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# Learn, Adapt and Evolve to boost Innovative Work Behavior: Empirical evidence from Higher Education Institutions

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## Abstract

Continuous learning and reform activities in higher education institutions (HEIs) can potentially increase academic quality and standards. Further, HEIs should concentrate on reiterating the fundamentals of a learner-oriented, sociable and instructive environment. Commitment to quality assurance has allowed recognizing of abilities and potential while keeping tabs on weaknesses. A rise in the innovative work behavior (IWB) of HEIs significantly benefits in reducing the gaps in socio-economics of the present and particularly the younger nation. The learning organization dimensions have the potential to raise innovative capacity as frequently alleged in the business organization, but its gaining steady attention in the HEIs context. This research report aims to reinforce HEIs' standing as learning organization that help close the world's knowledge gaps and strengthen the revolutionary needs of the global economy. This empirical paper used data from an online survey involving academics from Malaysian public HEIs. The structural models generated through the Smart PLS enable conclusions on the bonding between learning organisation dimensions and IWB, besides proposing implications for research and practice in academia.

**Keywords:** Academics, higher education institutions, innovative work behavior, learning organisation dimensions, Malaysia

## Introduction

The magnitude of advancement of educational services in higher education institutions (HEIs) mainly lies in the individual and group innovation capability that necessitates fostering innovative work behaviour (IWB). Endurance of organisation, whether business, not-for-profit, non-governmental, educational institutions, public, private and many more, requires a multifold revolution in how work is to be accomplished while maintaining the standards. Failing to address this will push the organization to a problematic state, either temporary or permanently (Choi, Chung, & Choi, 2019; Dedahanov, Rhee, & Yoon, 2017; Eidizadeh, Salehzadeh, & Esfahani, 2017; Javed et al., 2019; Scott & Bruce, 1994; Voolaid & Ehrlich, 2017)). Every educational entity must constantly evolve, adapt, unlearn, and relearn to keep up with the ever-shifting competitive living landscape. In maintaining a competitive edge, it is necessary to undergo a process of continuous transformation and renewal. Learning inside the HEIs is the mechanism that allows for this to happen. Senge (1990) dubbed the emergent structure "the learning organisation" that has flourished.

A learning organisation builds the system and resilience necessary to thrive by continuously adapting to new circumstances – industrial revolutions. HEIs should consider having innovative structures akin to other organization to adapt quickly to shifting survival conditions (Dedahanov et al., 2017). Perhaps the idea is not new but has already existed many decades ago, consistently reminded and remains relevant. Learning at the individual, team, organisational, and global levels is necessary for HEIs that many have embedded into their system and become strong cultures. Yet, many on the learning journey put actions in place to build the dynamism of learning organisation culture. Numerous debates on the concepts/models/ best practices of learning organisation versus organisational learning archive in organisation dan management databases. It is not the intention of this paper to continue the differentiated views. Nevertheless, the most exceptional approach of the learning organisation and its associated action imperatives (Watkins & Marsick, 1993, 1996) that have practical sense served as the conceptual model in fulfilling the research objectives. To Watkins and Marsick (1993), a learning organization learns continuously and transforms itself; learning is a continuous, strategically used process – integrated with and running parallel to work (p.8).

Several studies have examined how learning organisation practises and procedures influence business performance and establish favourable associations. Studies mainly in the business sector, where increasing shareholder value and maximising profits were the more significant motivations. The public sector, including the HEIs, is always seen as more bureaucratic and subject to stringent legal standards than the private business sectors operating for profit. A rigid operational structure may make it difficult for employees to learn beyond the scope of their daily assigned tasks. Nevertheless, numerous control mechanisms are in place at public sector organization to curb possible errors. Palos and Stancovici's (2016) research revealed that private organization are more robust in implementing learning organisation characteristics than public sector organization. On the other side, concerning a sample from a public sector organisation, Bhaskar and Mishra (2017) report that learning organisation dimensions influence financial and knowledge performance. Thus, applying learning organisation dimensions in public organization commonly acclaimed to be bureaucratic and its associated outcomes needs attention. Investigating whether the results are equally valid for the Malaysian public HEIs context is essential. The past claims of business organisation flexibility and the public sector organisation rigidity in slowing down the performances are debatable in the context of HEIs at present.

Long years ago, public enterprises often assumed more bureaucratic criticised in previous research for their alleged inability to fully embrace the learning organisation model (Jamali et al., 2006). Is this still exist now, a question to be pondered and researched? Public HEIs, need further scrutiny to put up empirical evidence. Empowerment does not remain a theory, and it has been in practice in any organisation. Bureaucratic principles are relevant to maintaining specific workflow and processes. HEIs operate in a mixed mode: bureaucratic to some extent and open system by large. It makes the HEIs chase the world's reality, catering for their responsibility to the nation. Each organisation needs to develop its unique approach to learning in the workplace because there is no universally applicable template; one size fits all is still questionable (Ortenblad, 2015). Given that HEIs are also within the landscape of revolutions, they are learning organization that carefully inspect the external environment and bring change internally to remain on a similar pace of technological, economic and social developments. s

To employ all learning organisation features should be implemented is something that will rely on the situational inventory used to inform the contingency model (Ortenblad, 2015). To that end, the action imperatives framework given by Watkins and Marsick inquiries into

how practical the ideas of learning organization are (1993, 1996). This study aims to investigate the link between the various elements of the learning organisation and their effect on innovative work behaviour. Individual, group/team, organisational, and global levels of learning are analysed, along with their impact on IWB; this is important because academics contribute at each stage of the innovation process and therefore need to know the influence of various learning levels. Thus, the study enables us to show the extent the sample organisation (HEIs) fits the definition of a learning organisation.

It would be difficult for HEIs to turn a profit without the tuition payments they receive from both domestic and international students. As a result of falling national income and business investment, public HEIs will likewise have to make severe cuts to their operating budgets. In times of economic uncertainty, businesses, including HEIs, have had to reorganize their operations to survive, or in the worst circumstances, they have had to close their doors permanently. We have faith in the HEIs administration's ability to learn, unlearn and relearn and devise innovative approaches to addressing the challenges of maintaining a healthy work behavior in light of the realities of the modern workplace. The environmental uncertainty is transforming businesses and creating the basis for an innovative work culture that supports organizational performance (Liu et al., 2017; Shipton, Budhwar, Sparrow, & Brown, 2017). Education systems must always be prepared to meet the needs of their students for the most up-to-date skill sets to retain their standing in modern society. When HEIs have adopted the learning organisation setting, the workforce will likely perform at a higher level and generate more valuable results through advanced IWB. Ghasemzadeh, Nazari, Farzaneh, & Mehralian (2019) found a lack of empirical research reports on the link between innovative culture yields within the learning organization. The authors strongly propose more research to reconfirm the previously claimed strengths philosophically.

## Literature Review

Personal and organisational attributes play an amicable role in engaging employees toward IWB (Dedahanov et al., 2017; Janssen, 2004; Liu et al., 2017; Shipton et al., 2017; Scott and Bruce, 1994). A learning organisation's culture readily embraces change (Senge, 1990; Watkins and Marsick, 1993, 1996) that crosses beyond individual learning and encourages IWB (Janssen, 2004; Scott and Bruce, 1994). Liu et al. (2017) further expressed that the organisation and management researchers show significant evidence of cultural change, innovative behaviour and multifaceted organisational performance. The concept of the learning organisation is in the work of John Dewey in1938. Nevertheless, only during the 1980s did organization realise the potential of learning in increasing performance, competitiveness, and success (Marquardt, 1996). In the late 1980s, Pedler should also applaud for propagating the concept in the United Kingdom, culminating in the book - The Learning Company.

On the other hand, Ortenblad (2004) believed that Bob Garratt was the first to coin the learning organisation concept in 1987. Although numerous scholars and practitioners actively advocated the essence of learning organisation in the early 1940s, the idea of the learning organisation was a breakthrough with the work of Senge (1990). From the beginning, the learning organisation attributes are allied sturdily to individual, group and organisation outcomes (Gentle & Clifton, 2017). Enriching the body of knowledge on the effects of learning organisation dimensions with outcome measures such as IWB is essential to portray how the concepts grow, are implemented, and are evaluated in multiple contexts (O'Brien et al., 2019). To Ahmad et al. (2017), a learning organisation continuously learns by providing creative and progressive learning atmospheres.

In a world where innovation, competence and innovative work behaviorare the lifeblood of success, rapid knowledge acquisition, competency grooming, and best practices are decisive success drivers for individuals and businesses (Ulrich, 1998), advised more than two decades ago, recalled. The HEIs should be acknowledged now and there for readiness in catering standards of different and interrelated industries (Hariri & Roberts, 2015). At the end of the 20th century, innovation and innovative organisation survival continuously reminded together with the learning culture as a supporting milieu (Ahmed, 1998; Amabile et al.,1996; Hurley and Hult, 1998). From the Malaysian private HEIs context, Kumar and Idris (2006) discovered significant positive relationships between the seven dimensions of the learning organisation and knowledge performance. Team learning, embedded systems and strategic leadership contributed holistically to the performance improvement. A recent study by Ghaffari et al. (2017) on the Malaysian public HEIs affirmed that perceived learning culture exists at the individual, team and organisational levels. One should also note that the IWB, similar to innovative culture, does not happen in silos. Still, the IWB construct - idea generation, promotion and application (Janssen, 2003) occurs at all levels of the organisation, nurturing a learning culture with its specific attributes enhances innovative organisational behavior(Ghasemzadeh, et al., 2019; Watkins and Marsick (1993, 1996)).

Following Ghasemzadeh et al. (2019) claims that innovative culture builds upon superior learning culture, Acevedo and Diaz-Molina (2022) reaffirm through their research that a learning culture is roots to innovative work principles when organization put in place an environment that supports learning opportunities at all levels. Other studies reviewed were found affirmative concerning the positive influence of learning culture on innovation in HEIs (e.g. Aminbeidokhti et al., 2016; Hao & Yunlong, 2014; Sutanto, 2017). Literature, to some extent, is replete with reports on many-sided IWB, yet there is a deep need to understand the IWB practices in the HEIs (Musenze & Mayende, 2022). The past research and the intention to keep the body of knowledge lively mooted the researchers to undertake that IWB will be at its peak in the learning culture at HEIs. Based on the rationale put forward by scholars and practitioners in the field of organisation and management study, this study proposed the following hypothesis:

H1: Seven learning organisation dimensions have a significant effect on IWB
H2: Learning at the individual, team and organisational levels has a significant effect on IWB
H3: Learning organisation culture has a significant effect on IWB

## Research Methodology

The dimensions of the learning organisation questionnaire (DLOQ) were designed and validated by Watkins and Marsick (1997). The DLOQ was used in research and practice to measure the learning culture of various businesses worldwide. Indeed the DLOQ gained massive attention in the human resource development discipline. Interesting, the shorter 21-item version of the DLOQ also received tremendous positive remarks almost two decades after the research and validation process by Yang (2003), Yang et al. (2004) and Marsick and Watkins (2003). The numerous empirical studies published in reputable journals witness the strength of the measures and are still in the high interest of present organisation development scholars and practitioners (Kortsch & Kauffeld, 2019).

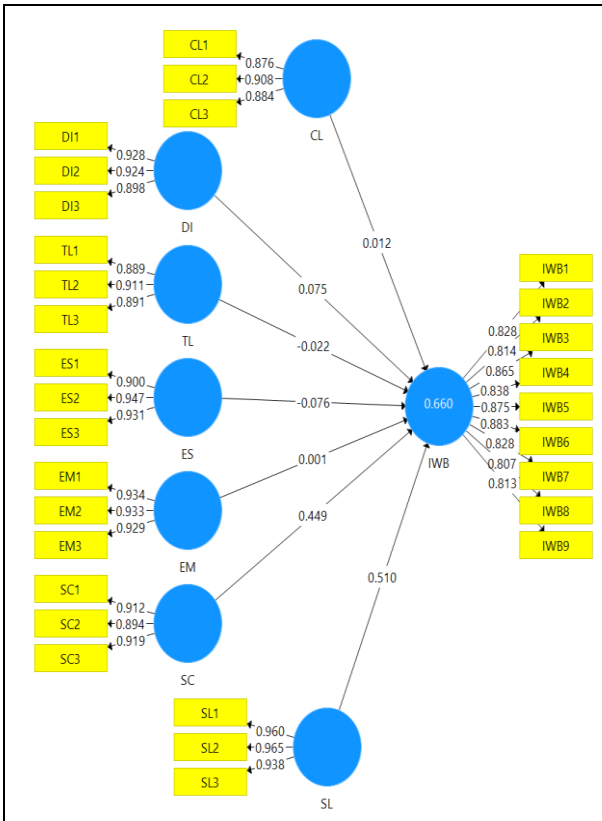
The DLOQ consists of seven dimensions, clustered into three learning levels. The first two dimensions, continuous learning (CL) and inquiry and dialogue (DI) serve the individual learning level. Collaboration and team learning (TL), one construct from three measurement items defined as learning at the team level. Finally, the other four dimensions serve the

organisation's level of learning: systems to capture learning (SC), empowerment (EM), systems connection (SC), and strategic leadership (SL). The present study adopted the model of Watkins and Marsick (1993) to frame and structure the learning organisation contexts and used the 21-item scale together with innovative work behaviour measures from Janssen (2000), which comprises nine (9) items. Three hundred sixty-six valid survey responses were collected using self-administered questionnaires delivered through the online survey with professors who serve in the Malaysian public HEIs as target respondents. The study used the SPSS and Partial Least Square Structural Equation Modelling (PLS-SEM) for exploratory data analysis and hypothesis testing.

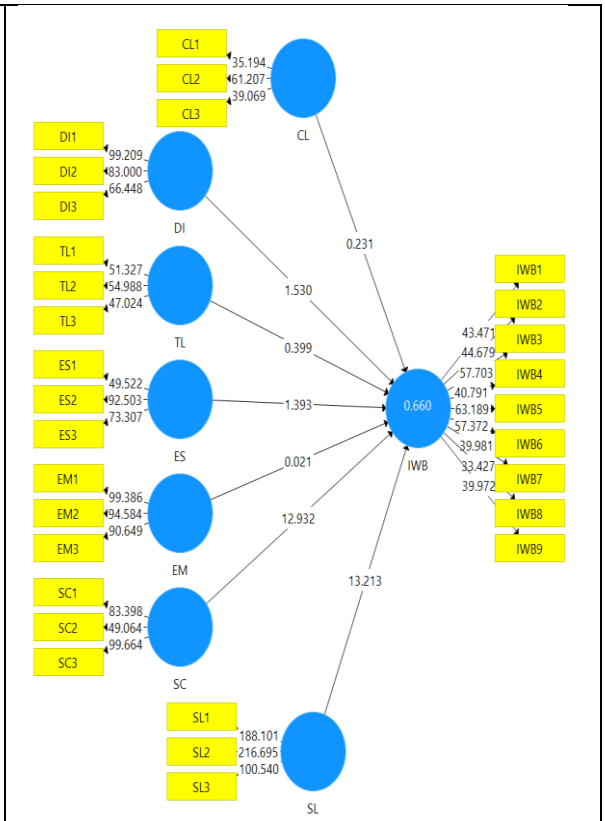
## Findings

The study found that skewness (±1.96) and kurtosis (±7) were within the generally accepted threshold value despite knowing that the PLS is a nonparametric statistical technique. The collinearity test result showed that variance inflation factor (VIF) values (refer to Table 1) were less than 5.0, indicating that the Common Method Bias was best handled and the data is adequate for further statistical analysis.

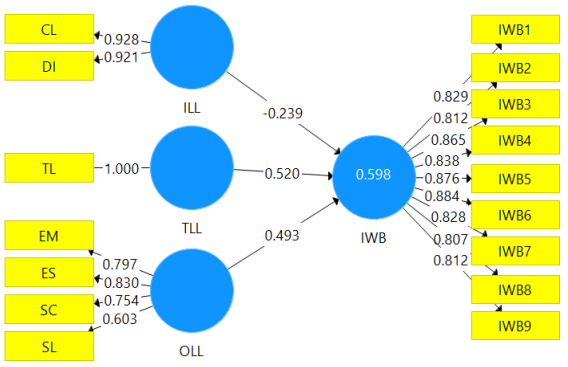
Internal consistency reliability (CR), convergent validity (outer loading), and AVE were assessed based on the rules of thumb suggested by Hair et al. (2017). The measurement model (Figures 1,2 &3) showed that Cronbach's alpha, composite reliability, and factor loadings were higher than 0.708. The average variance extracted (AVE) for convergent validity also showed values higher than 0.50 (refer to Tables 2 and 3). Thus, the measurement reached convergent reliability. Similarly, Fornell–Larcker's criterion and cross-loading proved discriminant validity. Heterotrait–Monotrait Ratio (HTMT) showed values less than 0.90 (Tables 2 and 3). The measurement model met all the criteria for a good fit and is apposite for hypothesis testing.



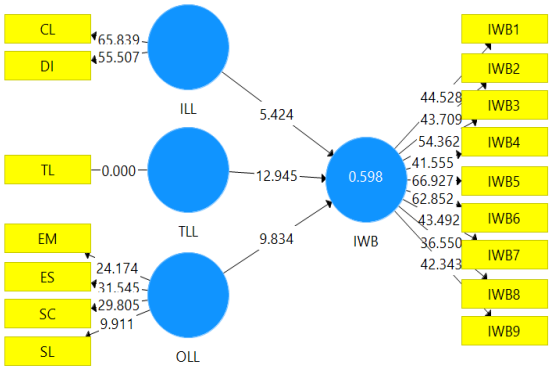

**<Fig. 1>** Measurement model of DLOs



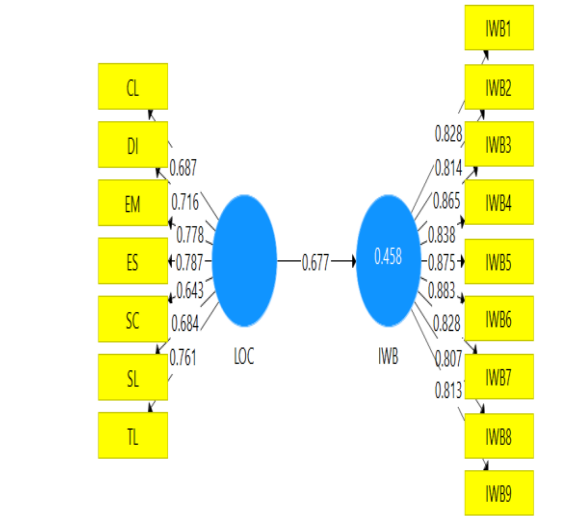

**<Fig. 4>** Structural model of DLOs



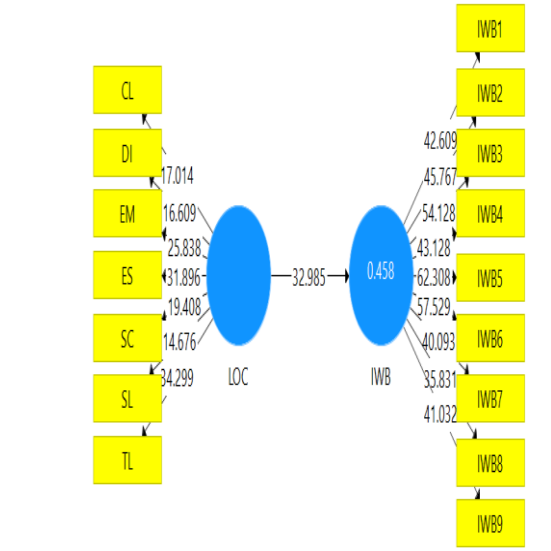

**<Fig. 2>** Measurement model of levels of learning




**<Fig. 5>** Structural model of levels of learning




**<Fig. 3>** Measurement model of LOC




**<Fig. 6>** Measurement model of LOC

The correlation matrix and VIF tested the latent variables' collinearity. The VIF scores were below the standard cutoff threshold of 5 (Hair et al., 2017); for DLOs, three levels of learning and the LOC construct. Thus it shows no issue with multicollinearity.

**<Table 1>** Collinearity statistics (VIF)

| Constructs | Learning Organization Dimensions | Levels of Learning | LOC |
|---|---|---|---|
| Continuous Learning (CL) | 2.400 | 1.679 | |
| Dialogue and inquiry (DI) | 2.735 | | |
| Team Learning (TL), | 3.035 | 1.450 | |
| Embedded System (ES.) | 2.817 | | |
| Empowerment (EM) | 2.814 | | |
| System Connections (SC) | 1.265 | 1.970 | |
| Strategic Leadership (SL) | 1.464 | | |
| Learning Organisation Culture (LOC) | | | 1.000 |

<**Table 2**> Reliability and validity (CA, CR, AVE, and HTMT) of DLOs and IWB

| Construct | Reliability and validity | | | Discriminant Validity: HTMT | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | CA | CR | AVE | CL | DI | TL | ES | EM | SC | SL |
| CL | 0.868 | 0.919 | 0.791 | | | | | | | |
| DI | 0.905 | 0.941 | 0.841 | 0.554 | | | | | | |
| TL | 0.879 | 0.925 | 0.804 | 0.811 | 0.656 | | | | | |
| ES | 0.917 | 0.948 | 0.858 | 0.784 | 0.573 | 0.846 | | | | |
| EM | 0.924 | 0.952 | 0.868 | 0.62 | 0.839 | 0.664 | 0.614 | | | |
| SC | 0.894 | 0.934 | 0.825 | 0.226 | 0.401 | 0.246 | 0.185 | 0.329 | | |
| SL | 0.951 | 0.968 | 0.91 | 0.443 | 0.475 | 0.413 | 0.422 | 0.47 | 0.426 | |
| IWB | 0.948 | 0.955 | 0.705 | 0.294 | 0.441 | 0.28 | 0.238 | 0.386 | 0.722 | 0.72 |

Note: CA= Cronbach's Alpha; CR=Composite Reliability, AVE=Average Variance Extracted, HTMT=Heterotrait–Monotrait Ratio

<**Table 3**> Reliability and validity (CA, CR, AVE, and HTMT) of Levels of learning, IWB and LOC

| Construct | Reliability and validity | | | Discriminant Validity: HTMT | | | |
|---|---|---|---|---|---|---|---|
| | CA | CR | AVE | ILL | TLL | OLL | LOC |
| ILL | 0.83 | 0.922 | 0.855 | | | | |
| TLL | 1.000 | 1.000 | 1.000 | 0.463 | | | |
| OLL | 0.765 | 0.836 | 0.564 | 0.868 | 0.624 | | |
| IWB | 0.948 | 0.955 | 0.705 | 0.318 | 0.702 | 0.637 | 0.610 |
| LOC | 0.863 | 0.885 | 0.524 | | | | |

Note: CA= Cronbach's Alpha; CR=Composite Reliability, AVE=Average Variance Extracted; HTMT=Heterotrait–Monotrait Ratio ILL (individual level of learning); TLL (team level of learning); OLL (organisation level of learning); LOC (learning organisation culture)

Path coefficients among the latent variables of the structural models in Table 4 (also refer to Figures 4,5 & 6) lead to decisions for the study's hypothesis. The direct effect systems connection (SC) ($\beta = 0.449$, $t = 12.873$, $p < 0.001$) and strategic leadership (SL) ($\beta = 0.510$, $t = 13.013$, $p < 0.001$) significantly affect the innovative work behavior(IWB). In regards to the three learning levels, all learning levels, individual (ILL) ($\beta = -0.239$, $t = 5.424$, $p < 0.001$),

Team (TLL) ($\beta = 0.520$, $t = 12.945$, $p < 0.001$) and organisation (OLL) ($\beta = 0.493$, $t = 9.834$, $p < 0.001$) also significantly affect the IWB. Finally, the learning organisation culture (LOC – reflective of the latent variables of DLOs) ($\beta = 0.677$, $t = 33.539$, $p < 0.001$) had a significant positive effect on IWB.

<**Table 4**> Direct path coefficients and test of hypothesis

| Hypothesis | Paths | Beta | T-value | P-value | Decision |
|---|---|---|---|---|---|
| All the learning organisation dimensions significantly affect the IWB | CL -> IWB | 0.012 | 0.23 | 0.818 | Reject |
| | DI -> IWB | 0.075 | 1.485 | 0.138 | Reject |
| | TL -> IWB | -0.022 | 0.416 | 0.678 | Reject |
| | ES -> IWB | -0.076 | 1.299 | 0.195 | Reject |
| | EM -> IWB | 0.001 | 0.02 | 0.984 | Reject |
| | SC -> IWB | 0.449 | 12.873 | 0.001 | **Accept** |
| | SL -> IWB | 0.510 | 13.013 | 0.001 | **Accept** |
| Learning levels significantly affect IWB | ILL -> IWB | -0.239 | 5.424 | 0.001 | **Accept** |
| | TLL -> IWB | 0.520 | 12.945 | 0.001 | **Accept** |
| | OLL -> IWB | 0.493 | 9.834 | 0.001 | **Accept** |
| LO culture significantly affects IWB | LOC -> IWB | 0.677 | 33.539 | 0.001 | **Accept** |

<**Table 5**> Models fit test for DLOs, Learning Levels, LOC and IWB (dependent variable)

| Construct | R-square | f-square | Q-square |
|---|---|---|---|
| CL | | 0.000 (no effect) | |
| DI | | 0.006 (small ) | |
| TL | | 0.000 (no effect) | DLOs-IWB |
| ES | DLOs-IWB | 0.006 (small) | 0.461 |
| EM | 0.660 | 0.000 (no effect) | |
| SC | (Moderate) | 0.468 (large) | Good predictive |
| SL | | 0.523 (large) | relevance |
| ILL | | 0.085 (small) | Learning Levels-IWB |
| TLL | Learning Levels-IWB 0.598 | 0.463 (large) | 0.414 |
| OLL | (Moderate) | 0.307 (medium) | Good predictive relevance |
| LOC | LOC-IWB 0.458 (Weak) | 0.845 (large effect) | LOC-IWB 0.313 Good predictive relevance |

Hair et al. (2013) suggested that *R* square values of 0.75, 0.50, or 0.25 for endogenous latent variables described as substantial, moderate or weak. Table 5 shows that dimensions of the learning organization explained 66% ($R^2$ = 0.660) variance in IWB. On the other hand learning levels and learning organisation culture explained 59.8% ($R^2$ = 0.598) and 45.8% ($R^2$ = 0.458) variance respectively in IWB. It is obvious that the systems connection and strategic leadership effects significantly the IWE compared to other dimensions. Besides, the team level shows significantly higher effects on IWB. The f-square values is the effect size (>=0.02 is small; >= 0.15 is medium;>= 0.35 is large) (Cohen, 1988) guided the decisions. To find out the Q Square value, performed the Blindfolding procedure using SMART-PLS. The Q-square values of DLOs, learning levels and LOC were above zero, indicating that the models have predictive relevance.

## Conclusion

This study used the 21-item DLOQ (Marsick & Watkins, 2003; Yang, 2003; Yang et al., 2004) to identify the effects of the learning organisation's constructs on innovative work behaviorin Malaysian public HEIs with the support of responses from faculties with the rank of professors. The statistical procedures support the strength of the shorter version of the DLOQ in measuring the individual dimensions, levels of learning and overall learning culture. This study concurs with the standing of Kortsch and Kauffeld (2019) that the DLOQ is multidimensional as opposed to Kim et al. (2015) that the DLOQ is unidimensional. The decision was arrived at by looking into the higher-level construct of the learning culture (second-order analysis) that had a significantly small fit than the independent dimensions of the learning organisation model. Nevertheless, the study has been conducted in different contexts and thus may have some limitations, and further research diagnostic is essential. The DLOQ is worth using to gauge learning culture in HEIs and other business and non-business settings.

Higher education must constantly include evolving educational content following economic, social and technological needs. Society lives in an open system, gaining deeper information about the present and future demands; thus, a rise in requests for a more contemporary curriculum and a guarantee of quality education by the HEIs has become a norm.

It applies to both public and private HEIs. Both internal and external stakeholders have consistently supported the public HEIs in Malaysia to enhance educational possibilities. Maintaining excellent standards through creativity and innovative work in higher education while simultaneously developing top talent is an ongoing challenge for small, medium and large HEIs. Innovation is critical for Malaysian HEIs to budge forward and sustain in providing education of the utmost quality. Innovative work behavioris essential, and the operation as a reputed learning organisation is the solution.

The interdependency HEIs-Industrial revolutions inevitably lead to advancement for human living beyond the knowledge economy. Undoubtedly, the HEIs have strategic plans to reconfigure education policy and increase relevance to the current global economy demands (Allen, Rosch, & Riggio, 2021). Thus, this research addresses the role of learning organization in creating creative work behaviorin a timely. The professors believe that the two dimensions of the learning organisation: systems connection and strategic leadership, have a substantial impact on IWB. Besides, it was acknowledged that learning significantly happens at all levels and nurturing a superior learning culture will progress in how HEIs strategically align their resources in achieving sustainable IWB among their staff. The research findings are evidence that there are traces of good governance and learning orientations in the Malaysian HEIs that enable HEIs to survive with differentiated educational provisions. The quick change in how all work performed at the HEIs in response to the recent global COVID-19 pandemics is evidence to be praised. Consistency and persistent reminders help build their future by discoveries of opportunities through networks of learning–systems connections. Indeed having a solid system that connects organisational members to the outside society helps to create a structure that adapts as society alters its demands. Information and knowledge remain critical to further educational goals, implementing direction and making a gainful functional level of decisions. Collaboration and team learning are also remarkable in contributing to how IWB improved.

The call to action issued by the learning organisation extended to all personnel at HEIs whose responsibility is to ensure that graduates retain a sense of gratitude for their educational experience. It is interesting to continuously support that the leaders within HEIs are consistently engaged in learning and bring respectful change decisions that affect the HEIs workplace. Through employee empowerment, valuable ideas generated, and vision motivates the Malaysian public HEIs and the feeling of ownership over work, which is essential to the modernised work culture. Strategic leadership speak loud on this matter. Difficult to show reasons not to study workplace innovation in the future. The readily available model-the learning organisation action imperative enables enduring learning in HEIs. Watkins and Marsick (1993) have designed a learning organisation framework that has gained tremendous acceptance and proven to be associated with many outcomes, such as IWB. Strategy, leadership, structures, and processes, are fostered to accelerate the learning culture. The learning organisation concept is not new, or not “old wine in a new bottle”, but it is the reality that has become more appealing in the past decades, shown significant success in empirical shreds of evidence and is parallel to the operation philosophy of HEIs. The findings of the study could be generalised with some limitations. Future studies are encouraged to look at the learning culture in private HEIs, compare the results with the public HEIs and help to enrich the body of knowledge using the seven action imperatives, a well-tested framework.

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