Measuring The Level of Leadership Competencies Of Principals, Teachers And 21st Century Teacher Learning And Facilitating Practices: Development Of A Questionnaire For Leadership Competencies Of Principals, Teachers And 21st Century Teacher Learning And Facilitating Practices

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ABSTRACT

School administrators must be competent and efficient leaders and managers to improve the management and administration of educational organisations in Malaysia and enhance the quality of education delivered by continuously assessing curricula and pedagogical approaches. This study developed a questionnaire to measure the leadership competencies of principals, teachers and 21st century teacher learning and facilitating practices. A comprehensive inventory list was prepared and a preliminary survey was developed. A representative sample of 400 teachers completed the questionnaire and an exploratory analysis was conducted. The results showed that this questionnaire containing 52 items was valid, consistent and reliable. The implications of this study are expected to help Education experts, especially in the Ministry of Education officials to improve the quality of services and contributions to teachers and the education sector. In addition, the findings of this theory are expected to help the Ministry of Education more effective and accurate improvement by taking into account all factors that influence the components of Leadership Competence among principals, teachers and further improve the practice of learning and Facilitation (PdPc) 21st Century Teachers. Therefore, it is proposed that further studies be implemented in schools such as boarding schools (SBP), religious secondary schools, national type secondary schools and technical and vocational secondary schools. In doing so, the findings of the study can be compared with the findings of this study.

KEYWORDS: Leadership, Competencies, 21st century learning and facilitating practices, principals, teachers, questionnaire.

In educational institutions, school leaders are responsible for managing and leading school personnel. Additionally, they implement the instructions of stakeholders and policymakers, such as the Ministry of Education, the State Education Office, and the District Education Office. Hence, school leaders must be capable of competently managing schools and fulfilling their responsibilities (Wan, 2010).

School leaders and administrators, particularly headmasters and principals, are the driving force behind the success of implemented changes. They play an important role within educational institutions as the leadership style can influence the level of acceptance of changes and support continuous improvement in schools (Fullan, 2015). Changes within schools are closely linked to leadership. According to Bush (2007), school administrators determine changes that are required and play a vital role in ensuring such changes are effective. Fullan (2007) states that principal leadership determines, to some extent, the success of executed changes.

According to Katzenmeyer and Moller (2009), in addition to the competencies of school leaders, the leadership abilities of teachers also received attention in the study. Past studies have found that teachers' leadership skills influence student performance. Wehling (2007) stated that teachers' leadership abilities trigger changes in schools. They can strengthen public education by ensuring that students are taught by competent teachers. Although teacher leadership has been widely studied abroad, there is limited research on this aspect of education in the Malaysian context.

Today, 21st Century Learning has become a global education agenda. School administrators should, therefore, strive to improve 21st learning and facilitating practices. In the second phase of the Malaysian Education Development Plan, the Ministry of Education Malaysia (MOE) emphasised the importance of 21st Century Learning and suggested a heightened focus on its implementation in schools (Malaysian Education Development Plan, 2013). School administrators must act as agents of change and encourage teachers to proactively offer ideas related to learning and facilitating practices planning. Yet, doubt remains about the readiness of school leaders to act as skilled school managers and apply 21st Century Learning.

Principal and Teacher Leadership and Learning and Facilitating Practices

Principals' and teachers' competencies, professional attitude and positive leadership style are crucial to ensure the effectiveness of education (Eddy, 2013). This is emphasised in the Malaysian Education Development Plan (2013-2025), which describes several proactive measures to increase school leaders' level of competency. These initiatives include Continuing Professional Development (CPD) training involving senior assistants, field heads, and committee heads.

The leadership capabilities of principals must be nurtured to ensure the effectiveness of secondary school education. Every principal must be efficient and possess good leadership skills to conduct their duties as school leaders to

emphasise aspects of learning and facilitating, ensure school improvement, and enhance student performance and wellbeing (Hallinger & Murphy, 1985; Kotter, 1990; Katz, 1993; Leithwood et al., 2004; Interstate School Leaders Licensure Consortium, 2008).

According to Harris (2003), teacher leadership can help school administrators to improve schools. However, teachers do not view themselves as school leaders, but as implementers of programmes and activities, although they may lead other teachers (Katzenmeyer & Moller, 2009). Teacher leadership is thus not confined to classroom tasks, but extends to connecting and working with instructors and other teachers to improve education practices and achieve results (York & Barr, 2004).

Regarding teaching practices, schools with successful 21st century learning and support empower teachers to learn innovatively, imaginatively, and autonomously (Roebuck, 2011; Cranston, 2002). Leadership skills should be fostered to enhance the professionalism and expertise of teachers. Teachers can also enhance their daily learning and facilitating practices and feel self-contained in their work, rather than controlled (Kimwarey et al., 2014).

The Measurement of Principals' and Teachers' Leadership Skills and Implementation of Learning and Facilitating Practices

School administrators are agents of change who can ensure the continued excellence of schools (Schein, 2004). Therefore, leadership skills are important for secondary school principals to realise positive changes and improve academic and co-academic performance. According to Sani, Zabidi and Husaina (2015), educational leadership is a complex concept. It can be interpreted based on the environment or sociocultural profile of the local community. In Malaysia, school administrators are considered the backbone of schools and responsible for promoting the national education philosophy that is a continuous effort to develop the potential of the individual in a holistic and integrated manner, so

as to produce individuals who are balanced intellectually, spiritually, emotionally and physically, based on strong faith and loyalty to God.

The Florida Department of Education (2008) suggested that the leadership skills of school administrators are based on knowledge of organisational formations, collaboration with stakeholders, proactive response to feedback and influence over others. Hussein (1989) described competence as an important element regarding school excellence, given that it is closely related to the role of administrators regarding school missions, curriculums, pedagogical approaches, administrative skills, and relationships with external parties.

A study by Sulaiman & Wan (2018) discussed the role of teachers as leaders in the education system. Teachers have the responsibility of realising the policies and goals of the national curriculum. Educational planning cannot proceed without the support of teachers. Therefore, teacher competency is crucial for progress to be achieved in Malaysia. Teachers are the implementers of the curriculum; they set standards and ensure the quality and effectiveness of education (Siraj and Mohammed, 2012). Education is the process of disseminating knowledge and skills from one generation to another. Thus, in education, teachers play an important role in disseminating knowledge and skills through formal education (Siraj & Mohammed, 2012).

According to Halimah and Dayang (2017), effective leadership begins with administrators' theoretical and practical skills and overall management processes. Excellent leaders can inspire others within schools to succeed. Therefore, school leaders should possess skills and knowledge in areas of education and pedagogy, such as 21st Century Learning. School administrators should be proactive in improving the skills and expertise of teachers to ensure effective leadership within schools.

Teacher leadership plays a role in ensuring that students are educated via the pedagogical approaches and elements featured in

21st Century Learning. The Ministry of Education Malaysia (MOE) is also working to increase teacher autonomy in learning and facilitating. This aspect of autonomy will be applied in all schools by phase three of PPPM (2021-2025). Teachers will be given autonomy in setting learning and facilitating practices and applying elements of creativity and innovation in the classroom. Teacher autonomy must be emphasised to encourage teachers to improve their 21st century skills and learning and facilitating practices and identify the best methods of incorporating them into their teaching (Arbaa, 2015).

MacMath (2008) stated that teachers must demonstrate creativity and utilise diverse teaching techniques to increase student involvement. Arbaa, Jamil & Zohir (2017) explained that the effectiveness of learning and facilitating is subject to the ability of teachers to adapt their teaching materials to students' lives and provide them with meaningful knowledge. This can help to boost student engagement in learning sessions.

Objective

This study formed part of the research effort in Malaysia to establish a framework and guidelines concerning the leadership skills and competency levels required of administrators such as principals and teachers. The development of the conceptual framework and its relation to theoretical frameworks is detailed in the Leadership Competency Instrument (LCI, 2017), the Malaysian Education Quality Standards Instrument (SKPM, 2017) and the 21st Century Learning Module (21st Century Learning, 2017).

We built an easy-to-use self-led questionnaire for teachers on their and their principals' leadership skills and competency levels. Teacher leadership has become a focus of numerous studies to bolster and transform the success of schools because it directly affects students' academic achievement. Robinson (2008) and Sugg (2013) argue that teacher leadership is an important strategy to improve school academic achievement. Mansor and Izham (2015) demonstrated that competency is

crucial for leaders as a competent head of department can ensure that teachers and staff conduct their duties effectively and remain committed to the school.

Adam, Harris and Jones (2018), numerous studies have emphasised the importance of learning and facilitating methods and leader competency in driving student excellence, boosting school effectiveness, and improving school achievement. However, according to researchers, only a limited number of studies have been undertaken on the level of leadership competency of principals and teachers, especially in relation to competencies based on intellectual, emotional and spiritual intelligence, skills, and transformational skills.

Professionals can help principals and teachers to collaborate and reach their educational goals. This study aims to identify principals' and secondary school teachers' leadership skills, levels of competency, and implementation of learning and facilitating practices. Mapping the leadership skills required of principals and teachers and clarifying approaches towards training and learning and facilitating practices can assist the development of educational policies. Leadership skills are viewed in this context in a broader sense (school, state). This study analyses specific action improvements regarding the leadership skills of principals and teachers and their implementation of learning and facilitating practices.

Method

The survey was developed in five stages. All of the important skills to be calculated were included in the preliminary questionnaire during the first three stages. Official documents and lists were screened and compared. The list was modified by peer reports, compiled into questionnaires, and submitted to a panel of experts. In the fourth stage, a limited number of pilot teachers closely evaluated the questionnaire. The questionnaire was finalised by representative instructors in the fifth and final stage. The five stages of development are described in detail below.

Stage 1: Inventory of Principal and Teacher Leadership Skills, Competency and Use of Learning and Facilitating Practices

The initial stage of the questionnaire's construction used a mix of the Leadership Instrument Model (LCI, 2017), the Malaysian Education Quality Standards Instrument (SKPM, 2017), and the 21st Century Learning Module (21st Century Learning, 2017). The researcher used the Leadership Competency Instrument Model (RSOG, 2017), for both principal and teacher leadership skills and competency. This model was developed by the Razak School of Government (RSOG) under the Government Transformation Plan (GTP). The learning and facilitating practices of teachers were stated in the standard 4 document Malaysian Education Quality Standards Wave 2 SKPMg2 Ministry of Education Malaysia (MOE, 2017).

Stage 2: Conceptualisation of the Questionnaire through Peer Debriefing

Four scholars critically assessed the lists of leadership skills and learning and facilitating practices (Lincoln & Guba, 1985; Figg et al., 2010). The criteria for clarity, tangibility, and specificity were evaluated for each item. Next, items were grouped based on thematic similarities, resulting in three categories. Principal leadership skills and competencies consisted of four sub-components: personal and social skills, management skills, leadership skills, and transformative skills. Teacher leadership skills and competencies consisted of three sub-components: ethics and spiritual skills, management skills, and transformative skills (Leadership Competency Instrument (LCI), 2017). Learning and facilitating practices were obtained using seven items on the questionnaire concerning learning and facilitating practices of teachers (standard 4 document Malaysian Education Quality Standards Wave 2 SKPMg2 Ministry of Education (MOE, 2017).

Stage 3: Expert Inquiry

The third stage involved an expert inquiry. Six specialists from administrative and academic backgrounds were given the questionnaire prototype. They were asked to

evaluate whether the framework elements incorporated all characteristics of principals' and teachers' leadership skills and learning and facilitating practices. One researcher visited the experts, studied their comments, and reported their input. The researchers combined and discussed these reports and updated the framework. All constructs and items were modified and the terminology was revised. The experts received an electronic summary of the changes.

Stage 4: Pilot Study

A pilot study with 100 respondents was held before the questionnaire was distributed to a representative sample. The researchers assessed whether the questions were understandable and unambiguous. Items were placed on a 10-point Likert scale, ranging from '1 - strongly disagree' to '10 - strongly agree'. Participants proposed some improvements and suggested that all items should include some examples or descriptions.

Stage 5: Survey with Teachers

Researchers collected quantitative data from secondary school teachers in the state of Penang. The sample was determined using a systematic random sampling technique. According to Cohen, Manion and Morrison (2007) and Airasian and Gay (2003), in systematic random sampling, populations have similar or homogeneous properties and samples are selected at random from groups.

Before conducting the study, the researcher obtained a letter of permission from the Education Policy Planning and Research Division (EPRD) Ministry of Education Malaysia (MOE) . This allowed the researcher to obtain data related to the respondents and seek assistance and cooperation from the MOE. The permission letter was used as a supporting document to obtain the permission of the Director of the State Education Department, the District Education Office, and the schools involved.

Researchers distributed questionnaires through a Google Form link. Before distributing the questionnaire, the researcher contacted the principals of the schools involved. After the researcher had obtained the principals' permission to distribute the questionnaire, the Google Form link was sent via the school's official email; the principals selected the teachers to be involved. Teachers were given 2 weeks to complete the questionnaire and their contact details were obtained by the researcher. After 2 weeks, the researcher contacted the principals to collect the completed questionnaires. Approximately 80% of the distributed questionnaires were completed and returned to the researcher. According to Kerlinger (1970), 80% is a satisfactory rate of return.

The questionnaire for the representative sample of 400 teachers was adjusted based on the input of the 437 teachers who had participated in the preliminary survey. Table 1 presents an overview of the representative group.

Table 1

Respondent Group Profile – Teachers

	Numbers	**Percentage**
Age		
21 - 30	5	1.3
31 - 40	149	37.3
41 - 50	167	41.8
51 - 60	79	19.8
Gender		
Male	109	27.3
Female	291	72.8
Education Level		
PhD	1	0.3
Master	54	13.5
Degree	342	85.5
SPM / MCE	2	0.5
Other	1	0.3
Years of Teaching Experience		
0 - 5	5	1.3
6 - 10	61	15.3
11 - 15	92	23.0
16 - 20	100	25.0
21 - 25	76	19.0
26 - 30	66	16.5

Profile analysis by age indicated that most respondents (41.8%) were aged 41-50. This was followed by 31-40 years (37.3%), 51-60 years (19.8%), and 21-30 years (1.3%). Of the 400 respondents involved in this study, there were more female teachers (72.8%) than male teachers (27.3%). Regarding academic qualifications, some teachers held a PhD (0.3%), a master's (13.5%), degrees (85.5%), SPM/MCEs (0.5%), and other academic qualifications (0.3%). With respect to years of teaching experience, 1.3% had 0-5 years, 15.3% had 6-10 years, 23.0% had 11-15 years, 25.0% had 16-20 years, 19.0% had 21-25 years, and 16.5% had 26-30 years.

A study of non-response and an exploratory factor analysis (EFA) were included in the analysis phase. We began by analysing the items in the questionnaire. An EFA was performed using SPSS Statistics 25 with Varimax rotation. The measurements of Kaiser-Meyer-Olkin (for all analyses > .871) and the sphericity Bartlett's test (for every $p = .000$ analysis) indicated that the information was suitable to analyse each factor (Loewen & Gonulal, 2015). We utilised the limit value of 0.30 when assigning items to a factor (Guadagnoli & Velicer, 1988).

Result

Fifty-two items were generated which were assigned to three clusters, based on the identification and concept-making procedure:

a. Principal Leadership: personal and social skills, leadership skills, management skills, and transformative skills.

b. Teacher Leadership: ethics and spiritual skills, management skills, and transformative skills.

c. Learning and Facilitating Practices: teachers' abilities to manage learning and facilitating both inside and outside of the classroom.

Tables 2, 3 and 4 present the EFA results for principal leadership, teacher leadership, and learning and facilitating practices. The results of the component analysis for principal leadership are summarised in Table 2. Table 3 provides an overview of the factor analysis results for teacher leadership. Table 4 offers an overview of the factor analysis results for learning and facilitating practices.

Table 2

Items and EFA Results on Principal Leadership

Items		Factor			
		Personal and social skills	Leadership skills	Management skills	Transformative skills
	My principal:				
PS3	thinks clearly, even under stress	.959			
PS1	decisions are not influenced by feelings and emotions	.951			
PS2	assesses the impact of their leadership style	.940			
PS6	remains calm even in difficult circumstances	.939			
PS4	understands their personality	.933			
PS7	tries to understand my views and feelings	.919			
PS5	seeks feedback on their leadership style	.906			
M2	encourages me to exceed expectations		.951		
M3	sets a good example to motivate me		.945		
M5	celebrates my accomplishments		.941		
M4	encourages creativity among teachers to showcase their talents		.913		
M6	pays attention to each teacher individually		.902		
M1	shares information with all teachers		.892		

U1	scrutinises work processes to ensure service quality			.973	
U3	develops strategies for performing tasks			.973	
U2	ensures that new ideas are in line with established work procedures			.972	
U6	takes clear measures (quality, quantity, cost, timelines and frequency of completion) at all levels to ensure successful results			.966	
U7	ensures that I adhere to work standards			.959	
U5	considers customer feedback (parents, PTAs and students) when developing new services			.956	
U4	meets customer satisfaction (parents, PTAs and students) by meeting their expectations			.924	
TR1	recognises my work performance from different backgrounds				.975
TR3	harnesses my skills, talents and potential				.974
TR4	accepts/considers ideas from different perspectives				.968
TR2	stresses that it is not impossible to be a high-performing school				.928
Variance Explained (%)	87.524	85.398	92.233	92.437	
Kaiser-Meyer-Olkin	0.940	0.980	0.942	0.871	
Bartlett's Test of Sphericity (Sig.)	.000	.000	.000	.000	
Alpha Cronbach	0.957	0.965	0.986	0.972	
Overall Alpha Cronbach	0.922				

Principal leadership included four components: personal and social skills, management skills, leadership skills, and transformative skills. For these sub-constructs, the total number of items was 24. An EFA procedure using Varimax rotation for Principal Component Analysis

(PCA) left 24 items with four sub-constructs. The subjects are provided in Table 2. A test for the factorability of the study items was conducted using Kaiser-Meyer-Olkin (Pallant, 2010). In this study, the Kaiser-Meyer-Olkin values were greater than the intended threshold and above the minimum value of 0.60. (Awang, 2010, 2012a; Hoque & Awang, 2016; Hoque et al., 2017).

Bartlett's test was significant with a p-value of 0.000. Criteria were met for both the Kaiser-Meyer-Olkin and Bartlett's tests. The analysis of factors by the PCA method developed dimensions for 24 items. The extraction of 24 items from four constructs via Varimax rotation yielded four dominant factors based on eigenvalue values exceeding 1. The criteria in the extraction of these factors were based on the recommendations of Hair et al. (2010).

Table 2 indicates the Variance Explained; a total of 24 items formed four single dimensions, measuring 87.524% (personal and social skills), 85.394% (leadership skills), 92.33% (management skills) and 92.437% (transformative skills). These values are sufficient because they exceed the minimum level of 60% (Awang, 2010, 2012a; Hoque & Awang, 2016; Hoque et al., 2017). The loading factor must exceed the minimum value of 0.6 to identify the items that can be used for the component. Items with loading factor values of less than 0.6 must be excluded as they do not contribute to the construct measurement (Hoque et al., 2016, 2017; Chik & Abdullah, 2018).

Table 3

Items and EFA Results for Teacher Leadership

	Items	Factor		
		Ethics and spiritual skills	Management skills	Transformative skills
	I:			
ER2	cultivate spirituality	.948		
ER1	am a person who has a sincere intention to work	.939		
ER4	promote a work culture as an act of worship	.916		
ER5	treat fellow teachers fairly	.903		
ER3	am a forgiving person	.899		
ER6	am obedient and believe in God	.889		
ER7	learn from others	.813		
US5	examine the 21st century learning and facilitating processes to ensure service quality		.947	
US3	ensure new ideas are in line with established work procedures		.934	
US2	develop a clear 21st century learning and facilitating strategy to perform tasks		.933	
US6	adhere to 21st century learning and facilitating standards		.929	
US7	take clear measures (quality, quantity, cost, timeliness, and		.915	

	frequency of completion) at all levels to ensure successful results			
US1	analyse strategically to effectively realize 21st century learning and facilitating	.901		
US4	ensure customer satisfaction (parents, PTAs and students) by meeting their expectations	.874		
TF1	leverage the skills, talents and potential of students			.920
TF2	recognise the talents of students			.911
TF3	inspire students to strive beyond their capabilities			.903
TF4	encourage the practice of current thinking			.896
TF6	look for opportunities to improve myself			.896
TF5	support students with physical disabilities by providing alternative work			.841
TF7	emphasise that it is not impossible to be a high-performing school			.782
	Variance Explained	81.326	84.505	77.388
	Kaiser-Meyer-Olkin	0.938	0.952	0.901
	Bartlett's Test of Sphericity (Sig)	.000	.000	.000
	Alpha Cronbach	0.961	0.959	0.947
	Overall Alpha Cronbach		0.976	

Teacher leadership consisted of three sub-components: ethics and spiritual skills, management skills, and transformative skills. There were 21 items for these sub-constructs. With the EFA procedure using PCA via Varimax rotation, 21 items remained in three sub-constructs. The items are presented in Table 3. The Kaiser-Meyer-Olkin test examined the factorability of study items (Pallant, 2010). The Kaiser-Meyer-Olkin value exceeded the minimum value of 0.60 (Awang, 2010, 2012a; Hoque & Awang, 2016; Hoque et al., 2017). Bartlett's test was significant, with a p-value of 0.000. Both the Kaiser-Meyer-Olkin and Bartlett's tests met the set criteria. The factor analysis performed using the PCA method was significant, forming dimensions for 21 items.

The extraction of 21 items from three constructs via Varimax rotation yielded three dominant factors based on eigenvalue values exceeding 1. The criteria in the extraction of these factors were based on the recommendations of Hair et al. (2010).

Table 3 demonstrates the Variance Explained; a total of 21 items formed three single dimensions, measuring 81.326% (ethics and spiritual skills), 84.505% (management skills), and 77.388% (transformative skills). These values are sufficient as they exceed the minimum level of 60% (Awang, 2010, 2012). The loading factor must exceed the minimum value of 0.6 to identify the items that can be used for the components. Items with a loading factor of less than 0.6 must be excluded as they

do not contribute to the construct measurement (Hoque et al., 2016, 2017; Chik & Abdullah, 2018).

Table 4

Items and EFA for Learning and Facilitating Practices

Items		Factor
		Learning and Facilitating Practices
LF3	I: provide guidance to master skills in learning activities	.941
LF5	stimulate students to communicate	.926
LF2	manage learning and facilitating time in line with learning activities	.891
LF4	help students to make decisions and solve problems in learning activities	.885
LF6	create opportunities for students to lead	.870
LF1	plan activities in learning and facilitating	.862
LF7	use various learning and facilitating assessment methods	.840
Variance Explained		78.957
Kaiser-Meyer-Olkin		.934
Bartlett's Test of Sphericity (Sig)		.000
Overall Alpha Cronbach		0.955

In teachers' learning and facilitating practices, seven subject areas were studied using Varimax rotation via PCA. Bartlett's tests were significant, with p values of less than 0.05 ($p < 0.05$). The adequacy value of the Kaiser-Meyer-Olkin sampling was 0.934 and the minimum limit value was 0.6. Both tests are appropriate for EFA procedures (significant Bartlett's test equivalents and Kaiser-Meyer-Olkin values > 0.6).

Factor extraction to one dimension is supported by the Variance Explained criterion. Table 4 demonstrates the Variance Explained; a total of seven items formed one dimension, measuring 78.957%. The loading factor must exceed the minimum value of 0.6 to identify the items that can be used for the component. Items with a loading factor of less than 0.6 must be excluded as they do not contribute to the construct measurement (Hoque et al., 2016, 2017; Chik & Abdullah, 2018). The following results were observed regarding reliability:

i.   Principal Leadership
         (24 items; α = > .992)
ii.   Teacher Leadership
         (21 items; α = > .976)
iii. Learning and Facilitating Practices
         (7 items; α = > .955)

All factors demonstrated adequate internality and were meaningful in their content (Field, 2013).

Conclusion and Recommendations for Future Research

The Ministry of Education Malaysia (MOE) has focused on human resource development to improve the competency and competitiveness of personnel (National Education Policy, 2004) and has set key performance indexes (KPIs) to ensure quality education in every school in Malaysia. To measure leadership skills in educational organisations, this study developed a questionnaire to examine principals' and teachers' leadership skills and learning and facilitating practices, aiming to understand these factors regarding 21st Century Learning pedagogical practices and personal and social, ethical and spiritual, management, leadership, and transformative skills.

The questionnaire was prepared in five stages. The relevant literature was studied in stages one through three to develop a relevant and comprehensive questionnaire. During stage four, a limited pilot group critically evaluated the questionnaire. A representative sample of teachers completed the questionnaire in the fifth and final stage. The results indicate that the questionnaire was valid, consistent and reliable.

However, this study involved some limitations, and some areas need to be researched further. The survey was self-reported and some factors were likely misreported by the respondents (Hargittai, 2005). Furthermore, some researchers have indicated that self-assessment and performance measures may be inappropriate. Nonetheless, all skills are formulated in an abstract manner, which enables teachers to interpret the specific form and realisation of each skill. This may lead to some discussion or misunderstandings as interpretations may differ. The questionnaire must, therefore, be further developed.

Furthermore, this study was conducted on the leadership skills and competencies of principals and teachers in one state only. Thus, the findings of this study cannot be generalised to the leadership skills and competencies of principals and teachers in other states in Malaysia. Therefore, we propose that further studies should be conducted on leadership skills and competencies throughout Malaysia so that real models of principal and teacher leadership and learning and facilitating practices can be developed.

This study focused on the leadership skills of principals and teachers as the main construct in this study. This is because researchers have found that, in practice, there are deficiencies in the learning and facilitating practices of teachers. If action is not taken, this will cause a decline in student academic achievement. We suggest that future researchers focus on other dimensions or constructs, as recommended by Slocum and Hellriegel (2007). Additionally, this study only involved the leadership skills and competencies of principals and teachers in ordinary national secondary schools. Therefore, it is proposed that further research should be conducted in schools such as boarding schools, religious secondary schools, national-type secondary schools, and technical and vocational secondary schools. In doing so, results can be compared with the findings of this study.

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