Issues Relating to the Implementation of Lesson Study in the Malaysian Education Context

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Abstract: *This qualitative study explored the implementation of Lesson Study, a kind of teacher-directed approach of Japanese model of teacher pedagogical development in the Malaysian education context. It seeks to answer a research questions: what are the school-based factors that support or hinder the implementation of lesson study in the Malaysian education context? Multiple data sources were gathered through in-depth interviews, observations, group discussions and reflections as well as participants' journal writing. Data sources were gathered through in-depth interviews and observation. Analysis of the qualitative data indicated that the lesson study has provided an encouraging opportunity and venue for the respondent to collaborate, discuss and share their teaching experiences in managing their lesson. As lesson study was a relatively new culture of teacher learning, various constraints and challenges were encountered in implementing the lesson study. On a micro level, there were three constraints, namely time, teachers' workload and the perception of teaching observation. On a macro-level, this study implied two main challenges: (i) the lack of teachers' awareness of professional development, and (ii) the examination-oriented culture rooted in the education system. However, when provided with sufficient supporting factors such as positive support from the school administrators, committed and dedicated group leader and strong collegiality among the lesson study team, then lesson study could be successfully implemented as an effective and innovative mode of teacher professional learning.*
Keywords: *Lesson Study, ProfessionalTeacher Development, Qualitative Research Methodology,Student-centeredapproach.*

I. Introduction

Lesson study, a form of collaborative practice, is a school-based professional development initiative that aims to enhance teaching and learning through the methodology of professional sharing of practice (Burghes and Robinson 2009) [1]. Reforms in curriculum and educational policies are aimed to overcome deficiencies and weaknesses as well as preparing the nation to face global challenges in the future. Malaysia, a developing nation has been revamping and reviewing educational policies to strive a higher level of educational standard. One of the major issues addressed in educational reforms is the teachers' quality and this is close related to teacher professional development. To overcome the deficiencies and weaknesses of teachers' teaching, the MOE has been conducting various in-service programmes and courses with the aim to improve teachers' teaching knowledge, skills and competency. It is a widely-held perception and belief that this would impact on teachers, and in turn change and enhance their teaching practices. It is vital to devise, formulate and seek an effective approach of in-service programme that would enhance teachers' teaching. Lack of continuity and support for the teachers in their professional development were argued to have not produce an effective change in teachers' teaching (Loucks-Horsley, Stiles, and Hewson, 1996) [2].

Conversely, it was pointed out that a critical component in any educational reform effort is to provide teachers with opportunities and appropriate support for improvement in pedagogical practice (Darling-Hammond and McLaughlin, 1995 [3]; Garet et al., 2001) [4]. Hence, it is vital to analyze the situational context and identify the problems that might have influenced the effectiveness of the in-service programmes conducted for teachers in Malaysia. What are the main sources of problem? How should the in-service programmes be conducted effectively? In other words, is there an alternative approach of in-service programme that is deemed effective to enhance teachers' teaching?

II. Literature Review

2.1. Lesson Study for Teacher Professional Development

In *The Teaching Gap*, Stigler and Hiebert (1999) [5] summarized four main features of lesson study. They are: (i) lesson study is based on a long-term continuous improvement model, (ii) lesson study maintains a constant focus on student learning, (iii) lesson study focuses on direct improvement of teaching in context, and (iv) lesson study is collaborative. Evidently, these features are consistent to the principles of effective professional development as discussed earlier. Lesson study is a structured model of teacher professional development that consists of specific steps in the implementation. In the lesson study process, teachers would spend considerable time in lesson planning to best serve their students' learning (Fernandez and Yoshida, 2001) [6]. They will discuss and share their evidences on students' learning and then, formulate an effective lesson plan that will be best to facilitate the students' learning on a particular topic (Lewis, 2002) [7].

During lesson planning, teachers will find themselves sharing and thinking about their own experiences in the classroom. This encourages the teachers to reflect and consequently, enhance their teaching knowledge (Fernandez & Yoshida, 2001) [6]. Through the discussions and arguments during lesson planning, Lewis and Tsuchida (1998) [8] observed that conflicting ideas created would provide the opportunity for teachers to reflect and gain new teaching knowledge and ideas. Subsequently, when teachers observe their peer's teaching, it again provides valuable opportunities for

the teachers to examine their teaching practices through self-reflection (Fernandez and Yoshida, 2001 [6]; Lewis, 2002) [7]. As such, the processes within the lesson study context looks very promising to enhance teacher professional development.

When analyzed explicitly, the model of lesson study itself adheres to the principles of effective professional development. It is a school-based in-service programme that requires teachers to work together and collaboratively improve their teaching practices (Hiebert et al., 2002) [9]. Lewis (2002) [7] noted that lesson study would create a learning environment for teachers to collaborate in school. This view was well supported by Shimahara (1998) [10] who expressed that peer collaboration is vital to support the learning of craft teaching knowledge. Nevertheless, Shimahara (1998) [10] cautioned that lesson study would have a minor setback if it is only confined within the peer's group in the school. Having reviewed briefly on the structure and processes of lesson study, it seems clear that lesson study is consistent to the principles of effective professional development. More importantly, lesson study is structured as a long-term programme for teacher professional development that has been practiced decades ago in Japan. Research studies to date have been supporting the practices of lesson study for teachers' professional development (Lewis and Tsuchida, 1998 [8]; Stigler and Hiebert, 1999 [5]; Fernandez and Yoshida, 2001 [6]; Lewis, 2002 [7]; Hiebert et al., 2002) [9].

2.2. Perspectives of Teacher Learning

To enhance teaching, teachers should continue to learn and seek professional development programmes that will improve their teaching knowledge and pedagogical skills. In reality, teachers continue to learn about teaching in a variety of ways. They learn from their own teaching practices in the classroom (Ball and Cohen, 1999 [11]; Ball, 2000) [12]. Teachers gain new knowledge and understanding of their students, curriculum and pedagogical practices when they engage in actual teaching practices (Schon, 1987) [13]. According to Ball (2001) [14], teaching is a practice and not a domain of knowledge. For this reason, she provided three perspectives on teacher's professional learning: (i) learning by acquiring new knowledge; (ii) learning through collegial interaction, and (iii) learning in and from practice (in a classroom context). Ball and Cohen (1999) [11] described a *pedagogy* of professional development that includes components based on the contemporary knowledge of how people learn. The pedagogy of professional development includes a community of teachers actively designing a learning task for actual teaching. To enhance teachers' teaching, a learning environment must be created for teachers to discuss and analyze students' learning and work in collaboration with others (Ball and Cohen, 1999) [11]. This perspective of learning is closely parallel to the Vygotsky's theory of sociocultural learning.

As suggested in the principles of effective professional development, teacher collaboration and support from their peers are crucial for their professional development. Lieberman (1986b) [15] suggested that teacher collaboration is a powerful means to increase teaching knowledge through collegial relations. Teachers learn through their interaction with other teachers, either in formal or informal situations. Apparently, novice teachers learn through formal mentoring or supervision by an experienced teacher who provides valuable insight or advice (Putnam and Borko, 2000) [16]. In addition, teacher learning is also enhanced through various collaborative approaches such as peer coaching, action research, group discussions and lesson planning. For this reason, learning to teach is a highly complex process and teachers will continue to learn teaching in multiple ways and tasks. The literature advocated that networks, collaborative and partnership will provide teachers with professional learning community to support their changes in teaching practices (Lieberman and McLaughlin, 1992 [17]; Lieberman, 1995 [18]; Hiebert et al., 2002 [9]; Elmore, 2002) [19].

2.3. Teachers' Teaching Knowledge

Generally, all teachers have some sort of knowledge to teach. The experiences as a student in school, the teaching knowledge and pedagogical skills acquired during teacher education programme have provided the foundation for teacher's teaching knowledge. However, to enhance or improve teaching practices, the knowledge base for teaching needs to grow and continuously improve (Hiebert et al., 2002) [9]. The significance of teacher's teaching knowledge in teaching practices was well grounded in the past and current literature. According to Ball and Cohen (1999) [11], teachers need to understand the subject matter, pedagogy and students as learners in developing professional teaching practices. Subject matter or content knowledge is vital for teachers to teach but it is actually inadequate in the real context of teaching (Wilson et al., 1987 [20]; Ball, 2000) [12].

Ball (2000) [12] observed that the subject matter and the pedagogy domains had been persistently divided in the conceptualization of teacher education curriculum. This has subsequently led to the notion that the subject matter and pedagogy are two separate domains (Wilson et al., 1987) [20]. This situation leaves the teachers on their own to integrate subject matter knowledge and the pedagogy in the real context of teaching (Wilson et al., 1987 [20]; Ball, 2000) [12]. In other words, teachers need to develop the pedagogical content knowledge on their own. Ball (2000) [12] explained that it will happen in the course of teacher's teaching experience. Sharing Ball's view, Shulman (1987) [21] referred it as the *"wisdom of practice."* In Shulman's (1987) [21] view, the pedagogical content knowledge is a critical form of professional teaching knowledge, and perhaps the paramount element in the knowledge base for teaching. Nevertheless, despite the complexity of teaching, the teaching knowledge (such as subject matter, pedagogical content, students as learners) is regarded as the fundamental and foundation in teaching. Hence, in-service educations and professional development programmes should aim to increase and expand the teaching knowledge of teachers.

2.4. Reflective Practice

Reflective practice in teaching has gained its importance in the context of effective teaching practices (Calderhead and Gates, 1993) [22]. The literature and documents on effective teaching are often linked to teacher's reflective practice. The concept of reflective practice was based on the earlier work of John Dewey but was promoted by Schon in the 1980s. It has since established itself as a powerful metaphor in the context of effective teaching and professional development (Ball, 1996 [23]; Calderhead and Gates, 1993 [22]; Calderhead and Shorrock, 1997) [24]. Schon (1987) [13] identified two forms of reflection which could be applied in the context of teaching. The first one, which he termed *"reflection-in-action"* refers

to the processes of monitoring and adapting one's behavior in the context. As teaching is rather complex and unpredictable, teachers cannot rely on routine and specific ways to cope with various situations. Hence, teaching involves a process of acting and reflecting on the effects of one's actions and constantly adapting one's behavior to the situation. The second type of reflection, termed as *"reflection-on-action"* places emphasis on after the event evaluation. Teachers, after a lesson or after the day is over, may reflect on a particular event and analyze the difficulties which arise during that situation. After making some considerations, the teachers may take some stance to decide on the future directions their teaching might take. The notion of reflective practice in teaching that emerged in the 1980s was mainly due to the changes in the perspective of teaching. According to Calderhead and Shorrock (1997) [24], the principle in the reflective practice suit well to the trend and changes in the teaching profession. It emphasized that teachers need to analyze, discuss and evaluate their teaching to improve their own teaching practices. In other words, this perspective suggests that teachers need to reflect and make their own decision based on the realities of their classroom. Reflective practice is critical in the context of professional development because it enables teachers to gain a better understanding of their own teaching practices (Cruickshank and Applegate, 1981 [25]; Ferraro, 2000) [26]. Supporting this similar stance, Ball (1996) [24] expressed that reflective practice is central to teacher's learning to teach and would ultimately enhance the teacher's teaching practices.

Naturally, teachers are able to reflect on their practical experiences and analyze their own teaching practices (Calderhead, 1989) [27]. Hence, the issue is how to enhance the reflective practice of the teachers that will ultimately contribute to the improvement of teachers' teaching knowledge and practices in the classroom. For instance, the practice of action research is well documented to enhance teachers' reflective practice. Cruickshank and Applegate (1981) [25] suggested that *"peer teaching and evaluation by their colleagues give teachers insight into their teaching strategies"* (p. 553). As such, professional development programmes should emphasize the opportunities and means for teachers to reflect critically on their teaching knowledge pertaining to the subject matter, pedagogy and students as learners (Darling-Hammond and McLaughlin, 1995) [3].

III.   Methodology

Qualitative research is known to be able to provide rich and deep understanding of social phenomena compared to quantitative research (Silverman, 2005) [28]. Case study design was chosen for this study as it was defined by Creswell (1998) [29] that case study is *"an exploration of a bounded system or a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context"* (p. 61). The lesson study process adopted in this study is a kind of teacher professional development originated from Japan. Having selected qualitative case study as the research design, two groups of secondary school teachers were sought as the participants. School A and School B, located within the district of Kulim in Kedah were chosen mainly because the sites were near to the researcher's premise. However, the more important consideration in selecting both the schools was the school principals' consent and permission to carry out the research. This aspect was deemed vital to carry out any research study in Malaysia. No specific criteria were imposed by the researcher in selecting the schools as the initial and real concern was getting the consent from the school principals as *"gate-keeper."*

IV.   Data Collection

Interview is the most widely employed method to collect data in qualitative research (Bryman, 2004) [30]. Through interview, the researcher could obtain rich, in-depth and detailed information that shows or reflects the views and perceptions of the participants. Interview is also appropriate to seek information in the past as concurred by Merriam (1998) [31] that, *"It is also necessary to interview when we are interested in the past events that are impossible to replicate"* (p. 72). The researcher used semi-structured interview as suggested by Yin (1994) [32] and Creswell (2003) [33] to focus on certain aspects of interest that were relevant and important for this study.

However, unstructured part of the interview was also allowed to collect any unanticipated data that were deemed vital and relevant to conceptualize the findings of this study. There were two forms of interview in this study: group interview and individual interview that were conducted at the end of every lesson study cycle. At the end of each lesson study cycle, group interview was conducted with the participants to gain an overview of the lesson study process conducted. All group interviews were taped and later transcribed by the researcher. After each lesson study cycle was completed, the researcher conducted an interview with each individual participant. The duration for each interview was between 20 to 50 minutes with an average of 25 minutes. The participants were interviewed individually with semi-structured and open-ended questions to probe the participants' views and reflections of the lesson study conducted.

V. Data Analysis

A distinctive characteristic about qualitative research is on-going analysis during the process of data collection (Creswell, 2003) [33]. Hence, there were two stages of data analysis in this study: data analysis during fieldwork and post fieldwork data analysis. The data analysis during fieldwork was vital to enable the researcher to focus and conceptualize on key emerging issues, in particular the constraints and challenges to implement lesson study. Consequently, to move on with this study, the researcher had allowed some flexibility to overcome the challenges faced in the lesson study implementation. At the preliminary stage of this study, the researcher performed the role as lesson study facilitator to engage the participants. This was to ensure that the participants were appropriately engaged as in the actual context of lesson study. Due to the constraints faced in the lesson study implementation, preliminary analysis allowed the researcher to reflect and wonder if the constraints were due to the educational system and teaching culture which was further examined after the data collection has completed.

Another issue encountered while in the fieldwork was the attitude and commitment of the participants. There were signs and gestures of reluctance among the participants to engage in the lesson study at the beginning but they began to show interest as the research progressed. For instance, they deliberately showed little interest to share and discuss during the

discussion session. Preliminary analysis helped the researcher to determine if the participants were coerced into participation by their school administrators or they have yet to understand and conceptualize the rationale of lesson study. The findings emerged include the participants' attitude and the lack of awareness of teacher professional development in the schools as one of the key factors uncovered was the reluctance of the participants to stay back after school dismissal. Nevertheless, the major data analysis work was conducted upon the completion of the fieldwork.

All group discussions, interviews and teachings that were audio taped were transcribed into verbatim transcripts. The post fieldwork data analysis involved analyzing the data from field notes, interview transcripts of the discussions and teachings. These data collected over the 12-month period was indeed voluminous and the research questions have indeed provided great assistance to the researcher in analyzing the data as suggested by Miles and Huberman (1994) [34]. The initial step taken to analyze the data was identification of key ideas. Based on the transcribed data, and field notes, the researcher read several times and synthesized the information to get a *general sense* or idea that reflects the whole study as suggested by Creswell (2003) [33]. In reality, each transcript was read until it was clear of its meanings that reflect the ideas in the paragraph. Although qualitative research paradigm stresses the findings to surface from empirical data (Richards, 2005) [35], the researcher focused on data related to the research questions were identified and gathered as codes. In this step, the researcher extracted relevant and appropriate quotes or words from each transcript and placed them under major themes of the research questions. In the course of action, some data were probably neglected if deemed irrelevant in the view of the researcher.

As the quotes relevant to each theme were extracted, initial domains began to emerge from the data. The quotes were then re-examined whether they appropriately fit to the domain while new ones were created to cater the needs. In the same domain, data retrieved from the researcher's field notes has the following: *participants' attitude towards work and teaching profession, school cultural factors* and *teachers' awareness of professional development*. Besides the responses gained from the participants, the events in each of the lesson study cycle also provided the data and evidences. The next task was to refine these domains and cross-check if they were deemed appropriate. In reality, many of the domains were interrelated and could not be clearly distinguished. Besides, data from the two sites were compared, analyzed and contrasted to enhance its reliability. The cross-case analysis allowed the researcher to identify and conceptualize the emerging themes from the study which are guided by the research questions. At the same time, analysis was also made for any contradicting evidences in the study. As this study was qualitative, and therefore interpretative in nature, the researcher concluded the overall findings on personal views and reflections guided by the principles in qualitative research.

V.   Result And Discussion
6.1. Issues and Challenges in the Lesson Study Implementation
In general, these constraints can be classified into school-based or teacher-related factors. The school-based factors are time constraint and teacher's workload while teacher-related factors are mainly personal characteristics such as attitude, perceptions and commitment towards the teaching profession. Nonetheless, these factors are found to be interrelated and intertwined with one another and have exerted significant influence towards the participants' commitment in the lesson study process. Indirectly, this affected the influence of the lesson study in this research.

6.1.1 Time Constraint
Time constraint was reiterated by the participants in almost every lesson study cycle. From the data analysis, it was deduced as a major constraint for the lesson study implementation. As quoted by Jayanthi;

> "*Time constraint, very hard to gather the teachers together. Sometimes, they are not here [absent] . . . then, they come in the middle [in the midst of lesson study cycle] and they don't understand what is happening around*". (Interview: 10/08).

For instance, in the third lesson study cycle conducted at School A, the attendance record showed that not a single session has full attendance of all the participants. Aishah was out-of-school consecutively for three weeks as she was appointed by the state education department to coach and train students for inter-state bowling competition. Hence, she did not participate in the first and second discussions. Likewise, Zaiton and Raja missed the second discussion when they were assigned to supervise students for an inter-school games held in another school premise. Rohani, Malik and Raja could not participate in the third discussion because they were instructed to attend the one-week course organized by the state education department. Nori started her maternity leave after the second discussion and thus, she was not able to participate for the rest of the sessions in the

cycle. Malik missed some of the lesson study sessions as he was busy with the hockey and chess competition in the school. With regards to Raja's attendance in this cycle, he explained:

> *I could not involve and as I said, after I came back from one week course, I seldom communicate with other teachers. This is a big school and has a lot of teachers. From Sunday till Wednesday, I have many teaching periods. I always go to class, so less communication with other teachers. I did not get information [lesson study meetings] from other teachers like Rohani or Jayanthi. That's why I was lost in this cycle [not aware of the lesson study meetings].* (Interview 33a: 11/05).

The time constraint as expressed by the participants was closely linked to the tight schedule of the school activities and programmes being carried out. Ziti elaborated:

> *A lot of school's activities. In the first month, when the school re-opens, it is sport. For sport practices, the morning teachers have to come in the evening. In the third month, its Sport's Day, almost a month without lesson. Then, the fifth month, it's the mid-year holiday. After that, straight to exam . . . like that. Seventh month, test again. The eighth month...trial exam. PMR, SPM trial exams, not enough time . . .* (Interview 21j: 27/10).

Given such situations and scenarios in the school, naturally the participants perceived the time as major constraint for lesson study implementation unless it is provided some sort of support by the school administrators or educational authorities. It was evident that time factor is a major constraint for the lesson study implementation based on the data collected from this study. In comparison, the teachers in Japan do not face such constraint as lesson study has been incorporated as one of the school's programme (Fernandez and Yoshida, 2004) [36].

6.1.2 Teacher's Workload
The participants in both the schools cited their workload as *'heavy'* which indirectly has affected their commitment towards lesson study. As explained by Rohani at the end of the third lesson study cycle:

> *I am not sure of the problems but frankly, the workload is a lot. The workload is heavy, maybe at the beginning of the year. Last time, we carried out from July onwards. If July onwards, not much of workload. This cycle, we begin in the early of the year, so maybe that's the reason. A lot of work to do and I have to admit that the workload was heavy.* (Interview 32c: 11/05).

Indeed, the time constraint as discussed earlier is close related to the teachers' workload. Teoh explained the interrelation:
> *First, the time...time because we don't have we have other things to do. Next, the workload, a lot of things to do. Sometimes when you come here for two hours discussion, other teachers have things to do. So, also cannot carry out [lesson study] and this is the problem...lah.* (Interview: 27/04).

Besides, Jayanthi also lamented on petty matters in the school that she needed to attend almost daily as a class teacher:
> *Not only paperwork. OK, the information that you have to get from the students, the money you have to collect and the disciplinary action you have to take. Even though it's like small, small, small matters . . . every time there's something, you have to search for the few people . . . and pass them their work and get it back from them. Then, you have to see the students and so you have to move a lot . . . and it consume a lot of time.* (Interview: 21/10)

In other words, the participants were struggling for time in school to cope with the amount of workload and this drove away their enthusiasm and interest to engage in professional development activities such as lesson study. The participants seemed to have little grouses of their teaching tasks but they voiced strongly on the non-teaching task: the administration reports and paperwork which have to be submitted to the educational authorities periodically. The participants lamented that they were exhausted with the work which was tedious and time-consuming, and this has affected their participation in the lesson study. Another form of workload pointed out by the participants was the extra classes or tuition arranged by the school administrators after the school dismissal. The aim is to improve the school's academic performance which has become a common practice or culture in the schools. The participants also revealed that they were exhausted and burdened with these extra classes. Form the data analysis, teacher's workload was identified as one of the constraints for lesson study implementation as the participants were struggling for time to cope with the voluminous amount of workload in the school.

6.1.3 Working Beyond School Time

Although efforts were made to accommodate the lesson study discussions within the school time, this was somehow not possible due to various constraints in the school context. Consequently, the participants were required to stay back beyond school time to carry out lesson study. The lesson study discussions at School B were largely conducted within the school time due to the two sessions setting. However, for School A which was a single session school, the lesson study discussions were conducted after the school's dismissal. From the data collected, it was deduced as one of the main constraints as some participants were reluctant to spend time or work beyond school time. Maria, Nori and Malik of School A were obviously uneasy to stay back until 3.30 p.m. for the lesson study discussions. Although they did not voice their reluctance openly, it was evident from their actions and gestures during the discussions. As the group leader, Rohani was aware of their problem but she personally feel that teachers ought to have some degree of commitment towards their teaching profession. Rohani lamented the following after the first lesson study cycle, "*I saw a few of them not too willing to spend time . . . I don't know but I think they are putting their priorities for their family because their children are still young*". (Interview 13a: 11/08).

In her routine, Maria fetches her children home after the school's dismissal. Likewise, Malik has to fetch his wife and children from their schools. As Rohani revealed Malik's problem:

> *Malik always rushing after school because he has to go to School X to fetch his wife as she could not drive. So, if there are anything after school, a bit reluctant for him because the wife has to wait long time there.* (Interview 32d: 11/05).

As for Nori, she merely wanted to be home early for her child. Hence, it was sensible that they reacted negatively towards lesson study as it has somehow disrupted their routine. Moreover, this lesson study was a mere research study and was not any directive from the educational authorities. As Nori said, *"We are not only [commit to] for the school. Sometimes, we also have other things to do"* (Interview 17d: 12/08). Raja agreed with Nori's view, *"Actually, the only problem is time . . . not enough time because as we see, the discussions or the planning of the lesson plan was until 3.30 p.m. So, I think that's the problem"*(Interview 15b: 12/08). In retaliation, they deliberately behaved negatively towards the lesson study implementation, particularly at the initial stage.

In addition, Nori wrote in her journal, "*Some of the teachers have to sacrifice their extra classes to attend lesson study. This should not have happen because the examination is getting near. Teachers' time is very limited and teachers have other things to do*" (Journal: 13/07). These statements were made by the participants to express their displeasure in working beyond school time. However, Rohani expressed that working beyond school time would not be a major problem if only the teachers concerned are willing to put aside their self-interest for the sake of professional development. In other words, the participants' attitude is the root of the problem as they could make prior arrangement if they were required to stay back in the school. The above has reflected that practicing teachers may not be willing to sacrifice their *private* time for lesson study even though they are aware of its benefit. Hence, this study foresees that it would be a challenge to implement lesson study in the Malaysian school context unless some kind of support from the school administrators is provided such as allocating time for lesson study within the school time.

6.1.4 Perception of Teaching Observation

One of the challenges in lesson study implementation was the reluctance of the participating teachers to have their teaching observed by their peers. Although their teachings are regularly observed by the school administrators as required by the educational authorities, they expressed *tension* and *uncomfortable* feelings when their teaching is being observed. From the data analysis, it was found that most of the participants felt shy and *'threatened'* as the teaching observations could expose their weaknesses to their peers which will then undermine their credibility as trained and qualified teacher. Hafizah explained, "*Its [teaching observation] quite pressure. It is not the presence of the external observer but then, the perspective of our colleagues on us. So, after observing her teaching, then we know . . . what's the 'grade' for her teaching?*" (Interview: 27/04). Although it was repeatedly emphasized and advised by the researcher not to perceive the teaching for evaluation purpose, the participants have yet to change their perception of peer's teaching observation. Hence, it is not easy to build the *non-threatening* environment as envisioned in the model of lesson study. Moreover, the teaching will be commented and criticized by their peers during the reflection session and this probably annoyed the participants. Most of the participants have to be persuaded to take up the challenge except for Rohani and Jayanthi who personally volunteered to demonstrate their teaching. This suggested that the teaching observation in lesson study process is unlikely to be welcomed by the practicing teachers. As Jaafar explained:

I think if teaching observation is considered as normal thing, not everyone would regard it as norm because if anything is to be observed, our action is limited. We tend to do things . . . like not the real one, not real . . . we are force to act . . . just like doing a show. (Interview 18f: 20/10).

On the extreme side, some of the participants regarded the teaching observations as mere putting up a *show* for the eyes of the observers rather than the actual aims of teaching the lesson. Such perception of teaching observation by the participants thus reflected the challenges to implement lesson study as highlighted by Liptak (2005) [37].

6.1.5 Lack of Teaching Knowledge and Confidence
The aim of the lesson study is to enhance teachers' teaching knowledge and confidence. Rationally, teachers who lack the knowledge and confidence in teaching would appreciate and look forward to participate in more lesson study cycles. However, on the contrary, analysis of the data suggested that teachers who lack teaching knowledge and confidence are a constraint for lesson study implementation. The problem is linked to the uneasiness and threatening environment as experienced by the participants that subsequently urged the withdrawal attitude. In the first lesson study cycle at both the schools, the researcher facilitated the lesson study discussions and often provoked the participating teachers' confidence of their teaching. Depended upon the participants' attitude, those who lacked teaching knowledge and confidence felt threatened and perceived the discussion as a challenge that could undermine their credibility as a teacher. In other words, lesson study discussions could expose their weaknesses to their peers and this threatened them. They felt annoyed as they would not want to be labeled as *dumb* in their peers 'eyes. As Ziti said:

It [lesson study] is applicable but the teachers' mindset. They were shy and not confident to share their experience. Worried others will say that he or she is stupid and do not know the contents. Actually, that's the constraint, unwilling to admit own weaknesses. (Interview 29d: 27/04).

Nori and Raja of School A were two exemplary cases that have provided some support for this argument although their attitude was another likely factor. Both were notably passive during the lesson study discussions and Rohani acknowledged that Nori lacked the content knowledge, "*Mm, she is new and I think she is not competent with the subject matter yet, not yet because she is new. She still has a lot to learn*". (Interview: 25/10).

As for Raja, Rohani said:

Mm, I don't know how to say. He not really contributes ideas because maybe he himself does not know how to give ideas, no ideas to give. His past teaching experience is not the same as now; last time was in primary school. So, not much experience and yet to have something to contribute [to the discussion of the lesson]. (Interview 32e: 11/05).

4.1.6 Teachers' Teaching Conception
Teachers' teaching conception particularly the active student participation in teaching emerged as one of the constraints for lesson study implementation. Having participated in one complete lesson study cycle, Lee and Jaafar of School B remarked that lesson study practice is not practical or viable in the Malaysian school context. They pointed out that active student participation in teaching as discussed and planned in the lesson plan is not feasible in actual teaching practices. Lee argued his rationale, "*For primary school, we can think many activities that will attract students' interest. But for secondary school, knowledge is more important. Whatever way we use, they should understand*". (Interview 27b: 04/11). In other words, Lee tried to explain that the teacher-centered teaching approach would be more realistic for secondary schools as the teachers are required to finish the syllabus for examination purpose. Jaafar explained:

Actually, teacher-centered or student-centered . . . it's not for all topics. Not all the topics and it also depends on the class and situations. If it is 1A or 1B, then it's OK because sometimes we need to control the students' discipline too [for weak classes]. (Interview 18g: 20/10).

Compared to other participants, Lee and Jaafar were relatively more skeptical about the lesson study. They were not convinced of the ideas to promote students' thinking or active learning as suggested in the lesson study's goal. Subsequently, they participated apathetically and rarely expressed their thoughts and views. Such attitude and actions may be related to their teaching conception as both of them had expressed that teacher-centered teaching is inevitable in the exam-oriented culture. As Lee admitted his own teaching, *"Yes, the*

teacher talks more in the class because we have to finish the syllabus. If all the students talk, until year end I think the syllabus cannot finish. The teacher who teaches [next year] will be in deep trouble". (Interview 27c: 04/11). The mismatch of the teaching conception and lesson study probably led the withdrawal of their participation in the second lesson study cycle. Other participants might share the same teaching conception as Lee and Jaafar but were less aggressive to speak out. As Jayanthi said, *"We don't have activities in the normal teaching and learning. We don't have group activities. We don't use all this method"*. (Interview: 18/05). In fact, most of the participants were aware of the active student participation in learning as promoted in the curriculum as exposed to them during the in-service courses and teacher education programme. It was argued that the overly emphasis of examination in the education system has shaped and influenced the participants' beliefs and conception in teaching.

6.1.7 Teachers' Attitude towards Professional Development

As lesson study is teacher-led type of professional development (Stigler and Hiebert, 1999 [5]; Fernandez and Yoshida, 2004) [36], teachers' attitude is perhaps the most crucial and important factor for lesson study implementation. This study acknowledged that teachers' attitude is a prime factor as constraints related to the lesson study implementation were mainly associated with the participants' attitude. Although the school's teaching environment was argued to have attributed to the lack of awareness of professional development among the participants, teacher-related factors, in particular the attitude was a constraint. As Ziti lamented on her peers who showed lack of commitment in their lesson study participation, *"Teachers' attitude . . . they just don't want to help others. Some teachers are not willing to sacrifice their time for others. Actually, there are times when we really need other teachers' cooperation and they don't think about it"*. (Interview 29e: 27/04). Hafizah concurred with Ziti's opinion:

> *Mm . . . lack of awareness. Maybe they think it is not important. Maybe they think it cannot really give them direct benefit individually. This is the group benefit, so some people will only think for themselves first, second only for others. So, it's the attitude*. (Interview: 27/10).

However, despite the school teaching environment that lack the support for professional development, Jayanthi and Hafizah defied the odds as they were motivated to engage in lesson study. Jayanthi revealed that she was thrilled with the lesson study, *"To me, the whole session was very interesting but I think if we have a lot of time just for this lesson study, it would make it better for the teachers*. (Interview: 10/08). The data seemed to suggest that both the participants were motivated after realizing the benefits gained in the lesson study process and in turn, spurred their interest further in lesson study. Other participants also espoused the benefits of lesson study but due to their attitude towards professional development, they expressed little interest to participate in lesson study. Some participants revealed their interest to engage in lesson study if the contextual constraints are resolved. For instance, Ziti wanted to reduce her teaching workloads, *"Personally, if reduce the teaching periods, I am willing [to engage in lesson study]"*. (Interview 29f: 27/04). This showed that the constraints and challenges as discussed earlier have been influencing the participants' attitude towards professional development. Although lack of awareness of teacher professional development in the school context was highlighted, it was found that various factors are intertwining and influencing the participants' attitude towards their professional development.

VI.   Conclusion

Putting aside the constraints encountered due to the contextual factors and teaching culture, there is little doubt of the influence of lesson study on teachers' learning as propagated by Vygotsky in the theory of sociocultural learning. In this study, lesson study is merely creating and providing the venue and opportunity for the participants to meet, collaborate and work together, which prior to this study is a very rare experience. As described by Stigler and Hiebert (1999) [5], *"The premise behind is simple: If you want to improve teaching, the most effective place to do so is in the context of a classroom lesson. If you start with lessons, the problem of how to apply research findings in the classroom disappears"* (p. 111). The practice of lesson study has been working well for decades in Japan, and this has eventually embedded as part of the culture in the teaching profession (Fernandez and Yoshida, 2004) [36].

To conclude, it is a worthy agenda to promote lesson study as an innovative school-based teacher professional development in long term. The school administrators have a prominent role to support and motivate the teachers to strive for their professional development. The teacher educators or master teachers could extend their teaching expertise as *knowledgeable others* by working and collaborating with the practicing teachers in schools. This builds a network of teacher collaboration and cooperation that is highly recommended in the context of teacher learning. For this reason, the lesson study model may serve as a promising and innovative approach to improve teaching as elaborated by Cerbin and Kopp (2006) [38]. The lesson study, if

implemented in the Malaysian education context would mark a major paradigm shift for teacher professional development.

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