An Analysis on the Implementation of Professional Learning Communities in Malaysian Secondary Schools

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Abstract: The main objective of the study was to examine the implementation of Professional Learning Communities (PLCs) in Malaysian secondary schools. The study was conducted by using quantitative method whereby a total of 971 principals, senior assistants and teachers were involved in the survey. The descriptive statistical analysis was employed to obtain scores and means whereas the t-test and ANOVA were adopted to test the significance of the concerned variables. The result revealed that, i) the schools were rated as *Quite Good* in practising PLCs; ii) comparing the two dimensions of PLCs, Organizational Factor achieved a higher mean score than Non-organizational Factor; iii) among all the sub-dimensions, *Principals' Commitment and Support* achieved the highest whereas *External Support System* achieved the lowest mean score. The study summarized that although contextual factors such as decentralized school system, the policy environment and teachers' workload are potential factors that might impact the development of PLCs, the incompetence of the teachers in practising *Collaborative Learning*, *Collective Inquiry* and *Reflective Dialogue* would significantly hinder their professional practices in PLCs. The study offers an analysis in exploring PLCs towards sustained school improvement and may help move the current available literature to a more coherent, theoretical perspective for practical engagement.

1.   Introduction

A myriad of educational policies and reforms around the globe have been enforced to prepare students for the 21st century, particularly to meet the new demands of Education 4.0 (Lim & Gurcharan, 2020; Tai, Omar, Khalip, Ghouri & Khan Naveed, 2020b). As the core of education, schools are therefore subject to unavoidable external and internal change pressures. However, despite schools undertaking wide-ranging reforms, the efforts have remained elusive or benefits marginal (Harris, Jones & Huffman, 2018, Olivier & Huffman, 2016). Basically, the main problem is the capacity to offset change forces that threaten the sustainability of school effectiveness, which is the core of all school reforms; this begs for a systemic and holistic approach to school effectiveness that has a sustainable impact on students.

Teacher quality is an important determinant of student outcomes (Harris *et al.,* 2018; Jensen, 2012). With the growing need for educational excellence, there has been an increased demand upon teacher professional development as well. However, most of the contemporary literature on professional development found that this alone was insufficient to meet the increasingly complex and urgent demands of the schools; rather, the focus should be on teacher professional learning (O'Brien & Jones, 2014; Timperley, 2011). Therefore, the current paradigm shift in teacher professional growth is towards engaging teachers in meaningful professional learning whereby teachers act as their own agents, proactively taking initiatives to construct knowledge collectively, so as to make positive and lasting differences in student learning. Professional learning communities (PLCs) are perceived as a potential catalyst for such improvement; PLCs act as a lever that supports school-wide capacity for promoting effective teacher and student learning as well as school effectiveness (Chen, Lee, Lin & Zhang, 2016; Harris *et al*., 2018; Zhang & Pang, 2016).

The Malaysia Education Blueprint 2013-2025 was launched to ensure that the Malaysian education system remained relevant, vibrantly attractive and effective (Nusrah & Chan, 2020; Tai & Omar, 2018; Wilson & Narasuman, 2020). While school reforms have targeted the improvement of learning achievements of students, research has indicated that there is a significant link between PLCs and the improvement in teachers' practice (Voelkel & Chrispeels, 2017; Zhang & Sun, 2019; Cansoy & Parlar, 2017) and student achievement (Lomos, Hofman, & Bosker, 2011; Ozdemir, 2019; Huggins, Scheurich and Morgan, 2011). Hence, the development of a peer-led culture of PLCs is one of the important approaches to achieve the objectives of the 4th shift of the Blueprint i.e. "Transform Teaching into the Profession of Choice" (Ministry of Education Malaysia, 2016). With vast resources allocated to the above initiative, it seems timely and functionally apt at this juncture to investigate PLCs in the Malaysian school system. The findings have implications on whether PLCs are able to engage teachers in professional learning and change.

2.   Professional learning communities

The concept of PLCs appeared about three decades ago in the western educational arena (Barth, 1990; Sizer, 1992). It is generally viewed as learning communities whereby teachers collaboratively work together to develop a culture that enhances teaching and learning for all through shared vision and values, collective responsibility and professional learning practices (Huffman *et al*., 2016; Zhang & Pang, 2016). Basically, the implementation of PLCs is perceived as a significant and powerful staff development approach that has the potential to reframe teaching and learning practices to provide diverse learning experiences contingent to the needs of the students for their future, and is central to school improvement and effectiveness (Harris *et al*., 2018; Olivier &Huffman, 2016).

Indeed, the PLC is perceived as the "best hope for school reform" (Olivier & Hipp, 2010; Qiao, Yu & Zhang, 2018) as empirical research reveals a significant relationship between PLCs and the improvement in teachers' behaviours and performance (Lomos, Hofman, & Bosker, 2011). For instance, research on PLCs has been conducted in relation to independent variables such as teacher efficacy (e.g. Battersby & Verdi, 2015; Vanblaere & Devos, 2016; Voelkel & Chrispeels, 2017), teacher commitment (e.g. Hausman & Goldring, 2001; Lee, Zhang & Yin, 2011; Zhang & Sun, 2019), teachers' job satisfaction (e.g. Harris, 2010; Harris & Jones, 2010; Zhang & Yuan, 2020), and teacher professionalism (e.g. Cansoy & Parlar, 2017). All these studies found that there was a significant relationship between PLCs and the concerned variables that specifically enhances teacher professional capacity in strengthening instructional improvement and school reform.

Besides, research also reveals that PLCs have a positive impact on student achievement (Lomos, Hofman, & Bosker, 2011). While investigating the mediating role of PLCs between school leadership and student achievement, Huggins, Scheurich and Morgan (2011) found that principal leadership had positive effects on student learning with the mediating role of PLCs in improving teacher learning that links closely to student achievement. In the same vein, Park, Lee and Cooc (2019) revealed that principal leadership positively influenced PLCs by promoting teachers' collaboration and learning that can enhance student

achievement through meaningful learning. Besides, Ozdemir (2019) found that principal leadership had indirect positive effects on students' math achievements with the mediating role of PLC especially by enhancing teachers' shared responsibility and de-privatized practices. In short, as PLCs hold considerable promise for effective teacher learning and is pivotal in promoting student learning, it has gained attention worldwide and has been studied globally and intensively.

3.   The Conceptual Background

In Malaysia, the MOE (Ministry of Education) started to implement PLCs among schoolteachers from 2011. The spirit of PLCs started to blossom in 1,548 schools as part of the CPD strategy of the schools to enhance teacher quality (MOE, 2015). Initially, the focus of PLCs was given to lesson study but the strategy was diversified in 2012. Further to this, the PLC concept was accredited in the Malaysian Education Development Blueprint 2013-2025 as one of the pathways to improve the overall teacher professionalism and transform the school system effectively (MOE, 2015). As mentioned earlier, developing a peer-led culture of PLCs is one of the strategies to achieve the objectives of "Transform Teaching into the Profession of Choice" in the Blueprint. By encouraging collaboration among teachers in teaching and learning, the PLC is a good platform to develop schools as learning organizations (MOE, 2016).

To investigate the implementation of PLCs in Malaysian secondary schools, the Professional Learning Community Model (PLCM) developed by Tai and Omar (2019) was employed in the study. As the practice of PLCs is embedded in cultural contexts (Koffeman & Snoek, 2018; Zhang & Pang, 2016) and PLCM is one of the local models developed against the background of the secondary school setting, the model selection is relevant and appropriate. As shown in Figure 1, the PLCM consists of two main dimensions i.e. Organizational Factor and Non-organizational Factor. The Organizational Factor encompasses four components. *Shared Norms and Vision* refers to the extent to which school members share visions pertaining to student learning, pedagogical purpose, and school improvement and effectiveness, and support behaviour norms that guide decisions about the concerned purposes. *Principals' Commitment and Support* is viewed as the extent to which school principals support and is committed to the development and enhancement of PLCs in school and will take optimal efforts to manage any obstacles. *Structural Support* means the extent to which the administrative system, procedures and policies support the development and enhancement of PLCs in terms of time arrangement, space, facilities, resources and funding. *Collegial Understanding and Trust* refers to the extent to which school members develop mutual understanding, respect and trust, and mindful and caring relationships that facilitate group processes to make decisions, solve problems and promote change (Tai & Omar, 2019).
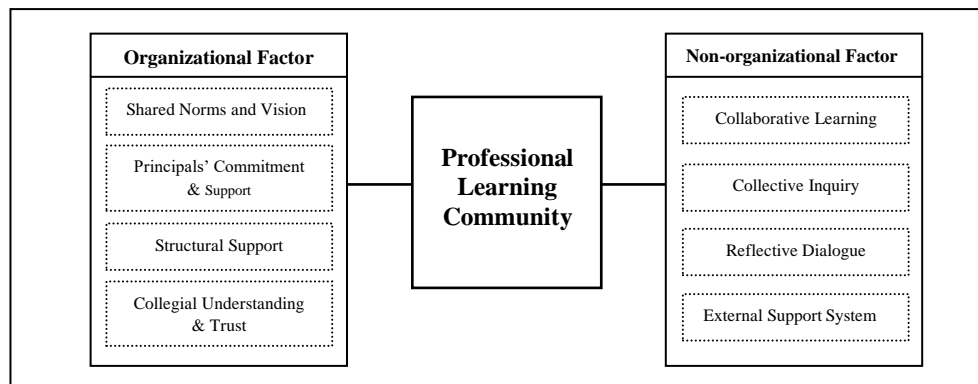

Fig. 1 The conceptual framework of the study

The Non-organizational Factor also consists of four components. *Collaborative Learning* is seen as the extent the teacher will practise collaborative learning that includes constantly sharing information, resources and works collaboratively to identify and solve problems, strengthen teaching practice and enhance student learning. *Collective Inquiry* refers to the extent the school encourages its staff in building shared knowledge by examining systematically and collectively their educational practices and impact. *Reflective Dialogue* is the reflective conversations in pairs or groups that might help teachers to gain new insights about teaching practices, and usually the perspectives are shared in a manner of mutual support. *External Support System* means improving outreach and collaboration with stakeholders including families, communities, district and state education departments, in the process of developing and promoting PLCs in schools (Tai & Omar, 2019).

4.   Methodology

4.1   Sample

The study was conducted to examine the implementation of PLCs in Malaysian secondary schools. For the above purpose, all the 16 states including federal territories in Malaysia were involved in the study. Three secondary schools were selected at random from each state/federal territory giving a total of 48 schools engaged in the study. The sample included school principals, senior assistants and teachers so as to triangulate the data for better justification. For every school, the school principal was identified as the first respondent. Five senior assistants and twenty teachers were also selected at random as respondents. Altogether, there were 48 school principals (16 x 3 x 1), 240 senior assistants (16 x 3 x 5) and 960 teachers (16 x 3 x 20) or a total of 1,248 respondents chosen for the study (Table 1).

Table 1. Total number of school principals, senior assistants and teachers engaged in the survey

Respondents	Number of respondents identified in every school	Total number of respondents identified for the survey	Total number of questionnaires returned (Response rate)	Total number of usable data
School principals	1	48	42 (87.50%)	41
Senior assistants	5	240	170 (70.83%)	168
Teacher	20	960	772 (80.42%)	762
Total	26	1,248	984	971

4.2   Survey Instrument

PLCs were measured by using the Professional Learning Communities Scale (PLCS) developed by Tai and Omar (2019).   As mentioned above, the instrument encompasses two key dimensions: Organizational Factor and Non-organizational Factor with each dimension made up of four components. The PLCS consists of 44 items and held convergent validity as the Squared Multiple Correlations (SMC) all surpassed the threshold of 0.5. (Hair, Black, Babin & Anderson, 2010), the Average Extracted Value (AVE) all achieved the recommended acceptance level of 50% (Fornell & Larker, 1981), and the Composite Reliability Index (CRI) surpassed the threshold of 0.70 (Hair *et al.,* 2006). Besides, the PLCS also possessed discriminant validity as the AVE of the factors is more than 0.50 (Hair *et al*., 2010) and the CRI greater than 0.70 (Hair *et al*., 2006). The instrument is a six-point Likert-type scale and responses ranked from "strongly disagree" to "strongly agree". The data interpretation for the level of PLCs is based on the measurement of two indicators i.e. frequency of the performance and performance rating as shown in Table 2.

Table 2. Raw Scores of PLCs and Its level and indicators

Raw Scores	Level of PLCs	Indicators	
		Frequency of the Performance	Performance Rating
5.51 - 6.00	Very good	Almost all of the time	Very satisfactory
5.01 – 5.50	Good	Often	Satisfactory
4.01 - 5.00	Quite good	Quite Often	Quite satisfactory
3.01 - 4.00	Fair	Sometimes	Average
2.01 - 3.00	Quite poor	Quite Rarely	Quite Dissatisfactory
1.51 – 2.00	Poor	Rarely	Dissatisfactory
1.00 – 1.50	Very poor	Almost Never	Very Dissatisfactory

4.3   Data Analysis

As shown in Table 1, of 1,248 questionnaires sent out by post, 42 of 48 questionnaires were sent back by school principals with a response rate of 87.50%; 170 of 240 questionnaires by senior assistants, representing a response rate of 70.83%; and 772 of 960 questionnaires by teachers with a response rate of 80.42%. Nevertheless, only 41, 168 and 762 questionnaires of school principals, senior assistants and teachers, respectively, or a total of 971 sets of questionnaires were kept for the final analysis due to invalid responses. The above data collection adheres to all ethical considerations. The descriptive statistical analysis was employed in the current study to obtain scores and means whereas the inferential statistical analysis such as t-test and ANOVA were adopted to test the significance of the differences between or among the concerned variables at the significance level of .05.

5.   Demographic Characteristics

Of the respondents completing the questionnaires, about 68.49% (N=665) were female and 31.51% (N=306) were male. There were 38.21% (N=371) in the age group of 31 to 40 years, 28.12% (N=273) in the age group of 41 to 50 years, 23.89% (N=232) 51 to 60 years and 9.78% (N=95) 21 to 30 years. Among the respondents in the sample, almost 91% had a Bachelor's degree (90.73%; N=881), followed by 8.75% respondents with a Master's degree (N=85) and only .52% (N=5) of the respondents had a Ph.D. degree. Besides, more than one-fourth of the respondents or 28.53% (N=277) had worked more than 20 years, 21.52% (N=209) worked between 6 to 10 years, 19.57% (N=190) 11 to 15 years, 15.76% (N=153) 1 to 5 years and 14.62% (N=142) had worked 16 to 20 years.

6.   Findings

In examining the level of practising PLCs, based on the interpretation in Table 2 and as shown in Figure 2, the secondary schools achieved the level of *Quite Good* as the mean scores fell within 4.01 to 5.00, i.e. 4.74. Similarly, in examining the dimensions of PLCs, with the mean score of 4.80 and 4.68 respectively, the secondary schools were rated as *Quite Good* in practising Organizational Factor as well as Non-organizational Factor. In comparison between Organizational Factor and Non-organizational Factor, Organizational Factor (M=4.80) achieved a higher mean score than Non-organizational Factor (M=4.68); the difference was significant and supported by the *t*-test result, t=4.453, df=1940, p<.05 (Table 3). In Figure 3, a close examination by sub-dimensions revealed that *Principals' Commitment and Support* achieved the highest mean score whereas *External Support System* achieved the lowest mean score.
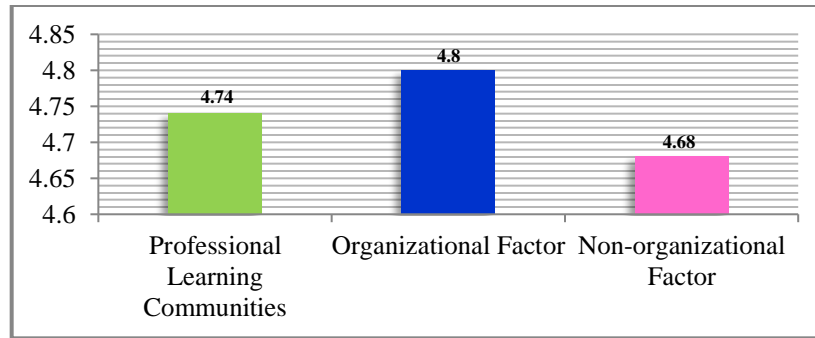
Fig. 2 Mean score of PLCs and its dimensions

Table 3. Independent samples test for Organizational Factor and Non-organizational Factor

	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	1.620	.203	4.453	1940	.000	.11688	.02624	.06541	.16835
Equal variances not assumed			4.453	1936.977	.000	.11688	.02624	.06541	.16835
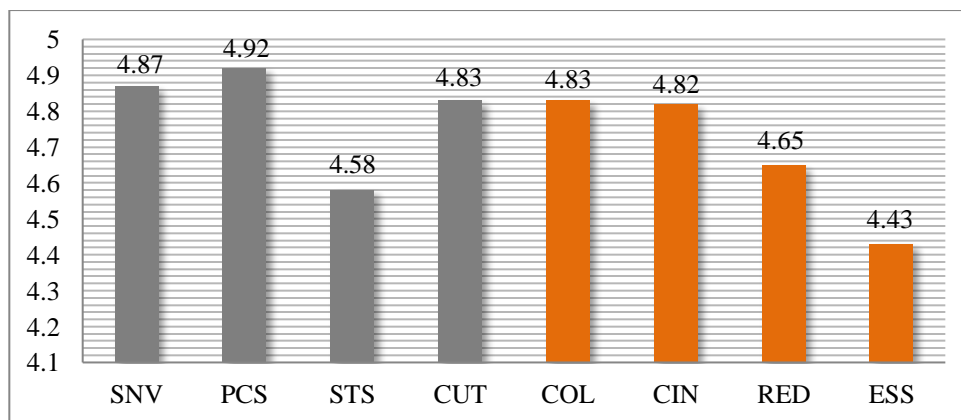
Note. SNV= Shared Norms and Vision; PCS= Principals' Commitment & Support; STS=Structural Support; CUT= Colleague Understanding & Trust; COL= Collaboration; CIN= Collective Inquiry; RED=Reflective Dialogue; ESS= External Support System

Fig. 3 Means of the sub-dimensions of PCLs

7. Discussion

The findings of the study have led to several important insights. Firstly, the study revealed that the secondary schools were perceived as *Quite Good* in practising PLCs. Based on the raw scores and the level of PLCs suggested in the study, the teachers had only practised PLCs 'quite often' with 'quite satisfied' performance. Generally, the level of practising PLCs in Malaysian secondary schools is yet to be enhanced with room for improvement --- this means that instead of 'quite often' in terms of frequency with 'quite

satisfied' performance, teachers in the secondary schools are encouraged to 'often' practise the concept of PLC with 'satisfied' performance if it is to be effective in the process of school reform.

There are a number of possible reasons for the above perception. Although Malaysian schools have some important processes of PLCs similar to those described in western literature, the forms and structures seem to be somewhat different. Malaysia has a centralized rather than a decentralized school system. Despite the common features of shared values and collective responsibility for students in the Malaysian and western contexts, the hierarchical relationships within schools in a centralized school system may limit teacher autonomy in practising PLCs. Besides, conformity is essential within the hierarchy of authority in the learning process (Andrews, Hayes, Kilgore, MacDonald & D. Gabbard, 2020). This deterministic system does not allow teachers to make choices and act on those choices that have professional importance. Eventually, PLCs are perceived by teachers as something created by external sources for them rather than something that they have the ability to influence (Imant and Van der Wal, 2020). As a result, teachers have a sense of disempowerment that might hinder their willingness to engage in PLCs actively (Keay, Carse & Jess, 2019).

Another reason might be the environment of the educational policy in Malaysia. Before the concept of PLCs emerged as an initiative to facilitate the teachers' continuous development, teacher development programmes were bureaucratic in approach where teachers were sent for training courses offered by the MOE. As a result, teachers would only meet the basic requirement of professional development of at least seven days per year as outlined by the MOE (MOE, 2014). However, since the 2011 implementation of PLC by the MOE as an alternative to promote teachers' continuous development, teachers have been encouraged to participate in learning through collaborative interaction, open sharing of classroom management, deep reflection of teaching practices, exchange of feedback etc. However, change is a stressor when individuals are forced to face the uncertainty of new processes and new demands of the change (Hayes, 2010; Kotter, 1999; Tai & Omar, 2013). With a prevailing culture of privatized practice in Malaysian schools, teachers may have difficulties and fears about how to handle and cope with these new challenges, thus having a reluctance to give up old habits (Tai & Omar, 2017). If the teachers are comfortable to remain in their present state, it would be difficult for them to embrace the implementation of PLCs actively in schools.

Another possible reason for the slow implementation of PLCs might be the teachers' heavy workload. Existing literature reveals that school-based PLCs can be hindered by the conditions in the workplace (Hairon & Dimmock, 2012; Kim & Ju, 2012; Lee, 2011; Song & Choi; 2010; Zhang & Pang, 2016). Kim and Ju (2012) point out that excessive administrative work was one of the reasons why teachers were not willing to pay much attention to teaching and learning. In examining the development of PLCs in Shanghai and Southwest China, Zhang and Pang (2016) argue that teachers in Shanghai who have heavy workloads have had their efforts undermined in establishing PLCs as compared to teachers from Southwest China who have lesser workloads. According to Joseph (2017), the Malaysian teachers are preoccupied with reports and other administrative work; this may hinder their involvement in PLCs. In fact, many local studies such as Chong, Ghani and Abdullah (2018), Rahim, Sulaiman and Sulaiman (2015), Saad, Walsh, Mallaburn and Brundrett (2017), and Yaakob, Hasbullah, Yunus and Yusuf (2017) also found that workload is an antecedent that affects the implementation of PLCs in Malaysian schools. Hence, to a large extent, if the MOE is not able to relieve teachers of their heavy workload that includes clerical duties, teachers would not be able to actively and meaningfully engage in PLCs.

Despite the contextual factors discussed above, we may be able to understand better why the secondary schools were rated as *Quite Good* in practising PLCs by analyzing further the second finding of the study --- comparing the two dimensions of PLCs, Organizational Factor achieved a higher mean score than Non-organizational Factor in Malaysian secondary schools and the difference was significant. This finding revealed that at the school level, the extent of how the schools develop and support the practice of PLCs in terms of *Shared Norms and Vision*, *Principals' Commitment and Support*, *Structural Support* and *Collegial Understanding and Trust* were more encouraging than at the non-organizational level --- the extent to which teachers perform PLCs in terms of *Collaborative Learning*, *Reflective Dialogue* and *Collective Inquiry* and how various stakeholders and the local community support PLCs through *External*

Support System.

On the one hand, the above finding may be due to the fact that MOE's school leadership development programmes such as the National Professional Qualification for Educational Leaders (NPQEL) by Institut Aminuddin Baki, the training arm of MOE for school leaders (Tai & Omar, 2020a), are basically sufficient to develop school leaders' capacities to drive change in schools including how to develop and sustain PLCs in schools. To a certain extent, the above initiative taken by the MOE could explain why the secondary schools achieved a higher mean score in Organizational Factor than in Non-organizational Factor. On the other hand however, the finding also revealed that the secondary school teachers were not competent enough and thus did not perform well in the Non-organizational Factor. A local study conducted by Abdullah, Manaf, Ail and Ramzv (2016) even pointed out that the lack of understanding the PLC concept among teachers is one factor hindering the implementation process of PLCs in Malaysian schools. Not surprisingly, the secondary school teachers achieved a lower mean score in Non-organizational Factor than the Organizational Factor in the implementation of PLCs.

Taking a closer look at the four components of the Non-organizational Factor, only *External Support System* has no direct relationship with teacher learning; it only involves how various stakeholders and the local community support the implementation of PLCs. The other three components of Non-organizational Factor i.e. *Collaborative Learning*, *Collective Inquiry*, and *Reflective Dialogue* are the central idea of how teachers engage continuously in sustained cycles of collaborative and inquiry-based learning that builds teacher capacity and improves student outcomes (Song & Choi, 2017). In fact, these three components are found in most of the models of PLCs such as Kruse, Louis and Bryk (1995), DuFour and Eaker (1998), Zhang and Pang (2016), and Song and Choi (2017). As teachers are the key players of PLCs, these three components are the innermost aspects of PLCs as promoters of teacher professional growth (Keay et al., 2019).

Specifically, *Collaborative Learning* provides teachers with chances to involve consistently in learning experiences that are self-organizing, emergent and interactive in nature (Zhang & Pang, 2016); *Collective Inquiry* is an interactive action with on-going discussions that help teachers to support and sustain the development of their knowledge base and educational vision (Keay et al., 2019); and *Reflective Dialogue* helps teachers consolidate and evaluate their practices in an honest manner, with the feedback enabling them to frame their actions and create opportunities for continuous learning (Zhang & Pang, 2016). Only through these initiatives, teachers are able to step out of their traditional and individually oriented learning cultures and share their visions, values and ideas through the socialization of their thought processes and practices to increase the likelihood for sustained meaningful learning in PLCs (Wagner & Parra). Consequently, this would encourage independent judgement and knowledge construction that encourage the enactment of quality classroom learning experiences for students (Lopes & D'Ambrosio, 2016).

More importantly, if teachers do not have sufficient competencies to perform well in *Collaborative Learning*, *Reflective Dialogue* and *Collective Inquiry*, there is a tendency that they are most unlikely to develop and enact their professional agency --- teachers' capacity to act constructively and purposefully to direct their professional growth as well as the growth of their colleagues that is central to the implementation of PLCs (Andrews et al., 2020; Keay et al., 2019). According to Vangrieken, Meredith, Packer, and Kyndt (2017), without reaching the deeper level of human behaviours --- the inner strength that greatly helps individuals in coping with external challenges, little may change and to a large extent this will impede the adopting of PLCs in schools. Therefore, it is not surprising that the secondary schools only achieved the level of *Quite Good* in practising PLCs as a whole.

The third finding of the study revealed that among all the sub-dimensions of PLCs, *Principals' Commitment and Support* achieved the highest mean score whereas *External Support System* achieved the lowest mean score. Empirical research consistently demonstrates that principals' leadership and commitment is one of the critical components in facilitating school-based PLCs (Cordingley, 2015; Hallinger & Lee, 2011; Hord & Sommers, 2008; Olivier & Hipp, 2010; Khalid & Strange, 2016; Olivier & Huffman, 2016). According to Cordingley (2015), school leaders play a crucial role in supporting professional learning and sustaining improvements in practice by providing sufficient resources and time,

sourcing relevant expertise and opportunities, and specifically in working together with teachers who are reluctant to engage in PLCs. Hord and Sommers (2008) highlight that school principals are the lynchpins of school reform and are in a strategic position to lead and provide support required for a learning school specifically in creating a culture of collaboration for improving instruction. In the same vein, Khalid and Strange (2016) emphasize the significance of school leaders in providing a safe and challenging climate conducive in building deep collaboration within PLCs in the schools.

Principals' Commitment and Support achieved the highest mean score among all the sub-dimensions of PLCs in the current study and this implies that the commitment and support of the school principals for developing PLCs in schools were sufficient and relevant in comparison with other sub-dimensions. The facilitating structure includes supporting teacher conversation that permits pedagogical reasoning, specifying problems, generalizing teaching principles and knowledge building (Tai & Omar, 2019). Some of the important initiatives of school principals that significantly contribute to facilitating successful PLCs in schools are creating opportunities to engage teachers in decision making, providing emotional support and devoting sufficient time to settle potential problems pertaining to student learning, offering constructive feedback for teachers through constant class observation, using every possible means to help teachers to teach their best, acknowledging the professional achievements reached by the PLCs and sharing leadership of the PLCs with teachers (Tai & Omar, 2019). Specifically, if school leaders participate in PLCs in a collaborative role rather than a supervisory one, this would influence a positive evaluation of teachers toward the initiatives, which in turn would encourage the teachers to engage in developing and sustaining PLCs in schools (Zhang & Pang, 2016). .

On the other hand, it was found that *External Support System* achieved the lowest mean score among all the sub-dimensions of PLCs. In fact, the development and enhancement of school-based PLCs does not depend solely on the internal processes and structures, but on external influencing factors and stakeholders as well (Cowan, Joyner & Beckwith, 2012; Olivier & Huffman, 2016; Osmond-Johnson, Campbell & Faubert, 2019; Spencer 2016). Cowan *et al* (2012) reveal that the district education departments have become increasingly accountable for student learning outcomes and hence the need to develop the district's capacity to help schools improve. They emphasize the importance of funding, with district officers providing professional support and guidance in the realization of powerful PLCs in schools. Olivier and Huffman (2016) point out that as the PLC process becomes embedded within schools, the support from the district department has a profound impact on the extent how schools are able to re-culture and sustain highly efficient collaboration practices. Osmond-Johnsona *et al* (2019) highlight the importance of the relationship between educational stakeholders and teacher organizations in the area of teacher professional learning, with the purpose of widening the space for further collaborations in improving student achievement. For Spencer (2016), inviting the community into the school to observe the results of collaboration can effectively communicate the importance of PLCs and develop sustainability and support from all stakeholders

Obviously, to promote, sustain and extend PLCs, it is essential for schools to get external support, foster networking and work with other partnerships (Sperandio & Kong, 2018). As *External Support System* achieved the lowest mean score in the study, this indicates that there is room for improvement for collaboration between schools and various stakeholders to promote PLCs in Malaysian secondary schools. School leaders play an important role in promoting the shared responsibility effectively among stakeholders, including parents, in maximizing the practice of PLCs in schools. Basically school leaders need to guide the change process to a positive conclusion by providing a moral purpose for it and make possible opportunities for building good relationships (Tai & Omar, 2019). They also need to take initiatives to share the information about how PLCs will benefit the students and invite the community for dialogue so as to foster understanding. Besides, Thessin and Starr (2011) suggest that the district education department must involve teachers and school leaders in developing and leading the PLC process, train school leaders and teachers on how to work together effectively in PLCs, show how PLCs fit into the district's improvement process and support schools according to their unique needs. Although the path to develop and maintain high-performing PLCs in schools is complex and time consuming, the involvement of various stakeholders

and local community can certainly foster the development of PLCs within schools and ultimately impact teaching practices positively and improve student learning.

8.   Implications

As a whole, the study offers insights into the implementation of PLCs in Malaysian secondary schools. As the secondary schools only achieved the level of *Quite Good* in practising PLCs, the MOE needs to identify the root cause of this predicament. The MOE needs to reflect upon their current approaches as they make refinements and alignments to the implementation of PLCs in the near future. Notwithstanding that relevant rules and regulations need to be in place to ensure the incorporation and enhancement of PLC practices in schools, the MOE also needs to ensure that the teachers acquire relevant competencies to develop and sustain PLCs effectively in schools. It is essential for MOE to customize training programmes based on the distinct needs of the teachers. Specifically, they need to design professional learning programmes for teachers that are targeted at facilitating their engagement into *Collaborative Learning*, *Collective Inquiry* and *Reflective Dialogue*.

The findings also bear important implications for school leaders as they are instrumental in promoting an authentic and professional learning culture in schools for teachers to grow. As teacher agency is central to teacher professional development (Andrew et al., 2020), school leaders are responsible to cultivate a school-wide capacity to develop teachers' professional space so as to enact teacher professional agency. The development of agency will affect teachers' efficacy and learning across all stages of teacher professional growth particularly in shaping teachers' view of how they adapt and apply learning through PLCs inside the classroom (Keay et al., 2019). To achieve the above purpose, the school management needs to take more initiatives to create a synergy of mechanisms that develop leadership abilities among the teachers at different levels, with individuals taking the lead to promote teacher learning and making PLC a culture rather than just a structure. There is a growing consensus that teacher leadership is at the forefront of teacher agency development, and is a powerful antecedent for PLC success (Wagner & Parra, 2019).

On a brighter note, the awareness of the active and agency role of teachers in PLCs is a good indicator of their success. This awareness values teachers as knowledge builders instead of service providers (Imant & Van der Wal, 2020); teachers are experts, decision makers and agents of their professional development and growth (Lopes & D' Ambrosio, 2016). As such, teachers need to shift their focus on teaching to that of learning. Basically, there is a need for the secondary school teachers to sharpen their skills and enhance their professional practices in PLCs; rather than working in isolation, teachers need to work collaboratively to construct knowledge to improve student learning; instead of treating the teacher's classroom activities as an individual teacher's traditional domain, they need to open up to their colleagues; rather than waiting for things to be done, teachers need to proactively take initiatives to engage in interaction that leads to learning. In short, instead of viewing themselves as factors, teachers need to act confidently as actors in PLCs (Imant & Van der Wal, 2020).

9.   Limitations of the study and future directions

Several limitations and future directions for research are identified in the current study. Firstly, as the implementation of PLCs is a complex learning process, future research can make great contributions to the body of knowledge if a mixed method is employed by combining surveys, observations, interviews or focus group discussions in examining PLCs instead of conducting a survey alone. Secondly, the assumption made in the study regarding the possible reasons (such as why the schools only achieved *Quite Good* in practising PLCs, and why Organizational Factor achieved a higher mean score than Non-organizational Factor in implementing PLCs) need to be investigated further by using relevant instruments. Any attempts to explore the issues through such approaches would certainly give better insights into the reasons for the current rate of adoption of the PLC concept in schools. Thirdly, it is essential to further explore PLCs in

different types of secondary schools in Malaysia including the residential and religious secondary schools so as to capture a better representation and to ascertain if the findings can be generalized.

10.   Conclusion

The study gave a brief overview of the implementation of PLCs in Malaysian secondary schools, highlighting the different effects and forms of their practice. Although contextual factors such as decentralized school system, the policy environment and teachers' workload are potential factors that might impact the development of PLCs, the incompetence of the teachers in practising *Collaborative Learning*, *Collective Inquiry* and *Reflective Dialogue* would also greatly hinder their professional practices in PLCs. Besides, external factors such as networking, external support and various forms of partnership might have substantial effects in sustaining the practice of PLCs within schools. In essence, the ethos of PLCs will only be embedded in the school system if teacher agency is widely cultivated among teachers. As teacher leadership is the foundation of teacher agency development, developing leadership among teachers at different levels is a *sine quo non* in promoting teacher learning. Teacher leaders are not only the drivers to lead in learning, they also motivate colleagues and community with ideas, knowledge, and passion, thus expanding existing efforts to steer systemic improvements in teacher learning. The study offers researchers a comprehensive analysis in exploring PLCs as a means towards continuous and sustained school improvement, with the prospect of even moving the current available literature to a more coherent, theoretical perspective for practical engagement.

11.   References

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