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A Confirmatory Factor Analysis of the Niche-Malaysian Teachers' Leadership Competency Instrument (NMTLCI)

[1]Fanny Kho Chee Yuet, [2]Hamidah Yusof, [2]Syed Ismail Syed Mohamad

[1]Sultan Idris Education University (UPSI), Department of Management and Leadership, Faculty of Management and Economics, 35900 Tanjong Malim, Perak Darul Ridzuan, Malaysia.
[2]Sultan Idris Education University (UPSI), Department of Management and Leadership, Faculty of Management and Economics, 35900 Tanjong Malim, Perak Darul Ridzuan, Malaysia.

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ABSTRACT

As professionals, teachers should extend their knowledge and repertoire of skills and challenge them to think, and not merely respond to what they are told. They are also encouraged to assume more formalized leadership roles in their schools as a pathway to administration. This is where teacher leadership comes into its own. Thus, the objective of this study is to determine the relevance and applicability of the Niche-Malaysian Teachers' Leadership Competency Instrument (NMTLCI), particularly in Malaysian secondary schools. This instrument may provide an early indication of teachers' leadership practices in Malaysian classrooms. It was generated through literature review and comprehensive discussions with a group of school teachers. It is revealed that by focusing on various leadership role, teachers will be more confidence to sustain their instructional practices and take part in school change initiatives. The findings of this study are also useful to be incorporated into teacher preparation programmes, held by respective teacher training institutions and universities throughout Malaysia, particularly in preparing quality teacher leaders for the future.

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INTRODUCTION

In today's ever changing world, teachers are required to demonstrate informal leadership roles in classrooms and formal leadership roles in schools. Therefore, teachers would need to be willing to engage in teachers' leadership roles as it is the most significant school-based factor determining student outcomes. Additionally, the Malaysia Education Blueprint 2013-2025 also affirmed that teachers who assume formal classroom-based leadership roles as well as school leaders who assume more formal school-based leadership roles serve as the most important drivers of student outcomes. Nonetheless, research has shown that the commonly held view concerning the effects of school leaders' leadership on school outcomes is not warranted. This led to the recommendation that more attention should be given to school condition through which such leadership flowed (Leithwood and Jantzi, 2000).

Indeed, Andrews, Crowther, Hann and McMaster (2002) have developed "Teachers As Leaders" framework which highlights the importance of two key factors focusing on the leadership of teachers, namely the values- and powers-based instructional practices and their ability to create new meaning in the life of people in schools. They also make an important distinction between teachers as leaders in a specialised area such as pedagogical and (subject) discipline leadership and most importantly, leadership which contributes to whole school reform and improvement. This focus on school improvement was central to recent Federal Government trial project of a shared leadership approach in schools in Australia (Chesterton and Duignan, 2004) and

Elmore (2000), too, argued that leadership of schools is beyond the capacity of any one person and needs to be 'distributed' to incorporate the contours of expertise within a culture that provides coherence, guidance and direction for instructional practice. In other words, new form of negotiations between leaders and teachers as in distributed leadership need to be made (Beck and Frederiksen, 2008). Distributed leadership therefore, must have a clear purpose and focus engaging teachers as leaders based on their professional expertise. It is through distributed leadership that the chance of teachers

Corresponding Author: Fanny Kho Chee Yuet, Sultan Idris Education University (UPSI), Department of Management and Leadership, Faculty of Management and Economics, 35900 Tanjong Malim, Perak Darul Ridzuan, Malaysia.

acting as transformational leaders is most likely to occur (Anderson, 2008).

There is an extensive body or research which confirms that strong collegial relationship, mutual trust, support and a focus on enquiry are crucial for effective school-wide improvement and change initiatives (Harris, 2002). In fact, the task of impacting school-wide change effectively requires a multi-dimensional set of leadership competencies (Day and Harris, 2003). Marcus and Pringle (1995) highlighted competencies as one of the three critical keys to successful change (the other two being commitment and capability). While the need for developing effective teachers' leadership competencies is acknowledged, there is much less certainty about which leadership competencies are most likely to produce favourable outcomes.

Current trends revealed that identifying competencies is a valuable piece of the leadership development puzzle (Yamazaki and Kayes, 2004). Knowledge of which competencies significantly influence teacher leadership success and lead more effective teacher leadership efforts. Therefore, if teacher leadership is examined from the most critical competencies that can be learned, there is little doubt that processes of teacher leadership development can be fine-tuned for greater efficiency to lead change from the classroom (Teacher Leadership Exploratory Consortium, 2011; Tubbs and Schulz, 2006).

Literature Review:

Variety of empirical studies have revealed that leadership competencies are sets of knowledge, skills, traits, and attributes that collectively enable individuals to perform competently (Zenger and Folkman, 2002; Teacher Leadership Exploratory Consortium, 2011). According to Spencer and Spencer (1993), competency is an underlying characteristics of an individual that is causally related to effective or superior performance in a job or situation. Practically, competencies differ on different counts, depending on the specific task to be performed by individuals.

Teachers need a wide range of competencies in order to deal with conditions at school such as school administration as well as curriculum and instruction at school and classroom level, for instance, classroom management and management of student behaviour, which support and sustain school improvement. According to Katzenmeyer and Moller (1996), "if a teacher is not proficient in professional skills, then the focus in the classroom is on daily survival. This teacher will need to develop classroom expertise before leading others beyond the classroom" (p.43).

Thus, leadership competencies in this study were identified based on four different types of models which embedded teacher leadership development in schools as shown in Figure 1. These models include The Framework for Teaching Evaluation Instrument (Danielson, 2013), Teacher Leadership Skills Framework (Centre for Strengthening Teaching Profession, 2009), Teachers as Leaders Framework (Crowther, 2008), and Teacher Leader Model Standards (Teacher Leadership Exploratory Consortium, 2011). In fact, there is limited number of models of teacher leadership in the literature. Therefore, the model proposed by Teacher Leadership Exploratory Consortium (2011), which is known as the Teacher Leader Model Standards serve as a core model in this study.

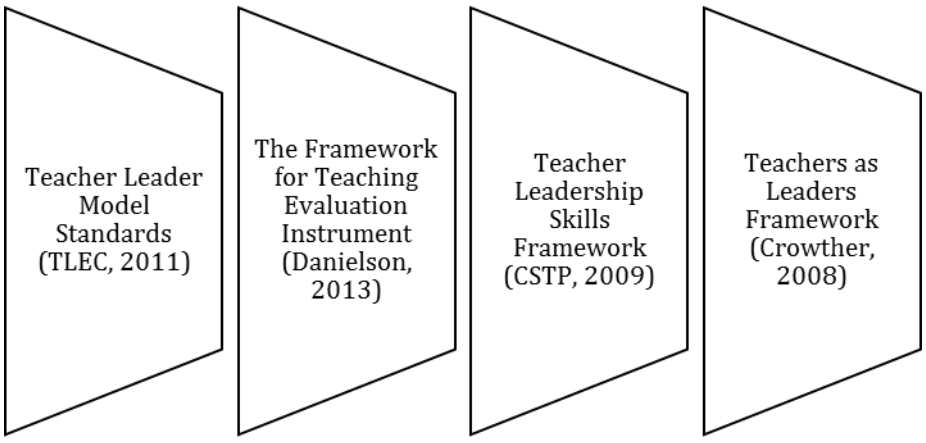

Fig. 1: The Articulation of the Proposed NMTLCI

The Elements of Niche-Malaysian Teachers' Leadership Competencies Instrument (NMTLCI):

Based on the extensive review of competencies from the four models above, this study discovers five broad elements, i.e. i) Curriculum and Instruction; ii) Leadership Attributes and Skills; iii) School Administration; iv) Collaborative Culture; and v) Instructional Experts. These broad elements lead to the formation of five elements utilized in NMTLCI, i.e. i) 'Facilitating Improvement and Establishing Standards' (FIES); ii) 'Modelling Leadership Attributes and Skills' (MLAS); iii) 'Participating in

Organizational Development (POD); iv) 'Fostering a Collaborative Culture' (FCC); and v) 'Performing as Referral Leader' (PRL).

The first element of NMTLCI – 'Facilitating Improvement and Establishing Standards' was constructed based on the third role of teacher leaders - 'Strive for pedagogical excellence' as listed in the Teacher as Leaders Framework. It emphasizes on improving teacher's instructional practices while taking into consideration diverse student's learning need. Indeed, pedagogical excellence is concerned with both pedagogical and social nature, and thus, teacher leaders must have the competencies in both in order to influence student engagement beyond the classroom (Katyal and Evers, 2004).

The second element of NMTLCI – 'Modelling Leadership Attributes and Skills' (MLAS) was constructed based upon teacher leadership definition by the Centre for Strengthening the Teaching Profession (2009). The centre defined teacher leadership as 'Knowledge, skills and dispositions demonstrated by teachers who positively impact student learning by influencing adults, formally and informally, beyond individual classrooms. Therefore, teacher leaders must possess common leadership values, leadership knowledge and leadership skills in order to lead.

The third element of NMTLCI – 'Participating in Organizational Development (POD) was developed based on the fifth domain in the Teacher Leader Model Standards (Teacher Leadership Exploratory Consortium, 2011). This domain was addressed as 'Promoting the Use of Assessments and Data for School and District Improvement'. According to Spillane (2006), leaders need to participate in the core work of the administration competently. In line with this, teacher leaders need to have the competency to assist their principals or colleagues in utilizing multiple assessment tools aligned to state and local standards, aimed at improving student achievement. It also can be summarized that 'School administration' focuses on getting teacher leaders to be the front-line personnel, who shared responsibilities with school administrators to run the schools and guide other colleagues towards achieving the school's vision.

The fourth element of NMTLCI - 'Fostering a Collaborative Culture' (FCC) was identified based on the fourth domain of Danielson's Framework for Teaching Evaluation Instrument which stated 'Participating in the Professional Community'. According to Danielson (2013), teachers should work with their colleagues for the betterment of the school and getting involve in 'professional community'. To form professional community into community of continuous professional development, school principals, as the head of the school, should utilize his highest potential to appoint competent teacher leaders, who have the leadership values, knowledge and skills, to successfully lead their colleagues towards achieving school's goal. In other words, professional learning community could be develop via teacher leadership (Barth, 2001).

The fifth element of NMTLCI - 'Performing as Referral Leader' (PRL) was identified based on The Teaches as Leaders Framework (Crowther, 2008). According to Knapp *et al*. (2003), teacher leadership is "the act of imparting purpose to an organization as well as motivating and sustaining effort in pursuit of that purpose" (p.13). Therefore, teacher leaders must continuously polish their talents as 'Instructional experts', to enable them to guide their colleagues to overcome instructional issues in order to make informed decisions that improve learning for all students.

The Niche-Malaysian Teachers' Leadership Competency Construct and their Measurement Items:

In order to develop a psychometrically sound instrument that aimed to facilitate change initiative in Malaysian secondary schools, the researcher followed the steps suggested by Hinkin (1998) whereby; i) to specify the elements of teachers' leadership competencies by integrating distributed leadership theory (Gronn, 2002; Spillane *et al*., 2004; Spillane, 2006), leadership competencies theory (McCall, 1998; Conger, 1999; Charan Drotter *et al*., 2000; Tichy and Nancy Cardwell, 2002), competency theory (Boak and Coolican, 2001; Cairns, 2000), ii) to develop items that measure the domain; and iii) to determine the extent to which items measure that domain.

The five elements of Niche-Malaysian Teachers' Leadership Competency Instrument (NMTLCI) functioned as guiding principles of the teachers' leadership competencies in this study. The first guiding principle, Facilitating Improvement and Establishing Standards (FIES) is associated with i) Applying various curriculum management skills; ii) Engaging in establishing standards for student behaviour and for school-wide classroom management policies; and iii) Learning from one's own practice (TLEC, 2011; Danielson, 2013; CSTP, 2009; Crowther, 2008). Secondly, Modelling Leadership Attributes and Skills (MLAS) is mainly associated with i) Becoming a role model (TLEC, 2011; Danielson, 2013; CSTP, 2009; Crowther, 2008). Thirdly, Participating in Organizational Development (POD) is mainly concerned with i) Involvement in management and administrative; ii) Building school capacity; and iii) Utilizing data in decision making process (TLEC, 2011; Danielson, 2013; CSTP, 2009; Crowther, 2008). Fourthly, Fostering a Collaborative Culture (FCC) emphasizes on i) Supporting educator development and student learning through sharing responsibilities, knowledge and ideas with others for the best results and practices; ii) Nurturing the culture of life-long learning and reflective practices; and iii) Anticipating

future needs and challenges (TLEC, 2011; Danielson, 2013; CSTP, 2009; Crowther, 2008). Fifthly, Performing as Referral Leader (PRL) emphasises on i) Willingness to go above and beyond prescribed roles; ii) Has impact in the area of expertise; iii) Demonstrates high ethical standards; and iv) Demonstrates high practical on "organizational and change innovation" (TLEC, 2011; Danielson, 2013; CSTP, 2009; Crowther, 2008).

After successfully identifying the guiding principles, the researcher develops 34 items that measure each guiding principles as illustrated in Table 2.

Table 2: The NMTLCI and Its Scale Item

El	Comp	Atrb	Items	
1.	FIES	V	1	Modelling various leadership values and behaviours
		V	2	Meeting the needs of the students
		V	3	Practicing collaboration culture in order to maximize students' performance
		S	4	Applying various curriculum management skills
		K	5	Establishing standards for students' behaviour and school-wide classroom management policies
		S	6	Displaying outstanding teaching skills
		S	7	Practicing life-long learning
2.	MLAS	V	8	Inculcating ethical/integrity values in leadership practices
		V	9	Adopting a culture of creativity and innovation
		V	10	Nurturing the ability to make good decision
		K	11	Eliciting students' potential for higher order thinking
		K	12	Instilling decision making technique among peers and students
		S	13	Facilitating students for effective interpersonal and intrapersonal communication skills
		S	14	Polishing students' capability to be a leader
3.	POD	V	15	Taking risks in order to achieve school's vision
		V	14	Practicing life-long learning values
		K	1	Developing the school's capacity for strategic development (vision and mission, professional
			16	development, infrastructure, finance, student activities, student achievement)
		K		Giving exposure to students particularly on the importance to utilize relevant data in decision making
		S	17	Utilizing data to make informed decision
		S		Contributing ideas to the management to enhance school improvement
		S	18	Giving feedback to the management to enhance school improvement
			19	
			20	
			21	
4.	FCC	V	22	Fostering teamwork in order to achieve certain goals
		V	23	Accessing and utilizing research data to improve managerial practices
		K	24	Forming roles as mentor and coach in order to influence others for best practices
		K	25	Making improvements in management practices based on data analysis
		S		Collaborating and sharing responsibility with others for best practices
		S	26	Practicing professional learning through research
			27	
5.	PRL	V	28	Exemplifying ethical standards
		V	29	Going above and beyond their prescribed roles
		K	30	Leading groups, workshops, collaborative work, mentoring, teaching adults and action research
		K	31	Dealing with instructional and management matters
		S	32	Demonstrating exemplary practices on "organizational change and innovation"
		S	33	Sharing experiences and expertise
		S	34	Giving opportunities to the stakeholders to contribute (ideas and effort) in various aspects of educational development

Note: El = Element; Comp = Competencies; Atrb = Attributes

Questionnaire Design:

A set of 6-point Likert scale [ranging from 1 = "Least Agreeable" (LA) to 6 = "Most Agreeable" (MA)] instrument was administered to the samples. The samples were required to complete their demographic information and response to the 34 items in the NMTLC instrument.

The NMTLC instrument was developed by the researcher together with a group of Niche Research Grant Scheme (NRGS) team members based on literature review and comprehensive discussion with a group of school teachers which may provide an early indication of the importance of teachers' leadership in Malaysian classrooms. It was constructed based on five guiding principles, i.e. (1) Facilitating Improvement and Establishing Standards (FIES) with seven items; (2) Modelling Leadership Attributes and Skills (MLAS) with seven items; (3) Participating in the Organizational Development (POD) with seven items; (4) Fostering a Collaborative Culture (FCC) with six items; and (5) Performing as Referral Leader (PRL) with seven items.

Nonetheless, the original version of NMTLC instrument which was prepared in English, was then translated into Malay language since most of the samples were non-English speakers. The NMTLC instrument then undersent back-translation to English language again. This 'back technique' was significantly important (Frazer & Lawley, 2000) in order to enable the respondents to give their genuine responses, as well as to avoid cultural differences

which may confound the results (Salciuviene, Auruskeviciene, and Lydeka, 2005).

The translation process had undergone two steps in order to establish its validity. First, the instrument was translated into Malay by an accredited bilingual lecturer and language expert from Faculty of Language and Communication, Sultan Idris Education University, who was proficient in both English and Malay Language. Next, the Malay version of the instrument was then underwent back-translated into the English version by another accredited bilingual lecturer, whose mother-tongue was Malay. This lecturer was also from the Department of Language and Communication at Sultan Idris Education University.

Meanwhile, to ensure the NMTLC instrument has reasonable construct validity, both statistical analysis procedures, i.e. exploratory and confirmatory factor analysis were conducted.

Statistical Analysis And Results:

Sampling:

The research utilized a purposive sampling procedure to select the samples from secondary school teachers working in Malaysia, amounting to 121 respondents. Most of the teachers, 71 (58.7%) were female; only 50 (41.3%) were male. 4 (3.3%) of the respondents held Diploma in Education. Most of the respondents, 112 (92.6%) had their Bachelor in Education, while 5 (4.1%) of them had pursued their study in Master of Education.

Out of the 121 teachers, 40 (33.1%) had between one to five years of experience in the current position; 44 (26.4%) had between six to ten years of experience in the current position; 11 (9.1%) had between eleven to fifteen years of experience in current position while fifteen of them had served in the current position for the period between sixteen to twenty years; and another eleven of them had less than twenty years of experience in current position.

In fact, 13 (10.7%) had served in their current schools for less than a year. 62 (51.2%) had between one to five years experiences teaching in the current schools, 31 (25.6%) had between six to ten years of experiences; 7 (5.8%) had between eleven to fifteen years of experiences; and 8 (6.6%) had served in the current schools in the period between sixteen to twenty years.

Meanwhile, most of the respondents, 104 (86.0%) served in daily secondary schools, 11 (9.1%) in boarding schools, and 6 (4.9%) in religious secondary schools. 68 (56.2%) of the secondary schools are located in urban area while 53 (43.8%) in rural area. Details of the profiles are shown in Table 3.

Table 3: Respondent profiles

Type	N	Factor	Frequency	Percentage
Gender	121	Male	50	41.3
		Female	71	58.7
Professional Qualification	121	Diploma of Education	4	3.3
		Bachelor in Education	112	92.6
		Master of Education	5	4.1
Years of service in current position	121	1–5 years	40	33.1
		6–10 years	44	36.4
		11–15 years	11	9.1
		16–20 years	15	12.4
		> 20 years	11	9.1
Years of service in current school	121	< 1 year	13	10.7
		1 – 5 years	62	51.2
		6–10 years	31	25.6
		11–15 years	7	5.8
		16–20 years	8	6.6
Type of schools	121	Daily Secondary Schools	104	86.0
		Boarding Schools	11	9.1
		Religious Schools	6	4.9

Source: Survey Report

Reliability and Validity Test:

Cronbach (1951) as well as Nunnally and Bernstein (1994) claimed that the Cronbach Alpha coefficients are statistical tools mainly utilized in measuring the internal consistency of research instruments in an empirical study. Therefore, the Cronbach Alpha coefficients of the constructs in this study which were greater than .70 had been retained for further factor analysis (Hair, Black, Babin, Anderson and Tatham, 2010; Hancock and Muller, 2010).

Exploratory Factor Analysis (EFA) on NMTLC Constructs:

The exploratory factor analysis (EFA) through orthogonal rotation with varimax method had been employed. Hair *et al*. (2010) as well as Tabachnick and Fidell (2006), Sheskin (2007), Coakes and Steed (2005) proposed the EFA to undergo the following rules:

- Kaiser-Meyer-Olkin Measure of Sampling Adequacy ≥ 0.50;
- Bartlett's Test of Sphericity χ^2 had to be significant ($p < 0.05$);

- Communalities ≥ 0.30;
- Eigenvalue > 1.00;
- Items with the factor loading > 0.50 were retained.

Output of the Kaiser-Meyer-Olkin measure of sampling adequacy in this study is .928. This value which falls above the cut-off value of 0.7 (Hair *et al*., 2010), shows that the sample size is adequate for factor analysis.

Likewise, the significant of Bartlett's Test of Sphericity (p=0.000) supported the evidence that the items were sufficiently correlated and to be considered for further analysis as shown in Table 4.

Table 4: KMO and Barlett's Test for NMTLC Constructs

Kaiser-Meyer-Olkin measure of Sampling Adequacy	.928
Approx. Chi-Square	5093.003
Barlett's Test of Sphericity df	561
Sig.	.000

In EFA, discriminant validity is only shown if the indicator loading is high towards related factor when compared to other factors. The cut-off value of 0.4 for each indicator is considered sufficient (Hatcher, 1994; Fullerton and Wempe, 2009). On the other hand, a minimum value of 0.5 fits cross-load items to various factors is considered as sufficient (Ngai et. al., 2004). Thus, fourteen items were suggested to be omitted due to its low loadings. The result of EFA exhibited for TLC constructs with 20 items. In other words, only 20 items were retained for further analysis. These 20 items had factor loadings of more than 0.50 (Field, 2005) and it confirmed the high variation among the variables.

Meanwhile, the Maximum Likelihood extraction method indicated that most of the 34 items were extracted more than .5, (B1 – B34: 547 - .905), except for item B14 which only loaded at .468. Thus, the factor loading is considered as good extraction for newly developed items.

The matrix also indicates 18.0% of non-redundant residuals which is acceptable value for exploratory factor analysis. The Pattern Matrix showed 6 items were loaded in Factor 1 (range of .614 to .994), 6 items were loaded in Factor 2 (range of .604 to .922), 5 items were loaded in Factor 3 (range of .614 to .883) and 3 items were loaded in Factor 4 (range of .638 to .866).

Unfortunately, 14 items were not loaded anywhere (B6, B7, B14, B15, B17, B18, B19, B20, B22, B25, B26, B27, B33, B34), which also means that the items had negative loading. Fortunately, there was no cross loading items analysed. The loading coefficient for each item is above the cut-off point 0.5 since the instrument was newly developed.

Also, the Pattern Matrix indicates that only four factors were retained for NMTLC model: Fostering Improvement and Establishing Standards (FIES); Modelling Leadership Attributes and Skills (MLAS); Participating in Organizational Development (POD); and Performing as Referral Leader (PRL). Only one factor, which is, Fostering a Collaborative Culture (FCC) was excluded as most of the items were not loaded in its respective construct

Table 5 showed 4 out of 5 factors were extracted with cumulative value (69.238%), which exceeded the expectation of 60%. Similarly, four factors with a factor loading higher than 0.5 were formed through Promax Orthogonal Rotation process as shown in Table 5.

Table 5: EFA and Internal Consistency Values

Con	NF	NIC	FL	PV	CP	Cα
NMTLC	4	6	.614-.994	57.286		
		6	.604-.922	5.680		
		5	.614-.883	3.890		
		3	.638-.866	2.383	69.238	.962

Note: Con=Construct; NF=Number of Factor; BIC=Number of item per construct; Fl=Factor Loading; PV=Percentage of variance; CP=Cumulative percentage; Cα=Cronbach's α

Confirmatory Factor Analysis (CFA) on NMTLC Constructs:

The Confirmatory Factor Analysis (CFA) was employed to validate the findings of the Exploratory Factor Analysis (EFA), as well as to test the stability of 4 factors and twenty items of NMTLC instrument. This model was tested utilizing AMOS Version 22 software (Arbuckle, 2009). The hypothesized 4 factors represent the importance of teacher leaders' role in Malaysian secondary school classrooms. The first factor: Facilitating Improvement and Establishing Standards (FIES) consisted of 4 items (range of .80 to .95); the second factor: Modelling Leadership Attributes and Skills (MLAS) consisted of 5 items (range of .76 to .91); the third factor: Participating in Organizational Development (POD) consisted of 4 items (range of .77 to .89); and Performing as Referral Leader (PRL) consisted of 3 items (range of .81 to .88).

The parameters were estimated using maximum likelihood. This technique incorporates both observed and latent variables. Multiple indices provide a comprehensive evaluation of model fit (Hu and Bentler, 1999).

For the purpose of NMTLC instrument, the researcher examined chi-square per degree of

freedom ratio (χ^2/df), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI) and Normed Fit Index (NFI). These indices were used to evaluate the goodness-of-fit of the model that fit the data. The lower cut-off value of the acceptable fit for χ^2/df is less than 5.0 (Marsh and Hocevar, 1985) while CFI, TLI and NFI is .90 and .95 indicates a good fit (Bentler, 1990; Bentler and Bonett, 1980; Bollen, 1989b). The results of the second order Confirmatory Factor Analysis (CFA) are presented in Table 6.

Table 6: Summary of fit indices of NMTLCI

Model	χ^2/df	CFI	TLI	NFI	α
Four-factor NMTLC model	1.88	.950	.939	.900	.955

Analysing the Latent Construct on NMTLC Instrument:

Unidimensionality was achieved through the item deletion process for redundant item (B9 redundant with B2). Item B8 (.72) had also been deleted due to high Standardized Residual Covariance which is more than .1 (>.1). Items B16 (.73) and B5 (.73) were both deleted in order to achieve the required level of model fit indexes.

Convergent validity was also achieved since the AVE of the four-factor were above 0.5 as shown in Table 7. Discriminant validity was also achieved upon deletion of redundant items.

Table 7: The Summary of CFA for the NMTLC

NMTLC Instrument							
Fac	Ele	NIU	IAE	EAC	VCa	AVE (>0.5)	CR (>0.6)
1	FIES	7	5	4	.928	.773	.931
2	MLAS	7	5	5	.931	.736	.933
3	POD	7	2	4	.900	.699	.903
4	PRL	7	5	3	.877	.712	.881
	Total	28	17	16			

Source: Survey data (n=121)
Note: Fac=Factor; Ele=Element; NIU=No. of Items Used; IAE=Included After EFA; EAC=Excluded After CFA; VCα=Value of Cronbach's Alpha; AVE=Average Variance Extracted; CR=Construct Reliability.

Each factor of Niche-Malaysian Teachers' Leadership Competencies produces an acceptable value of construct reliability (CR) and average variance extracted (AVE). The values for construct reliability, i.e., composite reliability or CR, and average variance extracted (AVE) were needed in order to obtain the divergent validity (Hair *et al*., 2010). The accepted value for CR should be at least 0.60 and 0.50 for AVE. The formulae for CR and AVE are shown below:

CR:

$$(\Sigma K)^2 / [(\Sigma K)^2 + (\Sigma 1 - K^2)]$$

Note: K = factor loading of every item

AVE:

$$\Sigma K^2 / n$$

Note: K = factor loading of every item
n = number of items in a model

Discussion And Conclusion:

The following discussion is based upon the results of the analysis above. This entails that the Niche-Malaysian Teachers' Leadership Competencies in Malaysian secondary schools has shifted the paradigm of teachers` isolation and burnout to collaborate and hold leadership responsibility from classroom to school-based leadership. By focusing on various leadership role of teachers, i.e. facilitating improvement and establishing standards (FIES), modelling leadership attributes and skills (MLAS), participating in the organizational development (POD), and performing as referral leader (PRL) will ignite and sustains teachers' confidence to improve their instructional practices to improve students' achievements and take part in school change initiatives.

The findings of this study are also useful to be incorporated into teacher preparation programmes, held by respective teacher training institutions and universities throughout Malaysia, particularly in preparing quality teacher leaders for the future. The search on finding the optimal mix of teachers' leadership competency model that work best in Malaysian classrooms setting has also been discovered. The findings are also useful to assist school leaders in organizing school-based professional learning communities focusing on leadership practices in Malaysian secondary schools setting.

Nonetheless, although the empirical results supported the current Niche-Malaysian Teachers' Leadership Competency Model, it also highlights at least three limitations which need to be carefully considered. First, possible biases or preferences, i.e. leadership behaviours and attributes, may occur due to distinct personal experiences or educational backgrounds. Second, the study only focused on secondary schools teachers, therefore it would be advisable to extent the study to primary school teachers in future. Third, the characteristics of the

sample schools (Malaysian secondary schools) may differ from those in other countries.

Simply state, the result of the current study should not be generalized to other leadership studies in respective fields. In fact, it may only serve as fundamental reference for the schools which has almost similar environments to those in our country, Malaysia.

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