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The Development and Validation of Collegial Supervisory Practices Questionnaire for Malaysian Public Secondary School Teachers

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Abstract--- *This study develops and validates the scales of collegial supervisory practices of public secondary school teachers in Malaysia. The study uses quantitative approach to collect data from 357 Malaysian public secondary school teachers. The study employed the Principal Component Analysis (PCA) and Confirmatory Factor Analysis (CFA) to evaluate the internal consistency and psychometric properties of the collegial supervision scales as perceived by public secondary school teachers. The results of PCA revealed five factors with internal co-efficiencies ranging from 0.89 to 0.95 which indicated high reliability values across the extracted factors. Furthermore, the results are imperative for being the first of its kind in addressing the standard instrument for collegial supervisory practices in the context of Malaysia public secondary schools.*

Keywords--- *Collegial Supervision, Public Secondary Schools, Malaysia, Psychometric Properties.*

I. INTRODUCTION

The concept of collegial supervision (CS) refers to the initiatives to provide a sufficient or clear standard on teaching and its vital role in helping educators towards true success in teaching and learning. Empirically, CS concentrates on collaborative efforts by supervisors and teachers in improving instructional practices through knowledge sharing platforms and feedback for teachers' professional growth [1-4]. In this sense, Little [5] affirms that through teacher' collaborative efforts, it is believed that CS improves interpersonal relationships, meeting personal needs and breakthrough norms of isolation that are deep-rooted in the school environment.

Even though the concept of CS received significant attention among researchers from the UK, US and European schools since 1984 by Glatthorn [6], there is no specific measure of collegiality [7]. The majority of studies adopt non-quantitative approaches [8], and the complexity of collegial practice itself [9-11], led to the 'paucity' of studies on collegiality. Nevertheless, there have been recent developments in the collegiality measurement scale [7,12]. These developments reflect that the trend of collegiality study is now ready to be continued in the schooling system.

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1.1 The Concept of CS

In defining the concept of CS, Singh and Manser [13] believed that CS refers to the involvement of shared responsibility and values among school personnel including the principals, administrators and teachers. Furthermore, collegiality is understood as the sense of responsibility assigned to the teachers to become an integral part of the management and leadership processes of the school that are guided by schools' shared vision. Collegiality reflects the connection between leaders and subordinates; principals and teachers [11] and goes beyond classroom observation [4]. In another definition, CS is sometimes referred to as peer supervision [6,15] for its emphasis on self and colleague assessment rather than supervisors, with broader premises, dimensions, styles and mechanisms.

As teachers are the focus of the collegial approach to supervision [16,17], it is believed that the approach has the potential to create additional, more appropriate and accessible success for supervision. Practising CS results in higher teachers' morale while improving work-life quality and work commitment [18]. The collegiality concept in CS has become more into play in recent years due to the fact that today's teachers are well trained, and strongly committed to educational quality [19]. In terms of benefits, researchers believe that practising CS enhances teachers' sense of belonging through sharing responsibility and deceases teachers' withdrawn [20-21]., cultivates a sense of synergy [22], contributes to the colleagues' professional competencies and motivation [23], solves the acute shortage of well-educated and highly trained teachers in critical areas especially in secondary education [24], and strengthens interpersonal relationships among them [11,25]. The implementation of CS in schools officially redirects teachers with a great sense of loyalty towards the school and teaching, especially for novice teachers [26]. Thus, the collegial climate reduces the percentage of teachers' turnover [25,26].

1.2 CS in the Malaysian Context

The literature on the supervisory practice in the context of Malaysia emphasises direct supervision in its clinical mode [27,28] and pays little attention to CS. Supervision in Malaysian public secondary schools is broadly understood by the principals and teachers [29] as being derailed from its primary objective [30]. According to (2013, p. 196) [31], "most of the school principals seem to think that their most important and only duty is to carry out directives from the Ministry of Education, State/District Education Department" follow orders, and the same should apply to teachers. Furthermore, principals often disregard supervisory duty [32] and supervisory practice as paperwork completion [30] and neglect the teachers in the decision-making process [33]. The foregoing issues accounted for teachers' uncomfortable emotions, tarnishing ownership feeling [34], and pressure [35], and reflect that supervision is not being widely administrated adequately.

Succinctly, a clear standard framework, model and approach seem to be absent except the general supervisory implementation guidelines outlined in the circular letter no. 3/1987 issued by the Ministry of Education (1987) of Malaysia [36]. There is limited empirical evidence about the framework, model and items of CS in Malaysian public secondary schools. In other words, the standardised item related to the standard framework of CS is arguably unknown in the context of secondary schools. This gap necessitates an empirical investigation to identify the items that represent the standard framework of CS in secondary schools and suggests a standard framework of CS for Malaysian public secondary schools. It therefore, examines the items which were self-developed from a rigorous

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series of literature reviews, interviews with teachers and school administrators concerning CS in the Malaysian school context. Specifically, it examines the reliability, validity of the Standard Framework of CS for Malaysian Secondary Schools' (SFCSMSS) items based on teachers' feedback who served at these schools.

II. METHODOLOGY

2.1 Participants

A total of 357 teachers were selected of whom 259 were female, and 98 were male for the purpose of data collection through survey questionnaire. Teachers were selected using the multistage cluster sampling technique known as multiple probability technique37 used due to the difficulty in determining the entire population. This technique is appropriate for large populations that are geographically spread and natural in the population [37] in order to ease the group's identification, locate lists [38] while also reducing bias and representative issues.

2.2 Measures

In this study, the Standard Framework of CS for Malaysian Secondary Schools' (SFCSMSS) questionnaire was designed to assess the effective practice of CS in Malaysian secondary schools based on secondary teachers' feedback. The questionnaire consisted of 30 items which comprised four items on demographics, and 26 items that represent the five sub-dimensions; collegial relations (CR, 5 items), teacher's province (PR, 5 items), teacher growth (TG, 5 items), teacher collaboration (TC, 6 items), and reflective inquiry (RI, 5 items). In the demographics, four items were constructed; the staff gender, years of experiences within the teaching profession, the person-in-charge of their school supervision, and frequency of supervisory practices in a year at their schools. The items were derived from a series of interviews with teachers related to the practice of CS within their school context as part of continuous improvement for teachers' growth. Later, items were checked by senior teachers and the school administrators in obtaining the content validity of all items. The senior teachers were purposely selected and asked to respond to the survey items. The reason for selecting this particular group for this special task was because they were more engaged in and well-versed with school concept of supervision, especially the practice of CS.

Items were constructed in the Malay language. However, later, it was decided to provide an English translation based on the requirement by some English language teachers. In terms of the scaling, SFCSMSS uses a five-point Likert scale: 1: strongly disagree, 2: disagree, 3: Neutral, 4: agree, and 5: strongly agree. In this study, the five-point scale was decided to use based on the following justifications: (a) it is a common rating scale among social researchers; and (b) the scale provides equal opportunity for all respondents while providing their answers [39]. As for the pilot study, a total of 26 questionnaires were distributed to teachers. All questionnaires were returned. The results of the reliability analysis of the pilot data ensured the reliability of the items in the questionnaire.

2.3 Data Analysis

Before proceeding with quantitative data analysis, various measurements were taken. First, since some items were negatively worded, recoding process of negative items was executed during data analysis. Second, a series of exploratory factor analyses were performed to account for the variance of each dimension and measure the sampling adequacy. Lastly, the confirmatory factor analysis using the Structural Equation Modelling approach was undertaken to examine and predict underline measurement dimensions.

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III. RESULTS

3.1 Teacher's Demographics

The total respondents to the study were 357 out of 605 respondents intended. This accounts for a response rate 59.01%, which exceed the expected returned rate in the educational sector (49%) as discovered by [40]. The majority of the respondents were female teachers. Table 1 demonstrates the distribution of teachers according to gender, years of experience, administrative experience, and frequency of supervisory practices.

Table 1: Demographics of Teachers

Variables	**N**	**Percentage**
Gender		
Male	98	27.5
Female	259	72.5
Years of Experiences		
0 x ≤ 10 years	97	27.2
10 > x ≤ 20 years	149	41.7
20 > x ≤ 30 years	111	31.1
Administrator of School Supervisory Practice		
Principal	79	22.1
Deputy principal	115	32.2
Departmental head	155	43.4
External supervisor	8	2.2
Supervisory Practice		
2 – 4 times / year	192	53.8
Once / year	160	44.8
0 time / year	5	1.4
Total	357	100

The distribution of respondents in the study corresponding to their years of experience in teaching is quite balanced. The respondents are dominated by educators who ranged from 10 to 20 years of experience with a small majority of 41.7 % (n=149).

They are followed by respondents with 20 to 30 years' experience with 31.1% (n= 111), and the smallest group of respondents has 0 to 10 years of experience with 27.2 % (n= 97). This reflects a good distribution of the study coverage, in which respondents comprised all levels of experience from non-experienced teachers up to highly experienced teachers.

On the other hand, data portrayed supervisory practice administering in school. As resulted in the survey, supervisory practice is currently conducted internally by school members instead of external supervisors. External supervisors refer to supervisors from PPD, JPN or officers from KPM, which recorded 2.2% of total supervisory practices in school.

The remaining practice is currently conducted either by the school principal (22.1%), deputy principal (32.2%), and department head (43.4). With regard to the frequency of supervisory practice, the majority of respondents are supervised two to four times a year by respective supervisors aligned with what was outlined by the Ministry of Education of Malaysia. It recorded up to 53.8% (n=192) respondents. While 44.8% (n=160) assured that they were supervised once a year. 1.4% asserted that they have never been supervised. Table 1 depicts the details.

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3.2 Reliability and Correlational Indexes

Prior to the factor analyses, all 26 items in the questionnaire were examined through reliability analysis using the Cronbach's alpha value. The overall value for 26 items revealed an alpha value of 0.945, which demonstrates high internal constancy [41,42]. Specifically, the alpha values within the five elements of CS practice for Malaysian secondary schools are collegial relations (CR, $\alpha = 0.939$), teacher's province (PR, $\alpha = 0.916$), teacher growth (TG, $\alpha = 0.887$), teacher collaboration (TC, $\alpha = 0.887$), and reflective inquiry (RI, $\alpha = 0.900$). These values met the criteria for a reliable instrument, as suggested by [41]. Furthermore, the results of correlation coefficient values all constructs also correlated positively at a significance level of $p < 0.05$. Table 2 depicts the details.

Table 2: Correlational Matrix: Reliability, Means and Standard Deviations

Constructs		Alpha	Mean	SD	I	II	III	IV
I	CR	0.939	3.81	0.73	1			
II	TP	0.916	3.84	0.72	.623**	1		
III	TG	0.887	3.89	0.68	.551**	.702**	1	
IV	TC	0.887	3.98	0.67	.551**	.702**	.773**	1
V	RI	0.900	3.87	0.64	.566**	.692**	.832**	.832**

Correlation coefficient statistically significant at *p < .05; **p < .01.

Note: CR = Collegial relationship, TP = Teacher Province, TG = Teachers' Growth, TC = Teachers' Collaboration, and RI = Reflective Inquiry.

Based on the correlational matrix between constructs, the values ranged between $r = 551$ to $r = 832$. Based on teachers' feedback, teacher collaboration was the most crucial element within CS practices (M = 3.98; SD = 0.67) followed by teachers' growth (M = 3.89; SD = 0.68), reflective inquiry (M = 3.87; SD = 0.64), teachers' province (M = 3.84; SD = 0.72) and collegiate relationship (M = 3.81; SD = 0.73).

3.3 Exploratory Factor Analyses

To begin with the factor analysis, the principal component analysis (PCA) procedure was selected as the procedure for conducting the factor analysis. In this study, the five studied sub-constructs that are collegial relations (CR) ($\alpha = 0.939$), teacher's province (PR) ($\alpha = 0.916$), teacher growth (TG) ($\alpha = 0.887$), teacher collaboration (TC) ($\alpha = 0.887$), and reflective inquiry (RI) ($\alpha = 0.900$). In this analysis, item loadings below 0.30 were omitted.

Through the PCA procedure, the KMO index for sampling adequacy was 0.950, while Bartlett's test of Sphericity was significant ($\chi 2 = 6.707E3$; df = 325; $p < .0000$), indicating that the correlation matrices were appropriate for the analysis43.

From the analysis, five factors were extracted with eigenvalues greater than one, which accounted for 72.070% of the variance. From the rotation, the first factor contributed 13.049%, the second factor contributed 1.621%, the third factor contributed 1.281%, the fourth factor 1.060 %, and the fifth factor 8.94%. The factor loadings ranged between 0.513 to 0.795 values, which considered satisfactory values. Table 3 presents the details.

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Table 3: Factor Loadings on Principal Components Analysis of the CS Scale Items

Items	Component				
	1 TC	2 PR	3 CR	4 TG	5 RI
CR1	.197	.009	.721	.181	.304
CR2	.193	.213	.795	.163	.056
CR3	.172	.357	.614	.291	.065
CR4	.286	.442	.621	.215	-.023
CR5	-.058	.008	.513	.102	.051
PR1	.267	.552	.479	.117	.053
PR2	.223	.691	.209	.296	.087
PR3	.388	.635	.154	.147	.315
PR4	.437	.627	.273	.081	.310
PR5	.172	.812	.142	.133	.812
TG1	.327	.229	.376	.635	.239
TG2	.382	.243	.434	.558	-.057
TG3	.396	.386	.337	.588	-.013
TG4	.310	.279	.150	.720	.213
TG5	.318	.640	.167	.640	.110
TC1	.725	.193	.144	.154	.202
TC2	.736	.297	.325	.170	-.017
TC3	.637	.441	.344	.178	-.080
TC4	.639	.386	.020	.094	-.033
TC5	.714	.269	.234	.261	.036
TC6	.697	.137	.212	.432	-.014
RI1	-.031	.421	.142	.267	.639
RI2	.018	.239	.133	.217	.728
RI3	.099	.155	.204	.248	.742
RI4	.023	.181	.198	.221	.767
RI5	.376	.038	.447	-.122	.623

Extraction Method: Principal Component Analysis.

Note: CR = Collegial relationship, TP = Teacher Province, TG = Teachers' Growth, TC = Teachers' Collaboration, and RI = Reflective Inquiry.

3.4 Confirmatory Factor Analysis

The appropriateness of the measurements model constructs of the study was examined using Confirmatory Factor Analysis (CFA). CFA was performed to examine the structural model [43,44] on summated scales used to validate the initial results. In the study, the CS model was constructed based on the feedback provided by 357 academic staff comprising teachers and principals in four different public secondary schools. The five factors indexed in the PCA analysis were hypothesised. The items CR1 until CR5 measured the first latent variable CR. Item PR1-PR5 measured the second latent variable PR, while items TG1-TG5 indexed the third latent variable TG. Furthermore, items TC1-TC6 measured the fourth latent variable TC, while the final factor was measured by items RI1-RI5 respectively. These latent variables constitute the proposed standards of CS in the study.

The CFA analysis used maximum likelihood (ML) estimation to access the overall fitness of the CS model. Pertaining to normality, there is no serious violation normality assumption. There is no outlier in the Mahalanobis distance, and all the values of kurtosis and skewness were negative and less than 1.0. The value of Chi-square ($\chi 2$)

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would be zero in the perfect situation while the fit is obtained from an insignificant $\chi 2$. However, the large $\chi 2$ value indicates that the observed covariance matrices are far from the estimated covariance matrices [45]. Therefore, a well-fitted model would be drawn either from an insignificant $\chi 2$ or alternatively from RMSEA through a method of lower and upper bounds. RMSEA, with its point estimate and associated confident intervals (CI) are using lower 0.05 and upper 0.10 as the cut-off values to the extent to which the hypothesised model fits the data. The model would be rejected if RMSEA and its CIs are less than the value of lower bound 0.05. It will be also rejected if it has exceeded the value of upper bound 0.10 [46]. Depending only on $\chi 2$ for statistical significance test per se, will not provide enough information about the degree of goodness of the model fit due to sensitiveness of $\chi 2$ to sample size and other associated limitations of $\chi 2$[47]. Therefore, statisticians and practitioners encourage researchers to use additional indices in addition to $\chi 2$ such as CFI, TLI, IFI, AGFI, GFI, and RMSEA to evaluate the model fit [43,45,46]..Result of the five factor measurement model resulted in an overall fit of the model; $\chi 2$ (26) = 884.889, p = 0.001, which was statistically significant indicating inadequate fit between the covariance matrix of the observed data and the implied covariance matrix of the model. However, CFI and RMSEA of the model recorded good scores with CFI = .902 and RMSEA = .076. While CMIN/DF = 3.062 is still within the acceptable ratio when referring to suggestion of [48], and TLI was close to its acceptable range with TLI = .890. These fit indices are not encouraging. Although CFI, RMSEA and CMIN/DF fell within accepted fit range, other indices fell short the desired indices of good model fit. Therefore, the model estimation of CS underwent a revision (modification) process to achieve better fit. Figure 1 depicts the detail.

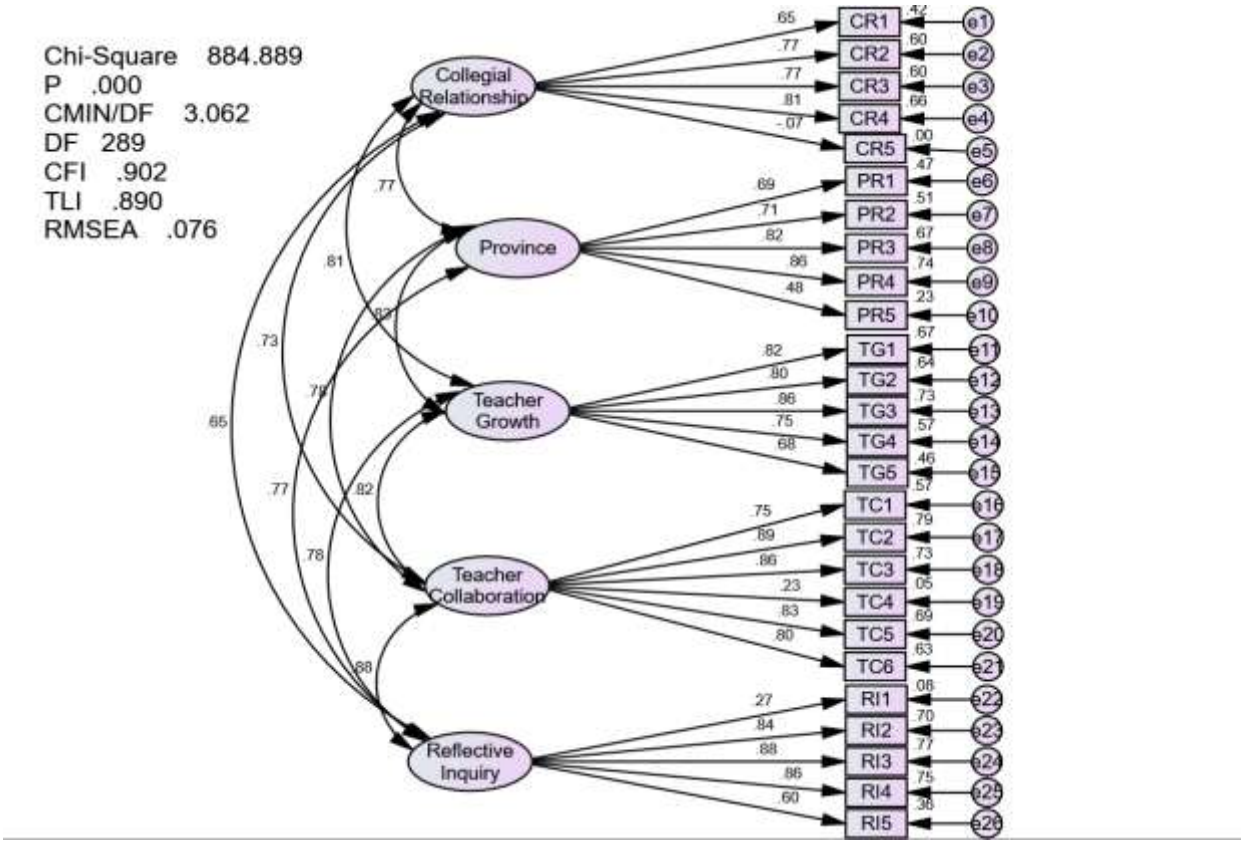

Figure 1: Measurement Model of Collegial Supervision in Malaysian Public Secondary Schools

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3.5 The Revised Model of CS

In determining better fit values for the existing CS model, several modifications were performed to identify a more parsimonious model. Referring to [49] suggestion, as well as recommendations by43 for practical significance of the loadings, standardised loading estimates should be greater than 0.4 (>0.4) for interpretative purposes. Thus, factor loading below 0.4 that causes the measurement model to have poor fit was deleted from the model. Three items have factor loadings below 0.4. After deleting these three items (CR5, TC4 and RI1) to retain only factor loadings of >0.4, a new CFA measurement test of the model was executed. The result of the revised model is shown in Figure 2.

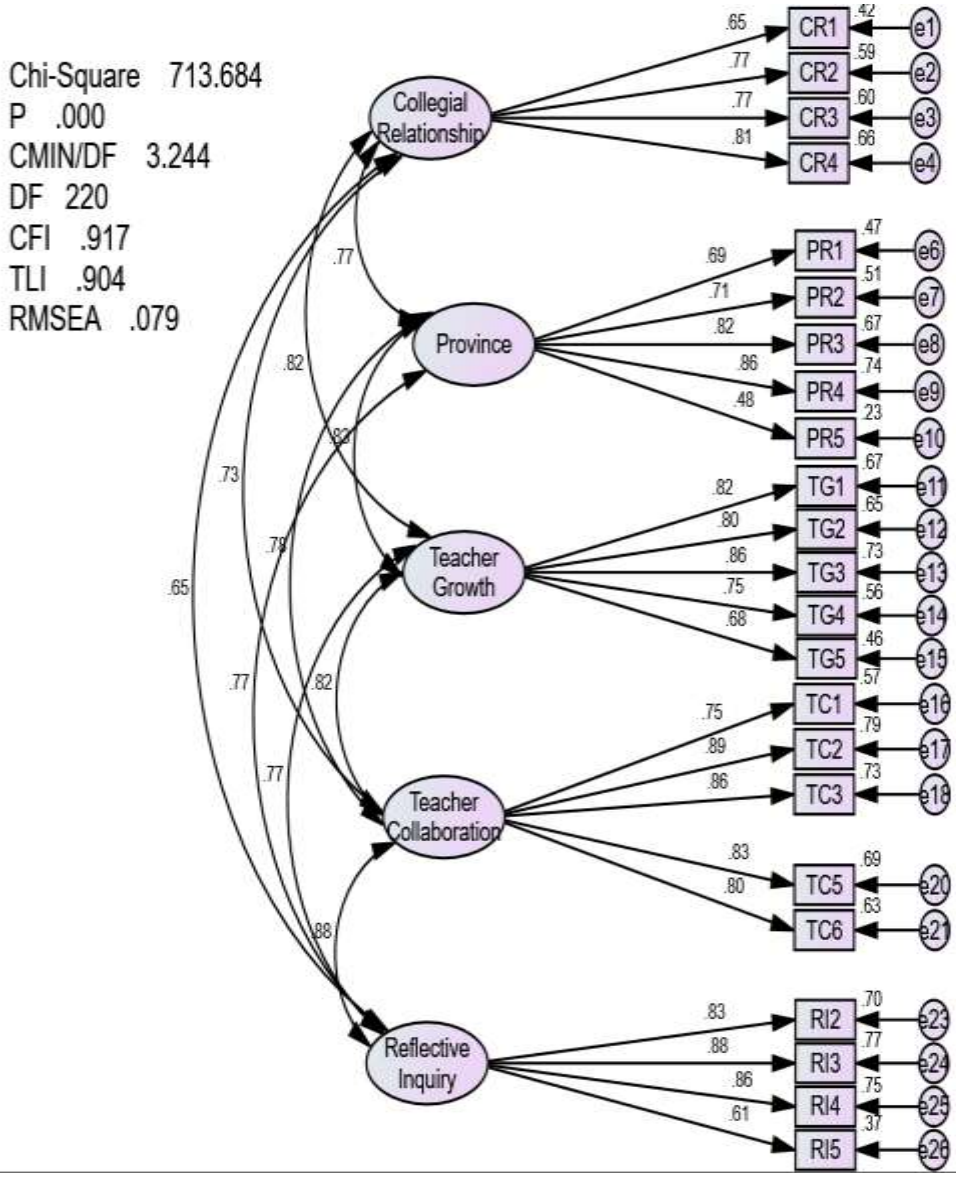

Figure 2: The Revised Measurement Model of CS

The revised multidimensional model of CS yielded an overall $\chi 2$ value of 713.684, $p < .001$ with CMIN/DF = 3.244, CFI = .917, TLI = .904, IFI = .907 and RMSEA = .079. The fitness indexes result for the revised CS model

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against the recommended thresholds of the goodness of model fit are summarised in Table 4. Following the recommendation from experts such as [50] and [51], simpler theoretical processes are favoured over complex ones. Therefore, the study stops the process at the stage after deletion of three items (factor loading < 0.4) since the results gained on CFA test of the revised model of CS, met criteria needed (CFI, TLI, IFI and RMSEA). The revised model of CS met the level of acceptance indexes for absolute fit [53] and incremental fit [54]. However, it did not manage to achieve the parsimonious fit due to a Type II error (sample size). According to [50], $\chi 2$ is highly sensitive with sample size, in which small samples have a high tendency to accept poor models (Type II error). Once the value of $\chi 2$ is relatively high, it is impossible for the CMIN/DF to retain under parsimonious fit (CMIN/DF < 3).

Table 4: Summary of Fit Indices of the Revised CS Model

	Fit Indices		
	Recommended		**Revised CS**
	Accepted Fit	**Good Fit**	**Model Fit**
Chi-square	Insignificant	Insignificant	713.684
P – value	.001 ≤ p ≤ .05	.001 ≤ p ≤ .05	.001
CMIN/DF	$2 \leq \chi^2/df \leq 5$	$0 \leq \chi^2/df \leq 3$	3.244
CFI	.90 ≤ CFI ≤ 1.00	.95 ≤ CFI ≤1.00	.917
TLI	.90 ≤ TLI	TLI ≤ 1.00	.904
IFI	.90 ≤ IFI	IFI ≤ 1.00	.917
GFI	.90 ≤ GFI	GFI ≤ 1.00	.85
AGFI	.90 ≤ AGFI	AGFI ≤ 1.00	.812
RMSEA	.05 ≤ RMSEA ≤ .08	0 ≤ RMSEA ≤ .05	.079

Note. The table outlined goodness-of-fit criteria suggested by the statisticians (Wheaton et al., 1977; Hair et al., 2010) for statistically significant at level .05.

Composite reliability index (CRI) was inspected to indicate how well each structure been described by the observed variable. CRI method would allow researchers to evaluate factor indicator scores more accurately (Raykov & Shrout, 2002), and is considered as advance criterion of estimation compared to coefficient alpha (Fornell & Larker, 1981). Based on its ability to compute on standardised regression weights and measurement correlations errors, the CRI test of the study was performed confirming the internal consistency (reliability) of the factor loadings. Through PCA application, CRI values for each construct of the study been calculated. As a result, CRI values ranged between 0.80 < CRI < 0.95 been recorded and found to exceed the cut off value 0.7 (CRI > 0.7) to claim that the internal consistency is established as notified by Fornell and Larker (1981) and Hair et.al (2010). Detail figure on CRI for each construct is shown in Table 5. On the other hand, amount of variance captured by the construct due to measurement error average variance extracted (AVE) test were performed next. The AVE method been used to evaluate convergent validity and discriminant validity of a given construct; calculated as a square root of the average communality (Fornell & Larker, 1981). The AVE values of the study lied within range of 0.566 to 0.685 as portrayed in Table 4.22. It is clearly shown that the values attained are greater than 0.50 as cut-off value. Therefore, referring to Fornell and Larker (1981) and Hair et.al (2010), it can be evidence that the construct and convergent validity of the study are met and established.

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Table 5: CRI and AVE Report for Every Construct in the Model

Construct	Item	Factor loading (α)	CRI	AVE
Collegial Relationship (CR)	CR1	0.65	0.838	0.566
	CR2	0.77		
	CR3	0.77		
	CR4	0.81		
	CR5	deleted		
Province (PR)	PR1	0.69	0.842	0.525
	PR2	0.71		
	PR3	0.82		
	PR4	0.86		
	PR5	0.48		
Teacher Growth (TG)	TG1	0.82	0.888	0.615
	TG2	0.80		
	TG3	0.86		
	TG4	0.75		
	TG5	0.68		
Teacher Collaboration (TC)	TC1	0.75	0.915	0.685
	TC2	0.89		
	TC3	0.86		
	TC4	deleted		
	TC5	0.83		
	TC6	0.80		
Reflective Inquiry (RI)	RI1	deleted	0.876	0.644
	RI2	0.83		
	RI3	0.88		
	RI4	0.86		
	RI5	0.61		

Note: Composite reliability index (CRI) formula = $\sum$(factor loading α)2 / $\sum$(factor loading α)2 + $\sum\varepsilon j$. Average variance extracted (AVE) formula = $\sum$(factor loading α)2 / $\sum$ (1 – factor loading α)2 + $\sum\varepsilon j$.

IV. DISCUSSION AND IMPLICATIONS

This paper evaluates and assesses the construct reliability and criterion-related validity of the CS practice through the feedback provided by public secondary school teachers. The study demonstrated that items measuring CS practice in Malaysian secondary schools are considered reliable and exhibited goodness of fit. The items were developed from a series of interviews with secondary school teachers and devised into dimensions. Thus, based on the evaluation and statistical assessment, the findings supported the use and suitability of the items in measuring the CS practice from a wider perspective. Furthermore, the study addressed the gap of the relevant topics on CS practice which have hardly been studied within the Malaysian context. the results indicated that secondary teachers preferred teacher collaboration as the most crucial element within CS practice (M = 3.98; SD = 0.67) followed by teacher growth (M = 3.89; SD = 0.68), reflective inquiry (M = 3.87; SD = 0.64), teachers province (M = 3.84; SD = 0.72) and collegiate relationship (M = 3.81; SD = 0.73) respectively.

The results discovered a growing consensus that CS has the potential to be practised successfully in Malaysian public secondary schools. It requires more exposure to the effectiveness of CS practices such as appropriate training and a series of workshops to rationalise its objectives. The most important aspect needed is an appropriate standard framework that can be used as a guideline to steer the implementation. CS implementation requires a proper basic structure underlying the system (standard framework), followed by the well-informed techniques of implementation. In determining an appropriate standards framework of CS suited the Malaysian school culture and norms, the study amalgamated between the basic premises of CS and dimensions of CS discovered throughout this study. It is based

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on the alteration of [55] framework named 'formative and cyclical nature of the instructional supervision'. The standard framework of CS in this study is made up of three layers. The outermost layer of the framework is governed by five basic premises that work as basic principles of CS. The second layer is structured by dimensions that edge the features of CS, examined thoroughly from the exploratory perspective of the Malaysian public school context. While the innermost layer consists of the standards of CS proposed in the study. The graphical standard framework of CS in this study is represented in Diagram 1. Bounded within the territory made of the five basic premises of the CS [16,17] as 'universal set' safeguards the standards formed to be eternally aligned with its principle practice. However, these basic premises of CS are not standalone premises, but are highly interdependent and arranged according to its priority order (premise 1 through premise 5) for it to serve as a complete value of collegial supervisory practice.

The standard framework relies not only on the basic premises but is also influenced by the CS dimensions that rule collegial supervision. Split into the nine contemporary collegial dimensions discovered in Malaysian secondary public school context, they are parallel with the dimensions noticed earlier by [8] and later by [9], with some additional dimensions. Likewise, the CS dimensions are greatly interrelated dimensions.

4.1 Standard 1: Reduce Isolation and Preserve Unity

The first standard proposed in this study is 'reduce isolation and preserve unity'. Reducing isolation and preserving unity abolishes the deep-rooted sickness in a school environment which is found to be a common practice among teachers. This standard perhaps postulates the challenges faced in the Malaysian school context in which people are beginning to prefer 'working alone and seeing others as opposition. This standard also strengthens school members' relationships towards collegial bonding. By deliberating on vision, power and authority, through interdependency and valuing each other, this standard will be able to preserve unity and secure harmony in the Malaysian public school culture. This standard could be an 'antidote' for the isolation preferences.

4.2 Standard 2: Steer Sense of Belonging

CS ought to be a province between teachers and supervisors. Therefore, it is vital for the school to 'steer a sense of belonging' among school members. This standard would enable cultivating teacher's responsibility, motivation and competencies to play a part in any school activity including supervision. This standard advocates that supervisory practice is not just for paperwork completion and remove a feeling that supervision is dedicated to the top management, but a platform for all. As a result, it opens up frequent communication opportunities across hierarchical boundaries and develops mutual support and trust among the school community. The standard also increases empowerment awareness, helping colleague's professional development and igniting a learning culture among them. At the same time, it could overcome teachers' uncomfortable emotions, and pressure experienced by Malaysian teachers.

4.3 Standard 3: Promote "Risk-Taking" and "Can-Do" Spirit

To support teachers' growth, CS needs to 'promote "risk-taking" and "can-do" spirit' as part of its standard. Teacher initiatives and their new ideas are sometimes not heard and appreciated. Under the flag of "risk-taking" and "can-do", this standard creates a platform in which teachers' initiatives and their new ideas will be supported and

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acknowledged. It may also boost creative thinking among Malaysian school teachers. Teacher's creativity, brilliant ideas, talent and skills will no longer be wasted but praised and encouraged. Once teachers are brave to take a risk by practising their ingenuity, and allowed to make mistakes so that they can learn from the mistakes for improvement [56], it will inspire and boost their "can-do" spirit.

4.4 Standard 4: Encourage Cooperation and Sustain the Collegial Learning Community

Good teachers must always be willing to learn and collaborate with others for them to continue to flourish. Thus, encouraging cooperation and sustaining collegial learning community is the fourth standard of CS in the study. Encouraging cooperation fosters collaboration in school. However, it needs to be done in creative ways to avoid rejection. Among the forms of supervisory cooperation that will be accepted among Malaysian teachers are mentoring, cognitive coaching, and peer coaching, as identified by [57]. Sustaining collegial learning urges the school community to share resources, knowledge and expertise. Not just by seniors towards juniors, or supervisors to ordinary teachers, but as a learning culture atmosphere. This culture may prevent losing the knowledge, experience and expertise [58] of the retired teachers. Cultivating a learning tradition among the school community is not restricted to 'craft (content-based) knowledge' sharing, but includes interchanging fruitful ideas and adequate feedback.

4.5 Standard 5: Create 'Safety-Net'

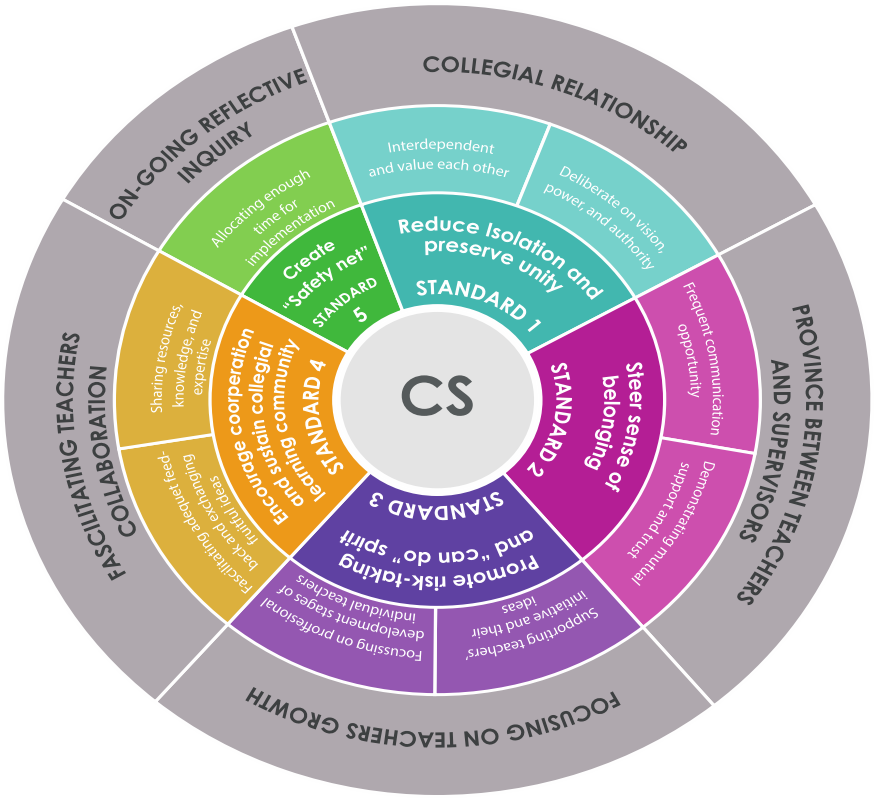

Figure 3: Proposed Standard Framework of Collegial Supervision for Malaysian Public Secondary Schools

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The final standard of CS as suggested in the study is creating a 'safety-net'. Safety-net features are needed to secure on-going reflective inquiry of supervision and works as 'teachers' protection' by ensuring teachers are not blamed and held responsible for the schools' successes or failures. Safety-net creates a proper network in which accountability of any school's tasks is upon every school members as a team not on an individual. Individuals should not be blamed but all team members are held responsible for the mistakes. This gives them the opportunity to learn from mistakes, as suggested in [56]. Through a safety-net, a proper support system and plan will be designed in which every action related to ideas or problems can be examined. This standard also advances the 'risk-taking' and 'can-do' standard. It changes the scenario of blaming teachers as noted by previous researchers [30] towards coaching and guiding [30]. Another safety-net feature suggested in this study is allocating appropriate time for any implementation. In other words, new tasks or policies are given appropriate time allocation for its execution, since changes cannot happen overnight. Figure 3 depicts the details.

V. CONCLUSION

Accountability has created the need to scrutinise effective supervisory practice for quality improvement in the school educational system. Supervision is the backbone of a school's effectiveness. Collegial supervision is a new school supervisory practice in many developing countries, including Malaysia. Understanding and implementation of CS are still at a preliminary stage. It requires time to develop awareness and understanding before it can be completely exercised. This study evaluated and assessed the items related to CS practice in Malaysian public secondary schools which were largely overlooked by previous scholars on supervisory practice. Based on the findings, the items derived from a series of interviews with secondary school teachers and the school administrators scored acceptable reliability and validity values which underscore the relevance and legitimacy of the framework to measure the CS practice.

VI. RECOMMENDATIONS FOR FUTURE STUDIES

Reflection from the current result and owing to the limitation of the study, the researchers offer several recommendations for further research on CS in the school context. Further research should consider the following suggestions:

[1] This study selected only public secondary schools in southern and the central region of Malaysia as the research site. Therefore, future research could enlarge the scope by covering private primary and secondary schools as well as public primary schools across other regions.

[2] In regard to respondents, further studies could explore the perceptions of educational officers from state and district educational department (PPD and JPN), external supervisors from Jemaah Nazir and also school administrators since this study only sought teachers and internal supervisors' perceptions. The acceptance level of a standard framework of collegial supervisory practice in Malaysian school is uncertain. Therefore, follow-up research on the matter is highly recommended. This would support how the practice could be implemented successfully.

[3] Developing an official collegial supervisory instrument to gauge the level of supervisory practice and using

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it as a tool for measuring the effectiveness of the practice is also something that can be developed in the future.

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