Sustaining learning organization in the next normal of educational management: Evidence from Malaysia

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Article Info	ABSTRACT
	Organizations experience severe crises as a result of unanticipated changes, such as the COVID-19 pandemic, which has raised awareness of how organizations learn to become stronger. Consequently, the purpose of this study is to determine the level of learning organization (LO) of the state education official (SEO) in Malaysia from the dimensions of continuous learning, inquiry and dialogue, team and collaborative learning, embedded system, empowerment, system connection and strategic leadership as well as to explore the differences in LO practices of the SEO in Malaysia across demographic factors. Due to the COVID-19, data was collected from 450 SEOs using Google Forms. The analysis of data showed that the level of LO was very high. The different frequency of participation in courses, workshops or training related to governance, leadership or educational management during the respondent's tenancy at the state education department (SED) was shown to be significant according to the analysis of multiple analysis of variance (MANOVA) results. However, there was no significant difference in the LO practices of SEO based on position, age, experience, and academic credentials. The finding has a significant representation of the educational management and provide a viable framework for the context of the pandemic as it can be used to compare it to findings from similar studies conducted in other regions or public sector as well as provide useful insights for countries with characteristics that are like those of Malaysia in the future. *This is an open access article under the [CC BY-SA](#) license.*

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1. INTRODUCTION

The increasingly complex and unanticipated issues faced by organizations globally have had a direct influence on organizational change [1]. Global competition has changed learning for organizations [2] and organizational changes are inevitable. This new reality supports lifelong learning and the sustainable development goals (SDG), which call for employees to have the right knowledge, skills, and attitudes. This demonstrates the requirement for crisis management and learning organization (LO). As a result, several general or conventional management functions and responsibilities, like those in education, have changed and no longer apply to society today. Due to the COVID-19, education worldwide has drifted online [3]–[5].

COVID-19 has also challenged many parts of society, from top leadership to front-line service. It has also made inequalities and weaknesses stand out and be more obvious. Nevertheless, COVID-19 has made learning the foundation of how we develop and improve. This indicates decisively that LO must lead

crisis management and prevention, as even if a crisis is averted and learning leads to organizational change, there will be parts that might have been handled more efficiently. This is even more crucial given that, as a result, a number of general or conventional management functions and responsibilities, such as the educational system, have become obsolete or irrelevant to the current social state [6]–[8].

As mentioned in the literature review, Malaysian educational institutions are adopting the concept of LO [2], [9]–[12] because only "learning" organizations can operate efficiently and competitively [13]–[15]. Moving towards wave 3 (2021-2025) of the Malaysia Education Development plan (2013-2025), which is the plan's final wave of pursuing excellence through the transformation of the education system, the Ministry of Education (MOE) human resource training policy, in line with the public sector human resource training policy, aims to develop the organization as an excellent and well-planned LO at every level to provide high-level thinking skills as well as future-ready skills. In addition, starting in 2022, state education department (SED) will employ the SED excellence standard rating, which is also known as the *Standard Kecemerlangan Jabatan Pendidikan Negeri* [6]. This will be done to make sure that service excellence is being met. Consequently, it advocates for LO to achieve excellence beyond reviewing strengths and weaknesses and identifying improvement and mentorship opportunities to consistently enhance SED excellence, as supported by previous study [16] that learning occurs at all levels of the organization and must be supported and implemented by organizational management.

Due to rising global competition, all organizations, including SED, must acknowledge that learning is more important than ever [2]. Unexpected adjustments require the organization to foster collaborative continuous learning to adapt to new imaginative ideas. The organization's working environment and culture are no longer fit with modern ways of working and keep employees from reaching their full potential [17]–[19]. Jalet and Yunus [20] argue that many education officials and educators struggle to adapt to change rapidly and the rate of learning to deal with changes and new issues is slow at every level of MOE. A study by Hassan [21] indicated that management officials at the MOE, SED, and District Education Office lacked personal development and failed to comprehend the expanded scope and field of job, causing stress in the workplace. Supported by Hamzah, Rani, and Matore [9], it was demonstrated that a lack of disclosure of the value of learning in the organization led to modest personal learning.

Therefore, to reinstate the SED's position and function as the state's educational anchor, it is required to determine the level of the LO and the variables influencing its development. Thus, a quantitative approach using a cross-sectional survey design with a sample of 450 state education official (SEO) in Malaysia was conducted. This study will shed some lights on determining Malaysian SEOs' level of LO practices and analysis of multiple analysis of variance (MANOVA) was used to determine possible differences in the LO practices of the SEO based on demographic factors. This study could provide an overview of LO practices among Malaysian SEO.

The findings could be used to make recommendations to the MOE and SED to improve educational management. Hence, this study has two leading objectives: i) to identify the level of LO of the SEO in Malaysia from the dimensions of continuous learning, inquiry and dialogue, team and collaborative learning, embedded system, empowerment, system connection, and strategic leadership; and ii) to examine the differences in LO practices of the SEO in Malaysia based on age, position in the organization, work experience, academic credentials, frequency of participation in courses/workshops/training related to governance, leadership, or educational management during the respondent's tenancy at the SED. The following hypotheses were constructed: i) There is no significant difference in the LO practices of SEO in Malaysia based on age (Ho1); ii) There is no significant difference in the LO practices of SEO in Malaysia based on position (Ho2); iii) There is no significant difference in the LO practices of SEO in Malaysia based on experience (Ho3); iv) There is no significant difference in the LO practices of SEO in Malaysia based on academic credentials (Ho4); and v) There is no significant difference in the LO practices of SEO in Malaysia based on the frequency of participation in courses, workshops or training related to governance, leadership, or educational management during the respondent's tenancy at the SED (Ho5).

2.   RESEARCH METHOD

2.1. Research design

The study used cross-sectional survey design to identify the level of LO and examine the differences of LO practices among SEO in Malaysia. This allows researchers to compare many different variables at a single point in time. This implies that it enables researchers to compare a wide range of demographic factors such as age, position in the organization, work experience, academic credentials, frequency of participation in courses/workshops/training related to governance, leadership, or educational management during the respondent's tenancy at the SED simultaneously.

2.2. Participants

The study's population consisted of 1995 SEO from the Northern Region, Central Region, Southern Region, East Coast, and East Malaysia. Table 1 displays the representation of 450 SEO who were selected using stratified random sampling techniques to ensure their representation. These methods ensured that members from each stratum (Malaysian zone) were included in the sample. Notably, the proposed sample size of 322 respondents based on the Krejcie and Morgan [22] table has been increased to 450 respondents with the addition of 28.44% as suggested by Wallen and Fraenkel [23] to increase the number of samples by 20% to account for respondents who withdrew and damaged the instrument.

Table 1. Population and sample

Regions in Malaysia	SED	Population by state	Population by region	Sample size by state	Sample size by region	% of sample by region
Northern Region	Kedah	147	420	33	95	21.0
	Pulau Pinang	120		27		
	*Perlis (115)-Pilot study	NIL		NIL		
	Perak	153		35		
Central Region	Selangor	170	341	39	78	17.2
	Wilayah Persekutuan Kuala Lumpur	108		24		
	Wilayah Persekutuan Putrajaya	63		14		
Southern Region	Negeri Sembilan	119	401	27	90	20.0
	Melaka	120		27		
	Johor	162		37		
East Coast	Pahang	151	428	34	97	21.5
	Kelantan	152		34		
	Terengganu	125		28		
East Malaysia	Wilayah Persekutuan Labuan	57	405	13	91	20.3
	Sabah	180		41		
	Sarawak	168		38		
	Total	1,995	1,995	450	450	100%

2.3. Research instrument

There were two sections to the questionnaire. The first section collected demographic information, including age, position in the organization, experience, academic credentials, and the frequency of participation in courses, workshops or training related to governance, leadership, or educational management during the respondent's tenancy at the SED. In the second section, a total of 39 measurement items were observed for continuous learning, inquiry and dialogue, team and collaborative learning, embedded system, empowerment, system connection, and strategic leadership [15] and modified in accordance with the Malaysia MOE's operational definition and human resource training policy service circular [24]. The language of the items had been meticulously revised to ensure that they were understandable by the intended respondents. Ratings ranged from strongly agree=1 to strongly disagree=5 on a five-point Likert scale.

2.4. Validity and reliability

The wording of the items was slightly modified for the Malaysian SED setting. For content validity, researchers sought the assistance of three experts: i) Deputy Director from one of the universities in Malaysia who specializes in educational management, innovation in education and human resource development; ii) Dean of the Faculty of Educational Studies who has expertise in the field of quality management and educational management; and iii) Deputy Director in the policy and teacher development planning sector, teacher professionalism division, MOE who is also an expert in the field of LO development in Malaysia. Furthermore, a pilot study involving 102 SEO was carried out, yielding composite reliability value of each construct for the pilot study was in the range of 0.935 to 0.990 while the range of Cronbach's alpha value was in the range of 0.907 to 0.989 as display in Table 2. Statistical package for social science (SPSS) version 26 and SmartPLS 3 was used to examine the data that was gathered.

2.5. Data analysis

The data were encoded using SPSS 26 and SmartPLS 3 for descriptive and inferential analysis. To determine the mean score and standard deviation of the responses, descriptive analysis was used. The first research objective was thus addressed by this. The mean score interpretation proposed by Hundleby and Nunnally [25] was used to determine the extent of LO practices among SEOs in Malaysia, which was also used by Azerai [26]. In response to the second research objective, MANOVA was used to identify differences in LO practices based on age, position in the organization, work experience, academic credentials, frequency of participation in courses, workshops or training related to governance, leadership, or educational management during the respondent's tenancy at the SED.

Table 2. Cronbach's alpha and composite reliability

Construct	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Inquiry and dialogue	0.989	0.990	0.751
System connection	0.972	0.976	0.802
Strategic leadership	0.974	0.978	0.848
Team and collaborative learning	0.985	0.986	0.834
Continuous learning	0.962	0.966	0.626
Embedded system	0.907	0.935	0.782
Empowerment	0.968	0.972	0.779

3. RESULT AND DISCUSSION

3.1. Malaysian state education official level of learning organization practices

The first objective of this study was to identify the level of LO of the SEOs in Malaysia from the dimensions of continuous learning, inquiry and dialogue, team and collaborative learning, embedded system, empowerment, system connection, and strategic leadership. Table 3 shows that the overall means of LO practices among SEO was 4.31 (SD=0.48). According to several researchers [26], [27], LO was exceptionally high. Strategic leadership had the highest mean (4.37, SD=0.60), which was very high.

The high LO practices in this study match with Watkins and Marsicks' hypothesis, which created an integrated framework for understanding LO [28]. The learning capabilities of the SED were evaluated and enhanced. Research on LO in the district education offices of Malaysia likewise revealed that it was relatively high [9]. However, Jalet and Yunus [20] investigation revealed that many education officials were still reluctant to adapt to change and deal with new challenges. Failure to learn continuously among the education officials contributed to the failure of the educational management system in the organization.

Moreover, the seventh LO dimension, strategic leadership, had the highest mean score with a "very high" category. Prior studies that have also noted the importance of strategic leadership. Soleh *et al*. [27] found that leaders are essential for policies execution and reaching goals. Strategic leadership raises the performance of organization as well as the education officials to the right levels. Rosmaniar [29] discovered that instructional leadership of principals on LO practices and madrasah quality in Indonesia were significantly correlated, and this study demonstrates the significance of strategic leadership in learning. Thus, educational researchers should perform more studies to compare the findings to similar studies in other regions or public sectors, particularly in educational management.

Table 3. Malaysian SEOs' overall means of LO practices

Dimension	Mean	Standard deviation	Score interpretation
Continuous learning	4.16	0.52	High
Inquiry and dialogue	4.33	0.49	Very high
Team and collaborative learning	4.36	0.56	Very high
Embedded system	4.24	0.60	Very high
Empowerment	4.35	0.58	Very high
System connection	4.33	0.58	Very high
Strategic leadership	4.37	0.60	Very high
Overall	4.31	0.48	Very high

3.2. Malaysian state education official learning organization practices by demographic factor

MANOVA analysis was used to identify differences in LO practices based on demographic factors which are age, position in the organization, experience, academic credentials, and the frequency of participation in courses, workshops or training related to governance, leadership, or educational management during the respondent's tenancy at the SED. The homogeneity of variance-covariance matrices was verified using Box's M test of covariance equality. Table 4 shows that the age covariance matrix was significant and unequal between groups, implying that their covariances were not homogeneous across the learning organization. Table 5 indicates that the position covariance matrix was different and significant among groups, implying varying covariances across the learning organization. Table 6 also shows that the experience covariance matrix differed significantly among groups, suggesting varying covariances within the learning organization. Table 7 reveals significant differences in academic credentials among groups, indicating varying covariances within the learning organization. Lastly, Table 8 shows that the training covariance matrix was significant and unequal between groups, implying that their covariances were not homogeneous across learning organization as well. However, the effect of type I error was very small if the research involved a large sample size and therefore recommended MANOVA tests to be performed even if the value of Box's M was significant ($p. < 05$) [30], [31].

Table 4. Box's M test of the age factor

Effect	Box's M	F value	df1	df2	p-value
Age	118.452	2.055	56	155017.428	0.000

Significant at the p<0.05 [30]

Table 5. Box's M test of the position factor

Effect	Box's M	F value	df1	df2	p-value
Position	114.654	1.930	56	33163.109	0.000

Significant at the p<0.05 [30]

Table 6. Box's M test of the experience factor

Effect	Box's M	F value	df1	df2	p-value
Experience	222.655	2.547	84	107493.220	0.000

Significant at the p<0.05 [30]

Table 7. Box's M test of the academic factor

Effect	Box's M	F value	df1	df2	p-value
Academic	114.730	1.836	56	4953.399	0.000

Significant at the p<0.05 [30]

Table 8. Box's M test of the training factor

Effect	Box's M	F Value	df1	df2	p-value
Training	200.983	2.306	84	110860.091	0.000

Table 9 shows that the MANOVA analysis revealed that there was no statistically significant difference in the mean scores of learning organization among different age groups of SEO at the SED. Table 10 also demonstrates that the MANOVA analysis found no statistically significant difference in the mean scores of learning organization among various position groups of SEO. Table 11 shows that the MANOVA analysis did not find any statistically significant difference in the mean scores for learning organization among different experience groups of SEO. Table 12 indicates that the MANOVA analysis revealed no statistically significant difference in the mean scores for learning organization among various academic credential groups of SEO at the SED. Hence, the MANOVA results were insignificant for age, position, experience, and academic credentials and this implied that the null hypothesis Ho1, Ho2, Ho3, and Ho4 had failed to be rejected. However, Table 13 demonstrates that there was a significant difference between the frequency of participation in courses, workshops or training related to governance, leadership, or educational management during the respondent's tenancy at the SED with values of Wilks λ=0.902, $F(3,445)$=2.199, p=0.779, and p<0.05. Subsequently, Ho5 was accepted.

Table 9. MANOVA analysis of Malaysian SEOs' LO dimensions by the age

Effects	Wilks' lambda	F	df1	df2	p-value
Age	0.958	1.359	2	446	0.167

Significant at the p<0.05 [30]

Table 10. MANOVA analysis of Malaysian SEOs' LO dimensions by the position

Effects	Wilks' lambda	F	df1	df2	p-value
Position	0.907	1.026	5	442	0.426

Significant at the p<0.05 [30]

Table 11. MANOVA analysis of Malaysian SEOs' LO dimensions by the experience

Effects	Wilks' lambda	F	df1	df2	p-value
Experience	0.950	1.086	3	445	0.356

Significant at the p<0.05 [30]

Table 12. MANOVA analysis of Malaysian SEOs' LO dimensions by the academic

Effects	Wilks' lambda	F	df1	df2	p-value
Academic	0.972	0.910	2	446	0.548

Significant at the p<0.05 [30]

Table 13. MANOVA analysis of Malaysian SEOs' LO dimensions by the training

Effects	Wilks' lambda	F	df1	df2	p-value
Training	0.902	2.199	3	445	0.001

Significant at the p < 0.05 [30]

Since the MANOVA analysis showed a significant difference in the mean score of LO practices of SEO in Malaysia through the dimensions of continuous learning, inquiry, and dialogue, team and collaborative learning, embedded system, empowerment, system connection, and strategic leadership based on the frequency of course, workshop or training attendances, further testing on each dependent variable through the test of between-subject effects was conducted. Looking at Table 14, the result obtained from the test of between-subject effects, it is apparent that SEO who attended more than 12 times scored the highest in all dimensions. Nevertheless, only continuous learning, inquiry and dialogue, team and collaborative learning, empowerment, system linkage, and strategic leadership were significant since embedded system was insignificant. Continuous learning had the largest effect size, whereas strategic leadership had the smallest though the effect size for all dimensions were large. These results match the p-values for all dimensions, indicating that creating continuous learning opportunity will contribute to ongoing learning and growth with the highest mean for the frequency of course, workshop or training attendance (>12 times).

These findings matched with Juraime [32] who discovered that the quantity of courses completed significantly influenced the level of principal technology leadership practices. Research by Yaqoot, Noor, and Isa [33] found that contextual element such as training has a significant impact on the program carried out in the public sector. This information is crucial for literatures about training in the public sector. The findings are consistent with those of Kanapathipillai and Azam [34] who claimed that training is statistically significant and corelates to job performance in the organization. Meanwhile, Sulaiman and Ismail [35] place a strong focus on the requirement for training of human resource managers in order to further their professional development goals. The findings of this research demonstrate that Malaysian SEOs are highly practicing LO irrespective of age, position in the organization, experience, and academic credentials.

Table 14. Test analysis of between-subject effects

Dimension	Frequency (times)	Mean	Std. Deviation	Sum of squares	df	Mean square	F	p-value	Partial eta squared
Continuous learning	1-3	4.009	0.549	7.842	3	2.614	10.114	0.000	0.64
	4-7	4.160	0.508						
	8-12	4.292	0.504						
	>12	4.343	0.437						
Inquiry and dialogue	1-3	4.209	0.522	4.737	3	1.579	6.763	0.000	0.44
	4-7	4.357	0.441						
	8-12	4.406	0.496						
	>12	4.471	0.468						
Team and collaborative learning	1-3	4.246	0.607	3.719	3	1.240	4.010	0.008	0.26
	4-7	4.415	0.527						
	8-12	4.450	0.532						
	>12	4.450	0.518						
Embedded system	1-3	4.149	0.573	2.269	3	0.756	2.084	0.102	0.14
	4-7	4.280	0.618						
	8-12	4.245	0.581						
	>12	4.323	0.636						
Empowerment	1-3	4.220	0.629	4.818	3	1.606	4.947	0.002	0.32
	4-7	4.399	0.519						
	8-12	4.433	0.593						
	>12	4.469	0.524						
System connection	1-3	4.228	0.601	3.030	3	1.010	3.044	0.029	0.20
	4-7	4.359	0.554						
	8-12	4.407	0.559						
	>12	4.428	0.572						
Strategic leadership	1-3	4.272	0.621	3.024	3	1.008	2.814	0.039	0.12
	4-7	4.369	0.589						
	8-12	4.467	0.617						
	>12	4.472	0.564						

Besides, this study's primary contribution to knowledge was an expansion of the body of knowledge that already exists about LO. It is one of the few to have been conducted among Malaysia's government sectors, specifically at MOE, and its findings may help people better understand how the idea of LO can improve organizational performance. The growing need for performance measurements in educational management has been examined; as a result, specific strategies for the SEDs to become LOs have been suggested. In order to improve their skills and abilities, SEOs should be sent on appropriate training program as part of a continuous learning process. The administrative team may thus need to think about holding regular feedback and evaluation meetings for the SEOs so that they can gain new perspectives on the program and courses they have taken while also having the chance to impart their expertise and experiences.

Taken together, it is hoped that the study's findings will help the organization, which has a lot of problems with learning, improve its educational management system. The study by Jalet and Yunus [20] showed that many educators still do not adapt quickly to change, and it takes a long time for them to learn how to deal with new problems and developments. So, a key policy priority should therefore be to plan for the long-term plan of LO. MOE and SED need to look at the state of LO practices and redesign them in order to set up and keep LO going. This will help improve the performance of educational management.

4. CONCLUSION

This study's findings provide positive insights and implications for LO practices. This study explored and extended LO understanding and identifies variation in LO practices based on SEO demographics in Malaysia. The result found that the level of LO practices of the SEO in Malaysia was very

high. Despite the fact that LO practices comprise not just continuous learning, inquiry and dialogue, team, and collaborative learning, embedded system, empowerment and system connection, but also strategic leadership; strategic leadership appeared to be the primary domain of practices in SED. In addition, the MANOVA results were insignificant for age, position, experience, and academic credentials and this implied that the null hypothesis Ho1, Ho2, Ho3, and Ho4 had failed to be rejected. However, there was a significant difference between frequency of participating in the course, workshops or training related to governance, leadership, or educational management of SEO in Malaysia, thus Ho5 was accepted. As a result, to strengthen the SED as a LO, all SEO must participate in ongoing learning.

The significance of this study lies in the fact that the findings can be utilized as a strategy for enhancing the main policy for the SED long-term care plan. More empirical studies like this research are therefore required to better understand how education officials in the SED organize their learning. The findings justify further integrative research on LO. In relation to a sustainable post-pandemic society, it would be fascinating and necessary to examine additional dependent variables, such as change commitment and innovative work behaviors, in future research. Doing so will aid the study of the COVID-19 pandemic in the organizational context, as the LO is believed to be able to incorporate people and structures in an innovative manner towards continuous learning and change.

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