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Professional Development of Mobilizer Teachers Through a Coaching Lesson Study Approach (Design Principles and Its Applications Merdeka Learn/Merdeka Teaches Edition)

Widodo Widodo*, Agus Wahyudin, Masrukhi Masrukhi, Widiyanto Widiyanto

Universitas Negeri Semarang, Indonesia

*Corresponding Author: widodopramuka1984@students.unnes.ac.id

Abstract. The idea of teacher professional development is the most phenomenal topic because it demands innovative practices to improve didactical-pedagogical skills. In line with the Implementation of the Merdeka Curriculum (IKM) and Teacher Mobilization Education Program, although this author's idea is a modification, it emphasizes proposals that focus on strengthening teachers, that encourage reflection and collaboration among teachers, and that promote an academic approach to learning. Coaching Lesson Study (CLS) is a solution to answer these demands and what is known as the Collaboration of Teaching and Learning. CLS is a cyclical process in which a group of teachers collaborated in designing, teaching, observing, and discussing lessons that are, in parallel, being investigated to improve them. In doing so, CLS links teacher professional development to student learning, integrates coaching and teaching practice, and facilitates self-inspection through observation and reflection among peers. This article presents seven principles for practicing CLS as an innovative idea for teacher professional development that is based on what the literature suggests and on best practice in education and learning. In many studies CLS contributes to the development of teacher's didactic knowledge but if it is collaborated with Coaching techniques, the results should be more optimal.

Keywords: lesson study; coaching; mobilizer teachers; professional development; innovation.

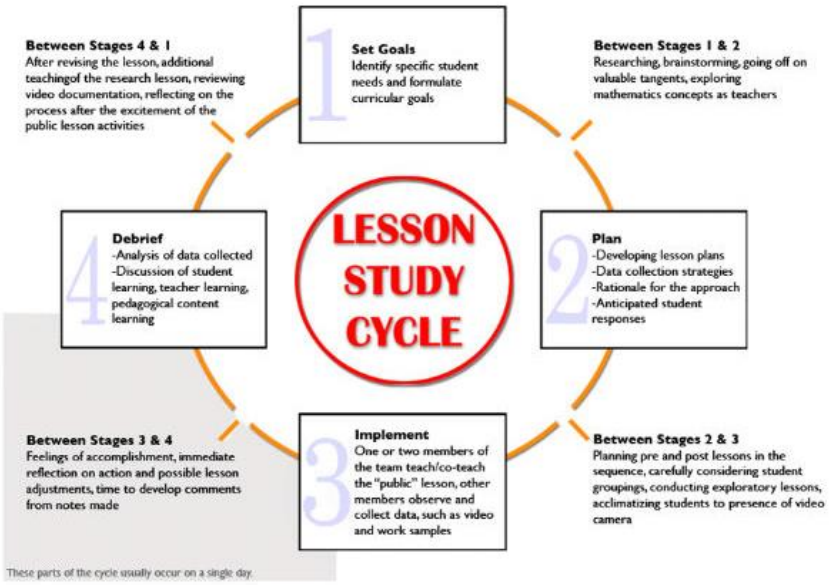
INTRODUCTION

Successful learning systems invest in teacher development for their reliable development (Sahlberg, 2023). The development of qualified teachers among various countries is varied and relative. When coaching is well defined and strategically implemented as part of an overall school improvement plan, it can significantly support the professional development of early career teachers, improve student outcomes, and help schools to retain their teachers.

Reliable training and development of teachers has captured the attention of teachers in the last decades. As we know, from the competency-based curriculum, the K-13 curriculum, to the current Merdeka Curriculum, teachers are always involved because they are trained in various patterns. Especially the last mentioned, the development of reliable teachers who are more famous, namely Learning Teacher Mobilization. Attention to the development of teacher competence continues to continuously call for innovative applications that serve to actually improve the pedagogical and professional competence of teachers.

Therefore, an Merdeka Curriculum demands initiatives that: a) focus on student education and promote new ways to improve it, b) feed pedagogical reflection among teachers, c) promote inquiry-based approaches to teaching and education, d) stimulate collaboration between the teacher and e) contributing to increasing the value and importance given to the digital teaching and learning process.

Coaching is defined by the ICF (International Coach Federation) as a form of partnership between the coach and the coachee in opening inspiring ideas, thought processes, and creativity, aiming to maximize the personal abilities and professional development of the coachee. Coaching is a client-driven process.



Lesson study (LS) is a self-developmental approach that relies primarily on collaborative interactions with colleagues in work context texts to promote teacher learning (Benedict et.al, 2013). Originally developed in Japan, LS was introduced to the United States by Stigler and Hiebert (1999) and is now commonly used throughout the US (Akiba, 2016; Yoshida, 2012) and internationally. LS uses a cyclical structure: the teacher analyzes student work iteratively , uses this analysis to inform collaboratively planned lessons, applies the lessons while observing each other's performance, and analyzes the quality of the lessons (Gersten et.al, 2010). This activity is repeated in successive cycles from time to time. Theoretically, LS enables teachers to learn by engaging in in-depth analysis of student instruction and reflection through critical and collaborative discussions that unfold when teachers design, observe, and reflect on student learning (Stewart & Brendefur, 2005).

Research lessons continue to grow in popularity around the world, and are now widely practiced, in more than 30 countries. As can be seen in photo 1, LS is a cyclical process consisting of educational design, teaching and observation, dialogue and commentary, and dissemination. Practical education is designed to be based on student education, developed collaboratively by a group of teachers, and has a character of inquiry. Thus, the teacher collects data during different stages of the process (sometimes, only during observation while teaching the lesson) which allows analysis and subsequent dialogue to improve the lesson. In addition, the lessons and analysis tend to be disseminated in various ways so that others can learn and use them, and to get more feedback. For this alibi, LS is a reliable model of application and development based on facts and which responds to demands arising from literature, by linking lesson study to student education, encouraging cooperation between teachers, engaging in pedagogical reflection, engaging teachers in investigations about their learning applications, and promote the opening and dissemination of innovation and learning research.

LS has similarities with other models currently used to improve teacher abilities, such as action research, PDSA (plan, do, study, and act) or ADDIE (analysis, design, development, implementation, and evaluation). However, unlike this, LS is a practice created out of the interest of the teacher as a teacher. Once implemented, it has proven useful and effective in promoting curricular development, supporting a student-centered approach to learning, and enhancing teaching and learning worldwide.

Lesson Study (LS) helps teachers find ways to solve many of these problems in our educational units. In addition, many studies show that LS helps teachers gain didactic knowledge about content, classroom management skills, and the generation of more significant learning experiences for students.

Based on the author's literature and practical experience in designing, implementing, and evaluating LS programs,

the following principles aim to assist their implementation, increase positive outcomes, and help overcome problems and misconceptions that arise when LS programs are developed in practice in the field.

Theory of Design Thinking

The 21st century is known as the era of digitalization, which impacts and creates challenges for the world of education. The characters of the 21st Century are very unique (Hasibuan & Prastowo, 2017): easy to get information (easy to get information), respect different opinions, encourage innovation and creativity, think critically, integrate knowledge and, and continue to learn throughout life (collaborating and being more communicative).

According to Rusdiana (2014), educational innovation is closely related to the components of the education system, both institutional, national and regional. The ability to innovate encourages people to survive in the midst of civilization (in Scheer, A., Noweski, C., & Meinel, C., 2012). These factors include the increasing and growing complexity of contextual life, globalization, technological disruption, short product turnaround times, and intense business and economic competition.

We have several educational innovation methods, the main approaches of which are: a) ATM (Observe, Copy, Modify), b) Scamper Technique, c) Quality Function Development, and d) Design Thinking (Nasution & Kartajaya, 2018). We are familiar with a popular innovation method called Design Thinking.

Tim Brown (2008) defines Design Thinking as an innovation development method that utilizes sensitivity, framework and design techniques to achieve "top user needs", so as to achieve what is called business feasibility and strategy so as to achieve customer value and market opportunities. In other terms, Design Thinking is meaningful as a process of creating/developing new ideas and updates that are problem solving in nature (Brown, 2018).

Design Thinking is solutive in nature, included in the realm of learning. Design Thinking can promote problem solving skills in the 4.0 era as well as the 21st century, can facilitate students to function as developers/designers, facilitate users in solving complex problems, the focus is in learning units to everyday problems in areas where we live universally (Shutter and Razzouk, 2012). In another view by Scheer and Plattner (2011) confirms that Design Thinking can significantly increase effective results as well as being a catalyst for education through implementation in a constructive and holistic interdisciplinary project.

With 5 steps, Design Thinking is a dynamic and non-linear, accelerated framework (lueprint) for all team members to utilize (Wolniak, 2017). The syntax includes: (1) empathy, (2) define, (3) generate ideas or inspiration, (4) prototype and, (5) testing.

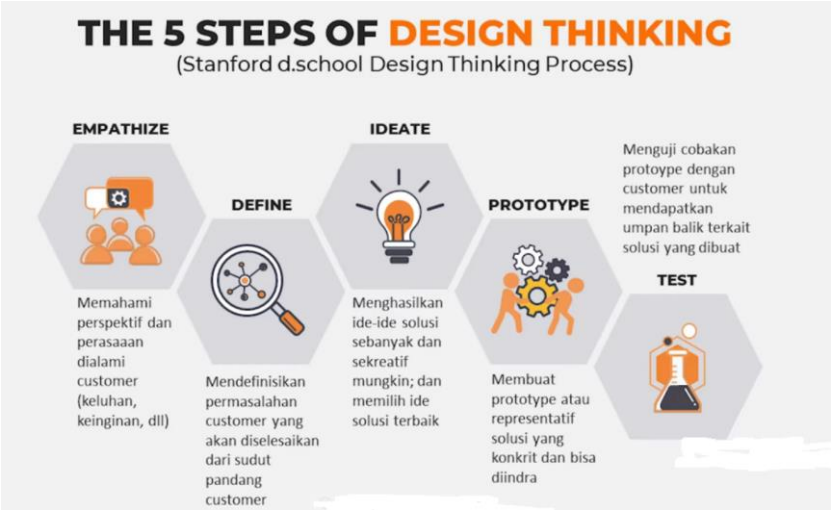


Figure 1. Stage Thinking Design

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Lesson Study Collaborative Coaching Design as a Teacher Professional Development Innovation

Pay attention to your philosophy as well as your practice

Teaching is social application and, as such, subject to cultural relativism; For this alibi, when adopting training that arises in a context not only ours, it is necessary to pay attention to something that is more than just a practical element.

According to the source, LS is based on 2 traditional characteristics of Japanese reliable culture that convey meaning: collectivism and long-term review of actions taken, thus, prior review of events for revision and decision-making after the teacher's reliable application consensus process. Given this, the adoption and application of LS was facilitated when a teaching application approach was promoted that emphasized a commitment to continuous revision and to pursue (and liberate) ideas and patterns of thought through self-inspection and reconsideration of actions taken. Not only that, this approach is aligned with contemporary ideas related to what is known as self-feedback and among equals as part of reliable routines.

Instantly, there are 2 ways for LS to be practiced accompanied by good cultural elements and meaningful training: a) holding an initial stage (workshops, meetings, etc.) which serves to increase understanding among teachers, guiding them towards achieving goals primary LS (increase student education) and promote group cohesion (eg, sharing of teaching experiences), and/or b) incorporate people who facilitate and guide teachers during LS development (observe principle 3).

In both methods, it also contributes to creating a basis and shared vision over expectations about LS which contributes to the sustainability of its practice and the maintenance of positive bonds between teachers which facilitates dialogue about the process.

Make time for greater sustainability, convenience and productivity

The involvement of teachers at various stages of LS is essential for the continuity of the process and, of course, for impact on their learning. Useful results from LS emerge when the practice is maintained over time and, in particular, when there is sufficient space for reflection and discussion.

However, time and logistics are the most common difficulties when practicing LS. LS involves meetings to design lessons, observing how lessons are taught (or delivered), meetings to assess the process and propose changes for improvement and, ideally, taking time to share the work done and the results. However, this occurs with institutional support (eg, waived teaching hours) or working outside hours. Since we don't always have the first and the second is something to avoid, it's best to limit the number of times LS is practiced to ensure faculty participation and continuity of the process, as well as to guarantee sufficient time for its development. For this reason, it is necessary to plan the LS in detail in advance, clarifying the time and commitment required from the people participating; setting a meeting schedule at the beginning of the semester usually facilitates the process.

On the other hand, when planning the various phases, special attention should be paid to the time elapsed between teaching/observing a lesson and subsequent discussion for its analysis and improvement. Discussions can take place immediately after the delivery of the lesson or allow time to pass. In the first case, this is usually justified on practical grounds (centralizing the meeting between participating teachers) or emphasizing the importance of remembering the facts observed during the lesson. However, the author's experience supports the choice to allow time between teaching/observation and discussion. This is for 4 more important reasons if the participating teachers do not know each other well or have little experience in peer observation and discussion processes: a) memory loss due to the passage of time can be limited by scheduled observations (see principle 5) or by recording the delivery of the lesson (see principle 6), b) Discussions to analyze and improve lessons become more relevant and productive if previously ideas have been contemplated and compiled and reflected on. In addition, the teacher who has delivered the lesson also needs time to consider what happened, c) Having time to think about what to say orally and how to say it results in more comfort when sharing ideas and increases opportunities to understand and assimilate/accept ideas during the process of discussion and feedback, d) Emotions felt during teaching (exaltation, nervousness, boredom, etc.) can affect the analysis and evaluation of lessons,

so some time is also helpful to gain perspective on this.

Involve facilitators and experts

Although there is no need for support to practice LS, especially when it is practiced for the first time, it is customary to invite people who facilitate and guide the process, or people who are experts in certain aspects of interest to participate teachers (Hervas, 2023).

In the former case, a facilitator usually has a primary role of directing and guiding the discussion that occurs after teaching and observing the lesson to enhance its formative value for the participating teachers. Their role is concerned with discussions that do not forget student learning and are therefore reflective and constructive. Additionally, if this person accompanies the entire process, this also transfers to the different LS phases and also contributes to reaching consensus and/or resolving problematic situations.

In the second case, an expert is a person who specializes in a particular lesson content (for example, someone who is an expert in instructional media) or in its pedagogical elements (for example, someone who is an expert in virtual classrooms) who is invited to observe the delivery of the lesson and present his views in the ensuing discussion. Therefore, their presence contributes to the learning of participating teachers and the improvement of lessons, both from a variety of disciplinary and pedagogical perspectives.

Engaging facilitators and/or experts should be done after discussing with them the type of contribution expected, emphasizing their role to support and guide the awareness and reflection of participating teachers. The purpose of this inclusion is to increase the formative potential of LS and improve the quality of the resulting learning. Thus, with experts, the topic of reflection tends to emerge more, whereas with the facilitator there is a guide that directs reflection, taking into account the meaning of LS and the needs of the teachers involved in their learning.

Peer observation guide

Peer observation is a common process in the LS process in the presence of a peer teacher (peer peer) who tends to be justified by its contribution to reflection, enhancement of teacher skills and practice, professional growth, and development of professional trust and respect.

However, these benefits do not always occur because they do not arise from the observed facts alone, but depend on how the observations are made.

Reference is made to principle 2 about how guided observation allows avoiding overreliance on memory when discussing lessons. For this reason, during LS practice it is advisable to use collecting data in a more systematic way and, if necessary, it can also be used to organize observations according to various criteria, for example distributing who pays more attention to a particular moment, space or person.

In short, guiding peer observations increases the likelihood of generating constructive reflections on lessons that do not lose sight of the main goal.

Use video recordings with care for memory and awareness

The benefits and uses of recording and viewing videos in processes that contribute to improved learning however, a recent systematic review advises caution when selecting video recordings and recommends weighing their use, being clear about the nature of the learning being conducted and the specific practices used.

The use of video recordings during LS has been shown to enrich discussions and help teachers realize aspects of lesson delivery that should be omitted. However, as in other training practices for video it is preferable to use it to evoke specific and selected situations that you want to focus on to promote discussion and reflection.

In this way, the selective incorporation of videos during LS (to which the facilitator can contribute) can be used to guide discussion, contribute to awakening teachers and reflecting on various aspects that are both disciplinary and pedagogical and, in addition, it supports memory if, as suggested, some time is allowed to elapse between the presentation of the lesson and its discussion.

Lesson Study approach by maintaining an inquiry and evidence-based approach

The inquiry nature of LS is critical to understanding the professional value of teachers. Aligned with the most relevant coaching principles, LS requires teaching practices that are embedded in the research process and open to disseminating, among other things, the results achieved. This "academic" approach and based on Evidence implies, at least, 2 necessary actions when considering LS:

a) Designing how information will be collected during the LS that will serve to discuss

and analyze lessons. In this case, the instruments and strategies mentioned earlier (such as observation templates and video recordings) can serve as elements for analysis and discussion and are complemented, for example, by writing a reflective diary, interviewing students, or with samples. student work. b) Promote dissemination of lessons learned and results achieved, for example through reports or innovations or research articles or lesson demonstrations. These actions open up educational practice to scrutiny and review and, in this way, also contribute to the dissemination of knowledge at both levels institutional and disciplinary.

Not forgetting that LS's inquiry and evidence-based approaches have also contributed to legitimizing and giving value to the role of teaching in the field of SC, where the role of the teacher continues to be the least recognized and social, by contributing to the global advancement of teaching and learning in the discipline, giving others the opportunity to develop their practice based on ours.

Engage students to promote a learning-centered teaching approach

Despite the fact that engaging students to contribute to teacher P&F is not yet common practice, recent studies in the area of learning/instructional show that their participation produces positive impacts which among other things, relate to sustaining the approach. towards teaching that is centered on learning and evoking a culture (institutional and/or disciplinary) of open and participatory teaching and learning.

In the case of LS (Charlotte, 2020), students can be promoted to have active participation in various ways: a) inviting students from previous courses to propose lessons and content that will benefit most from the redesign process based on their experience and that they contribute to the process observing and discussing lessons; b) open the lesson plan or one of its components (for example the design of an activity) to students with the aim that it is more in line with their previous knowledge and with their characteristics; and c) asking a portion of the student group to collect their classmates' impressions of how the lesson was conveyed and perceived in order to obtain this information when analyzing and discussing it.

These 3 alternatives not only bring lessons and their redesign closer to students, but are also actions that, outside of LS, impact student learning, by helping to generate a greater sense of relevance to the course and the responsibility associated with it. .to study on his own. In all these cases, having an external facilitator in the CB also acts as a bridge between the teacher and students, as students can contribute more freely and safely.

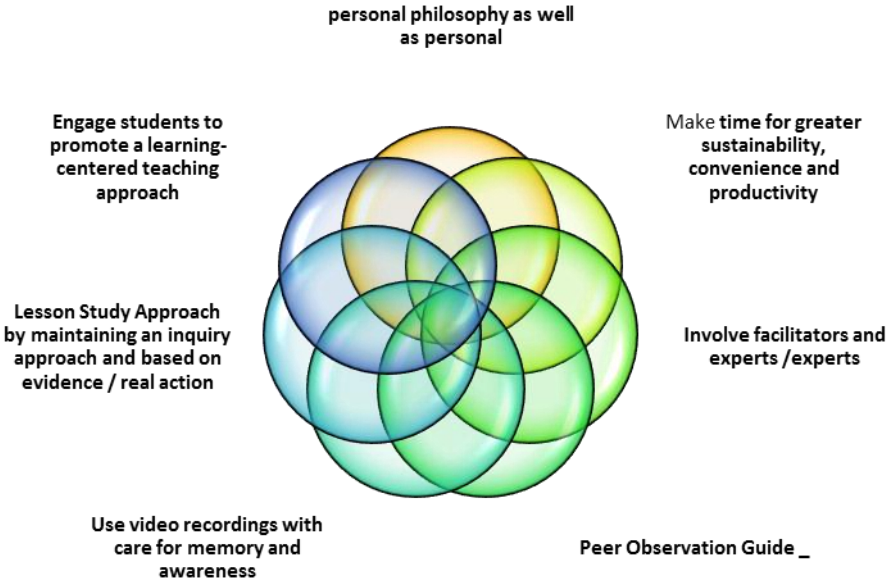

Figure 2. Lesson Study Collaborative Coaching Design as a Teacher Professional Development Innovation

RESULTS AND DISCUSSION

CLS has important benefits in teacher professional development, but its practice is not without challenges. The principles in the previous section highlight the factors and aspects that should contribute to the successful implementation (in the case of training) of CLS and to overcoming the difficulties observed when practiced without experience or support. In light of the above, the key elements discussed are summarized below: 1) Integration in CLS learning-centred teaching practice, research on teaching and learning, reflection, collaboration, and observation and discussion among peers offers responses to recent calls in the field of learning development; 2) CLS meets the demands emerging from the coaching literature regarding the development of training proposals and teaching that is open and collaborative, engages teacher inquiry into and about their practice, focuses on student learning, and nurtures reflection on teacher pedagogy; 3) The literature shows that CLS promotes a student-centred approach to teaching and their learning, more significant learning experiences, and impacts on improving teaching, curricular development, and teachers' didactic knowledge of content; 4) The adoption of CLS must pay attention to the elements that are practical in nature, but also elements that are professional in nature which give meaning and are related to the nature of the investigation, commitment to continuous improvement, and discussion of actions and decisions taken; 5) Ongoing CLS practice is based on prior planning that respects the time of teaching staff, must guarantee space for reflection, and is supported by an ongoing evaluation process; 6) The chances of success and potential impact of CLS increase when we have people facilitating the process, with people who are experts in the content or pedagogical aspects of the lesson, and if we invite students to participate.

Adopt Innovation

In the school environment, the introduction and adoption of innovation takes place in a social system of collaborative work environments. Some strategies for gaining support for positive change in schools: 1) Identify and clearly communicate the observable benefits demonstrated in research and practice, repeatedly and by any means available, from adopting an innovation; 2) Get an opinion leader on the part of the teachers in the school. We need to seek support from influential colleagues and principals who are likely to be early adopters of the initiative and are willing to spread these ideas to a large audience of teachers; 3) Organizational support in the scope of schools and education offices by advocating changes in policies and procedures that will facilitate the adoption of innovations; 4) Take advantage of social networks, electronic channels and other attractive ways to effect change.

Fundamental Impact

In the case of Lesson Study, the teacher can evaluate and reflect on every process that has been done. The results of assessment and reflection can be used to optimize performance in order to improve the quality of learning.

Lesson research has an effect on teacher performance, as evidenced by several studies. Lesson study can therefore be used as an alternative method for teacher development to improve the didactic-methodical-pedagogic abilities, professional competence, and social-personality of teachers. But whether it becomes effective when combined with coaching is something that needs more research. The author hopes that the results will have a positive and significant impact on teacher professional development.

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