Article

Investigating the Effects of Workplace Learning on Employees' Performance in Small Medium Enterprises in Singapore

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ABSTRACT

Learning in the workplace has aroused scholarly interest over the past few decades. Many scholars have argued the positive significant effect that training has impacted job performance. The absence of existing research conducted in the Singapore context forms the bedrock for this study. The study adopted a quantitative method using a deductive approach and the research design is predictive and explanatory to establish the causal relationship between the variables. Employees (N=100) were randomly sampled. The model achieved constructs' reliability and validity for both the inner model and the outer model. The results of this study established a significant relationship between workplace learning and employee performance (β=0.805, t=25.821, p=0.000).

Keywords: Contextual performance, counterproductive work behavior, employee performance, workplace learning

INTRODUCTION

Many scholars, (Høyrup, 2012; Virtanen, Tynjälä & Collin, 2009) asserted that learning at the workplace comes in many different forms such as formal learning, non-formal learning, informal or incidental learning and its practice bound framed by work tasks. The phenomenon of workplace learning occurs amidst our day-to-day hustle and bustle of work, and in the dynamic interplay between the social

practice of workplace learning and individuals' agencies (Tan & Sim, 2022). Employee performance is often the key to the success of any organization in today's economy landscape. Learning is important for individuals and organization not only due to the positive influence on skills acquisition at the individual and productivity improvement at the organizational level, learning also prepares both for the inevitable change with the evolving landscape (Nikolova, Van Ruysseveldt, De Witte & Syroit, 2014). The SME community has contributed close to 42% to the economy of Singapore, such as Singapore's Gross Domestic Product (GDP) and employment of more than half of her workforce (Lim, 2007). The total turnover continues to increase steadily over the years and that results in doubling the net profit. SMEs are generally resource-strapped and preoccupied with the day-to-day operational demands of their business. With the SME community playing a pivotal role in Singapore's economy, it raises the urgency for scholars and practitioners to delve into improving employee performance and the larger organizational performance. Whilst there are efforts by the respective government agencies to identify in-demand and emerging skills required by the industries, more efforts can be invested to establish the relationship between skills acquisition and employee performance. Despite the efforts, it is therefore timely to investigate the effectiveness of workplace learning on employee performance amongst SMEs in Singapore.

LITERATURE REVIEW

As organizations strive to compete and excel in today's highly competitive business environment coupled with the proliferation of digital technology, having an agile and competent workforce is a key essence of organizational success. As such, both big and small organizations have recognized the need for constant training of their employees to remain competitive in today's evolving business environment (Aguinis & Kraiger, 2009; Coetzer et al., 2017; London & Smither, 1999; Noe, Clarke, & Klein, 2014; Westbrook & Veale, 2001). Existing research examined the impact of workplace learning practices on employee performance, particularly in Singapore, is barely scratching the surface. Therefore, it is timely to pursue an investigation into the effectiveness of workplace learning practices in driving employees' performance in organization. The chapter is organized in the following outline which first present the critical discussion of the reviewed literature before proceeding to conclude the chapter with a summary of key findings, highlighting the existing literature gaps and present relevant next course of actions for the research endeavor.

Workplace learning cannot be interpreted without first understanding the context which refers to the evolving work situations, knowledge, and learning and the associations on how workplace learning is defined by individuals and organizations. Cullen et al. (2002) asserted that without context in workplace

learning, it is merely preparing individuals with the skills and competencies for today but not for the future. Workplace learning has a broader meaning, and it is closely connected to the notion of sustained development, learning processes, and learning outcomes to drive the development of individuals and the organization or business. As the world of work continues to evolve rapidly, it is now harder to predict the occupational future, and the corresponding skills needs. To remain competitive in the future of uncertainties, employees must be adaptable, agile to change and daring to innovate. Zuboff (1988) claimed that "learning is the new labor" and indeed businesses may gain competitive advantage using workplace learning as a 'tool'. Matthew (1999) also echoed the same sentiments that the aim of encouraging and promoting learning at work is to establish a sustainable development of the individuals followed by the organization. Workplace learning refers to all formal and non-formal learning that takes part or in whole (Institute of Personnel and Development, 2000). Since decades ago, formal workplace learning is commonly perceived as 'training' and the commonly known structured learning activities includes onboarding training for new employees. On the other hand, the understanding of non-formal activities includes daily work activities such as team development, action learning, knowledge sharing, and knowledge management.

Landy (1985), amongst the many researchers, asserted that employees' satisfaction at work was directly proportional to job performance, and thus increased job retention, as compared to those who with poor employees' satisfaction. On the contrary, unsatisfied employees are more likely to turnover and demotivated to strive for good performance at work. It was also discovered that employee performance is higher in happy and satisfied workers (Kinicki & Kreitner, 2007). Moreover, the management also find it easier to motivate high performer to strive for better results. The application of job performance of the employees as a benchmark to measure any business Organisation's overall productivity and organizational performance (Mefi & Asoba, 2020; Natsir et al., 2021). Sinambela (2012) asserted that the cumulative performance of the employees amounts to the overall organizational performance, henceforth the higher the employee's performance, the higher will be the organizational performance. Research by Badrianto and Ekhsan (2020) highlighted the interplay between the workplace environment, job satisfaction, motivation of the employee, commitment of the employee, and employee performance. It is therefore meaningful to examine further how these factors interact and impact employee performance. According to Diamantidis and Chatzoglou (2019), a good workplace environment facilitates positive employee performance as it increases motivation and job satisfaction of the employees. Contrarily, workplaces with poor and undesirable conditions can lead to poor job performance at the workplace (Guan & Frenkel, 2019).

Research studies conducted by Elnaga and Imran (2013), Mangkunegara and Agustine (2016), Mubarok and Putra (2018), and Setyawati et al. (2019)

revealed that training has partially positive significance effect on job performance. Johnson et al. (2002) posits that workplace learning, defined as formal and informal learning, has taken on an important role in the education and training of the workforce. This phenomenon is further bolstered by qualitative research conducted by Nassazi (2013) whereby the findings report that training has led to an increase in employee performance. Workplace learning is unpacked into simpler forms as typical work activities namely, learning through observing others on the job or the 'experts', learning through others' knowledge and experience sharing, learning through mistakes stemmed from day-to-day work, learning through coaching and mentoring arrangements. Up to this point, it is evident that many scholars have adopted workplace learning in its simplest form, i.e., on-the-job training, as the independent variable, and juxtaposed employee performance as dependent variable (Engetou, 2017; Eric, 2012; Falola et al., 2014; Khan et al., 2011; Kum et al., 2014; Nassazi, 2013; Shafini et al., 2016; Shafiq & Hamza, 2017). These studies have indicated a significant positive correlation between the interventions and employee performance. According to Githinji (2014), the findings from his study highlight training has indeed improved employee engagement and thereby improving the employee performance at work for a group of international civil servants. Another research conducted in Pakistan, particularly the hotel industry in Lahore, revealed that job training has a positive correlation to the employees' skills and enthusiasm for their work (Hanif, 2013). It is an obvious conclusion, with the aforementioned literature, that training has a significant impact on job performance. Notwithstanding, there are concerns raised by researchers that the topic of workplace learning has been too theoretical coupled with the lack of empirical evidence (Lee & Roth, 2006). However, absence of existing research that adopts workplace learning as a unidimensional construct to assess its impact on employee performance in organizations is prevalent.

Through the critical discussion of literature, workplace learning now has a broader meaning and plays a vital role in the development of the individual and the organization or business. This broader meaning includes both formal and informal learning which in this case refers to typical work activities namely, learning through observing others on the job or the 'experts', learning through others' knowledge and experience sharing, learning through mistakes stemmed from day-to-day work, learning through coaching and mentoring arrangements. The notion of employee performance in business or organization is not new. Many research studies have highlighted the close connections between job satisfaction and employee performance. Beyond job satisfaction, there are other factors that one needs to consider such as workplace environment, motivation, and commitment. Lastly, while the findings from many research studies point to the positive correlation between 'training' and employee performance, it is apparent that there are still literature gaps in this field that forms the basis for future research

to focus on adopting workplace learning as a unidimensional construct to investigate the impact on employee performance.

RESEARCH METHOD

This study adopts a quantitative method using a deductive approach to investigate workplace learning practices and employee performance amongst SMEs in Singapore. The approach involves the testing of theories by examining the relationship among variables (Creswell, 2017), using numerical data to investigate the influence of workplace learning practices on employee performance. The research is predictive and explanatory in design to achieve the establishment of a causal relationship between the variables and allow the anticipation of phenomena and predict their occurrence (Saunders, Lewis & Thornhill, 2019). An ex post facto design is appropriate for this study as the researcher is trying to establish a relationship between independent and dependent variables, in particular, informal learning activities (independent variable) on employee performance (dependent variable) (Wa-Mbaleka, Zubkov, Činčala & Penno, 2023). In this research, a structured questionnaire will be administered to seek statistical relationships between workplace learning practices and employee performance. Employee performance (EP) can be operationalized using the instrument, Individual Work Performance Questionnaire (IWPQ), constructed by Koopmans et al., (2013) through a holistic review of performance literature. IWPQ consists of three constructs namely, task performance (TP), contextual performance (CP), and counterproductive work behavior (CWB). On the contrary, workplace learning can be operationalized using the instrument, Workplace Learning Activity (WLA), constructed by Fontana et al. (2015).

Research Questions

1. What is the relationship between workplace learning and employee performance?
2. How does workplace learning impact employee performance?

Measures

The questionnaire items had specific rating scale labels, and a five-point rating scale assigned to. The complete item wordings are listed in Table 1. A total of three items were included in the scale for WLA, whereby participants rated the frequency of their behavior from "never" to "always". For the items under the construct of Task Performance (3 items) and Contextual Performance (3 items) from the IWPQ, the frequency rating scale was adopted whereby the participants rated the frequency of their behavior from "seldom" to "always". For the remaining

Table 1

Item Descriptives of Questionnaires

Construct	Items		Mean	Standard Deviation
Workplace Learning Activity	1	How often do you replicate colleagues' strategies to complete a task or solve a problem over the past three months	3.633	1.014
	2	How often do you attend training course over the past three months	3.765	0.855
	3	How often do you receive feedback on tasks from work colleagues	4.112	0.832
Contextual Performance	4	I managed to plan my work so that I finished it on time.	2.735	1.055
	5	I kept in mind the work result I needed to achieve.	2.704	1.127
	6	I was able to carry out my work efficiently.	2.857	1.221
Task Performance	7	I continually sought new challenges in my work.	4.133	0.723
	8	I actively participated in meetings and/or consultations.	4.204	0.832
	9	I came up with creative solutions for new problems.	4.112	0.832
Counterproductive Work Behavior	10	I focused on the negative aspects of situation at work instead of the positive aspects.	4.296	0.688
	11	I talked to colleagues about the negative aspects of my work.	4.071	0.773
	12	I made problems at work bigger than they were.	4.02	0.808

construct, Counterproductive Work Behavior (3 items) in the IWPQ, the frequency rating of behavior from "never" to "always" instead. Refer to Appendix A for the full questionnaire extracted from Qualtrics XM. Schwarz and Oyserman (2001) consider the frequency rating scale to be more valid than others as it requires individuals to recall and mentally assess the frequency when one engaged in each behavior. From Table 1, the item descriptives reveal that the items of contextual performance dimension held a mean value of 2.765 which is lower than the dimension of workplace learning activity at 3.837, task performance at 4.150, and counterproductive work behavior at 4.129.

Procedures

The questionnaire was distributed online using Qualtrics XM as part of the study. The sample data was collected through a non-probability sampling approach, in particular, convenience sampling where researchers utilize a readily available sample, and they have access to (Noor, Tajik & Golzar, 2022). The questionnaire consists of three components, first, informed consent will be sought from the participants before the start of the survey. Second, there is a total of 12 items from the constructs of WLA, Task Performance and Contextual Performance on a 5-point scale (1 = *seldom*, 5 = *always*) and Counterproductive Work Behavior on a 5-point scale (1 = *never*, 5 = *always*). Finally, the questionnaire will conclude with the demographic items consisting of age, gender, and education level.

Participants

The questionnaire was administered to a sample of employees from four security manpower agencies within the Security Association Singapore (100 completed responses with 100% response rate). The average age of the participants was 49 years of age ($M = 48.94$ years). Based on the sample population, there is a balance of responses between the four options provided for the demographic question. Approximately 50% of the sample population holds the minimum of a degree education level and above. The summary of sample data demographic features area presented in Table 2.

RESULTS

The statistical analysis chapter outlines the results that were analyzed using inferential statistical analysis tool, Structural Equation Model (SEM). The SEM was operated through the "Partial Least Square" (PLS) software version 4 of the Smart-PLS. The PLS-SEM can establish the reliability and validity of the construct which is fundamental to the assessment of any measurement model. Similarly, the

PLS-SEM can also determine the significance of the hypothesized relationships between the variables as shown below.

H_0: There is no significant relationship between workplace learning and employee performance.

H_1: There is a significant relationship between workplace learning and employee performance.

Table 2:

Summary of Sample Characteristics ($N = 100$)

Item	Responses	(%)
1. What is your age?		
Under 18 years	13	13%
18 - 24 years	14	14%
25 - 34 years	7	7%
35 - 44 years	11	11%
45 - 54 years	13	13%
55 - 64 years	7	7%
65 - 74 years	12	12%
75 - 84 years	7	7%
85 years or older	16	16%
2. What is your gender?		
Male	34	34%
Female	34	34%
Non-binary / third gender	28	28%
Prefer not to say	4	4%
3. What is your highest education level?		
Less than High School	21	21%
High School	12	12%
College	17	17%
2-year Degree	13	13%
4-year Degree	11	11%
Professional Degree	14	14%
Doctorate	12	12%

Inner Model

First, the assessment of the quality of the constructs begins by assessing the factor loadings of the constructs thereafter followed by establishing the construct reliability and construct validity.

Factor Loadings

Factor loading is defined as "the extent to which each of the items in the correlation matrix correlates with the given principal component. Factor loadings can range from -1.0 to 1.0, with higher absolute values indicating a higher correlation of the items with the underlying factor" (Pett, Lackey & Sullivan, 2003, p. 299). All the items in the study had a factor loading greater than the recommended value of 0.50 (Hair, Hult, Ringle & Sarstedt, 2016). Henceforth, there is no necessity to remove any items. The complete list of factor loadings is presented in Table 3.

Table 3

Factor Loading

	CP	CWB	TP	WLA
CP1	0.734			
CP2	0.915			
CP3	0.899			
CWB1		0.858		
CWB2		0.820		
CWB3		0.796		
TP1			0.916	
TP2			0.865	
TP3			0.810	
WLA1				0.713
WLA2				0.672
WLA3				0.874

Indicator Multicollinearity

Fornell and Bookstein (1982) defined the Variance Inflation Factor (VIF) statistic as the assessment of any potential multicollinearity amongst the indicators. Hair et al. (2016) elucidates that multicollinearity is not detrimental to the study if

the VIF value is lower than the value of 5.0. All the indicators presented VIF values that ranged between 1.146 to 2.879 which is lower than the recommended threshold of 5.0. The completed list of multicollinearity statistics for indicators is presented in Table 4.

Table 4

Multicollinearity Statistics (VIF) for Indicators

	VIF
CP1	1.561
CP2	2.879
CP3	2.273
CWB1	1.476
CWB2	1.760
CWB3	1.603
TP1	2.270
TP2	2.290
TP3	1.623
WLA1	1.896
WLA2	1.804
WLA3	1.146

Reliability Analysis

Mark (1996) states, "Reliability is defined as the extent to which a measuring instrument is stable and consistent. The essence of reliability is repeatability. If an instrument is administered repeatedly, will it yield the same results" (Mark, 1996, p. 285). In this study, Cronbach Alpha, and Composite Reliability (CR) shall be used for establishing reliability. The Cronbach Alpha values ranged between 0.696 to 0.833 whereas Composite Reliability statistics ranged between 0.800 to 0.898. The results for the construct reliability analysis are presented in Table 5. Cronbach Alpha and Composite Reliability as indicators of reliability have reliability statistics greater than the required threshold of 0.70 (Hair, Ringle & Sarstedt, 2011) except for the construct of WLA with the value of 0.696 which is considered as negligible. Henceforth, the construct reliability is established in this study.

Table 5

Construct Reliability Analysis (Cronbach Alpha and Composite Reliability)

	Cronbach alpha	Composite reliability
CP	0.814	0.888
CWB	0.771	0.865
TP	0.833	0.898
WLA	0.696	0.800

Convergent Validity

"Convergent validity is the degree to which multiple attempts to measure the same concept agree unanimously. The idea is that two or more measures of the same thing should covary highly if they are valid measures of the concept" (Bagozzi, Yi & Phillips, 1991, p. 425). Fornell (1981) asserts that the AVE value must be greater than or equal to the recommended value of 0.50 before convergent validity can be established. The AVE values for all the constructs ranged between 0.575 to 0.747 which is greater than the recommended value of 0.50. Henceforth, justifying the establishment of convergent validity in this study. Table 6 presents the complete list of AVE values.

Table 6

Construct Convergent Validity (AVE)

	Average variance extracted (AVE)
CP	0.728
CWB	0.681
TP	0.747
WLA	0.575

Discriminant Validity

"Discriminant validity is the degree to which the measures of different concepts are distinct. The notion is that if two or more concepts are unique, then valid measures of each should not correlate too highly" (Bagozzi et al., 1991, p. 425).

Fornell and Larcker Criterion

In this study, discriminant validity is established as the square root of AVE (in Bold and Italics) for all the constructs was greater than its correlation with other constructs (Fornell, 1981). Henceforth, justifying the establishment of discriminant validity in this study. The complete list of square roots of AVE is presented in Table 7.

Table 7

Discriminant Validity – Fornell & Larcker Criterion

	CP	CWB	TP	WLA
CP	*0.853*			
CWB	0.803	*0.825*		
TP	-0.175	-0.058	*0.864*	
WLA	0.826	0.691	-0.148	*0.758*

Table 8

Discriminant Validity – Cross Loadings

	CP	CWB	TP	WLA
CP1	0.734	0.586	-0.029	0.529
CP2	0.915	0.744	-0.120	0.641
CP3	0.899	0.717	-0.246	0.874
CWB1	0.719	0.858	-0.195	0.701
CWB2	0.564	0.820	0.040	0.458
CWB3	0.683	0.796	0.078	0.499
TP1	-0.189	-0.133	0.916	-0.159
TP2	-0.148	0.041	0.865	-0.098
TP3	-0.103	-0.012	0.810	-0.113
WLA1	0.337	0.329	0.051	0.713
WLA2	0.371	0.349	0.032	0.672
WLA3	0.899	0.717	-0.246	0.874

Cross Loadings

Cross loadings refer to the assessment of the loading strength of an item on the underlying construct amongst all the remaining constructs of interest. The

factor loading of all the items is greater on the underlying construct as compared to the other constructs in the study, this is aligned to the assertion by Wasko & Faraj (2005). Henceforth, it is concluded that discriminant validity is established in this study. Table 8 presents the cross loadings for all the constructs.

Heterotrait-Monotrait Ratio (HTMT)

HTMT ratio is established on the calculation of differences of the association between the constructs and this ratio plays a pivotal role in establishing discriminant validity. However, the threshold for HTMT ratio has yet to reach a consensus among scholars, Kline (2011) proposed a threshold of 0.85 or less, while Teo, Srivastava and Jiang (2008) recommended a liberal threshold of 0.90 or less. The HTMT results in Table 9 show that the HTMT ratio for this study is lower than the required threshold of 0.90 except for the correlation between CP and CWB which is at the value of 0.998 which is only 0.098 greater than the required threshold. This implies that there are potential difficulties in achieving discriminant validity between these two constructs.

Table 9

Discriminant Validity – HTMT

	CP	CWB	TP	WLA
CP				
CWB	0.998			
TP	0.190	0.157		
WLA	0.885	0.776	0.176	

Higher Order Constructs

As part of the assessment of the measurement model, the higher order constructs were assessed individually for reliability and convergent reliability. In conjunction with the assessment of measurement model, the higher order construct was also tested for discriminant validity with other lower order constructs in the study as recommended by Sarstedt et al. (2019). The higher order constructs' reliability and validity statistics were established within the recommended norms. The reliability and convergent validity for EP is considered as established even when the value for reliability is at 0.613 which is slightly lower than 0.70 while the AVE is greater than 0.50. The results of Fornell (1981) criterion shows that the square-root of AVE of the constructs is greater than its correlation with all other

constructs, correspondingly the HTMT ratio value is also lower than 0.90. The results are presented in Table 10, Table 11, and Table 12.

Table 10

Higher Order Construct Reliability and Convergent Validity

Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted
0.613	0.703	0.611

Table 11

Fornell (1981) Criterion – Higher Order Discriminant Validity

	EP	WLA
EP	*0.782*	
WLA	0.805	*0.758*

Table 12

Higher Order Discriminant Validity

	EP	WLA
EP		
WLA	0.958	

Hypothesis Testing

Hypothesis testing is the next step in structural equation to substantiate the proposed hypothesis as shown below.

H$_1$: There is a significant relationship between workplace learning and employee performance.

In reference to the model from Figure 1, the results of the correlation between the constructs are measured by the path coefficients and their level of significance. H$_1$: There is a significant relationship between workplace learning and employee performance, this is established by a path coefficient of 0.805. Based on the results from Table 13, the t-count value is 25.821 which is greater than 1.96 (t table at alpha 5%) coupled with a P-value of 0.000 which is lower than 0.05.

Henceforth, H_1 was supported, namely There is a significant relationship between workplace learning and employee performance.

Table 13

Mean Sample Test Results

	Original sample	Standard deviation (STDEV)	T statistics (IO/STDEVI)	P values
H1: WLA -> EP	0.805	0.031	25.821	0.000

Figure 1

Outer Model

DISCUSSION AND CONCLUSIONS

This study unveils important empirical evidence that makes a significant contribution to clarifying the question of the impact of workplace learning on employee performance. Results confirmed **H_1** by showing that there is a significant relationship between workplace learning and employee performance. This result is consistent with empirical findings of many researchers, Engetou (2017), Eric (2012), Falola et al. (2014), Khan et al. (2011), Kum et al. (2014), Nassazi (2013), Shafini et al. (2016), Shafiq and Hamza (2017), who have indicated a significant positive correlation between the interventions and employee performance. This result supports the findings by Hanif (2013) who revealed that job training has a positive correlation to the employees' skills and enthusiasm for their work. Lastly, the result provides insights consistent with Diamantidis and Chatzoglou (2019) who argue that a good workplace environment facilitates positive employee performance as it increases motivation and job satisfaction of the employees.

Scholarly interest in the phenomenon of workplace learning in organizations has increased significantly over the past few decades. The low adoption of initiatives such as Jobs-and-Skills insights in Singapore establish the impetus for this study which is to gain a comprehensive understanding of the complex relationships between workplace learning and employee performance. Based on the data analysis and summary of findings it is concluded that workplace learning has a significant impact on employee performance.

The present study has certain notable limitations that can inform future research. First, the sample size should be expanded to a larger sample to necessitate the generalization of the findings. Second, the adoption of longitudinal research design could have assisted in testing the causal relationship among the variables. Another notable limitation of this study is the generalizability of the findings. This study focuses on the impact of workplace learning on employee performance in security manpower agencies in Singapore, without accounting for other potential mediating variables such as employee satisfaction, work environment, work motivation etc.

IMPLICATIONS

The results derived from this study leads to the consideration of a series of implications for the SMEs, particularly managers in the security manpower agencies in Singapore. It is recommended for policy makers, stakeholders, and management of SMEs to espouse in the adoption of workplace learning practices. Workplace learning practices revealed in this study are learning through observing others on the job or the 'experts', learning through others' knowledge and experience sharing, learning through mistakes stemmed from day-to-day work, learning through coaching and mentoring arrangements. Research by Badrianto and Ekhsan (2020) highlighted the interplay between the workplace environment, job satisfaction, motivation of the employee, commitment of the employee, and employee performance. SMEs should adopt workplace learning practices to improve employee performance as the cumulative performance of the employees amounts to the overall organizational performance, henceforth the higher the employee's performance, the higher will be the organizational performance (Sinambela, 2012).

Note: The authors did not use OpenAI's ChatGPT or any other AI tools in the drafting, editing, or refining of this manuscript. All content was generated, reviewed, and refined solely by the authors.

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