Suratno, T. (2014). A lesson study network in Bandung: Focusing on designing teaching and learning. In S. Hendayana, A. Supriatna, P. Purnawarman, T. Suratno, & A. T. Rahman (Eds.), *WALS International Conference 2014* (pp. 998–1000). Bandung: Indonesia University of Education & WALS.
- Suzuki, R. (2017). *Reflection on open lesson at SD Anak Saleh*. Malang, Indonesia: University of Muhammadiyah Malang.
- Suzuki, Y. (2014). Reflection on lesson studies for teachers' professional community: A case study of a Japanese elementary school. In S. Hendayana, A. Supriatna, P. Purnawarman, T. Suratno, & A. T. Rahman (Eds.), *WALS International Conference 2014* (pp. 369–372). Bandung: Indonesia University of Education & WALS.
- Syamsuri, I., & Ibrohim, I. (2011). *Lesson study (Studi pembelajaran)*. Malang: UM Press.
- Takahashi, A., & McDougal, T. (2016). Collaborative lesson research: Maximizing the impact of lesson study. *ZDM - Mathematics Education*, 48(4), 513–526. <https://doi.org/10.1007/s11858-015-0752-x>
- Tall, D. (2008). Using Japanese lesson study in teaching mathematics. *The Scottish Mathematical Council Journal*, 38, 45–50. Retrieved from <http://www.scottishmathematicalcouncil.org/wp1/smc-journal-38-2008/>
- Tan-Chia, L., Fang, Y., & Chew Ang, P. (2013). Innovating the Singapore English Language curriculum through lesson study. *International Journal for Lesson and Learning Studies*, 2(3), 256–280. <https://doi.org/10.1108/IJLLS-03-2013-0017>
- Thinwiangthong, S., & Inprasitha, M. (2014). Pre- and in-service teachers role to improve the teaching and learning mathematics. *Procedia - Social and Behavioral Sciences*, 116, 1940–1944. <https://doi.org/10.1016/j.sbspro.2014.01.499>
- Towaf, S. M. (2016). Integration of lesson study in teaching practice of social study student teachers to improve the quality of learning and promote a sustainable lesson study. *Journal of Education and Practice*, 7(18), 83–91. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1105889.pdf>
- Triyanto, T. (2016). Building collaborative learning through lesson study. In *Prociding ICTTE FKIP UNS 2015* (Vol. 1, pp. 586–588). Surakarta: UNS. Retrieved from <https://media.neliti.com/media/publications/169388-EN-building-collaborative-learning-through.pdf>.

- Wahyuningtyas, N., Ratnawati, N., & Adi, R. (2015). Membangun kolegalitas calon guru IPS melalui lesson study. *Sejarah Dan Budaya*, 9(2), 217–222. <https://doi.org/10.17977/sb.v9i2.5004>
- Widiadi, A. N., & Utami, I. W. P. (2016). Praksis lesson study for learning community dalam pembelajaran ilmu pengetahuan sosial melalui kolaborasi kolegal guru dan dosen. *Teori Dan Praksis Pembelajaran IPS*, 1(2), 77–88. <https://doi.org/10.17977/jtp2ips.v1i2.8815>
- Wolf, J. M. (2007). Lesson Study in the United States. In *The World Association of Lesson Studies International Conference 2007*. Hongkong: The Hong Kong Institute of Education. Retrieved from [www.eduhk.hk/wals/lisconference/1st/pdf/DrWolf\\_Day3.pdf](http://www.eduhk.hk/wals/lisconference/1st/pdf/DrWolf_Day3.pdf)
- Zed, M. (2008). *Metode penelitian kepustakaan*. Jakarta: Yayasan Obor Indonesia. Retrieved from [https://books.google.co.id/books/about/Metode\\_Penelitian\\_Kepustakaan.html?hl=id&id=zG9sDAAAQBAJ&redir\\_esc=y](https://books.google.co.id/books/about/Metode_Penelitian_Kepustakaan.html?hl=id&id=zG9sDAAAQBAJ&redir_esc=y).