The effect of emotional intelligence as a mediator of the relationship between transformational leadership and professional learning community

El efecto de la inteligencia emocional como mediador de la relación entre el liderazgo transformacional y la comunidad de aprendizaje profesional

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ABSTRACT

A drastic national education transformation requires leaders that can shape high-quality teachers. Professional Learning Community (PLC) is a strategy introduced by the Teacher Education Division or *Bahagian Pendidikan Guru (BPG)* to improve the quality of teachers. In ensuring the successful implementation of this strategy, an effective principal leadership style should be practised in every organisation. Besides, emotional intelligence plays a role in assisting leaders to improve the effectiveness of their leadership. This study aims to examine the effect of emotional intelligence as a mediator of the relationship between principals' transformational leadership and teachers' professional learning community practice in High Performance Schools (HPS) in the state of Selangor. A total of 364 teachers were selected from 34 high-performance secondary schools in Selangor.

Keywords: Emotional Intelligence, High Performance School (HPS), Professional Learning Community Practice (PLC), Transformational Leadership.

RESUMEN

Una transformación educativa nacional drástica requiere líderes que puedan formar maestros de alta calidad. La Comunidad de Aprendizaje Profesional (PLC, por sus siglas en inglés) es una estrategia introducida por la División de Educación Docente o el Pendidikan Guru de Bahagian (BPG) para mejorar la calidad de los maestros. Para garantizar la implementación exitosa de esta estrategia, se debe practicar un estilo de liderazgo principal efectivo en todas las organizaciones. Además, la inteligencia emocional juega un papel en ayudar a los líderes a mejorar la efectividad de su liderazgo. Este estudio tiene como objetivo examinar el efecto de la inteligencia emocional como mediador de la relación entre el liderazgo transformacional de los directores y la práctica comunitaria de aprendizaje profesional de los maestros en las Escuelas de Alto Rendimiento (HPS) en el estado de Selangor.

Palabras clave: Inteligencia emocional, Escuela de alto rendimiento (HPS), Práctica comunitaria de aprendizaje profesional (PLC), Liderazgo transformacional.

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1. INTRODUCTION

Currently, transformational leadership is a practical leadership practice which to be adopted in educational organisations since the education system emphasises on transformation and innovation in implementing the Malaysia Education Blueprint 2013–2025. It is not easy to implement changes in educational organisations because the success of a change depends on the leadership of school leaders (Mohd Izham & Norzaini, 2009). A transformational leader supports the intellectual development of teachers as well as generating excitement and enthusiasm to implement the transformation. The transformational leader can create a positive organisational climate and accomplish goals easily. Besides, the transformational leader increases the motivation and instils the interest among followers (Ayhan Aydin, Yllmaz Sarie, & Sengul Uysal, 2013). Many research findings have shown that transformational leadership is highly relevant to be practised in education field. It has the ability to improve teachers' potential (Asiah, 2012), and teachers were found to be more motivated to implement changes in school to the extent of improving self and school performance (Hazlina, 2013; Mohd Zabedi, 2014; Siti Nadya & Mohd Izham, 2017). Also, transformational leadership can enhance organisational performance through motivation and increase the effective learning orientation in organisations (Bass & Riggio, 2006). It is supported by Amitay et al. (2006), which stated transformational leadership is highly associated with organisational learning.

The Professional Learning Community (PLC) is one of the changes introduced by The Teacher Education Division or *Bahagian Pendidikan Guru* (BPG) in the Continuous Professional Development Plan or *Pelan Pembangunan Professional Berterusan* (PPPB) since 2013. The initiative is implemented to improve the quality of teachers and the excellence of schools as announced in Wave 3 (2020–2025), which aims to enhance the professional excellence of teachers especially novice teachers. Previous studies have found that, they having a problem with classroom management and need support from expert teachers in order to help them to improve their teaching and learning quality (Fariza & Hazrati, 2109). In order for each student to succeed, the education system must have the best quality. The quality of education is determined by teacher's quality of the teaching, which thus leads the element to be put into highest consideration. (Zanaton, 2017). Indirectly, teacher professionalism can be enhanced when teacher's quality of teaching and student's quality are emphasized. PLC is a concept of collaborative learning of teachers (Mohd Faiz et al. 2016); and administrators explore and share the learning continuously followed by taking actions based on their learning. Giles and Hargreaves (2006) described PLC as the practice of teachers who frequently engage in discussions, by consistently paying attention to the teachers' teaching and learning process. Zuraidah (2012) considered PLC as a community that shapes a learning culture in an educational organisation where not only students learn in the community, but everyone also has a responsibility in implementing PLC in the community. The PLC practice needs support from committed leaders in shaping PLC in schools. An effective leadership style can affect PLC implementation, thus enhancing teachers' quality and student's excellence. Azlin Norhaini et al. (2014) stated that effective leadership associated with specific leadership styles such as transformational and transactional, which carry out activities to enhance teacher and student's achievement.

The emotional intelligence of a leader refers to the ability to identify and control the emotions of self and others, to motivate self, to manage one's emotion, and to manage the relationships with others (Goleman, 2001). Goleman (1988) stated that it refers to a leader's ability in managing conflicts. It is also associated with self-awareness and social relations. Emotional intelligence is a job-related skill that can be learned and should be mastered by leaders to enhance the effectiveness of their leadership in managing an organisation. A leader with high emotional intelligence can build an organisational climate that forms the foundation of organisational effectiveness, such as establishing effective communication, able to innovate, and creating a competitive culture to accomplish the organisational goals to the specified level (Yahya Don et al., 2016). The statement was also supported by Norasmah and Tengku Nor Asma (2018), by stating that individuals who can manage their emotions efficiently usually have the ability to direct their emotions towards their desired behaviours and maintain the effectiveness of their actions.

2. CONCEPTUAL FRAMEWORK

This study is based on three main theories, namely, i) Transformational Leadership Theory (Bass & Riggio, 2006); ii) Emotional Intelligence Theory (Goleman, 2001), and iii) Learning Organisation Theory (Senge 1990; 2012). Besides, the Professional Learning Community model (Hord, 2003) is also utilised within PLC strategy, as that has been implemented in Malaysia to create a learning organisation in schools. Figure 1 shows the measured constructs in this study. The Rational Leadership Construct of this study applied the professional learning community model (Hord, 2003). The model is highly geared to the education field and is consistent with the latest developmental needs of the Malaysian education system towards professional learning community practice in schools, which started in 2016. In this study, transformational leadership is performed as the independent variable, the professional learning community construct as the dependent variable, and the emotional intelligences construct is the mediator.

The figure on the conceptual framework of this study shows the entire elements in the three constructs. The transformational leadership construct has four elements: i) idealised influence; ii) inspirational motivation; iii) intellectual stimulation, and iv) individual consideration. The professional learning community construct consists of five elements: i) shared and supportive leadership; ii) shared values, goals, mission, and vision; iii) collective learning and application of learning; iv) shared personal practice, and v) supportive conditions. Finally, the emotional intelligence construct comprises four elements: i) self-awareness; ii) self-management; iii) social awareness, and iv) relationship management.

Sources: Combined Transformational Leadership Theory (Bass & Riggio, 2006), Emotional Intelligence Theory (Goleman, 2001), and Professional Learning Community Model (Hord, 1997, 2003; Senge, 1990; KPM, 2011)
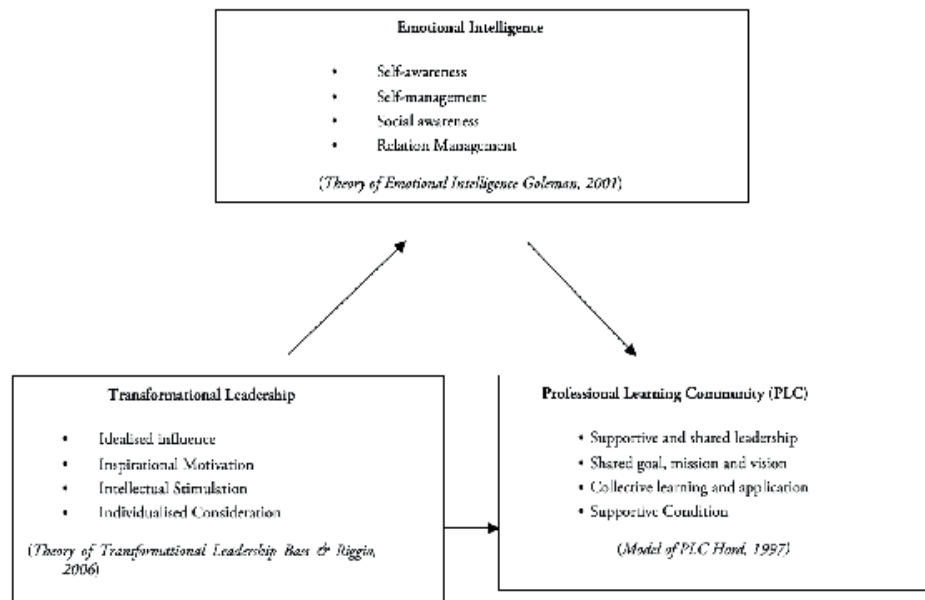
Figure 1. Conceptual Framework

3. RESEARCH PURPOSES

The study aims to identify the levels of transformational leadership and emotional intelligence of principals and their relationship with teachers' professional learning community practice in High Performance Schools (HPS).

4. RESEARCH OBJECTIVES

1. To determine the level of principals' transformational leadership practice through the dimensions of idealised influence, inspirational motivation, intellectual stimulation, and individual consideration in HPS.

2. To determine the level of principals' emotional intelligence in the aspects of self-awareness, self-management, social awareness, and relationship management in HPS.

3. To identify the relationship between principals' transformational leadership and teachers' PLC practice in HPS.

4. To identify the effect of emotional intelligence as a mediator of the relationship between transformational leadership and teachers' PLC practice in HPS.

5. RESEARCH QUESTIONS

1. What is the level of principals' transformational leadership practice through the dimensions of idealised influence, inspirational motivation, intellectual stimulation, and individual consideration in High Performance School (HPS)?

2. What is the level of principals' emotional intelligence in the aspects of self-awareness, self-management, social awareness, and relationship management in HPS?

3. Is there a relationship between principals' transformational leadership and teachers' PLC practice in HPS?

4. Does emotional intelligence have a mediating effect on the relationship between principals' transformational leadership and teachers' PLC practice in HPS?

6. HYPOTHESES OF THE STUDY

Ho1: There is no significant relationship between principals' transformational leadership and teachers' professional community practice in HSP.

Ho2: Emotional intelligence does not have a significant mediating effect on the relationship between principals' transformational leadership and teachers' PLC practice in HPS.

7. METHODOLOGY

The respondents consisted of secondary school teachers in the High Performance School (HPS) category in Malaysia. To generalise the respondents, the researcher used the clustered random sampling method by dividing the population into four zones, namely, the central zone, south zone, east zone, and north zone. The total number of respondents is 364. The number of samples by zone is shown in Table 1.1.

Table 1. Sample Distribution According to Zone

Zone	Samples
Central	52
North	95
East	82
South	100
Sabah/Sarawak	35
TOTAL	364

The transformational leadership instrument consisted of 26 items that were adapted from the Multifactor Leadership Questionnaire instrument (MLQ) (Bass & Avolio, 2000). Emotional intelligence was measured using 27 items, which were adapted from the Hay Group's Emotional Competencies Inventory (ECI-V2) instrument by Boyatzis, Goleman, and Hay Group (2001). Next, the teachers' professional learning community construct was measured using the instrument adapted from Zuraidah (2016) by consisting of 28 items.

8.   FINDINGS AND DISCUSSION

RESPONDENTS' PROFILE. Table 2 depicts the statistical analysis in the form of frequency and percentage to describe the profile of the study's respondents. The respondents consisted of teachers, who the majority have served for 21 years and above (104 respondents, 28.6 %), while the minority comprised those who have served for less than 5 years (13.5%). The rest is made up of teachers who have served for 6 to 10 years (70 respondents, 19.2%), 11 to 15 years (82 respondents, 22.5%), and 16 to 20 years (59 respondents, 16.2%). In terms of their academic level, the category with the most respondents is the bachelor's degree academic qualification (310 respondent, 85.2%), while the PhD category has the fewest number with only three respondents (0.8%), and the remaining have a diploma (four respondents, 1.1%) and a master's degree (47 respondents, 12.9%).

Table 2. Respondent's Profile

Variables	Frequency	Percentage
Service Duration		
Below 5 years	49	13.5
6–10 years	70	19.2
11–15 years	82	22.5
16–20 years	59	16.2
20 years above	104	28.6
Academic Level		
PhD	3	0.8
Master's degree	47	12.9
Bachelor's degree	310	85.2
Diploma	4	1.1
Total	**364**	**100**

Descriptive Analysis

i.   What is the level of principals' transformational leadership practice based on the dimensions of idealised influence, inspirational motivation, intellectual stimulation, and individual consideration in HPS?

Table 3. Mean and Standard Deviation Values and Interpretation of Scores for Principals' Transformational Leadership.

Variable	Mean	Standard Deviation	Interpretation of Score
Idealised Influence	4.33	0.468	Very High
Inspirational Motivation	4.35	0.483	Very High
Intellectual Stimulation	4.15	0.496	High
Individual Consideration	4.23	0.532	Very High
Overall	**4.27**	**0.439**	**Very High**

Table 3 shows the descriptive analysis results based on the respondents' information involving mean and standard deviation values. These findings answer the first research question, which is to identify the level of transformational leadership practice based on the elements of idealised influence, inspirational motivation, intellectual stimulation, and individual consideration. Overall, principals' transformational leadership practice is at a very high level (mean=4.2723, SD=0.439). The inspirational motivation element shows the highest mean score (mean=4.35, SD=0.483), followed by ideal influence (mean=4.33, SD=0.483) and individual consideration (mean=4.23, SP=0.532). Meanwhile, the mean score for intellectual stimulation (mean=4.15, SP=0.496) is the lowest compared to those of other elements.

ii.   What is the level of principals' emotional intelligence in terms of self-awareness, self-management, social awareness, and relationship management in HPS?

Table 4. Mean, Standard Deviation Values and Interpretation of Scores for Principals' Emotional Intelligence.

Emotional Intelligence	Mean	Standard Deviation	Interpretation of Score
Self-awareness	4.23	0.501	Very High
Self-management	4.32	0.470	Very High
Social Awareness	4.14	0.580	High
Relationship Management	4.22	0.513	Very High
Overall	**4.24**	**0.467**	**Very High**

Table 4 shows the descriptive analysis results based on the respondents' information involving mean and standard deviation values. These findings answer the second research question, which is to identify the level of principals' emotional intelligence based on the elements of self-awareness, self-management, social awareness, and relationship management. Overall, principals' emotional intelligence is at a very high level (mean=4.24, SD=0.467). The self-management element shows the highest mean score (mean=4.32, SD=0.470), followed by self-awareness (mean=4.23, SD=0.501) and relationship management (mean=4.22, SD=0.513). Meanwhile, the mean score for the social awareness element (mean=4.14, SD=0.580) is the lowest compared to those of other elements.

Inference Analysis

i.   Ho1: There is no significant relationship between principals' transformational leadership and teachers' professional learning community practice in HSP.

Table 5. The Relationship between Transformational Leadership and Professional Learning Community

		Transformational Leadership	Professional Learning Community
Transformational Leadership	*Pearson Correlation*	1	0.790**
	Sig. (2-tailed)		0.00
	N	364	364
Professional Learning Community	*Pearson Correlation*	0.790**	1
	Sig. (2-tailed)	.000	
	N	364	364

*** significant 0.01*

To examine Ho1, the researcher performed Pearson's correlation analysis. This analysis provided the findings on the relationship between transformational leadership and teachers' professional learning community. Based on Table 5, there is a significant positive relationship between transformational leadership practice and professional learning community (r=0.790; p=0.000). The value of r indicates that there is a strong relationship between transformational leadership and professional learning community (Jackson, 2006). Thus, the null hypothesis, Ho1, failed to be accepted.

iii.   Does emotional intelligence have a mediating effect on the relationship between the principals' transformational leadership and teachers' PLC practice in HPS?

To see the indirect effect of emotional intelligence as a mediator of the relationship between principals' transformational leadership and teachers' professional learning community (PLC) practice in HPS, the bootstrapping procedure was conducted. Before identifying the mediating effect by using the PLS-SEM software, the cleaned data is needed in order to achieve the criteria set by PLS-SEM, namely, internal consistency reliability, convergent validity, and discriminant validity.

Internal consistency reliability is intended to examine the extent that the developed indicators are able to measure for each construct. It can be determined by using the values of Cronbach's alpha and composite reliability (CR>0.7). Convergent validity ensures that there are no overlapping meanings among indicators. It can be confirmed by the average variance extracted value (AVE>0.5) (Bryne, 2016). If there is value lower than the set value, that indicator will be removed.

Discriminant validity refers to the degree of incompatibility among the constructs that should not be measured by the indicators. It is measured by using the Fornell-Larker, cross-loading, and Heterotrait-Monotrait (HTMT) values. However, according to Henseler, Ringle, and Sarstedt (2015), cross loading and HTMT values are sufficient for measuring discriminant validity. An HTMT value that exceeds the value set by Kline (2011) of 0.85 or Gold, Malhotra, and Segars (2001) of 0.90 is considered to have a discriminant validity issue.

i)   Internal Consistency Reliability for TL and PLC Constructs

Table 6 Composite Reliability and Cronbach's Alpha Values for Each Construct

Matrix	Composite Reliability	Cronbach's Alpha
TL	.969	.966
PLC	.966	.964
EI	.975	.973

Based on Table 6, all the values met the set criteria of the composite reliability, and Cronbach's alpha values must be equal to or exceed 0.7 (Hair, Hult, Ringle, & Sarstedt, 2017). The Cronbach's alpha value for transformational leadership is .966, professional learning community is .964, and emotional intelligence is .974. Meanwhile, the composite reliability values for transformational leadership and professional learning community are .969 and .966, respectively.

ii) Convergent Validity

Table 7 Average Variance Extracted for Each Construct

Matrix	Average Variance Extracted (AVE)
TL	.544
PLC	.519
EI	.582

Based on Table 7, the AVE values for transformational leadership (.544), professional learning community (.519), and emotional intelligence (.582) exceed .5. It indicates the items as suitable for measuring both the constructs.

iii) Heterotrait-Monotrait (HTMT)

Table 8 HTMT Value for Each Construct

	TL	PLC
TL		
PLC	.820	
EI	.880	.819

Referring to Table 8, the Heterotrait-Monotrait (HTMT) value for the construct of transformational leadership-professional learning community is .820, transformational leadership-emotional intelligence is .880, and professional learning community-emotional intelligence is .819. All the values do not exceed .90 (Gold et al. 2001). Hence, it shows that the items have satisfied with the discriminant validity condition.

Mediating Effect Analysis

To examine the mediating effect by using PLS-SEM, the bootstrapping procedure is the correct procedure to be applied (Hayes, 2009; Zhao et al. 2010) by looking at the indirect effect among the variables.

Table 8 Beta and t-values for Each Construct Relationship

Relationship	Std. Beta	Std. Error	*t*-value	Confidence Interval (BC)		Decision
				LL	UL	
TL>EI	0.855	0.019	44.78**	0.817	0.887	Supported
EI>PLC	0.437	0.075	5.802**	0.287	0.591	Supported
TL>PLC	0.419	0.074	5.635**	0.272	0.564	Supported

Table 8 shows the bootstrapping analysis is used to examine the effect of emotional intelligence as a mediator of the relationship between transformational leadership and professional learning community. The findings show three indirect effects, TL>EI (ß=0.855, t=44.786), EI>PLC (ß=0.437, t=5.802), and TL>PLC (ß=0.419, t=5.635), where the t-value >1.96 is significant. The indirect effects of 95% Boot CI Bias Corrected [LL = 0.817, UL=0.887], [LL=0.287, UL=0.591], and [LL=0.272, UL=0.564] do not straddle 0 in between (Preacher, 2004; Hayes, 2008). Thus, it shows that there is a relationship between transformational leadership and professional learning community mediated by emotional intelligence.

The findings show that principals' emotional intelligence is one of the mediators of the relationship between principals' transformational leadership and teachers' professional learning community. The results suggest that the principals of high emotional intelligence are capable to increase the level of principals' transformational leadership practice and hence, can enhance teachers' professional learning community practice in HPS. The emotional intelligence elements, which consisting of self-awareness, self-management, social awareness, and relationship management are capable to enhance the effectiveness of principals' leadership.
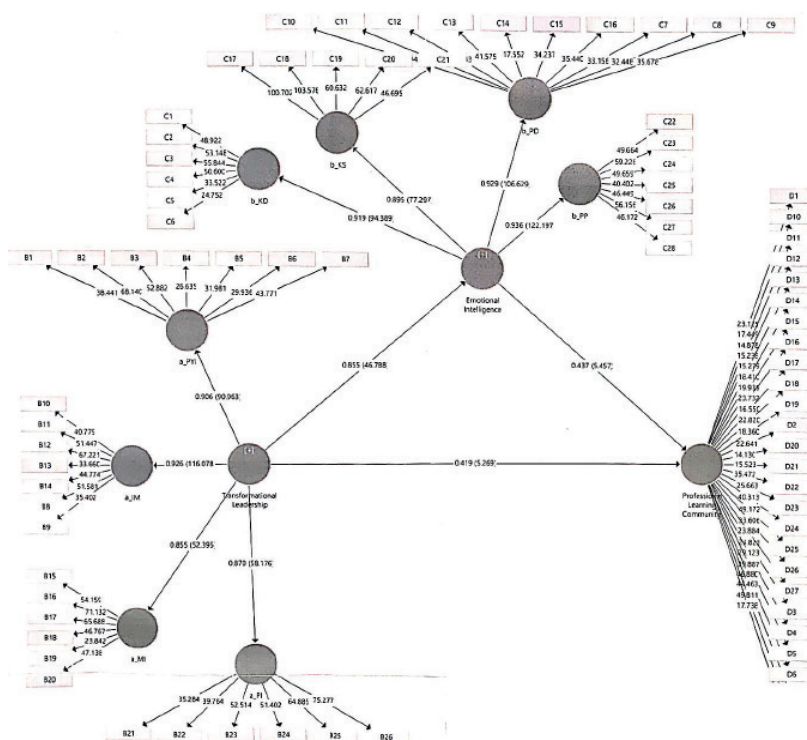

Figure. 2 Structural Model

9. IMPLICATION

This study provides a meaningful contribution to the literature on principals' leadership practice in the contexts of transformational leadership and teachers' professional learning community in schools. Despite many existing studies on transformational leadership, research on the effect of a mediator on transformational leadership is still lacking. Besides looking into the levels of principals' transformational leadership practice and emotional intelligence and their relationship with teachers' professional learning community, this study focuses on the role of emotional intelligence as a mediator of the relationship. The implication of the study supports the importance of principals' emotional intelligence in leading the organisation to be able to practise transformational leadership more effectively, thus providing a positive impact on the professional learning community practice towards high-quality and world-class teachers.

10. CONCLUSION

Based on the research results, it was found that principals' transformational leadership practice and emotional intelligence were very high. Besides, there was a strong relationship between principals' transformational leadership practice and teachers' professional learning community practice. Principals' emotional intelligence was found to have a mediating effect on the relationship between principals' transformational leadership and teachers' professional learning community practice in HPS. To obtain a different and comprehensive perspective, it is recommended to conduct research on boarding schools and Mara Junior Science College or *Maktab Randah Sains Mara* (MRSM) by focusing on the level of leadership practice, principals' emotional intelligence, and the effect on teachers' PLC practice in those schools.

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