TEACHERS' PSYCHOLOGICAL IMPACT TOWARDS THE IMPLEMENTATION OF LESSON STUDY IN SCHOOL

Faizah Che Mat Zi¹, Zanaton Hj Iksan²*

^{1,2}Fakulti Pendidikan, Universiti Kebangsaan Malaysia, Bangi 43000, Bandar Baru Bangi, Malaysia <u>zanaton.iksan@ukm.edu.my</u>

*Corresponding Author

Abstract: Lesson Study (LS) is a practice of the teachers that is origin from Japan which give the positive impact towards the quality of educators' professionalism. This innovation will encourage the teacher to work collaboratively in sharing of knowledge, experience as well as research throughout the teaching period. However, the culture of LS has not been widely implemented in Malaysia even though it has been established here since 2011. This is because, most of the teachers consider that this LS is an additional workload that causes emotional disturbance and also can cause stress among them. The purpose of this study was to look at the psychological impact on the implementation of LS in schools. The psychological impact is seen in terms of teachers' acceptance and its relationship with teachers' stress on the implementation of LS. This study used a survey method by using the questionnaire instrument. A total of 186 teachers who teach in sekolah menengah kebangsaan harian were selected to be the sample of the study. The data were analysed descriptively and inferentially using Statistical Package for the Social Sciences (SPSS) software. The findings of this study show that the level of teachers' acceptance towards the implementation of LS is high. However, the level of teachers' stress related to the implementation of LS is at a low level. While, there is a negative and very weak relationship between teachers' acceptance towards the implementation of LS with teachers' stress related to the implementation of LS. In conclusion, the teachers need to be given more effective exposure to the implementation of LS so that they can further improve the quality of teaching professionalism in the future.

Keywords: Lesson Study, teacher professionalism, professional learning community (PLC), teachers' workload, teachers' psychology

INTRODUCTION

The country's rapid development is now urging the government to carry out some reforms and transformation towards the system of education in this country so that it will be as good as the international education. It hopes to produce the generations that are smart, be able to compete globally and also be able to face the challenges of today's world (Radin & Yasin 2018). Therefore, the Ministry of Education Malaysia (MOE) has introduced a new approach to the teachers which is Lesson Study (LS). LS is a practice of the teachers that is origin from Japan which is related to the study and research towards the method of teaching that will give the positive impact to the quality of educators' professionalism (Zanaton et al. 2014; Md Yusoff et al. 2014; Chiew, Mohd Hasani & Lim 2016a; Tan, Ooi & Teh 2017; Copriady 2013). This approach needs the cooperation from certain people especially teachers, school administrators and also the experts (Md Yusoff et al. 2014; Bitty & Vincent 2017). According to Banda et al. (2014), LS not only can improve the technique and skill of teaching but also can increase the teachers' knowledge towards the content of school curriculum. This is one of the persistent efforts of the government to generate the qualified educators in line with advancing the education system in this country.

However, the changes and transformation of the education that has been done by the government can caused stress among the teachers even more when it involves an increase in workload (Tajulashikin, Fazura & Mohd Burhan 2013). Being a teacher is not easy as people think because this profession is always facing with many challenges (Lia Indah & Ruslin 2018; Nurul Shafinaz 2013). This is because, the career of a teacher is a job that quite famous which has a very heavy workload in providing the best education for the students (Norashid & Hamzah 2014). According to Noor Mala

(2015), stress exists when there is a perception of a comparison between instructions and the ability to execute those instructions successfully. However, the study of Baharin and Mariam (2010) and the study of Tajulashikin, Fazura and Mohd Burhan (2013) argue that stress is a disorder experienced by teachers either in terms of physiology or psychology due to the inability of teachers in performing assigned tasks so the onset of a pressure that is at an uncontrollable level. Failure in coping with the stress will affect the health of the teachers in terms of physical and mental as well as giving some impact towards the interaction between teachers and students that can reduce the teachers' performance in teaching sessions (Helen et. al 2005; Noor Mala 2015; Morris & Crispina 2015).

In previous studies, there is still less emphasis on the impact of the implementation of LS on teacher psychology where most of the studies that have been implemented in Malaysia more focus on the factors, importance and impact of LS on teaching and student learning only. Even though this approach gives benefits on the quality of the teaching skill and also student achievement, however without caring about the psychological impact of the teachers in its implementation, it will give some impact on the teachers' performance. So that, the relationship between teachers and students will be affected as well. Therefore, the purpose of this study is to identify the level of acceptance and the level of teacher stress related to the implementation of LS. Next, the relationship between acceptance and teacher stress on the implementation of LS.

Lesson Study (LS) in Education

There is no denying that this LS has many benefits not only to the teachers but to the students as well. The good implementation of LS will give an effective impact on the teaching skill of the teachers. The students will understand easily and the class control will be better maintained if the LS can be implemented properly. This is in line with a study by Md Yusoff et al. (2014) where the trainee teachers got a positive impact after carrying out this approach. Similarly, the findings from the study of Tan, Ooi and Teh (2017) which showed a change in terms of teaching among the trainee teachers after the LS program was implemented. With this program, the teachers especially trainee teachers will be constantly monitored in improving the skills teaching towards more excellence.

In addition, LS can also help the teachers in improving their thinking skills in order to be more creative and critical (Bitty & Vincent 2017; Zanaton et al. 2014). The teaching skills will be diversified when the teachers who have various types of experience in planning the lesson plan collaborate each other in order to make sure the teaching method is more interesting. This will encourage teachers to exchange their ideas and experiences (Ewe, Chap & Munirah 2010) and also train them to work in groups (Siti Malikhah 2016). Thus, LS can indirectly open up the opportunities for the teachers to interact socially (Lander 2015) and exchange their ideas not only among peers in the same school but also different schools. In such social interactions, the support and also cooperation from the teachers to involve actively is very important for the further successful implementation of LS. Without any support, this approach is not be able to run smoothly because it is a program that takes place in groups.

Besides, LS can also improve the teaching skills among the teachers in terms of pedagogy such as better understanding and mastery of a topic in the syllabus (Copriady 2013). A critical discussion will be done by the teachers to further increase the understanding of a topic. The sharing of teaching skills as well as some important tips by the experienced teachers will help the new teachers to get an insight to improve in their teaching skills. The new knowledge will be generated continuously as long as this kind of LS program is still there. In addition, LS can also train the teachers to always be ready in receiving the new knowledge and adhere to the concept of lifelong learning. Indirectly, the teachers also will always be ready to change for the better one during the teaching session because they are constantly monitored by other teachers.

However, there are some misunderstandings that are always be done by the teachers along the implementation of LS. According to Siti Malikhah (2016), the teachers often have a misunderstanding to evaluate the behaviors of the students in the classroom but in fact that this LS should be more focused on observation of the student learning. This is supported by the study of Ewe, Chap and Munirah (2010) where the LS is able to delve into student learning and all of the misconceptions and errors in the students' learning can be detected by the teachers. Thus, all of this such thinking needs to be changed so that the objectives of the implementation of LS can be achieved successfully.

Teacher Stress related to Lesson Study (LS)

Severe stress will have a negative impact on a person's emotional, cognitive and physical well -being. The issue of stress among the teachers is an issue that is often talked about this decade. Teachers play an important role in ensuring that their students get an equal education. The teaching skills among the teachers should be high qualified so that the knowledge can be imparted excellently to the students. In producing the quality education, all the teachers need to equip themselves with the best teaching skills in order to produce a generation of intelligent people. So that, they also need to be prepared in facing every change in the education system.

However, the efforts to improve the quality of teaching such as attending courses will be a new workload for the teachers and will cause more chronic stress problems among them. Most of the teachers also experience stress as they are overwhelmed by unrelated workloads. The real job of a teacher is not only to teach, but also to do the activities outside the classroom, including educating the students to have a better personality (Tajulashikin, Fazura & Mohd Burhan 2013). Due to being burdened with many tasks, stress problem will arise among the teachers. As mentioned by Baharin and Mariam (2010), when the stress in the individual exceeds the limits and cannot be controlled by the body as well as disturbs the mental and physical of a person, then that individual has experienced the severe stress.

Excessive workload is one of the aspects that can cause stress to hit the teachers (Fadilah 2012). The diversity of roles and responsibilities in the school causes the teachers to be overburdened and this can increase the level of stress among them. Although based on previous studies, the level of stress among teachers is still under control, but this matter needs to be emphasized so that it does not harm the mental health of the teachers in Malaysia. According to Tajulashikin, Fazura and Mohd Burhan (2013), teachers' workload includes tasks that involve academic time and also outside of academic time such as planning lessons, replacing the absent teachers, clerical work, duties as co-curricular teachers, updating related schedules and more.

RESEARCH METHODOLOGY

This study is conducted quantitatively where it used the survey method. The teachers who teach in sekolah menengah kebangsaan harian of a district in the state of Selangor represent the population of this study. The sampling method used is stratified random sampling.

In this study, a questionnaire instrument was used. This instrument was built by the researchers based on previous studies where it is divided into 3 parts, namely Part A (demographic data), Part B (teachers' acceptance of the implementation of LS) and Part C (teacher stress related to the implementation of LS). Each item that found in this instrument has been validated by the experts involved. Pearson correlation analysis was also used to determine the validity of the instrument through the corrected item-total correlation value. To determine the reliability of the instrument, Cronbach's alpha coefficient was used. In this study, it was found that the Cronbach's alpha values for constructs of teacher acceptance and teacher stress related to the implementation of the LS were 0.947 and 0.874 respectively.

Findings and Discussion

The participants of this study consisted of 69 male teachers (37.1%) and 117 female teachers (62.9%). In terms of teaching experience, it was found that 80 people (43.0%) had more than 10 years teaching experience, while 67 people (36.0%) had between 5 to 10 years teaching experience and 39 people (21.0%) had less than 5 years teaching experience. All the teachers (100%) in this study were reported to have been involved in the LS program in school either directly or indirectly. Then, for the experience of attending the formal LS courses, there were about 125 people (67.2%) had experience of 1 to 2 times, 19 people (10.2%) had experience 3 to 5 times and 15 people (8.1%) had more than 5 times experience while there were about 27 teachers (14.5%) who had never attended any formal courses that related to LS.

Level of Teachers' Acceptance of the Implementation of Lesson Study (LS)

The results of the descriptive analysis on the level of teachers' acceptance of the implementation of LS are shown and explained through Table 4.5 below. Based on the table, it is found that all items in this construct have a mean score value between 3.85 to 4.05. This can explain that the level of teachers' acceptance is at a high level. From the findings as well, the item no. 5 obtained the lowest mean score (3.85) while the item no. 1 has the highest score value (4.05). Therefore, it is clear that the results of this study show that the level of teachers' acceptance of the implementation of LS is at a high level (3.99).

Table 3: Descriptive results of the level of teachers' acceptance of the implementation of LS

No	Items	Mean	Standard	Interpretation
		Score	Deviation	
1.	My teaching sessions are more systematic	4.05	0.639	High
	through LS			
2.	I am more professional through LS	4.00	0.682	High
3.	The quality of my teaching is better through	4.04	0.677	High
	LS			
4.	Through LS, the tasks that performed with	3.97	0.727	High
	the colleagues become more better.			
5.	I am willing to apply LS in my pdpc	3.85	0.732	High
	practice.			
6.	LS can help to improve my teaching skills.	4.01	0.615	High
7.	I was able to plan the lessons through LS	3.98	0.661	High
8.	LS can help me to choose the teaching	4.01	0.602	High
	methods that are appropriate to the learning			
	topic.			
9.	LS improved my teaching skills	4.04	0.618	High
10.	I feel that the teaching method chosen is	3.99	0.641	High
	appropriate as a result of discussions with			
	colleagues in the LS.			
	Level of acceptance	3.99	0.560	High

In this study shows that teachers have opened up the opportunities to accept a new teaching approach in their profession in order to improve the quality of their teaching. According to Bitty and Vincent (2017), the teachers' acceptance towards the implementation of LS is depends on the willingness and the ability of them to make the changes on their teaching skills in schools. However, there are several studies in Malaysia have the findings that are not in line with this study. Rohaida (2017) stated that in her study, the teachers are still less prepared because they are not clear enough about the LS cycle.

The study of Ewe, Chap and Munirah (2010) also found that the teachers are less confident and do not show the deep interest to change from the aspect of teaching quality especially for the new teachers due to lacking in exposure and experience. In addition, the level of teachers' acceptance towards LS can also be influenced by the way of how the teachers are thinking. According to Chiew, Mohd Hasani and Lim (2016a), the main factor that cause the implementation of LS has not yet become a culture in Malaysia is due to the views and perceptions among the teachers. This is because in their study stated that the teachers have a tendency to not cooperate throughout the LS sessions is conducted just because they have a feeling of being threatened due to their teaching sessions will be

seen by other teachers. They get worried if their credibility as an instructor is underestimated by other colleagues. Because of that, it becomes one of the barriers for them to accept the implementation of LS willingly.

However, this study also has the same findings as some studies from abroad. According to Lamibao (2016), LS is well received by the teachers in the Philippines whereby they are willingly participated in LS. Besides, in a study that is conducted by Copriady (2013) also stated that almost 90% of the teachers in Indonesia are accepted the implementation of LS positively and try to apply this innovation as a new approach in order to improve their teaching skills. In a meanwhile, Lander (2015) stressed that the teachers need some time and also persistent effort from certain parties to accept the new changes towards their teaching skills.

The Level of Teachers Stress related to Lesson Study (LS)

Table 4 shows and explains in more detail about the results of the descriptive analysis of teacher stress levels related to the implementation of the LS. From the table, it is found that the mean score for all items is between 1.67 to 2.97 only. Nevertheless, the item with the lowest mean score value (1.67) was the number 2 item while the item with the highest mean score value (2.97) was item with number 9. The other items had a low mean score interpretation only. Therefore, it is clear that from these findings it is found that the level of teacher stress related to the implementation of LS in schools is at a low level (2.26).

Table 4: Descriptive results of teacher stress levels related to the implementation of the LS

Items	Mean	Standard	Interpretation
	Score	Deviation	
The discussion of LS interferes with my	1.90	0.650	Low
daily tasks.			
The commitment towards	2.97	1.068	Medium
implementation of LS made me anxious.			
I had recurrent headaches due to LS	2.59	0.892	Low
workload			
I felt my sleep routine was a bit	2.59	0.891	Low
disrupted due to the LS workload			
I often feel very stressed due to the LS	2.47	0.871	Low
workload.			
Along the LS approach is conducted, I	2.06	0.859	Low
will feel irritable.			
I have the intention to withdraw from	2.10	0.802	Low
the implementation of LS			
I felt tired throughout the LS sessions	1.94	0.717	Low
I felt lifeless throughout the LS sessions	1.67	0.653	Very low
Level of Teachers Stress	2.26	0.510	Low
	The discussion of LS interferes with my daily tasks. The commitment towards implementation of LS made me anxious. I had recurrent headaches due to LS workload I felt my sleep routine was a bit disrupted due to the LS workload I often feel very stressed due to the LS workload. Along the LS approach is conducted, I will feel irritable. I have the intention to withdraw from the implementation of LS I felt tired throughout the LS sessions I felt lifeless throughout the LS sessions	The discussion of LS interferes with my daily tasks. The commitment towards I had recurrent headaches due to LS workload I felt my sleep routine was a bit disrupted due to the LS workload I often feel very stressed due to the LS workload. Along the LS approach is conducted, I will feel irritable. I have the intention to withdraw from the implementation of LS I felt tired throughout the LS sessions I felt lifeless throughout the LS sessions 1.67	The discussion of LS interferes with my daily tasks. The commitment towards implementation of LS made me anxious. I had recurrent headaches due to LS workload I felt my sleep routine was a bit disrupted due to the LS workload I often feel very stressed due to the LS workload. Along the LS approach is conducted, I will feel irritable. I have the intention to withdraw from the LS approach is conducted. I felt tired throughout the LS sessions throughout the LS sessions the left of the LS throughout the LS sessions the left of the LS throughout the LS sessions the left of the LS throughout the LS sessions the left of the left of the LS throughout the LS sessions the left of the left of the left of the LS sessions the left of the left of the left of the LS sessions the left of the left of the left of the left of the LS sessions the left of the

Based on the findings of the study, the workload of the LS that involved throughout the cycle give a small impact in terms of psychological and physiological towards the educators. Even so, the teachers still experience the stress related to the implementation of LS even though the impact is only small and does not interfere with their daily lives. The findings of this study support the findings of previous studies whereby the teachers have experienced the stress, especially related to workload, but that stress is still low and can be controlled (Lia Indah & Ruslin 2018; Baharin & Mariam 2010;

Morris & Crispina 2015; Noor Mala 2015; Tajulashikin, Fazura & Mohd Burhan 2013; Fadilah 2012). According to Tajulashikin, Fazura and Mohd Burhan (2013), although the stress among the teachers is at a low level, but they still experience that pressure. Without the efforts in overcoming this problem, more severe stress will occur towards the teachers such as agitated, anxious and depressed (Noor Mala 2015; Nurul Shafinaz, 2013). The excessive stress in the workplace can ruin a person's career as this problem can deteriorate a person's work performance and health. Baharin and Mariam (2010) also believe that the physical health as well as mental will be disrupted when the stress levels are out of control.

The findings of a study by Helen et al. (2005) stated that the teachers who teach in religious secondary schools in Johor Bharu do not experience stress in the workplace. However, from that study also found that the main cause of stress is due to the excessive workload among the teachers in school. This indicates that although the findings of the study show that the teachers do not experience any stress, but the excessive workload can encourage the teachers to experience stress in the workplace. It is clear that the teaching profession is a very well-known career with a high workload.

The Relationship between Teachers' Acceptance Towards the Implementation of LS and Teacher Stress related to The Implementation of LS.

Based on Table 6, this study found that the coefficient of Spearman's rho correlation showed a negative and very weak linear relationship between the teachers' acceptance towards the implementation of LS and the teacher stress related to the implementation of LS [r (184) = -0.276, p <0.05]. From the findings, it is clear that the two variables influence each other but that result does not have a significant impact for the respondents.

Table 6: The relationship between teachers' acceptance towards the implementation of LS and teacher stress related to the implementation of LS

Construct	coefficient of Spearman's rho correlation	Correlation of determination (r^2)	Level of Significant	Interpretation of relationship power
Relationship between teachers' acceptance towards the implementation of LS and teacher stress related to the implementation of LS	-0.276	-0.076	0.001	Negative and very weak

^{**}Significant at level 0.05

This explains that the higher the level of teachers' acceptance of the LS, the less teacher stress related to the implementation of the LS. However, it has very little impact. From these findings it can also be explained that even though the tasks throughout the LS cycle can put pressure on the teachers, they still accepted this approach and acknowledge about its importance towards the quality of teaching. As stated by Copriady (2013), mostly the teachers that have been involved with LS admitted that LS can improve their teaching skills. Besides, LS is not only able to provide benefits to teaching skills but also can provide benefits to students' learning (Ewe, Chap and Munirah, 2010). Therefore, this approach should be exposed and make it as a mandatory practice among the teachers in order to produce the quality teaching staff as well as to educate the nation towards excellence.

CONCLUSION

In a conclusion, the teachers need to be given more effective exposure towards the implementation of LS so that they can further improve their quality of professionalism in the future. With the hope that this approach can become a new culture among the teachers as LS is not only benefits the teachers but also the students' learning. Although the tasks throughout the LS cycle give a little burdensome for the teachers, but this innovation will give the good effect on the system of education in Malaysia. Therefore, the MOE must arbitrate between necessary and unnecessary tasks so that the stress among the teachers can be overcome earlier and at the same time the culture of LS can be apply among them.

REFERENCES

- Baharin Abu, & Mariam Aziz. (2010). Stress dalam Kalangan Guru di Dua Buah Sekolah Menengah di Kawasan Skudai. Tesis Dr. Fal, Fakulti Pendidikan, Universiti Teknologi Malaysia.
- Banda, B., Mudenda, V., Tindi, E., & Nakai, K. (2014). Lesson Study Practice of Science Teachers in Zambia: It's Effects, Enhancing and Hindering Factors. *New Perspective in Science Education*, 8, 3–7.
- Bitty Ansawi, & Vincent Pang. (2017). The Relationship between Professional Learning Community and Lesson. *Sains Humanika*, 9(1–3), 63–70.
- Chiew, C. M., Mohd Hasani Dali, & Lim, C. S. (2016a). Issues Relating to the Implementation of Lesson Study in the Malaysian Education Context. *Journal of Research & Method in Education*, 6(3), 77–85.
- Chiew, C. M., Mohd Hasani Dali, & Lim, C. S. (2016b). Implementation of Lesson Study as an Innovative Professional Development Model among Malaysian School Teachers. *Malaysian Journal of Learning and Instruction*, 13(1), 83–111.
- Copriady, J. (2013). The Implementation of Lesson Study Programme for Developing Professionalism in Teaching Profession, *Asian Social Science*, 9(12), 176–186.
- Fadilah Mohd. (2012). Stres dalam Kalangan Guru Sekolah Tunas Bakti Jerantut: Satu Kajian Kes. Tesis Sarjana, Universiti Tun Hussein Onn Malaysia.
- Helen Malaka, Rojiah Abdullah, Nora'azian Rohani, Eldrana Augustin Daniel & Mustafa Kamal Mohammad. (2005). Hubungan Punca Stres Dan Tahap Stres Di Kalangan Guru-Guru Di Sebuah Sekolah Menengah Agama Johor Bahru. *Prosiding Seminar Pendidikan*, 1–12.
- Katina, M., Khalid Johari, & Ovelyn, M. (2013). The Perception of Teachers and Students toward Lesson Study Implementation at Rural School of Sabah: A pilot study. *Procedia-social and behavioral sciences*, 90, 245-250.
- Lamibao, L.S. (2016). Enhancing Mathematics Teachers' Quality through Lesson Study. *Springerplus*, 5, 1590.
- Lander, B. (2015). Lesson study at the Foreign Language University Level in Japan: Blended Learning, Raising Awareness of Technology in the classroom. *Emerald Insight*, 4(4), 362–382.
- Lia Indah Ahmad, & Ruslin Amir. (2018). Tekanan Dan Kepuasan Kerja Dalam Kalangan Guru Sekolah Menengah Daerah Pasir Gudang. *E-Prosiding Persidangan Antarabangsa Sains Sosial Dan Kemanusiaan 2018*, April, 82–95.
- Md Yusoff Daud, Zanaton Iksan, Fariza Khalid, & Roslinda Rosli. (2014). Refleksi Pendekatan Lesson Study Dalam Menjalani Latihn Mengajar oleh Bakal Guru Sains di Beberapa Sekolah Terpilih. World Association of Lesson Studies International Conference.
- Nik Nur Salwa & Zanaton Iksan. (2012). Pendedahan, pengetahuan dan kesediaan guru sains menggunakan model pengajaran lesson study. *Prosiding Seminar Penyelidikan Pendidikan Guru Malaysia-Indonesia*, Oktober, 309-312.

- Noor Mala. (2015). Pengaruh Tahap Stres Terhadap Kepuasan Kerja Dalam Kalangan Pengajar Kolej Vokasional Di Negeri Pahang. Tesis Sarjana, Pendidikan Teknik dan Vokasional, Universiti Tun Hussein Onn Malaysia.
- Norashid Othman, & Hamzah Md. Omar. (2014). Beban Tugas dan Motivasi Pengajaran Guru di Sekolah Menengah Daerah Ranau. *Jurnal Pemikir Pendidikan*, 5, 35–57.
- Nurul Shafinaz Halim. (2012). Menentusahkan Faktor Tekanan Kerja Guru Sekolah Menengah Gred A Daerah Batu Pahat. Tesis Sarjana, Pendidikan Teknik dan Vokasional, Universiti Tun Hussein Onn Malaysia.
- Radin, M. & Yasin, M. A. M. Z. (2018). Perlaksanaan Pendidikan Abad ke-21 di Malaysia: Satu Tinjauan Awal. *Sains Humanika*, 21, 1–6.
- Rogers, E. M. (1962). Diffusion of innovations. New York: Free Press.
- Rogers, E. M. (2003). Diffusion of innovations. Ed ke-5. New York: Free Press.
- Rohani Arbaa, Hazri Jamil, & Nordin Abd Razak. (2010). Hubungan Guru-Pelajar dan Kaitannya dengan Komitmen Belajar Pelajar: Adakah Guru Berkualiti Menghasilkan Perbezaan Pembelajaran antara Jantina Pelajar? *Jurnal Pendidikan Malaysia*, 35(2), 61–69.
- Siti Malikhah Towaf. (2016). Integration of Lesson Study in Teaching Practice of Social Study Student Teachers to Improve the Quality of Learning and Promote a Sustainable Lesson Study. *Journal of Education and Practice*, 7(18), 83–91.
- Tajulashikin Jumahat, Fazura Mohd Noor, & Mohd Burhan Ibrahim. (2013). Faktor-Faktor Penentu Stres Dalam Kalangan Guru: Sekolah Rendah Mubaligh Di Kuala Lumpur. *Jurnal Kurikulum & Pengajaran Asia Pasifik*, 1, 1–11.
- Tan, A. L., Ooi, S. Y., & Teh, H. L. (2017). Lesson Study: Amalan Berkolaborasi Untuk Pembelajaran Berkesan Di Institut Pendidikan Guru. *Proceedings of the ICECRS*, 1(1), 21–30.
- Zanaton H. Iksan, & Marziah Md. Rahim. (2017). Reflections on Teaching and Learning of Mathematics through Lesson Study and Video Critique. *Advances in Social Sciences Research Journal*, 4(1), 50–61.
- Zanaton H. Iksan, Aidah Abdul Karim, Fariza Khalid, Effandi Zakaria, Rosseni Din, Md Yusof Daud, & Roslinda Rosli. (2014). Lesson Study (Jogyoukenyu): Kajian Perbandingan Jepun dan Malaysia. *The 4th International Conference on Learner Diversity (ICELD 2014)*, 271-278.