

# Impact of Lesson Study Practice on the Teaching Practices of Teachers in a Schools-District of Quirino, Philippines

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**Abstract** Lesson Study emerges as a potent avenue for Professional Learning and Development particularly within a schools-district of Quirino, Philippines. This is significantly impacting teachers' teaching practices and optimizing classroom experiences for learners. The descriptive research design was employed to 51 teacher-implementers, which aimed at determining the impact of the LS practice that started in 2017 on the teaching practices of the teachers. The study's findings underscore LS's positive influence on the teaching skills and practices, encompassing domains like Assessment of Students Learning, Content Knowledge, Teaching Strategies, Lesson Planning, Quality of Teaching, and Teaching Climate. This multifaceted impact highlights LS as a comprehensive and effective approach for educator's growth, simultaneously elevating the overall quality of education provided to students in the locale of the study.

**Keywords:** *lesson study, professional development, teacher development*

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## 1. Introduction

The dawn of Education 4.0 in the Philippines signifies a shift towards internationalizing classroom effectiveness at all education levels. This international approach aims to enhance educational practices and standards, emphasizing the pivotal role of teachers in decision-making to achieve desirable teaching and learning outcomes. Continuous professional development is crucial for teachers in enabling them to continually improve their teaching skills, thereby contributing to the advancement of classroom instruction and student development [1].

One essential component of continuous professional development is Lesson Study (LS), a proven model that offers benefits to both teachers and students that originated in Japan. Lesson Study fosters professional growth among teachers in enriching their pedagogical knowledge, content expertise, and instructional practices [2]. It creates an engaging and collaborative environment for teachers to reevaluate and enhance their classroom teaching and learning strategies. While recognized for its effectiveness, implementing LS requires educators to become familiar with its pedagogical nuances to eliminate hesitations surrounding this innovative approach [3,4].

Originating in Japan, LS involves teachers' planning,

teaching, observing, and evaluating lessons in a cooperative and constructive dialogue setting. This approach supports participatory learning, educational reflection, and professional development while enhancing classroom instruction [5,6]. LS also has the potential to transform institutional norms and dynamics by establishing communities of practice and fostering a research-driven environment [5-7].

In 2017, LS was introduced in the Province of Quirino through a collaboration among the Quirino Provincial Government, the Department of Education, Schools Division of Quirino, and Quirino State University-system [7,8]. This initiative aimed to provide professional development opportunities for elementary and secondary teachers and teacher educators in Mathematics and Science. This professional development program focused on how LS components contribute to improving teaching skills and addressing learning gaps, ultimately enhancing students' academic performance in a schools-district of Quirino, Philippines.

Since then, a number of researches were conducted and documented. Most of them were presented to local and international fora and conferences. Two of which are already published in international journals. Thus, this paper aims to determine the impact of LS on the teaching practices of teachers in a schools-district in Quirino province, Philippines.

## 2. Methodology

The Quantitative research was utilized in this study specifically Descriptive Research Design. Data collection was made through the use of survey questionnaires in gathering a quantifiable data for the reference of formulating general hypothesis and principles that can guide future action. A detailed survey questionnaire was employed to examine the teachers' perceptions about their experiences practicing LS and how those experiences influence their teaching skills. Descriptive Research Design gives emphasis on the descriptions and characteristics of the respondents without manipulating any variable. This is to produce results that reflect precise measurement and an in-depth analysis of data. It is also used to obtain objective understanding of the perceived impact of LS practice on the teaching skills of the respondents.

The raosoft sample size calculator was employed in determining the sample size of 51. This has a power of 95 and an error of 5. This number is further employed in Stratified Random Sampling (SRS) technique to determine the number of samples per school.

The instrument in this research is the questionnaire from the study of Bautista et al. [8] which was floated to the identified respondents who are currently implementing and conducting LS. There are two parameters of the questionnaire, the activities and procedures in conducting LS and the perceive impact of LS on the teaching skills among teachers of a schools-district in Quirino, Philippines. Included in the survey is an approved letter of request from the Schools Division Superintendent where the district is situated to conduct such survey to teachers including a letter of request address to the District Supervisor where the teacher-implementers are assigned as well as a consent form of the respondents on their voluntary participation in the study.

## 3. Results and Discussion

Presented in Table 1 are the general perspectives of the respondents on conducting LS as impacted by the conducted professional development activities in the locale of this study. As it is shown in the table, the respondents perceived a *high impact* on the way they look LS as a teaching practice as reflected in the number vouched for HI in the scale given. This denotes that the professional development activities in the locale of this study had made a significant impact on the perspectives of the respondents on conducting LS as an innovative and efficacious teaching practice.

Presented in Table 2 are the general perspectives of the respondents in understanding learners in a LS as impacted by the conducted professional development activities in the locale of this study. As it is shown in the table, the respondents perceived a *high impact* on the way they look at the learners in a LS inspired classroom as reflected in the number vouched for HI in the scale given. This denotes that the professional development activities in the locale of this study had made a significant impact on the perspectives of the respondents on understanding the learners of a LS class.

**Table 1. General Perspective in Conducting Lesson Study**

General Perspectives in Conducting Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	I learned how other teachers dealt with the topic as well as the disruptions to tasks.	-	1	18	32	High impact
2	I learned a better way to teach the topic	-	1	15	35	High impact
3	I earned a deeper understanding of the content knowledge.	-	1	11	39	High impact
4	I gained insights on how students process their learning.	-	-	14	35	High impact
5	I learned various strategies and techniques to increase students' engagement.	-	2	12	37	High impact
6	I learned techniques on helping students articulate their thinking.	-	1	14	36	High impact
7	I learned the joy of the chance to work with my colleagues.	-	1	10	37	High impact
8	I learned to interact better with my colleagues even outside the LS meetings.	-	-	16	35	High impact
9	I learned to employ appropriate authentic and alternative assessment techniques.	-	2	12	37	High impact
10	I learned the importance of doing journals as comprehensible inputs in improving my craft in teaching.	-	2	17	32	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

**Table 2. Understanding the Learners in a Lesson Study**

Understanding the Learners in a Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	It makes me mindful in observing and understanding signs of students' learning	-	1	18	32	High impact
2	It improves my understanding on the apparent students' behavior for a smoother teaching-learning process	-	-	19	32	High impact
3	It helps me employ learner's unique behavior in grouping them for collaborative purposes	-	-	17	34	High impact
4	It draws insights in managing and teaching diverse and unique learners for their holistic development	-	-	15	36	High impact
5	It enables me to help students become efficient and effective learners	-	1	16	33	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

Presented in Table 3 are the general perspectives of the respondents in assessing learners in a LS as impacted by the conducted professional development activities in the locale of this study. As it is shown in the table, the respondents perceived a *high impact* on the way they look at the assessment strategies in a LS inspired classroom as reflected in the number vouched for HI in the scale given. This denotes that the professional development activities in the locale of this study had made a significant impact on the perspectives of the respondents in assessing the learners of a LS class.

Presented in Table 4 are the general perspectives of the respondents in assessing their content knowledge as impacted by the conducted professional development activities in the locale of this study. As it is shown in the

table, the respondents perceived a *high impact* on the way they assessed their content knowledge in a LS inspired classroom as reflected in the number vouched for HI in the scale given. This denotes that the professional development activities in the locale of this study had made a significant impact on the perspectives of the respondents on their content knowledge as they go through the LS processes.

**Table 3. Assessing Students in a Lesson Study**

Assessing Student Learning in a Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	It improves my employment of authentic and alternative assessment techniques	-	-	16	35	High impact
2	It complements my assessment tools with the students' learning styles and multiple intelligences	-	1	16	34	High impact
3	It improves my abilities to put assessment framework to put students' knowledge work	-	2	16	33	High impact
4	It helps me attain goals through authentic and alternative assessment techniques	-	2	18	31	High impact
5	It changes my general ways of assessing students' learning	-	3	15	28	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

**Table 4. Content Knowledge in a Lesson Study**

Content Knowledge in a Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	It enables me to see gaps in my content knowledge	-	2	18	27	High impact
2	It gives me avenues to brainstorm topics as comprehensible inputs furthering my content knowledge	-	1	19	30	High impact
3	It provides curating mechanisms that improve my content knowledge	-	1	18	31	High impact
4	It deepens my content knowledge	-	1	17	32	High impact
5	It decreases my anxieties and perplexities of delivering complex topics	-	2	17	31	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

Presented in **Table 5** are the general perspectives of the respondents on their teaching strategies in a LS as impacted by the conducted professional development activities in the locale of this study. As it is shown in the table, the respondents perceived a *high impact* on the way they look at their teaching strategies in a LS inspired classroom as reflected in the number vouched for HI in the scale given. This denotes that the professional development activities in the locale of this study had made a significant impact on the perspectives of the respondents on their strategies in a LS class: all at helm of improving students' engagement.

Presented in **Table 6** are the general perspectives of the respondents in lesson planning in a LS as impacted by the conducted professional development activities in the locale of this study. As it is shown in the table, the respondents perceived a *high impact* on the way they look at their lesson planning abilities in a LS inspired classroom as reflected in the number vouched for HI in the scale given. This denotes that the professional

development activities in the locale of this study had made a significant impact on the perspectives of the respondents on planning a lesson in the realms of LS.

**Table 5. Teaching Strategies in a Lesson Study**

Teaching Strategies in a Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	It increases my breadth of teaching strategies	-	-	20	31	High impact
2	It helps me revise my teaching procedures	-	1	19	31	High impact
3	It hones my knowledge on the varied forms of teaching approaches, strategies, and techniques	-	-	17	34	High impact
4	It encourages me to employ engaging activities that promote a culture of inquiry and practice	-	1	17	33	High impact
5	It improves my teaching abilities and practices to upscale students' learning	-	1	17	32	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

**Table 6. Lesson Planning in a Lesson Study**

Lesson Planning in a Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	It enables me to consider my students' needs and interests while planning my lessons	-	-	17	34	High impact
2	It enables me to focus on the goals I have set for my students	-	-	20	31	High impact
3	It encourages me to engage students with activities that promote a culture of inquiry and practice	-	-	18	33	High impact
4	It provides me mechanisms to look back in improving my lesson planning abilities	-	-	18	32	High impact
5	It impacts my lesson planning abilities	-	1	19	31	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

**Table 7. Teaching Quality in a Lesson Study**

Teaching Quality in a Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	It gives me the feeling of confidence in teaching	1	1	9	40	High impact
2	It gives me the confidence to improve my teaching	-	1	13	37	High impact
3	It enables me to arrive at right decisions in inviting students to come across learning	-	2	13	36	High impact
4	It improves my collaborative practices in designing lessons that engage students	-	1	11	39	High impact
5	It improves the quality of my teaching	-	-	13	35	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

Presented in **Table 7** are the general perspectives of the respondents on the teaching quality in a LS as impacted by the conducted professional development activities in the locale of this study. As it is shown in the table, the respondents perceived a *high impact* on the way they look at the quality of teaching in a LS inspired classroom as reflected in the number vouched for HI in the scale given. This denotes that the

professional development activities in the locale of this study had made a significant impact on the perspectives of the respondents on the teaching quality of a LS class.

**Table 8. Teaching Climate in a Lesson Study**

Teaching Climate in a Lesson Study		Responses				Mode
		NI	LI	MI	HI	
1	It builds my contribution on the development of knowledge and professional development	-	1	19	31	High impact
2	It expands my role in the teaching process	-	2	17	32	High impact
3	It provides avenues in sharing my knowledge in implementing reflective teaching	-	1	17	33	High impact
4	It develops a culture of linkage and collaboration in promoting adaptive pedagogical knowledge and understanding	-	1	18	32	High impact
5	It builds a system and community of inquiry and practice	-	2	16	33	High impact

Legend: NI-No impact; LI-Least impact; MI-Moderate impact; HI-High impact

Presented in Table 8 are the general perspectives of the respondents in terms of the teaching climate in a LS as impacted by the conducted professional development activities in the locale of this study. As it is shown in the table, the respondents perceived a *high impact* on the way they maintain a desirable teaching climate in a LS inspired classroom as reflected in the number vouched for HI in the scale given. This denotes that the professional development activities in the locale of this study had made a significant impact on the way the respondents build a favorable teaching climate in the realms of LS.

Lesson study is a collaborative professional development approach widely used in teaching, particularly in Japan and other Asian countries. It involves a group of teachers working together to plan, observe, and analyze a lesson, with the goal of improving student learning outcomes [2,3,4,9]. The following factors are considered why LS is beneficial in teaching:

1. Collaboration and shared expertise: LS promotes collaboration among teachers by encouraging them to work together to solve instructional problems and to share their expertise. By pooling their knowledge, experiences, and perspectives, teachers can develop more effective teaching strategies and techniques.
2. Reflective practice: LS places a strong emphasis on reflection. Teachers engage in a cycle of planning, teaching, observation, and reflection, enabling them to carefully examine the impact of their instructional decisions on student learning. This reflective practice helps teachers identify areas for improvement and make informed adjustments to their teaching methods.
3. Student-centered approach: LS places the focus squarely on student learning. Teachers design lessons with specific learning goals in mind and closely observe how students respond to different instructional strategies. By closely studying student reactions, teachers gain insights into students' understanding, misconceptions, and learning needs, enabling them to make more targeted instructional interventions.

4. Professional growth: LS provides opportunities for professional growth for teachers. Through collaborative planning and observation, teachers can learn from one another and acquire new teaching techniques. This process encourages continuous learning and development, fostering a culture of professional growth among educators.
5. Research-informed practice: LS encourages teachers to use research and evidence to inform their instructional decisions. During the planning phase, teachers may review educational literature, consult research studies, or explore best practices. This research-based approach ensures that teaching strategies are grounded in evidence and have a higher likelihood of positively impacting student learning.
6. Sustainable change: LS has a long-term impact on teaching practices. By engaging in a systematic process of lesson design, observation, and reflection, teachers can implement and refine instructional strategies over time. This iterative process of continuous improvement leads to sustainable change in teaching practices and positively influences student outcomes.
7. Teacher empowerment: LS empowers teachers by giving them a sense of ownership and control over their professional development. Through collaboration, reflection, and research, teachers become active participants in shaping their teaching practices and improving student learning. This empowerment enhances job satisfaction and professional fulfillment.

While LS has numerous benefits, it is important to acknowledge that there can be resistance to its implementation in certain educational contexts [7,8,10,11]. The following are some of the reasons why LS may face resistance:

1. Time constraints: Implementing LS requires a significant investment of time and resources. Teachers need to collaborate, plan lessons, observe each other, and engage in reflective discussions. In schools with packed schedules and heavy workloads, finding dedicated time for LS can be challenging. Resistance may arise when teachers perceive LS as an additional burden on their already busy schedules.
2. Lack of administrative support: The successful implementation of LS depends on strong administrative support and leadership. Administrators play a crucial role in allocating time, resources, and creating a supportive environment for LS. If administrators do not prioritize or understand the value of LS, teachers may face resistance or lack the necessary support to engage in the process.
3. Fear of judgment and evaluation: LS involves teachers observing and being observed by their colleagues. Some teachers may be apprehensive about being evaluated or judged by their peers, leading to resistance. The fear of being perceived as inadequate or making mistakes can hinder their willingness to participate fully in LS activities.

4. Traditional teaching practices: LS often promotes a shift towards more student-centered and inquiry-based teaching approaches. However, some teachers may be comfortable with traditional teaching methods they have used for years. The introduction of LS may challenge their established practices and require them to adopt new instructional strategies, which can lead to resistance.
5. Lack of trust and collaboration: LS thrives on collaboration, trust, and open communication among teachers. In environments where there is a lack of trust or limited opportunities for collaboration, resistance to LS may arise. Teachers may be hesitant to share their teaching practices or receive feedback from their colleagues due to a fear of criticism or competition.
6. Lack of understanding or misconceptions: Resistance can also stem from a lack of understanding about the purpose and benefits of LS. Some teachers may perceive it as a top-down initiative or as an evaluation tool rather than a collaborative professional development approach. Clear communication and professional development opportunities to educate teachers about the concept and benefits of LS can help address these misconceptions.
7. Cultural and institutional factors: Cultural and institutional factors can influence the acceptance or resistance to LS. In some educational systems, there may be a hierarchical structure that discourages collaboration or limits teacher autonomy. Additionally, cultural norms or values that prioritize individualism over collaboration can impede the implementation of LS.

In the locale of the study, teachers embraced LS as it was introduced strategically by the governing boards in the basic and higher education along with their preparation and continued practice. Lesson study was introduced in 2017 as a professional development program with the University of Philippines as trainers. This was followed in 2018 with its second implementation with UP and QSU as partners. In 2019, a total of 16 sessions, district and division wide practice, were conducted which allowed them to craft lesson plans and other materials. In 2020, 260 papers were documented although only two were published in international journals [7,8]. In 2021, 17 papers were presented in the World Association of Lesson Study in Hongkong, SAR, China.

## 4. Conclusion

Lesson Study is a very good avenue for Professional Learning and Development as it brings high impact on the teaching practices of teachers particularly in the locale of the study, a schools-district of Quirino, Philippines. Moreover, LS brings good educational effects towards besting the learners' experiences in an optimized classroom. Hence, LS practice impacts the teaching skills of the respondents along Assessment of Students Learning, Content Knowledge, Teaching Strategies, Lesson Planning, Quality of Teaching, and Teaching Climate.

Based on the conclusion that LS is a good practice, the following are recommended to further its adoption in the locale of the study and to ensure its successful implementation and maximize its benefits.

1. Establish a supportive school culture: Foster a school culture that values collaboration, continuous improvement, and professional growth. Encourage open communication, trust, and a shared commitment to improving teaching and learning outcomes. Administrators should provide support, allocate resources, and create dedicated time for LS activities.
2. Form a collaborative LS team: Create a LS team consisting of a small group of dedicated teachers who are committed to working together. Ideally, the team should represent diverse subject areas, grade levels, and teaching expertise. This diversity will bring a range of perspectives and experiences to the lesson planning and observation process.
3. Set clear goals and learning outcomes: Clearly define the goals and learning outcomes for the lesson study cycle. Identify specific areas for improvement or instructional challenges that the team wants to address. Having clear goals will guide the planning, observation, and reflection process, ensuring that the team stays focused on improving specific aspects of teaching and learning.
4. Conduct thorough pre-lesson discussions: Prior to teaching the lesson, engage in detailed pre-lesson discussions within the team. Discuss the intended learning outcomes, teaching strategies, and assessment methods. Share and integrate relevant research, educational resources, and best practices. This collaborative planning phase ensures that the lesson is well-designed and aligned with the team's goals.
5. Observe lessons and collect data: During the lesson observation phase, team members should carefully observe the lesson being taught by one team member. Use a variety of data collection methods, such as note-taking, video recording, or student work samples. Focus on student engagement, understanding, and misconceptions. Collecting rich and detailed data will facilitate effective analysis and reflection.
6. Engage in post-lesson analysis and reflection: After the lesson, engage in a structured and reflective analysis of the lesson's effectiveness. Discuss the observed student behaviors, teacher actions, and the impact of instructional decisions. Encourage open dialogue, sharing of insights, and constructive feedback among team members. Use the collected data to identify strengths, areas for improvement, and potential modifications for future lessons.
7. Implement iterative improvements: Based on the analysis and reflection, make informed adjustments and improvements to the lesson. Iterate the lesson based on the team's observations, feedback, and identified areas for growth. This iterative process allows for continuous improvement and refinement of teaching practices.
8. Share findings and insights: Communicate the team's findings, insights, and lesson improvements

with other teachers and stakeholders in the school community. Share the impact of LS on student learning outcomes and the professional growth of teachers. By sharing successes and lessons learned, LS can have a broader impact on the school community.

9. Provide ongoing professional development: Offer professional development opportunities to support teachers in enhancing their knowledge and skills related to lesson study. Provide training on collaborative planning, observation techniques, data analysis, and reflective practices. Ongoing professional development ensures that teachers are equipped with the necessary tools and knowledge to engage effectively in lesson study.
10. Form a professional group in the locale of the study: Forming a dedicated group or organization hasten the adoption of LS in the locale of the study. This will serve as a support system in the establishment of a rich LS culture.

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