

Teachers' Reflective Practice in Lesson Study: A Tool for Improving Instructional Practice

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In teacher education, a collection of research has established the importance of reflection in professional development. Lesson study, a popular professional development in Japan, incorporates reflection in one of its stages to enhance teachers' capacity to look into their enacted practices to improve their research lessons. However, there appear to be few studies determining the types of reflective practice among teachers. In this study, the various stages of lesson study process were documented and transcribed to analyze the teachers' reflective practices. Qualitative analyses yielded three types of reflective practice exemplified by the teachers, namely: descriptive, analytical, and critical. The study highlighted the collaborative, sustainable, and provisional environment which enabled the teachers to become practitioners who are able to use their reflections to gain understanding of their instructional practices. Findings also indicated that the context of professional development for teachers must be tailored to their direct experiences for them to significantly use the outcomes.

La recherche en formation des enseignants a établi l'importance de la réflexion dans le développement professionnel. L'étude de cours, qui constitue un élément important du développement professionnel au Japon, intègre la réflexion et vise à augmenter la capacité chez les enseignants de se pencher sur leurs pratiques pour améliorer leurs leçons. Toutefois, il semble avoir peu d'études portant sur le type de pratique réflexive qu'entreprennent les enseignants. La documentation et la transcription des différentes étapes du processus de l'étude de cours ont permis d'analyser les pratiques réflexives chez les enseignants. Les analyses qualitatives en ont révélé trois types : descriptives, analytiques et critiques. Cette étude met en évidence le milieu collaboratif, provisoire mais durable, qui a permis aux enseignants de puiser dans leurs réflexions pour mieux comprendre leurs pratiques pédagogiques. Les résultats ont également indiqué que pour que les enseignants profitent de façon significative de leur développement professionnel, le contexte doit être adapté à leurs expériences directes.

Initial and on-going professional development (PD) are important aspects to develop teaching competence. Teachers' initial PD is characterized by a discipline-based training, which builds confidence among pre-service teachers while on-going professional development is learning while in practice with the inclusion of reflection and exploration from actual teaching experiences (Herbert & Rainford, 2014). In both methods, such PD increases the instructional quality of teachers and would be translated into enhanced student learning. Pedder, Storey, and Opfer (2008) suggested that continuing PD must be collaborative and sustainable to avoid

passive ways of learning. These forms of PD must include critical reflective teachers' activities, which are necessary for instructional development. Critical reflection of instructional practice is essential in any teacher PD activity because it enables teachers to "reconstruct local knowledge while working within a dynamic research community" (Cochran-Smith & Lytle, 1993, p. 68) to become aware of their own pedagogical practices and empowered to critical instructional improvements (Cheetham & Chivers, 2001; Levine & Marcus, 2010).

Researchers claim that personal reflection is the best method of capability building among teachers (Darling-Hammond, Glickman, Gordon, & Ross-Gordon, 2009; Reeves, 2010). Moreover, by blending reflective practice into continuing PD, teachers develop self-knowledge and self-challenge on their professional learning journey (Leitch & Day, 2000; Klein, 2008; Ng & Tan, 2009). Effective PD for teachers goes beyond enhancing their knowledge and skills to providing them with opportunities of self-reflection within a support group which establishes sustainability and collaboration. Teacher inquiry groups (Crockett, 2002), peer coaching, collaborative teacher consultation, teacher mentoring (Brownwell, Adams, Sindelar, Waldron & Vanhover, 2006), lesson study (Lieberman, 2009), and collaborative professional learning (Gutierrez, 2015) are just few of the promising teacher professional development models at present. According to Shriki and Movshovitz-Hadar (2011), through these PD activities, teachers are able to acquire new knowledge and skills as they participate in a learning community that centers on their teaching practices as their learning objects.

In the Philippine basic science education, the implementation of the Enhanced Basic Education Curriculum (K to 12) in 2013 captured the attention of various education specialists to initiate PD deemed to enhance teachers' capabilities to implement inquiry-based teaching and learning. For most, this PD is designed to create a participative learning community to model inquiry among teachers to influence their instructional practices (Loucks-Horsley, Hewson, Love & Stiles, 1998). The problem, however, is grounded on issues of proper implementation with the newly acquired set of skills. Darling-Hammond and Richardson (2009) promoted the "active learning" community—a PD model which is school-based, sustainable, and collaborative in nature. Such PD activity builds sustainability of teacher practice in drawing inquiry from local knowledge (Villegas-Reimers, 2003). Lesson study, incorporates most of the promising features of a PD model where teachers work with colleagues and experts to increase their opportunities to fine-tune their instructional practices. It is a dynamic and a powerful approach to professional learning (Lewis, Perry, Friedkin, & Roth, 2012; Lim, Lee, Saito, & Haron, 2011) where teachers set long-term goals for their students, improve their lessons, learn new and valuable teaching approaches, deepen their subject matter knowledge, work collaboratively, and become self-reflective.

Many studies were conducted on the overall impact lesson study as a PD model for teacher development, but only few studies looked into reflection and how it helps the development of the individual and peer capacities of teachers to do assessment of their instructional methods. Inspired by the promise of achieving a high-impact PD model for teachers in response to the Philippine curriculum reform, this study attempts to present how lesson study became a venue where teachers built a learning community that is reflective, constructive, and formative in relation to their enhanced capabilities. It further aims to categorize the modes of reflection of teachers from their constant and series of interactions by themselves and with the knowledgeable others, which include mentors, university professors and school academic heads who act as experts in either the subject matter, teaching pedagogy or both.

Lesson study as a teacher professional development

Lesson study is the direct translation of the term *jogyokenkyu*, which in Japanese, the word *jogyo* means lesson and *kenkyu* means study or research. It involves a group of teachers collaboratively working together with the goal of improving certain aspects of their instructional practices. It involves the cyclical and systematic process of planning, observation, reflection, and revision of research lessons (Sims & Walsh, 2009). As such, actual classrooms serve as the object of learning as it has been proven to provide the powerful and evidence-based contexts of evaluating instructional practices (Cordingley, Bell, Rundell, Evans, & Curtis, 2004; Dudley, 2013; Elmore, 2004; Guskey, 2002; Kazemi & Hubbard, 2008; Opfer & Pedder, 2011). In doing this, the teaching process is critically examined and reflective thinking is developed while professional learning community is valued among teachers.

Lesson study is grounded on the idea that professional learning happens during social interaction among peers with similar goals (Kriewaldt, 2012). It captures the idea of enhanced learning and intellectual functioning when a group collaboratively works together leading to the development of personal expertise as a product of the constant interaction and deep reflection (Hadar & Brody, 2010). This means that constant interaction is vital to the optimum development of instructional practices. Moreover, the sustainable collaborative reflection of one's teaching routines not only evaluates the alignment of teaching practices to new and existing paradigms but builds a community of practice where teachers become critical and constructive with each other (Achinstein, 2002; Grossman, Wineburg, & Woolworth, 2001; Little, 1990, 1999; Witziers, Slegers, & Imants, 1999).

A group-directed and collegial learning among teachers is a potential venue for the examination and gradual improvement of classroom practices highlighting diverse mental models towards becoming open to the change process (Owen, 2015). In lesson study, a collaboratively-designed research lesson is open for observation and evaluation (Verhoef, Coenders, Pieters, van Smaalen, & Tall, 2015). Thus, lesson study is an excellent PD model where collegiality and apprenticeship between the "knowledgeable others" and emerging competent teachers serve as the foundation in the development of their instructional practices (Verhoef, et al., 2015). It supports the claim of Middlewood, Parker, and Beere (2005) that a professional learning is a process of self-development which leads to personal growth and development of skills and knowledge.

Embedding teachers' reflection into professional development

Reflective practice in education is said to scaffold critical thinking (Conway, 2001) and promote self-regulation (Boud, 2007; Singh, 2008) as teaching is a process that is open to examination and deliberation (Elliot, 2001; Schön, 1983; Van Manen, 1995) for significant improvement in the teachers' instructional practices (Kemmis & McTaggart, 1988). Various authors claim that embedding reflective practice in a PD model for teachers enable them to be critical and mindful in their own problems and later, would remain independent of outside knowledge (Cousin, 2002). Studies show that reflective writing supports pre-service teachers in becoming practitioners who are able to identify particular incidents during their field experiences in order to consider alternatives and future actions (Hume, 2009; Luk, 2008; Ryan, 2011). Larrivee (2008) defines reflective practice as the contemplative act of self-evaluation of actual tasks which involves decision-making and problem-solving. As such, reflective practice may be a

potential component of PD programs as it catalyzes the process of building teachers' capacities to constantly learn and enhance student learning (Glickman, Gordon & Ross-Gordon, 2009; Reeves, 2010).

Engaging in a reflective practice provides rigor in the shared repertoire of knowledge development through constructive utterances of opinions and feedback. Through feedback mechanisms, members of a group contribute to the critical consideration of renewing the qualities of their actual practices (Daniel, Auhl, & Hastings, 2013). In the process, feedback forms the basis of critical analysis in the sustainable evaluation of existing practices (Han, 1995; Hatton & Smith, 1995). On-going feedback thus becomes a crucial component in a community of reflective practitioners in response to the changing paradigms of professional engagement. In fact, Loughran (2002) stressed the importance of establishing meaning to actual experiences so that these may be valued "in ways that minimize the possibility that the problematic nature of practice might simply become a routine" (p. 34). In light of the foregoing literature, reflective practice brings implicit knowledge based on actual practice so that it can be recognized and explored (Parra, Gutiérrez, & Aldana, 2015) and the objects of learning are from classroom experiences.

Impact of lesson study on teachers' professional development

The essence of lesson study is to instill among teachers the idea of collaboration that helps them form an enquiry lens from their research lessons. The enquiry lens however is a product of their collaborative reflection after research implementations which are grounded on the effectiveness of the lesson based on students' responses. In the study conducted in the Philippines, lesson study was used as a professional development model to form a classroom-based professional learning community (Gutierrez, 2016). In the process of constant collaboration, teachers were able to improve the pedagogical practices from each other and from the knowledgeable others. This supports the study of Cerbin and Kopp (2006) which applied lesson study in the U.S. and yielded to common and shared ideas on certain research lessons over an extended period of constant and collaborative interaction. Moreover, it affirms the claims of Bryk and Schneider (2002) and Desimone (2002) which states that any PD activity which puts central emphasis on the importance of teachers makes them more receptive and therefore gain positive outcomes.

Lesson study can also enhance the critical assessment of teachers on their lessons. In the study conducted in Hong Kong (Lee, 2008), secondary English teachers developed subject knowledge and became more attuned to students' needs because of collaborative sharing and became more cognizant to collaboratively develop teaching strategies aligned to students' effective learning. In the study of Cheng and Yee (2011/2012), lesson study motivated and became the platform for Singaporean mathematics teachers to reconstruct and use the models of students' thinking in their lesson planning practices after a series of constant, collaborative and thorough examination of the lesson implementations. These results validate the findings of Yarema (2010) which report that through lesson study, teachers were able to explicitly ponder on how to enhance their pedagogies by exploring new tasks for effective teaching. Moreover, Singapore schools reported that lesson study "holds tremendous potential in uncovering both students' and teachers' conceptions of and approaches to learning" (Yoong, 2011, p. 4). In the study of Rock and Wilson (2005), the sustainable nature of lesson study involving the processes of researching, collaborating, active learning, observation, and focused reflection and discussion, led to the improvement of mathematics' teachers in terms of instructional

vocabulary, differentiated instruction, instruction using manipulatives, knowledge of mathematical learning stages, and the establishment of high student expectations.

Methodology

Context of this study

The purpose of this qualitative study was to survey, document, and categorize the reflective practices of 3 groups of public school elementary science teachers from their year-long PD through lesson study which was composed of two phases. Phase I was a seminar-workshop on inquiry-based teaching and learning through lesson study. The seminar-workshop included collaborative goal setting and lesson plan development, constructive critiquing and revising of lesson plans. Outputs included the formulation of a lesson study goal and the collaborative design of an inquiry-based science lesson plan which served as the research lesson in each grade level (Grades 1-6). The research lessons were presented, constructively critiqued, and collaboratively revised by each of the lesson study groups in preparation for the implementation. Phase II was the implementation phase of the research lessons which corresponded to the following procedure: 1) try-out of the research lesson; 2) revision of the research lesson based on the results of the try-out; 3) first research lesson implementation; 4) conduct of a post-lesson reflection and discussion (first PRD); 5) revision of the research lesson based on the first PRD; 6) re-implementation of the revised version of the lesson plan; 7) another post-lesson reflection and discussion (second PRD); and 8) writing the final version of the research lesson. Each grade level was assigned an implementation date (with a maximum of a five-day interval between the first and second implementation for each grade level) so that the total implementations were spread across the school year. At least two science education experts were present in all of the research lesson implementations.

Participants

The participants of this study were 15 public school elementary science teachers who are teaching grade levels 2, 3, and 6, respectively who participated in a PD activity through lesson study initiated by a group of science education experts. Initially, these teacher groups were part of the 30 public school elementary science teachers who attended a PD activity and were purposively chosen by their school head depending on their availability during the summer break. Five teachers from each level (Grades 1-6) composed a one lesson study team and represented the school so that a total of 6 lesson study groups were formed. As part of the training team, the author was assigned to Grades 2, 3, and 6 in both Phases for monitoring. As such, all forms of documentation were gathered from these three lesson study groups ranging from daily reflective logs, field notes, survey forms, audio, and videotaped recordings of all the teachers' interactions. The participants had an average of 9.47 years in the teaching service with 2 months as the minimum and 35 years as the maximum. All of the teachers have been teaching in the public school system in the Philippines since they started.

Research design and data collection

The study employed a qualitative research design. A survey was conducted to obtain the

reflections of the teachers regarding lesson study. Moreover, daily reflective logs were gathered from the participants during the seminar-workshop. In the Phase II, audio- and video-taped recording of interactions were transcribed to track all of the teachers' reflections during the PRDs from the two lesson implementations of each group (Grades 2, 3, and 6).

On average, each lesson implementation and PRD lasted for one hour, respectively. Since data were mostly gathered from the PRD, non-structured questions were asked but were usually focused on teachers' reflections on their lesson planning practices. The dynamics of the PRD involved the reflective analysis of the implementing teacher followed by the rest of the lesson study team, the invited science education researcher, the science coordinator (if present), and finally, the author. All reflections and suggestions to improve the lesson were summarized by one member of the lesson study team and counterchecked by the author. This served as a guide for the revision of the research lesson. All these data were supplemented through a written and open-ended questionnaire at the end of every second lesson implementation at the end of the school year.

Data analysis and interpretation

The analysis of data was done qualitatively. First, all transcripts were encoded in *Microsoft Excel*, and using the *Find* tool, keywords were identified. Using the constant comparison method (Strauss & Corbin, 1990), patterns were noted, established, and coded initially and six categorization units were generated by the author. This was followed by a request for coding from outside experts. Initial validity and reliability analyses yielded a mismatch on the categorization units and failed to meet the acceptable value for the Cohen's kappa inter-rater analysis. To establish a consensus, merging of categorization units was done and re-coding resulted in three categorization units with an acceptable .845 kappa value. To further establish uniformity of codes, all disagreements were identified and re-categorized by the author and the other raters.

Results

This study explored the types of reflective practice the teachers had in the various stages of the lesson study process. Given the robust number of interactions between the teachers themselves and the knowledgeable others, reflections were evident in nearly all of their conversations. Three types of reflective practice were noted and identified across the data: descriptive, analytical, and

Table 1

Reflection coding used in the study

Reflective statements	Explanation for the use of the codes
Descriptive Reflection (IF Code: DesRef)	A teacher views classroom events as random experiences and states perspectives not based from theory or any related prior experience
Analytical (IF Code: AnaRef)	A teacher thinks how his/her teaching procedures affect students' learning and thus shares possible ways to improve instructional practice in answer to students' learning capacities
Critical Reflection (IF Code: CritRef)	A teacher shares the importance of understanding the philosophical and ethical basis of teaching in the constant examination of emerging instructional practices and relates this to the diverse learning styles of students.

critical reflection. The lesson study process, therefore, provided an opportunity for the teachers to be able to provide insightful reflections on their instructional practices.

Results of the overall analyses on the transcripts show that there exist reflections across the stages of the lesson study process, but these were hardly noticed during normal conversations. As presented in Table 2, the team mostly used descriptive reflection (42.99%), and this occurred mostly during the planning and goal setting stage (47.37%) in the presence of the knowledgeable others. Analytical reflection significantly increased during the PRD in the presence of the knowledgeable others. Data revealed the major role of the knowledgeable others in the development of the reflective practices of the teachers by prompting the teachers to engage in critical dialogue and making attempts to self-evaluate. In this study, critical reflection is considered as the highest form of reflective practice, and it is interesting to observe that the 26.24% times of attempting this reflection is indicative of teachers' potential to become reflective practitioners given enough opportunities.

Analysis shows that the participatory, collegial, and collaborative nature of lesson study were the enabling factors in the open sharing of information and achievement with consensual and mutual understanding (Cooper, 2014) between and among the teachers and the knowledgeable others. This supports the claims of Healy (2009) who said that a collective and reflective approach to evaluation of professional practice supports the development of a shared professional identity. It further supports the claim of Marcos, Sanchez, and Tillema (2011) that reflective practice among teachers helps them to deliberate and solve instructional problems critically. In this study, three levels of reflective practice were exemplified by the teachers in a conversational type of interaction to arrive at an authentic understanding of their instructional practices.

Descriptive Reflection

In this type of reflection, the teachers mainly focused on the analysis of their teaching practices to underlying assumptions about teaching and learning. Most of their reflective thoughts were focused on isolated events not anticipating future connections for broader understanding. Classroom interactions were viewed as plain pupils' perspectives without due consideration to the possible consequences of their enacted practices. As such, most of their reflections were inclined to just narrate instructional actions rather than exploring possible alternatives and plausible explanations while connecting them to previous classroom events.

Teacher Glenn: The pupils enjoyed what they were doing. Some pupils were very eager for their turn to do their tasks.

Teacher Rowie: The pupils started late because they did not understand the instructions written in their activity sheets.

Teacher Nida: It seems that the pupils did not respond well because they belong to the lower section of the Grade level.

Most of the time, teachers shared how to adjust their current teaching practices without considering pupils' diversity of learning styles or long-term results. It is however interesting to note that the teachers engaged in reflective thinking that led them to move forward in their view

Table 2

Type of reflective practice of the teachers based from the transcripts

Type of reflective practice	Areas of reflection in the lesson study process												Total	%
	Planning and goal setting						Post-lesson reflection and discussion (PRD)							
	Between and among teachers		Between the teachers and the knowledgeable others		Total	%	Between and among teachers		Between the teachers and the knowledgeable others		Total	%		
	Number of reflective interactions	%	Number of reflective interactions	%			Number of reflective interactions	%	Number of reflective interactions	%				
Descriptive Reflection	16	43.24	18	47.37	34	45.33	26	39.39	35	43.75	61	41.78	95	42.99
Analytical Reflection	12	32.43	10	26.32	22	29.33	19	28.79	27	33.75	46	31.51	68	30.77
Critical Reflection	9	24.32	10	26.32	19	25.33	21	31.82	18	22.50	39	26.71	58	26.24
Total	37 (64.74)	100	38 (17.19)	100	75 (33.94)	100	66 (29.84)	100	80 (36.20)	100	146 (66.06)	100	221	100

of the professional practice in relation to their beliefs and individual capacities. Two teachers share the following as reflections during one of the PRDs:

Teacher Nika: I should have read the instructions one a time [sic] in order for the pupils to better understand what they are going to do...because the leader was not able to explain well to his group mates.

Analytical Reflection

In this type of reflective practice, the teachers were able to recognize the complexity of classroom dynamics in determining patterns, relationships, and connections to deepen their understanding of their instructional practices. They valued adjusting their teaching practices to pupils' relative performance and took responsibility for the result of their lesson implementations. In most cases, their insights considered the diversity of task structures such as cooperative learning groups and peer learning among the pupils as essentials in achieving success in the teaching and learning process. They were also able to share a constructive criticism among themselves which made the other members of the team recognize the existing gaps of what was accomplished and what needs to be done in future lesson implementations.

Teacher Karen: As an implementer, I learned some teaching strategies that helped the pupils develop their skills through inquiry-based activity by giving them hands-on activities. Some activities must contain thought-provoking questions that will lead the pupils to critically think. As a participant in critiquing and improving the lesson plan, the activities given must fit the pupils' capacity to cater their [sic] mind by supplying HOTS [higher order thinking skills] questions and most of all, activities should be applicable in real life situations.

Teacher Con: I learned that collaborative planning made us become more effective teachers because we learn from our ideas. It allowed us to divide the tasks at hand and made our classroom activities more manageable. We even extended this method to our classroom dynamics such as group learning or peer learning because we acknowledged its benefits to our pupils.

Critical Reflection

In this type of reflection, the teachers shared insights that their individual approaches to teaching can either contribute to or hinder the success of lesson implementations. As such, they view their practices as a factor in the social outcome of their pedagogical actions. This prompts them to put commonly-held beliefs into question and opens them to the knowledgeable others for appropriate verifications which either suspend or forego sudden judgements to consider other options. Most of the time, their analysis of their individual teaching practices yielded consideration not only to pupils' needs but also on the effectiveness of the lesson itself and the cognitive activity involved in the lesson planning stages.

Teacher Sam: Strategy wise, I learned that inquiry-based teaching is much better than any other strategies we have used especially when tasks require group activity. Through inquiry, the teacher acts as facilitator of learning while pupils' are doing their tasks. In fact, inquiry-based lessons are effective since embedded questions prompts pupils to critically think and reflect.

Teacher Melinda: I learned that a lesson that is planned collaboratively turns out to be one which suits to different level [sic] of learners (individual differences) for a fact that during the lesson planning, possible pupils' difficulties were already identified and teachers already figured out possible solutions to those difficulties/problems.

Based on the foregoing results, reflection was evident in the implementation stages where teachers already used their knowledge of reflective protocol from the planning and goal setting stages in their professional learning conversations. Most of their insights constituted a shared commitment and motivation in the accomplishment of their lesson study goals. As a result of the active participation, the teachers were able to see the relevance of collaborative learning as a professional development model.

Discussion

Based on the findings of this study, the PRD phase in lesson study was used to frame, re-frame, analyze, and evaluate classroom scenarios as they slowly unfold (Cavanagh & Prescott, 2010). Through the PRD, the implementing teachers shared their lessons from their own teaching experiences while the teacher-observers and the knowledgeable others shared what they learned from observing the lesson implementation. As the knowledgeable others facilitated the analysis of the outcome of the lesson implementation, the team came to a consensus on how their lessons would be improved. Their combined experience from pre-service and in-service teaching provided the benchmark of evidence-based evaluation of enacted practices. As such, the collaborative reflection in lesson study provided the teachers with different ways to view and analyze classroom outcomes aside from providing them with ways to become more conscious and critical about their own instructional strategies. The products of the reflective practices in lesson study therefore served as a venue to modify as well as improve teaching practices of the teachers involved in this study.

In the PRD process, the teachers were assisted by knowledgeable others in their conversational reflection which focused on the factors that need to be considered in their future lesson implementations. This provided them the opportunities to look back and review classroom events related to pupils' responses on the lesson. This supports the claim of Marcos, Sanchez, and Tillema (2011) that a conversational reflection builds a shared repertoire of strategies among teachers and other educators. Moreover, during the conduct of the PRD, the teachers and the knowledgeable others not only pointed out the areas of improvement of the lesson implementation but also affirmed areas which are effective and worth mentioning. The appreciative lens supported the teachers to develop their confidence and recognize the value of their actions from lesson preparation to its implementation. Because of the presence of the knowledgeable others from the planning to the lesson implementations and PRDs, the teachers were able to appreciate their sense of self and collegial professional development which bridged their feeling of isolation and exhaustion from work. The knowledgeable others became not only sources of new ideas but as inspiring individuals for the teachers to value their teaching profession.

Using reflection in lesson study with the goal of improving teachers' practices through analysis of lesson outcomes led the teacher study groups to redefine their beliefs and practices (Hung & Yeh, 2013) along with the emerging trends of science education. Moreover, it affirms Ermeling's (2010) features of teacher intervention program which include: "identifying

important instructional problems, connecting theory to action, utilizing evidence to drive reflection, and persistently working toward detectable improvements” (p. 379). Combining these features in a teacher PD would gradually create a teacher self-initiative to make sense of the outcomes of their teaching practices. It is therefore important that PD be focused on understanding and analyzing the dynamics of teaching and improving social competence to identify students’ problems and how to deal with them professionally. While mentoring has established a positive impact on individual teaching practices (Kadji-Beltran, Zachariou, Liarakou, & Flogaitis, 2014), collaborative reflection with the knowledgeable others in lesson study enhanced the teachers’ journey of growth towards enhanced instructional capability.

In the study of Parra, Gutiérrez, and Aldana (2014), becoming reflective practitioners increases teachers’ awareness of the different social and political contexts of education. On this basis, the role of the knowledgeable others as facilitators in the different lesson study phases led the team towards a meaningful learning environment for teachers amidst the gravity of work and the challenges they face. Moreover, since critical reflection is a social activity which requires a group of professionals with similar goals, lesson study served as an appropriate platform to facilitate the transformative learning of teachers. It is in this sense that this paper acknowledges the idea of Hickson (2011) that university support of teacher reflection is necessary in a meaningful critical reflection.

Conclusion

Drawing on the findings, this study concludes that professional development such as lesson study, which focuses on drawing practical lessons from actual classroom settings, provides a promising platform for teachers to develop a culture of reflection. The study also shows the value of building partnerships between university-based teacher educators who act as facilitators of the learning process in the adult learning environment. In consideration of the context of the study, reflective practice is operationalized as the process where the teachers look back on their previous classroom outcomes and treats these as benchmark information in the improvement of their instructional practices. This study therefore urges more teacher educators to embrace the formation of teacher study groups such as lesson study to upcoming professional development.

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