ORIGINAL ARTICLE

The influence of entrepreneurial leadership and sustainability leadership on high-performing school leaders: mediated by empowerment

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Abstract

The fifth shift of the Malaysian Education Blueprint (MEB) 2013–2015, stated that the ministry will ensure high-performing school leaders are placed in every school. But the main challenge for the Malaysian school leader is to improve and achieve the key performance indicators of high-performing schools. This study supports the aspirations of MEB 2013–2015 by identifying the best practices of leadership to achieve outstanding student performance as well as to maintain the high-performance of schools. Therefore, this study examines the influence of entrepreneurial leadership, sustainability leadership and empowerment towards high-performing school leaders in primary schools of East Coast Malaysia. The instrument used is a questionnaire adopted from several questionnaires developed by previous researches on entrepreneurial leadership, sustainable leadership, empowerment and high-performing school leaders. A total of 486 questionnaires were distributed to the respondents of 15 high-performing primary schools in Kelantan, Terengganu and Pahang using the random sampling technique. With a 58 percent return rate, the data were analyzed using SPSS version 24 and SmartPLS version 3.28 for descriptive analysis, measurement model and structural model. The findings show that variables such as entrepreneurial leadership exerted a significant influence on high-performing school leaders and sustainability leadership also exerted a significant influence on empowerment. In addition, the results of this study support the contributions of the study that have been proposed. The findings of this study will contribute to future research, particularly to researchers aiming to examine this leadership style in depth on school performance in Malaysia.

Keywords Entrepreneurial leadership · Sustainability leadership · Empowerment · High-performing school leaders

1 Introduction

Due to the demands to increase school performance, Malaysia Education Blueprint (MEB) 2013–2025 states that high-performing school leaders should be placed in every school. In this fifth policy shift, school leaders in any organisation should have the credibility to reach high performing school levels and always be persistent to accomplish the school's goals and objectives. The shift in MEB 2013–2025 is expected to be achieved by enhancing school leadership quality and school leaders' effectiveness to transform their school environment (Nisar et al. 2020). Besides that, the advancement of the Malaysian education system nowadays is rapidly changing that bring transformational changes to the Malaysian education in the coming twenty-first century (Fuad et al. 2020). This means that the Malaysian education system is now expected to improve the Key Performance Indicator (KPI) of high-performing school leaders in high-performing schools.

Key Performance Indicators (KPIs) are determinants of what schools need to do to achieve the targets set by the Malaysia of Education (MOE). High-performing schools need to provide assessment and evaluation reports to develop a balanced human capital as intended in the National Education Philosophy (NEP). The report and assessment cover various aspects related to students' achievement, including examining the level of academic ability, international network programme, and sports co-curriculum. However, the achievement of Key Performance Indicator in

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high-performing schools is still unsatisfactory according to the inspiration of MEB 2013–2025. The report by the Education Implementation and Performance Unit (PADU) in 2019 indicated that the performance of high-performing schools in Malaysia was still at unsatisfactory level.

Therefore, the annual report proposed School Leadership Leap Programme (ProPeKS) is being implemented to guide schools towards excellence with a mission to stimulate low-performing schools. The practical issue of KPI achievement in high-performing schools is connected to high-performing school leaders in assessing the quality of leadership. Thus, a study conducted by Adams et al. (2020) determined that the role of principals in Malaysia now is more challenging with regards to the nation's efforts to produce high-performing schools. The aspiration from the Malaysian education is that all schools must be high-performing schools by addressing challenges, motivating, and providing support to all schools, particularly low-performing schools.

The study also stated that fine-graining empirical work is necessary, especially concerning the aspirations of the MEB in producing high-performing leaders in Malaysian schools. Ensuring high performance in schools will require high-performing school leaders. Adams et al. (2020) study highlighted the aspirations by MEB 2013–2025 and specifically identified leadership as the best practice that leads to high student achievement toward school high performance and sustainability. This aspiration of MEB in sustaining high-performing schools will guide other public schools in Malaysia, especially the low-performing ones.

Therefore, to sustain high-performing schools as an aspiration and inspiration to other public schools, Malaysia is now expected to create different leaderships in developing goals, mission, and values of the schools in facing global challenges (Kasim and Zakaria 2019). Hence, Helvaci et al. (2020) and Burawat (2019) introduced the entrepreneurial leadership and sustainability leadership in leadership performance as a means to tackle environmental and global barriers to improve organisational performance. There are several studies regarding the variables of entrepreneurial leadership and sustainability leadership in relation to performance and achievement of an organisation. Imran and Aldaas (2020), for instance, found a significant relationship between entrepreneurial leadership and organisational performance. Filho et al. (2020) also discovered a significant relationship between sustainability leadership and organisational performance.

Based on the arguments on the relationship between the dimensions of entrepreneurial leadership and sustainability leadership, it can be concluded the variables of the two leaderships have a significant relationship towards organisational performance either in profit or non-profit organisations. The direct implication of independent variables on dependent variables proved the need of other variables to

test theories to understand the causal relationship (Memon et al. 2018). Therefore, this study needed a mediator as a mechanism through which entrepreneurial leadership and sustainability leadership are able to influence school performance. By using multiple mediators, they enable schools to make a model complex and see whether it is good advice or practice (Memon et al. 2018). Mediation is also used to indicate the effect of an independent variable that is transmitted through an intervening variable (Hair et al. 2019). In relation to this study, researchers also have proven through their findings that empowerment can be the mediator variable for the elements of leadership. Tripathi et al. (2020), for example, identified empowerment incompetence, as well as control mediated leadership and performance in the organisation.

Therefore, this study introduced the model of entrepreneurial leadership, the model of sustainability leadership, and the mediator of empowerment toward high-performing school leaders. As the study was conducted context of high-performing school, it is hoped that these schools will provide support and guidance to all Malaysian public schools, particularly those with low performance.

1.1 High-performing school leaders

School leaders are specifically referred to the principals or heads of school organisations. School leaders not only impact organisational capacity, but also student achievement toward school performance. The high-performing school leader concept includes leadership and direction, organisational management, educational programme management, learning and teaching, and student achievement. Many studies indicated the relationship between school leadership and school overall performance. High-performing school leaders play in the ways of school performance (Nieuwerburgh et al. 2020). These include selecting the right persons as school leaders and further developing them to become immensely important toward the school performance. Owen et al. (2020) recommended that clear requirements, preservice pieces of training, capacity building, mentors' guidance, and continuous professional development training have a good impact on selecting and developing school leaders. According to Óskarsdóttir et al. (2020), leadership is the process of influencing people and will contribute to the organisation's goals and objectives.

David and Abukari (2020) mentioned that high-performing school leaders is the exercising of influence on organisational members and diverse stakeholders towards the identification and achievement of the organisation's vision and goals. This influence is typically reciprocal, rather than unidirectional, and is exercised through relationships between and among individuals, groups, and the settings in which they find themselves. School leaders are defined as successful individuals to the extent that they make significant,

positive, and ethically defensible contributions to the progress in achieving the school organisations' visions and goals. Blossing and Liljenberg (2019) also stated that high-performing school leaders includes the process of guiding teachers, students, and parents towards achieving common educational goals. Meanwhile, educational leadership is a recent term which was referred to as educational administration or educational management in the past. Some relate school leadership largely to the principal of the school, while others associate it broadly.

1.2 Entrepreneurial leadership

Entrepreneurial leadership is a distinctive type of leadership required to deal with challenges and crises in the current organisational setting. This leadership style enables leaders to successfully direct their organisation and solve problems through different steps of its growth and development. It also has a great influence on leaders' competency in recognising new opportunities to improve the organisation's performance (Imran and Aldaas, 2020). These influential effects have led scholars to increasingly apply entrepreneurial leadership to improve various aspects of education, specifically school performance (Kongjinda et al. 2020). Entrepreneurial leadership has been emphasised to create a supportive environment for change and innovation at schools (Helvaci and Ozkaya 2020). There are different complexities and challenges of school organisation, such as higher demands for improving the quality of education in public schools, fast changes in the environment, and growing shortages in school resources and funds (Bagheri and Harrison, 2020). Researchers believed that school performance requires entrepreneurial leadership characteristics, as well as knowledge and competence to execute tasks based on leadership. Researchers also looked at the benefits of entrepreneurship for school performance in two ways.

Firstly, entrepreneurship in general and entrepreneurial leadership, in particular, have been considered as ways of thinking and lifestyle rather than merely establishing an organisation (Utoyo et al. 2020). In this sense, entrepreneurial characteristics and approaches can be applied to improve all aspects of education and schooling, specifically school leadership through influencing individuals' behaviours and their task achievements (Mukesh et al. 2020).

Accordingly, school leaders need to acquire and practice entrepreneurial leadership characteristics to improve their school effectiveness and facilitate the process of a quality school. Secondly, past researchers have focused on the advantages of organisational entrepreneurship for school organisation's improvement (Simić et al. 2020). In this context, organisational performance reflects the capacity of a school to develop and implement novel ideas that lead to critical changes and improvements at the school

(Brauckmann-Sajkiewicza and Pashiardis 2020). School performance has three main components, including the capacity to explore new educational opportunities, as well as the tendency to take action and exploit the opportunities and changes that implement innovations created in the school performance (Sawaean and Ali, 2020).

Therefore, entrepreneurship features are applied in school organisations to enhance their success in providing quality leaders and a learning environment. Entrepreneurial leadership competencies help school leaders face complexities and constraints of the school environment, such as fast pace changes, limited resources, variety of factors affecting school performance, and the urgency in the need of preparing learners for their highly competitive future (Riana et al. 2020).

1.3 Sustainability leadership

Sustainability leadership is where leaders take a long-term perspective in making decisions, fostering systemic innovation aimed at increasing customer value, developing a skilled, loyal, and highly engaged workforce, as well as offering quality products, services, solutions, and resilience. The outcome of sustainability leadership in an organisation contributes to the reputation, satisfaction, performance, and stakeholder's value (Burawat 2019). Researchers had proven in their recommendation of findings that sustainability leadership can be a new variable of leadership (Knight and Paterson 2018). Sustainability contributes in competence and control of the leadership, innovative work behaviour, and reputation in the organisation. The suggestion was also supported by Burawat (2019) as sustainability also influences the leadership through the engagement of effective commitment toward organisation performance. Researchers also found that sustainability and leadership will enhance and influence strategies in institutionalising organisational change towards corporate sustainability (Thakhathi et al. 2019). Meanwhile, Griswold (2019) mentioned that leadership and sustainability in the education context is in similar fashion to organisation success. The previous studies also provided the suggestion that leadership influences the sustainability of organisations. According to Robinson (2019), leadership can sustain organisations by articulating clear organisational future goals, generating employee enthusiasm for worthy causes, and expressing high performance expectation from employees.

Sustainability is positively associated to long-term achievements, which made it the least important leadership dimension in achieving sustainable leadership in organisations. Meanwhile, stakeholder relationship is the most important leadership dimension (Sumanasiri 2020). Accordingly, when leaders perceive that their requirements are meaningful and personally valuable, they can increase their

achievement by willingly spending time and effort necessary to thoroughly identify a problem, search for extensive information, and generate multiple ideas from different perspectives (Nisar et al. 2020). According to the Gorondutse et al. (2020), sustainability is positively associated with strategic in performance. Sustainability leads to orientation towards job, management, and organisation. Sustainability plays a buffering role relationship to innovative performance. Besides, sustainability may enhance employees' intrinsic motivation, leading to a higher level of innovation performance (Chaurasia et al. 2020).

Ghassim and Foss (2020) revealed that majority of their respondents believed that sustainability is becoming increasingly important to leaders and that the risks of failing to act on are achievement growing. The pressure an organisation feels to implement sustainability leadership practices too often results in a jumble of uncoordinated sustainability activities and disconnected from the firm's strategy that neither makes any meaningful social impact nor strengthens the firm's long-term competitiveness. If a firm's sustainability efforts are to provide long-term value to both the organisation and society, sustainability must be integrated into the firm's strategies. Sureka et al. (2020), in their study on fifteen years of international journal of productivity and performance management (2004–2018), mentioned that the measurement of performance system has positively influenced the sustainability. The concept of sustainability can foster leaders in an active work role, sustain their organisation, and support the effective governance of organisation. Grigorescu et al. (2020) demonstrated that sustainability is positively related to the employees' task, contextual, and innovation performance. The relationship between sustainability and innovation performance was found to have been significant by locus of control.

1.4 Empowerment

Empowerment is about a set of practices in authority delegation and responsibility among employees, self-management in teamwork, and a flexible hierarchy (Qing et al. 2019). Empowerment climate focuses on addressing the school inscribed as having a friendly and welcoming work environment where the school community is open and honest through a two-way communication practice. The leaders share the information so that all can do the job well. They too value the culture of both positive feedback and constructive criticism. The school has no problem with conversing about work issues with leaders and working together across the school to solve the problems of students (Kasim and Zakaria 2019). Psychological empowerment refers to the leaders' ability to make a decision and feel the necessity to do the job effectively. Leaders are encouraged to come up with new and better ways of doing things and give serious

consideration to the decision that affects teachers' work and ideas about the school (Echebiri et al. 2020).

Although empowerment has been identified as an important predictor of performance at both the individual and organisation effectiveness, research has yet to examine empowerment simultaneously at the individual and organisation of analysis, instead of studying empowerment either at the individual or organisation level (Jha 2019a, b). As such, it remains to be seen whether the same leadership practices have shown to empower individuals and also employees, or whether leaders need to use different practices to most effectively empower their members personally and collectively. Moreover, studies on individual leaders' empowerment have identified similar aspects of leadership as predictors of individual and organisation performance (Tripathi et al. 2020). Empirical research has shown that employees who develop better relationships with their leader feel more empowered and in turn are more motivated to perform effectively and contribute to organisation performance (Saleem et al. 2019).

Particularly, in a longitudinal study, Alotaibi et al. (2020) found that if employees developed better relationships with their leaders, they would subsequently perform better, as the relationships were mediated by empowerment. Besides, studies supported the causal influence of self-efficacy as captured by the competence dimension of empowerment of psychological and climate toward performance. At the organisation level, García-Juan et al. (2019) proposed a model that generalises empowerment from individuals to organisation. The model proposes that psychological and climate empowerment is highly similar to individual performance in terms of its underlying dimensions, predictors, and outcomes. As such, empowerment has been conceptualised as a multilevel construct, or a construct that shares similar meaning and functions similarly across levels (Turnipseed and Waa 2020). Empirical studies have also provided initial support for the generalisability of empowerment across levels and demonstrated positive influence of leader performance or organization effectiveness (Bartram et al. 2020).

Empowering leadership behaviours focus on actions the leader takes to increase the motivation, psychological, and climate of the team as a whole rather than the quality of the relationship between a manager and a subordinate (Mutonyi et al. 2020). The set of empowering leadership behaviours identified is highly similar to the notion of empowerment, psychological, and climate. According to Byun et al. (2020), empowerment, psychological, and climate represent as a shared perception regarding the extent to which an organisation makes use of structures, policies, and practices supporting employee empowerment. Joo et al. (2020) demonstrated that leaders help develop shared empowerment of psychological and climate in

teams through recurring practices that translate into formal policies and procedures. Thus, Imam et al. (2020) used the term leadership climate to refer to leadership psychological behaviours which are directed to the subordinates as a whole and have the potential of developing shared, subordinate level empowerment. Ilyas et al. (2020) claimed that empowerment has a significant relationship with leadership and individual performance. Thus, both the individual and organisation portions of model suggest that leadership helps to explain the relationship between empowerment and performance.

Specifically, the hypotheses are posited as:

H1 Entrepreneurial leadership influence high-performing school leaders.

H2 Sustainability leadership influence high-performing school leaders.

H3 Entrepreneurial leadership influence empowerment.

H4 Sustainability leadership influence empowerment.

H5 Empowerment influence high-performing school leaders.

H6 Empowerment mediates the relationship between entrepreneurial leadership, sustainability leadership, and high-performing school leaders.

2 Methodology

This study focused entirely on school leaders who represent the organization of primary High-Performing Schools and schools were selected based on studies by Adams et al. (2020). The primary school context was selected based on an empirical study (Hui and Singh, 2020). The selection of school organisations was done in the East Coast states of Malaysia with High-Performing Schools that have been awarded the Excellent School title from the Ministry of Education based on the cohort received (Harun et al. 2020). This study also adopted a quantitative approach in which questionnaires were used as the research instrument. As for the respondents, all teachers in each school were chose to answer the instruments provided. The teachers in each school were chosen as the unit of analysis (individual) in assessing their perceptions of their headmaster who is responsible for executing managerial responsibilities in the school's organization. A total of 486 questionnaires were distributed to the respondents of 15 high-performing primary schools in Kelantan, Terengganu and Pahang using the random sampling technique. The distribution of the survey forms was done by the researcher after dealing with the headmasters of the schools.

The measurement of high-performing school leaders (22 items) was adapted from Malaysia Education Standard Quality (2010) and supported by Sammons et al. (1995). The measurement of entrepreneurial leadership (53 items)

was adapted from Thornberry (2006); Fernald et al. (2005); Tierney and Farmer (2004); Gupta et al. (2004); Becherer et al. (2008); Chen (2007); D'Intino et al. (2008); Mumford (2002); Cogliser and Brigham (2004); McGrath and MacMillan (2000); Musa and Fontana (2014); as well as Hejazi et al. (2012). The measurement of sustainability leadership (11 items) was adapted from The Connor-Davidson Resilience Scale (CD-RISC) by Connor and Davidson (2003); Smith et al. (2008); General Decision Making Style (GDMS) by Scoot and Bruce (1995); Verma et al. (2015). The empowerment measurement (10 items) was adapted from Blanchard et al. (1999); Seirbert et al. (2004); as well as Spreitzer (1995).

3 Findings

3.1 Measurement of reliability

The data in this study were analysed using a Smart PLS version 3.28 for the analysis approach. In the assessment of the measurement model, the first criterion was to assess the internal consistency of the measuring observed variables or items with each other. For the reliability measure in PLS-SEM, two sets of reliability measurement model were used, namely Cronbach's α for items or indicators reliability and composite reliability for internal consistency reliability (Hair et al. 2014). Item or indicator reliability indicates which part of item's variance can be explained by the underlying latent variable (Gotz et al. 2010). Twelve items were removed because the factor loading value did not fulfil the condition (less 0.6). These items were from latent variable high-performing school leaders (8 items) and entrepreneurial leadership (4 items). The high-performing school leaders showed AVE 0.607 and CR 0.955, entrepreneurial leadership showed AVE 0.724 and CR 0.993, sustainability leadership AVE 0.759 and CR 0.972, and empowerment showed AVE 0.789 and CR 0.974.

3.2 Path estimation (β) and hypotheses testing

The path estimation or hypothetical relations test was performed to examine the significance of the path relations in the inner model. Each path relationship was examined through the regression coefficient (β). The significance of regression coefficient β was based on the t-value, which was obtained using the Smart PLS bootstrap process. The procedure number of the bootstrap sample used by this study was 5000 and the critical value for the one-tailed test was considered as a significant value. The procedure of the run bootstrapping for the lumped model was as suggested by Hair et al. (2014) (Fig. 1).
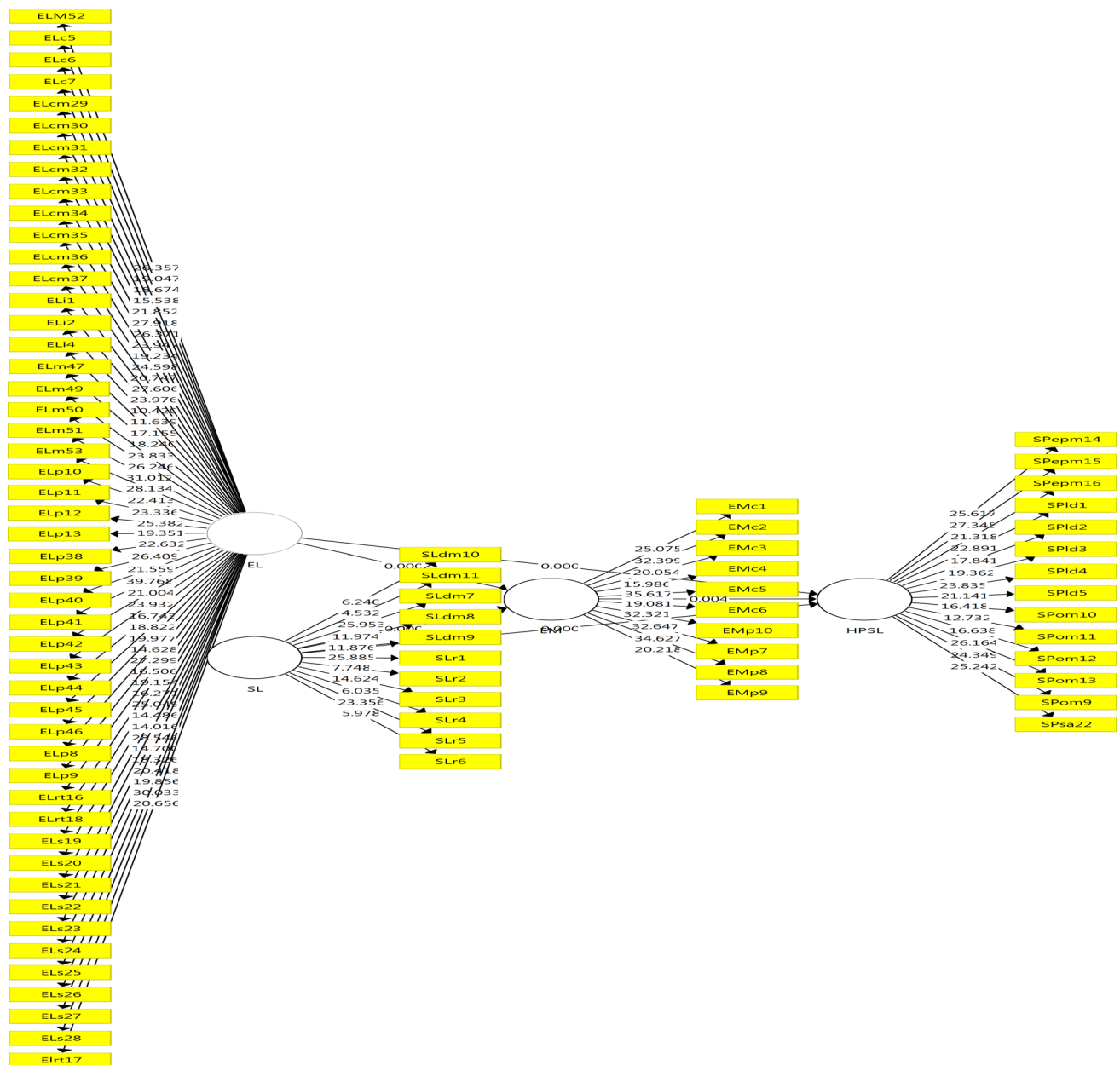
Fig. 1 The structural evaluation of indirect and direct effects model

In support to H1 until H5, this study discovered the influence of variables of entrepreneurial leadership and sustainability leadership on the high-performing school leaders, mediated by empowerment. The result of structural relation and path significance, the t-value and their significance level, p-value is as shown in Table 1. Besides, the result revealed that the entrepreneurial leadership variable provided a shred of evidence of significant support to high-performing school leaders. The result also revealed that sustainability leadership offered evidence of significant support to high-performing school leaders. In addition, entrepreneurial leadership and sustainability

leadership showed a significant relationship toward empowerment and empowerment also revealed a positive relationship toward high-performing school leaders (Table 2).

The bootstrapping analysis exhibited that the indirect effects, β = 0.799 and β1.172, were significant with the t-values of 8.217 and 2.166, accordingly. The indirect effects were 95% Boot CI Bias Corrected, [LL = 0.014 UL = 0.236] and [LL = 0.139 UL = 2.222]. Thus, it can be concluded from the result that the mediation effects were statistically significant.

Table 1 The influence of entrepreneurial leadership and sustainability leadership toward high-performing school leaders, mediated by empowerment

Hypothesis	Path relationship between variables	Path estimation (β)	*t* value	*p* value	Results
H1	EL->HPSL	0.646***	8.217	0.000	Supported
H2	SL->HPSL	− 0.494***	4.571	0.000	Supported
H3	EMP->HPSL	0.146***	1.736	0.004	Supported
H4	EL->EMP	0.799***	30.270	0.000	Supported
H5	SL->EMP	0.679***	3.389	0.000	Supported

EL entrepreneurial leadership, *SL* sustainability leadership, *HPSL* high-performing school leaders, *EMP* empowerment

Significant level $= ***p < 0.01$; ** $p < 0.05$; * $p < 0.10$; not significant

4 Discussion

4.1 The influence of entrepreneurial leadership on high-performing school leaders

The finding of this study demonstrated that entrepreneurial leadership provided a significant relationship with high-performing school leaders in the High-Performing Primary Public Schools of Malaysia East Coast. The literature mentioned that entrepreneurial leadership is a distinctive type of leadership required for dealing with the challenges and crises of the current organisational setting. The different leadership styles enable leaders to successfully direct their organisation and solve the problems through different steps of the organisation's growth and development. The result also supported a statement from Utoyo et al. (2020) which mentioned that this style of leadership has a great influence on leaders' competency in recognising new opportunities to improve the organisation's performance.

The result also supported the literature mentioned by Mukesh et al. (2020) where influential effects have led scholars to increasingly apply entrepreneurial leadership to improve various aspects of education and specifically individual or school organisational performance. This study concluded that school leadership requires entrepreneurial leadership characteristic, knowledge, and competence to execute their tasks based on leadership. Simić (2020) mentioned that entrepreneurship for school leadership benefits in two ways. Firstly, entrepreneurship in general and entrepreneurial leadership, in particular, have been considered as ways of thinking and lifestyle rather than merely establishing the organisation. The entrepreneurial characteristics and approaches can be applied to improve all aspects of education and schooling, specifically school leadership through influencing individuals' behaviours and their task performances (Sawaen and Ali 2020).

The finding of this entrepreneurial leadership toward high-performing school leaders also demonstrated that school leaders in high performing schools need to practice entrepreneurial leadership behaviour to increase school effectiveness. This result is supported by Kongjinda et al. (2020) in their study of entrepreneurial leadership, which mentioned that in order to increase the effectiveness of school organisations, a school leader needs to exercise entrepreneurial leadership by creating a positive school culture and teachers' organisational citizen behaviour. Kongjinda et al. (2020) also mentioned four dimensions of school effectiveness to be considered. Evidently, the control view of public-school effectiveness showed the highest mean score, followed by the creative view, the collaborative view, and the competitive view. In addition, the school leaders should focus on improving the competitive dimension of the school, for example, student achievement and the school's competitive advantage. In terms of factor loadings, the creative view presents the best loading to school effectiveness and emphasises the importance of school effectiveness. The effective schools need to identify themselves, differentiate themselves, and able to adjust quickly to the disruptive world. School leaders in high performing schools need to vary their curriculums to match the school context and the stakeholders' preference, to apply new technology to enhance pedagogy and effective school management, and to adopt entrepreneurial leadership and their critical characteristics as it has been proven to be related to school effectiveness.

The finding on the significant concluded that school leaders in high-performing school leaders need to acquire and practice this entrepreneurial behaviour to facilitate the process of a quality school. Back to the literature, Imran and Aldaas (2020) in their study of entrepreneurial leadership between perceived organisational support and organisational performance, mentioned that entrepreneurial leadership needs to enhance strategy, communication, and motivation. The school leaders in this context also need to enhance their knowledge about entrepreneurial leadership as it sheds light on its mechanism.

School leaders need to identify perceived organisational support as a predictor of entrepreneurial leadership. Nevertheless, majority of the present leaders are focusing on its effects but ignoring its predictors. It is one of the initial

Table 2 Hypothesis result on mediation

Relationship	Standard beta	Standard error	t value	p value	Confidence interval (BC)	
					LL	UL
H6 EL ->EMP ->HPSL	0.799	0.078	8.217	0.000	0.014	0.236
SL ->EMP ->HPSL	1.172	0.541	2.166	0.015	0.139	2.222

methods of identifying a variable that affects entrepreneurial leadership. In the context of the school organisation, school leaders have an important standing as they formulate the organisation's backbone. The standing of school leaders as a formulated approach will help the leaders in the school sector to better understand the importance of giving proper support to the entrepreneurial leaders in order to increase performance. With the relevant support, school leaders in high-performing schools who practice entrepreneurial leadership behaviour can boost organisational performance and sustain in the education environment.

The significance of this entrepreneurial leadership concluded that a school leader in a high-performing school needs a strong organisational culture and entrepreneurial behaviour to contribute to the survival and further development of the school to meet the changing and developing needs of the society. This result is supported by Helvaci and Özkaya (2020) in their study of the relationship between entrepreneurial leadership behaviours of school administrators and organisational culture. They mentioned that entrepreneurial leadership behaviours of school administrators and organisational culture are two important factors affecting each other and there are significant relationships between these two concepts. In line with the results of the hypothesis, the result supported the recommendations of Helvaci and Özkaya's (2020) study that found the relationship and influence between entrepreneurial leadership and organisational performance in public schools and leadership styles belong to school principals and to what extent these leadership styles direct organisational performance.

The result of this study also agreed that school leaders need to acquire and practice entrepreneurial leadership characteristics in order to improve their school effectiveness and facilitate the process of school quality. The result also revealed that organisational entrepreneurship for school organisations is capable of improving school organisation or individual performance. A literature study by Bagheri and Harisson (2020) stated eight dimensions, which include framing challenges, absorbing uncertainty, underwriting, building commitment, defining gravity, opportunity identification and exploitation, orientation towards learning, and creative collective self-efficacy. By highlighting

entrepreneurial leadership, this result assisted the development of theories on how entrepreneurial leadership influences the process of innovation and opportunity recognition. Leaders of all types of businesses or non-businesses can use the skills and behaviours of entrepreneurial leadership emerging from the study to evaluate their capabilities, as well as identify their strengths and weaknesses regarding each aspect of their leadership style. This study concluded that the characteristics of entrepreneurial leadership in capabilities and roles were identified in guided nascent and current entrepreneurs who effectively lead their organisation.

Entrepreneurial leadership also helps school leaders sustain their high-performing schools in facing the complexities and constraints of the school environment, such as fast pace changes, limited resources, variety of factors affecting school performance, and the urgency in the need of preparing learners for their highly competitive future. These results also concluded that to face the dramatic and environmental changes in public schools, school leaders are required to look beyond the current status of the school and develop new opportunities for the school improvement. This argument is also supported by Nor-Aisyah et al. (2020). In their study on entrepreneurial leadership and sustainable performance, they stated that entrepreneurial leadership behaviour is very important in driving organisations and the external environment towards sustainability. The entrepreneurial leadership and sustainability initiatives result in superior quality products in student achievement and services, increased achievement, improved environmental degradation, and satisfied educational needs.

The findings of this study indicated that entrepreneurial leadership represents an interesting area of practice, hence requires more school leaders to understand their substantial impact on sustainable performance. The school leaders should engage in skills development as a critical first phase towards school success. The school success criteria include setting clear goals, creating chances, allowing people, safeguarding organisational understanding, and creating human resource frameworks. The criteria of school success are also supported by Latif et al. (2020) who stated that entrepreneurial leadership involves inducing and directing the performance of group members towards the attainment

of organisational goals through recognition and exploitation of entrepreneurial opportunities. Entrepreneurial leadership also helps to enhance the success of the leader's task achievement and efficiency.

Therefore, the school leader in a high-performing school needs to practice entrepreneurial leadership behaviour as it is a unique leadership style that focuses on making heterogeneous talents work more creatively and innovatively in collective processes to respond to the uncertain organisational environment to create a coherent strategy and novel outcomes. Hence, school organisations need to be able to measure and thus manage their entrepreneurial leadership. School leaders with entrepreneurial characteristics may lack inspiration or charisma that is typically a characteristic of transformational leaders. Entrepreneurial leaders also motivate and inspire subordinates through imitation by role modelling instead of inspiring others to personal achievements. Although they lead with clear purpose and goals, entrepreneurial leaders may not be described as charismatic or inspirational by others as often as transformational leaders.

4.2 The influence of sustainability leadership on high-performing school leaders

The finding of this study hypothesised that sustainability leadership can be a new variable of leadership. This result was also agreed by Knight and Paterson (2018) that sustainability in competence controls leadership and reputation in the organisation. Furthermore, sustainability also shows a significant relationship between leadership and performance and influences leadership on the engagement of an effective organisation (Burawat 2019). Related to this study, the result of sustainability leadership toward high-performing school leaders concluded that sustainability and leadership will enhance and influence strategies for school organisation change towards corporate sustainability (Thakhathi et al. 2019). Corporate sustainability refers to the access to clearer rules and guidelines for managing sustainability issues, more efficient in managing multiple stakeholders' demands due to enhanced opportunities for learning, benefit from individual and reputation management, and are better able to capture weak signals about opportunities and threats in the external environment (Vidal and Buren 2020). This significance of sustainability leadership toward high-performing school leaders concluded that school leaders in high-performing schools used this characteristic of sustainability to sustain their school organisations as high-performing schools.

This argument was supported by Griswold (2019) who mentioned that emphasis on leadership and sustainability in the education context is similar for organisational success. Therefore, this statement suggests that leadership influences sustainable organisations to sustain them. This statement is supported by Robinson (2019) who believed that

leadership can sustain an organisation by articulating clear organisational future goals, generating employee enthusiasm for worthy causes, and expressing high performance expectations from employees. In addition, sustainability is positively associated to achievement of long-term orientation which is the least important leadership dimension in achieving sustainability leadership in organisations while stakeholder relationship is the most important leadership dimension (Sumanasiri 2020).

This study also concluded that school leaders can increase their achievement by willingly spending the time and effort necessary to thoroughly identify a problem to perceive their requirements as meaningful and personally valuable. The school leaders must search for extensive information and generate multiple ideas from different perspectives (Nisar et al. 2020). According to Gorondutse et al. (2020), sustainability in leadership is positively associated with a strategy in job, management, and organisational performance. Besides, sustainability plays a buffering role related to innovative performance and enhances employees' intrinsic motivation, leading to a higher level of innovative performance (Chaurasia et al. 2020).

The finding also concluded that sustainability is becoming increasingly important to school leaders and that the risks of failing to act on may affect the success of the school achievement. The school leaders feel that implementing sustainability leadership practices too often results in a coordinated sustainability activity, connects to the strategy that makes any meaningful social impact, and strengthens the long-term competitiveness (Ghassim and Foss, 2020). The long-term competitiveness is also related to a study by Sureka et al. (2020) in the international journal of productivity and performance management (2004–2018). They mentioned that the measurement of performance system positively influenced sustainability in long-term competitiveness. The concept of sustainability can foster leaders in an active work role, sustain their organisation, and support the effective governance of the organisation (Grigorescu et al. 2020).

4.3 The influence of entrepreneurial leadership on empowerment

Past studies have found that empowerment and leadership enhance subordinate work motivation and performance through the delegation of authority from job-related issues to decision-making (Chandranathan, 2019). Related to this study, the findings are also supported by Akbari et al. (2020) who claimed that entrepreneurial leadership has a significant relationship with empowerment. They, too, emphasised on the fact that leadership empowerment in the educational context is similar to as being advocated for organisation success. The previous studies also suggested that leadership

influences employees' attitudes and behaviours by empowering them. According to past studies too, the results supported the finding by Kundu et al. (2019) who mentioned that leadership has a positive relationship towards performance. Saleem et al. (2019) claimed that leadership can empower employees by articulating clear organisational future goals, generating employee enthusiasm for worthy causes, and expressing high performance expectation from employees.

The finding found that empowering and leadership will enhance subordinates' work motivation and performance through the delegation of authority for jobs related to decision- making. Leadership empowerment in entrepreneurial behaviour context is similar to as advocated for organisation success (Akbari et al. 2019).

Previous studies also suggested that entrepreneurial leadership influences employee attitudes and behaviours by empowering them (Chandranathan, 2019). According to the Sawaean and Ali (2020), entrepreneurial leadership can empower employees by articulating clear organisation future goals, generating employee enthusiasm for worthy causes, and expressing high performance expectation from employees. In relation to this research, school leaders have to create a working environment, share information, give constructive criticism, create team work, be involved in decision-making, and give serious considerations. Entrepreneurial leadership in the school leader context can empower school teachers by articulating clear organisational future goals, generating school teachers' enthusiasm for worthy causes, and expressing high performance expectation (Sawaean and Ali 2020).

4.4 The influence of sustainability leadership on empowerment

The result in the hypothesis test showed that sustainability leadership has a significant relationship toward empowerment. The contribution of this study proves that sustainability leadership criteria need to be adapted by all school leaders in Malaysia. Past literature mentioned that sustainability leadership and empowerment need to be adapted to management styles and leadership approaches. The leaders need to understand the value of the important relationships in organisational contexts for the subordinates. The sustainability of these leadership styles is believed to be the key to mobilising energy, challenges, and unpredictable environments of the twenty-first century, and promoting sustainable development and subordinates (Rehman et al. 2019). In relation to school context, school leaders need to understand the sustainability leadership style as it has been the most studied in individual style approaches to management within the field of school organisational studies for the past several decades. This interest is rooted in the importance of

sustainability for school organisational achievement (Khusanova et al. 2019).

In addition, the sustainable leadership style by school leaders mainly aims to create a solid school organisational infrastructure for the prospective leaders and the system that will transfer this infrastructure from generation to generation. Hence, it also brings a competitive advantage to the school organisations which in turn helps develop methods continuously improving school organisational performance (Sezgin-Nartgün et al. 2019). Empirical studies have confirmed that empowered sustainability by school leaders is more productive and effective, regardless of whether performance is measured at the individual, team, or organisation levels. This finding also showed that sustainability leadership by school leaders in high-performing school behaviours motivate school teachers to perform at higher levels and influence job satisfaction, innovative work behaviour, and empowerment (Segovia-Pérez et al. 2019).

4.5 The influence of empowerment on high-performing school leaders

Empirical studies proved that empowerment has been identified as an important predictor of performance at both individual and organisation effectiveness. In addition, literature has yet to examine empowerment simultaneously at the individual and organisation of analysis, instead of studying of empowerment either at the individual or organisational level (Jha 2019a, b). Related to this study, the findings showed that empowerment has a significant relationship with high-performing school leaders. Besides, it maintained that the leadership empowerment practices are shown to empower individuals and school teachers or whether school leaders need to use different practices to most effectively empower their school teachers personally and collectively (Tripathi et al. 2020). Moreover, empirical studies on empowerment have identified similar aspects of leadership as predictors of individual and organisational performance. Empirical research in school leadership also has shown that school teachers who develop better relationships with their school leaders feel more empowered and in turn are more motivated to perform effectively and contribute to school organisational performance (Saleem et al. 2019).

In addition, Alotaibi et al. (2020) found that better relationships with school leaders and school teachers, as well as subordinates, subsequently resulted in better performance as the relationships were mediated by empowerment. Hence, studies are supporting the causal influence of self-efficacy as captured by the competence dimension of empowerment toward performance. At the school organisational context, García-Juan et al. (2019) proposed a model that generalises empowerment from school leaders to school organisations. The model proposes that empowerment is highly similar to

individual performance in terms of its underlying dimensions, predictors, and outcomes.

As such, empowerment has been conceptualised as a multilevel construct, or a construct that shares similar meaning and functions similarly across levels (Turnipseed and Waa, 2020). An empirical study in school leadership also provided initial support for the generalisability of empowerment across levels and demonstrated the positive influence of school leaders' performance on school organisation effectiveness (Bartram et al. 2020). Empowering leadership behaviours in the school leadership context focuses on actions the school leader takes to increase the motivation empowerment of the school team as a whole rather than the quality of the relationship between school leaders and school teachers (Mutonyi et al. 2020). Therefore, the set of empowering leadership behaviours identified is highly similar to the notion of empowerment of psychological and climate. Therefore, the empowerment of psychological and climate represents a shared perception regarding the extent to which an organisation makes use of structures, policies, and practices supporting employee empowerment (Byun et al. 2020).

The hypothesis result is also supported by Joo et al. (2020) who stated that leaders help develop shared empowerment of psychological and climate in teams through recurring practices that translate into formal policies and procedures. Thus, the school leaders in this study practiced the term of leadership climate to refer to leadership psychological behaviours that are directed to the school teacher team as a whole and have the potential of developing shared values toward school team level (Imam et al. 2020). Thus, both the individual school leader and school organisation portions of the model suggest that leadership helps to explain the relationship between empowerment toward an individual or school organisation performance (Ilyas et al. 2020). In conclusion, this study showed that empowerment has a significant relationship with high-performing school leaders in Malaysia East Coast High-Performing Primary Public Schools. Based on the arguments in empirical studies and the findings of this study, the practical perspective proves that school leaders need to empower themselves to increase individual performance in contributing to the school's organisational performance. The theoretical perspective also proved that this study has achieved the goal as a new contribution to empowerment and high-performing school leaders.

4.6 The mediation of empowerment between entrepreneurial leadership, sustainability leadership, and high-performing school leaders

Empowerment refers to individuals' conception of their job roles and their capacity to create job outcomes. Empirical studies of empowerment mediator highlighted the empowerment point that serves as a mediator linking various work-related organisation outcomes (Ambad et al. 2021). Empowerment is an intrinsic motivation manifested in four cognitions reflecting an individual's orientation to work role meaning, competence, self-determination, and impact (Ahmed and Khalid, 2019). These four cognitions reflect an active orientation to a work role, an orientation in which an individual wishes and feels able to shape role and context. Meaning in the context of empowerment indicates the value of the work goal or purpose, judged by concerning an individual's ideals and standards (Begum et al. 2020).

The perception of low meaning leads to apathy, isolation, and a sense of non-involvement, whereas the perception of high meaning gives rise to commitment, involvement, and energy. Competence is an individual's belief in his or her capability to perform activities with skills (Iqbal et al. 2020). Competence is analogous to agency beliefs, self-efficacy, or personal mastery. Saira et al. (2021) emphasised that people with a high level of self-efficacy take initiative, make more effort, and are persistent when obstacles occur. Self-determination or autonomy means independent decision-making, which is reflected in the employees' choice of working methods, speed, and organisation. Matsuo et al. (2021) stated that autonomy increases employees' creativity, initiative, resilience, and self-regulation. The impact on an individual can influence strategic, administrative, or operating outcomes of work. Perceived impact reflects employees' awareness of the extent to which their views and perceptions are valued and affect the achievement of the organisation's goals (Suifan et al. 2020).

Related to this study, the relationships of entrepreneurial leadership and sustainability leadership toward high-performing school leaders were mediated by empowerment. Empirical studies have proven in their findings that empowerment can be the mediator variable in the leadership relationship. Empowerment in competence control mediates the leadership and reputation performance in an individual or organisation (Tripathi et al. 2020). Various studies indicate that empowerment is positively correlated with job satisfaction, work effort, and supporting organisation performance. In the development of empowerment, the central role belongs to the leader.

Therefore, in the context of school organisation, social structural empowerment may be viewed as a leadership style where the school leader deliberately delegates decision-making and responsibilities, offering school teachers trust in the leader and perceived organisational support and performance (Minai et al. 2020). In addition, empowerment revealed a positive correlation between school leaders with school teachers' work outcomes and job satisfaction, organisational and professional commitment, and self-management capability toward student achievement and school effectiveness. This mediation result proved that school leaders need to empower their school teachers in the school organisation

through the provision of clear direction towards their tasks. The mediating role of empowerment revealed that this study sends an important message to school leaders. In order to empower school teachers, it is not sufficient to merely delegate formal power, which is usually seen as a social structural empowerment. Empowering school leaders should be achieved by creating an opportunity for the school teachers to form a situation for teamwork as in working together to enhance student achievement toward school effectiveness as a symbol and inspiration to other schools.

5 Conclusion

In future, there are several directions for researchers to follow. First, future research on entrepreneurial leadership needs to adapt this leadership to non-profit organisations. The next study should also be on investigating entrepreneurial leadership towards school funds in Malaysian public schools. Second, sustainability leadership in the school organisation also needs to be explored by new studies.

This element practices ways to produce a set of twenty-three sustainability leadership practices introduced by Avery and Bergsteiner (2011). Third, future research can also become an attempt to use additional theories such as LMX to enhance the proposed new leadership style aligned by entrepreneurs and sustainability leadership towards performances or achievement in the organisation. The LMX theory occupies a unique position among leadership theories because of its focus on the dyadic relationship between leader and follower. LMX theory was originally referred to as the Vertical Dyad Linkage (VDL) theory (Dansereau et al. 1975). Fourth, the framework can be tested in private schools in Malaysia based on orientation rather than customer satisfaction. In the private school context of profit orientation, the framework could be enhanced by including the competitive pressure variable and the advantages of competitiveness and sustainability to the research framework.

The study has achieved its research objectives in constructing a framework for school leadership in Malaysian East Coast High Performing Primary Public Schools. It has been developed and validated by statistical analyses. The results were generated based on the proposed assimilation framework of school leadership in high performing schools, and can be used as empirical evidence by decision-makers in Malaysian public schools to provide a plan for successful leaders in such schools. The findings of this study on the effectiveness of school leaders can be used as a guide and motivation to all school leaders in Malaysia, especially low performing schools. The research makes several contributions to the variables of entrepreneurial leadership, sustainability leadership, and empowerment towards high-performing school leaders. The relationships in the research framework were proven significant using the PLS-SEM analysis. The validation of the framework was conducted in high performing primary public schools which slightly limits the study. These limitations can be solved in future research as suggested in the last section of this chapter. The study can be replicated and conducted by following a case study research design or focusing on the levels of individual leadership.

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