

# Effectiveness of Lesson Study in the Teaching of Lower Primary English as a Second Language (ESL) Class

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**Abstract --** This paper reports a study on the involvement of English teachers based on three fundamentals - Knowledge, Skill, Attitude; towards lesson study after it was incorporated in their English as a second language (ESL) classroom. 31 schools were chosen based on data retrieved from the NKRA (National Key Results Area) portal under LINUS (Early Literacy and Numeracy Assessment) Component and from these schools, one respondent was chosen using Convenient Sampling. Using Pearson correlation, results showed a significant positive relationship ( $p < 0.05$ ) of Lesson Study in the teaching of ESL class with Knowledge ( $r = 0.913$ ), Skill ( $r = 0.869$ ) and Attitude ( $r = 0.859$ ). The findings of this study expressed Knowledge, Skill and Attitude of teachers are closely related to the effectiveness of Lesson Study in teaching of ESL class. This research finds that teachers agreed that Lesson Study has succeeded in increasing their commitment to teaching.

**Keywords --** PLC, Lesson Study, Attitude, Knowledge, Skill, Lower Primary ESL Class

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## I. INTRODUCTION

### *Background of the Study*

A lesson study is a professional development practice for teachers and it is very popular in Japan. Japanese lesson study may seem straightforward, where teachers similar focus meet and plan lessons together, which then its implementation will be observed as a group in the classroom before a discussion for improvements and modifications is set up after.

Nonetheless, it is felt that there is a greater need to illustrate the concepts and processes of Japanese lesson study in practice, hence the broken down of its steps to (1) goal setting and planning, (2) establishing long-term goals, (3) planning the research lesson, (4) teaching and observing the research lesson, (5) teaching the research lesson, (6) observing the research lesson and finally, (7) the post-lesson discussion (Yoshida, 1999). Specific step by step guidance will be given to teachers in incorporating this strategy into their lesson planning, at the same time taking factors such as norms in our local education system, such as; stretched class scheduling, time constraints or overlapping in teaching periods. These factors need to be taken into consideration as it is important to contemplate the

possible restrains teachers would encounter in the duration of executing Lesson Study in their own teaching.

Lesson Study does not function as a tool designed to reveal a lesson's effectiveness, or to establish whether students learn what they are supposed to learn and achieve the lesson's objectives. However, the primary focus of a Lesson Study is not what students learn but rather how students learn. It focuses on observing the students' thinking during the lesson, how they make sense of the material, what kind of difficulties they have, how they answer questions, how their thinking changes during the lesson and so forth. Instead of observing how the teacher teaches, this strategy focuses on how students respond to the lesson, which was designed by a collaboration of teachers. This is a form of combined ownership of the lesson that will in the end help pave the way for public knowledge building. It is important that the students' development is taken as the main purpose of this study, to certify that teachers' instruction are more effective when working collaboratively in improving students' second language proficiency, especially in the Lower Primary School ESL class, with it being the foundation of students' early English literacy.

### *Statement of Problem*

Professional development of teachers is intended to replenish teachers' skills, knowledge and confidence and it mainly aims to improve outcomes for the students. Research evidence recommends that despite efforts taken to expose teachers to countless professional development trainings, the results are not always as hoped. Banilowler, Boyd, Pasley and Weiss (2006) state that, "professional development sessions are designed to deepen content knowledge and support teachers' content needs during implementation sometimes failed to delve into the very content they were designed to address, due to passing teacher concerns such as management of pedagogy". A good professional development programs are driven by lucid, distinct image of an effective classroom teaching and learning in which will offer teachers the opportunities to expand knowledge and skill, at the same time broaden their teaching approaches so they can create better learning prospects for students. This certifies that a lesson study demonstrates an effectual attempt at improving teachers' instruction. Lesson Study was introduced in the Malaysian education system in 2011 but the implementation has yet to meet the objectives and standards, and it is in this focus that this study is outlined.

### **Objectives of Study**

The objectives of this research are as follows:

1. To investigate the effectiveness of Lesson Study (LS) among teachers in ESL class.
2. To determine factors that contribute to the effectiveness of Lesson Study (LS) amongst teachers in ESL class.
3. To determine the relationship between effectiveness of Lesson Study (LS) and independent variables such as knowledge, skill and attitude among teachers.

## **II. LITERATURE REVIEW**

### **Defining the Lesson Study**

Research in the field of school effectiveness found that students' progress in learning are affected by the school system's performance, backed by two major components which are the quality of leadership and the quality of teachers. To improve school performance in increasing its overall distinction, all schools were listed and rated using a system (Band 1-7) and with that, several schools in the category of low achievers have been given support and encouragement to improve the aspects of leadership also in the field of teaching and learning. Teachers and school leaders are given trainings to increase professionalism by certain sections of the Ministry of Education. Among the initiatives undertaken to ensure the preservation of quality teachers is a Professional Learning Community (PLC).

Selecting PLC as one of the initiatives to improve the quality of teachers is based on trends and expansion of education in developed countries, where the establishment of professional learning communities amongst teachers is seen as an effort to improve their professionalism. In general, PLC refers to the efforts of educators who are committed and work collaboratively, continually make an inquiry or action research to achieve better performances for their students (Dufour, Eaker and Manny, 2006).

The Japanese Lesson Study is a school-based effort and organised by the teachers themselves without being funded and without it being mandatory. It involves groups of teachers meeting regularly over a period (ranging from several months to a year) to work on the design, implementation, testing, and improvement of one or several "research lessons" (Stigler & Hiebert, 1999). Research lessons are actual classroom lessons, taught to one's own students that are (a) focused on specific teacher-generated problem, goal, or vision of pedagogical practice, (b) carefully planned, usually in collaboration with one or more colleagues, (c) observed by other teachers, (d) recorded for analysis and reflection, and (e) discussed by lesson study group members, other colleagues, administrators, and/or an invited commentator (Lewis & Tsuchida, 1998).

Generally, Lesson Study provides a passage or an opportunity for professional development of teachers. In

comparison with one teacher professional development model to another, Lesson Study is unquestionably a unique model. Through this approach, school teachers work collaboratively in producing daily lesson plans that focuses on students' learning, within the combined practice of recruiting ideas, experience and skills that will develop the knowledge content. This is done through meetings and discussions of a group of teachers throughout fostering the production of teaching content, development of ideas and individual creativity in the process of lesson planning. However, to successfully instil a Lesson Study culture and to ensure its thriving implementation, teachers need to change the paradigm in line with the concept of lifelong learning.

The term Professional Learning Community (PLC) exists among educators as early as the 1960s. Rosenholtz (1989) conducted a study in 78 schools and found that the improvement in teaching and learning are done collectively and not individually. Little and McLaughlin (1993) also reported that the most effective schools and organizers are those who incorporate strong learning community in the institution. Based on this information, in 2011, the Department of Education for Teachers (BPG) has implemented the PLC using the strategy of Lesson Study in 289 low performing schools. The culture of collaborative learning and teaching activities amongst teacher community has shown encouraging results in improving school-based teacher professionalism. These efforts continued in 2012 in 107 schools.

### **Theoretical Framework**

To replicate a strategy that is said to be effective, there must be a theoretical organization to sustain its use. In association to this fact, it is reasonable to say that the basic theory of constructivism provides an outline that supports the use of Lesson Study as a tool in developing teachers' knowledge and skill. The primary theoretical principle of social constructivism asserts the social nature of knowledge and the belief that knowledge is constructed through social interaction and is a shared rather than an individual experience (Gergen, 1995; Vygotsky, 1978). Moreover, another principle of social constructivism indicates that knowledge acquisition is an adaptive function designed to organize one's experience (Fleury, 1998; Prawat & Floden, 1994). Therefore, teachers will be motivated to seek, investigate and consider various reactions within a collaborative surrounding when confronted with problems or discrepant events. This instance can be seen in the initial phase of a Lesson Study, where teacher study groups work together in setting a goal or aim that describes the qualities they would like to expand in their students during teaching and learning sessions. These goals are constructed based on a gap that teachers identify between their objectives for their students and how these students are developing and progressing. Consequently, teachers plan out their lessons around the struggles students are having and their own difficult encounters. The third principle of constructivism relates

that knowledge is the result of active mental processing by the individual in a social environment (Cobb & Yackel, 1996; Prawat, 1996). Thus, teachers should be inspired to reflect on their own experience to understand and explain their thoughts to others. When working in the lesson study groups, teachers are given the opportunity to reproduce, analyse, create action steps, assess and share their perceptions on things with other teachers. These principles of social constructivism grounds Lesson Study and certifies the process laid out within the process is important in increasing teachers' professional knowledge and skills.

### III. METHODOLOGY

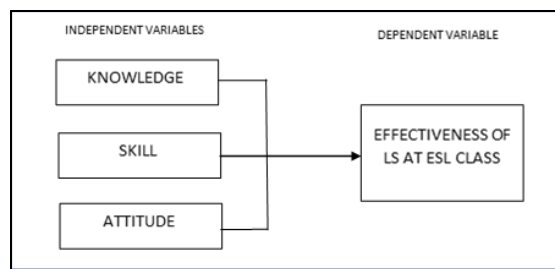
#### Research Design

Quantitative approach will be applied to acquire comprehensive and realistic data. Burns and Grove (1993:777) define quantitative research as a formal, objective, systematic process to describe and test relationships and examine cause and effect interactions among variables. Surveys may be used for descriptive, explanatory and exploratory research. A survey obtains information from a sample of people by means of self-report, that is, the people respond to a series of questions posed by the investigator (Polit & Hungler 1993:148). In this study, information was collected through self-administered questionnaires distributed personally to the subjects by the researcher. This design was chosen to meet the objectives of the study, namely to determine the effectiveness of Lesson Study through teachers' own feelings and insights. It will be carried out by English teachers of primary schools. The researcher posts as a medium in making sure the process of Lesson Study is administered accurately.

In designing the survey research process, the researcher performed four main important tasks to complete the research. These tasks are 1) designing survey questionnaire 2) conducting the survey, 3) analysing the result of the survey 4) reporting the survey results. The main assumption associated with convenience sampling is that members of the target population are homogeneous. That is, there would be no difference in the research results obtained from a random sample, a nearby sample, a co-operative sample, or ample gathered in some inaccessible part of the population.

#### Hypothesis Testing

A hypothesis is a statement which may or may not reflect any relationship. It is a statement made about the result of an experiment which has been tested. In this case, the best way to determine whether a statistical hypothesis is positive or negative, Pearson Correlation Coefficient is used to prove the researcher's beliefs that the independent variable (Knowledge, Skill, Attitude) has positive effects on the dependent variable (Effectiveness of Lesson Study in ESL Class).



The hypothesis are as follows:

H1 There is a significant relationship between knowledge among teachers and effectiveness of Lesson Study in ESL Class.

H2 There is a significant relationship between skills among teachers and effectiveness of Lesson Study in ESL Class.

H3 There is a significant relationship between attitude among teachers and effectiveness of Lesson Study in ESL Class.

#### Participants

The study population consisted of 31 English teachers who were already involved with Lesson Study in 31 primary schools of Hulu Langat; chosen based on data retrieved from the NKRA portal under the component of LINUS as one of the schools listed to be low achievers in the areas of Early English Literacy Assessment, with the Key Performance Index (KPI) below 95%. Convenient sampling is the process applied in selecting a representative from the population under study.

#### The Instrument

For this research, a questionnaire was the main method of data collection. It was divided into three sections. Section A aimed to retrieve teachers' demographic profile (i.e., age of teachers, gender, teaching experience, current grade, highest education level and English majors). Section B were questions related to knowledge, skills and attitude, answered in a five-point Likert scale. Section C were open-ended questions about strengths, weaknesses and suggestions from teachers as respondents throughout Lesson Study implementation.

#### Data Analysis

Data analysis was conducted using Statistical Analysis for Social Science (SPSS) version 16.0. The first part of analysis is a descriptive analysis. This involves the computation of means, standard deviation, frequencies and ranking of response on the items in the questionnaire. The second part of the analysis is factor analysis, which involves factorizing and identifying items which are important for measuring the effectiveness of Lesson Study in the teaching of ESL class. The third part of the analysis includes determining correlation of items in the inventory as well as determining the reliability using Normality Test.

**Pilot Test**

The pilot study was commenced using sample distributed to 10 volunteer respondents at SK Taman Cuepacs and SK Lubuk Kelubi consisting of 5 English Language teachers in each school. The pilot study was done to determine the reliability of the instrument that is used in this study.

**IV. FINDINGS**

**Demographic**

The respondents have been notified with a one-week duration to complete and return the questionnaire. All 31 samples have been successfully collected.

TABLE 1: DEMOGRAPHIC PROFILE

		Frequency	Percent	Cumulative Percent
Age	Below 30 Years	4	12.9	12.9
	30 Years – 40 Years	19	61.3	74.2
	More than 40 Years	8	25.8	100.0
	Total	31	100.0	
Gender	Male	2	6.5	6.5
	Female	29	93.5	100.0
	Total	31	100.0	
Teaching Experience	Below 10 years	22	71.0	71.0
	More than 10 years	9	29.0	100.0
	Total	31	100.0	
English Optionist	Yes	22	71.0	71.0
	No	9	29.0	100.0
	Total	31	100.0	
Education Level	Diploma	6	19.4	19.4
	Bachelor Degree	23	74.2	93.5
	Master Degree	2	6.5	100.0
	Total	31	100.00	
School Category	Sekolah Kebangsaan	25	80.6	80.6
	Sekolah Jenis Kebangsaan Cina	3	9.7	90.3
	Sekolah Jenis Kebangsaan Tamil	3	9.7	100.0
	Total	31	100.0	
School Location	Town Area	22	71.0	71.0
	Rural Area	9	29.0	100.0
	Total	31	100.0	

Table 1 shows respondents are from 28 years to 52 years old. The researchers have grouped them into three age categories as shown in the table above. Most respondents are aged 30-40 years (61.3% or 19 respondents), more than 40 years old (25.8% or 8 respondents) and below 30 years old (12.9% or 4 respondents). Overall respondents have from 2 years to 23 years of teaching experience. The researchers have grouped them into two categories i.e., under 10 years and over 10 years. This is because in field of education, particularly in the Malaysian education context, 10 years of experience can still be considered as novel teachers. Most respondents have less than 10 years of teaching experience (71.0% or 22 respondents) compared to more than 10 years (21.0% or 9 respondents). In addition, results show that 71.0% of the respondents are optionists in English teaching (or those who choose English subject as their expertise) while 29.0% are not.

**Knowledge, Skill and Attitude and their relationship with Effectiveness of LS in Teaching of Primary ESL Class**

The respondents were asked to rate the five dimensions based on Likert scale ranging from strongly disagree (1) to strongly agree (5). Mean scores for the five scales which consist of 15 items show the means values ranged from

3.42 to 4.61 and range for standard deviation is between 0.495 to 0.803.

**Knowledge**

As reflected in the survey, the five items have means between 3.77 and 4.29 (Table 2), which shows moderate level of respondents believe that knowledge contributes to effectiveness of Lesson Study in the teaching of the primary ESL Class.

TABLE 2: MEANS AND STANDARD DEVIATION OF ITEMS MEASURING THE KNOWLEDGE IN LS IN THE TEACHING OF PRIMARY ESL CLASS

Items	Mean	Mode	Standard Deviation
1. I have knowledge of Lesson Study in teaching Lower Primary ESL class.	4.29	4.0	0.588
2. I can use Lesson Study knowledge in teaching Lower Primary ESL class	4.16	4.0	0.688
3. I can share knowledge of Lesson Study in teaching Lower Primary ESL class with other fellow teachers	3.87	4.0	0.670
4. I can teach the knowledge of Lesson Study in teaching Lower Primary ESL class to English teachers	3.77	4.0	0.717
5. I can spread knowledge of Lesson Study in teaching Lower Primary ESL class to all teachers	3.77	4.0	0.762

**Skill**

Table 3 below shows the outcome of the test for variable skill contributed to the effectiveness of LS in The Teaching of Primary ESL Class. Amongst the five items, item one (I have the skills in Lesson Study in Teaching Lower Primary ESL Class), recorded the highest mean 3.68 and standard deviation of 0.748, whereas 45.2% of the respondents agree and 12.9% of the respondents strongly agree on this item. However, there are 12 respondents or 38.7% are undecided with that statement.

TABLE 3: MEANS AND STANDARD DEVIATION OF ITEMS MEASURING THE SKILL IN LESSON STUDY IN THE TEACHING OF PRIMARY ESL CLASS

Items	Mean	Mode	Standard Deviation
1. I have skills of Lesson Study in teaching Lower Primary ESL class.	3.68	4.0	0.748
2. I can use knowledge on Lesson Study in teaching Lower Primary ESL class	3.61	4.0	0.803
3. I can transfer skills of Lesson Study in teaching Primary ESL class with other fellow teachers.	3.52	3.0	0.677
4. I can teach the skills of Lesson Study in teaching Primary ESL class to other English teachers.	3.42	3.0	0.672
5. I can handle the training of Lesson Study skills in teaching Lower Primary ESL class to all teachers.	3.42	3.0	0.672

**Attitude**

The following test (Table 4) is about the relationship between attitude towards the effectiveness of LS in teaching Lower Primary ESL class. The outcome reflects positive attitude amongst respondents stating that Lesson Study increases their motivation, particularly on commitment and co-operation with colleagues, which scored the highest mean with 4.61. Moreover, from the 31 respondents, none voted negatively on this question; with 38.7% of the respondents agreed and 61.3% of the respondents strongly agreed. This certifies that respondents' agree that Lesson Study can increase teachers' commitment in teaching effectively when it is done collaboratively.

TABLE 4: MEANS AND STANDARD DEVIATION OF ITEMS MEASURING THE ATTITUDE IN LS IN THE TEACHING OF THE PRIMARY ESL CLASS

Items	Mean	Mode	Standard Deviation
1. I am interested in Lesson Study.	4.29	4.0	0.643
2. I am confident with Lesson Study as it relates to my field of work.	4.13	4.0	0.763
3. Lesson Study helps to be more productive and productive.	4.06	4.0	0.772
4. Lesson study encourages my work to be more efficient.	4.06	4.0	0.727
5. Lesson study increases the commitment and co-operation of colleagues.	4.61	5.0	0.495

**Reliability Analysis**

The reliability tests for this study show the result as below (Table 5):

TABLE 5: CRONBACH'S ALPHA ANALYSIS

Items	Number of item	Cronbach's Alpha
Knowledge	5	0.931
Skill	5	0.943
Attitude	5	0.933

According to Tovakol and Dennick (2011), low value of alpha could be due to a low number of questions, poor interrelatedness between items or heterogeneous constructs. However, based on the recommendation by Dr. Klassen (2003), in general an Alpha equal to or greater than 0.6 is considered a minimum acceptable level, although some authorities argue for a stronger standard of at least 0.7. Respondents were tested to evaluate their perception towards five-point Likert scale questions and the data reliability analysis show that all five dimensions have records the range of 0.931 to 0.943. Therefore, it is acceptable according to the above statement made by Dr Klassen.

**Correlation Analysis**

TABLE 6: CORRELATION

		KNOWLEDGE	SKILL	ATTITUDE	EFFECTIVENESS
KNOWLEDGE	Pearson Correlation	1	.750**	.683**	.913**
	Sig. (2-tailed)		.000	.000	.000
	N	31	31	31	31
SKILL	Pearson Correlation	.750**	1	.558**	.869**
	Sig. (2-tailed)	.000		.001	.000
	N	31	31	31	31
ATTITUDE	Pearson Correlation	.683**	.558**	1	.859**
	Sig. (2-tailed)	.000	.001		.000
	N	31	31	31	31
EFFECTIVENESS	Pearson Correlation	.913**	.869**	.859**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	31	31	31	31

\*\* Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis is used to describe the strength and direction of the linear relationship between two variables. In this research, Pearson correlation is used as the procedure in obtaining and interpreting. Pearson correlation coefficients (r) can only take on values from -1 to +1.

Table 6 shows the relationship between effectiveness and knowledge, skill and attitude. We see the value of p for (knowledge and skill) is  $p = 0.0001$ . The p value is below the value of alpha 0.05 which means that there is a significant relationship between knowledge & skill which indicates that with higher knowledge of LS the higher the skill of the teachers in conducting a LS.

In addition to this, the relationship between effectiveness with knowledge, skill and attitude shows the value  $p = 0.0001$ . This directs the researcher to believe that there is a significant relationship existing between the variables.

**V. CONCLUSION**

The results from the study shows positive relationships between knowledge, skill and attitude with the effectiveness of using lesson study in teaching and learning. Teachers' knowledge has a strong relationship with the effectiveness of lesson study followed by skill and attitude; knowledge (3.92), skill (3.59) and attitude (4.12). This information tells us that having knowledge, skills and positive attitude during conducting Lesson Study in teaching and learning is accommodating in producing effective teachers and lessons.

Moreover, looking at the five items in attitude, the frequency of the fifth item indicates that respondents agree that lesson study is helpful in the relationship with fellow colleagues. The mean value (4.61) is supported by mode (5.0) which shows that 61.3% respondents strongly agree with the statement and 38.7% agree with the statement. This indicates that through Lesson Study, our teachers are more open to cooperative work, at the same time able to improve themselves professionally during discussion and reflection with their colleagues.

Rosenholtz (1989) conducted a study in 78 schools and found that the improvement in teaching and learning are



done collectively and not individually. Little and McLaughlin (1993) also reported that the most effective schools and organizers are those who incorporate strong learning community in the institution. Seeing that Lesson Study fosters positive attitude on relationship between colleagues, it is also possible that a lesson study program can be applied in different organizations with the aim of improving the relationship between members of an organization and thus improving the quality of production.

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