



MODERNIZED WORK ENVIRONMENT AND WORK PERFORMANCE OF THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS PERSONNEL

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ABSTRACT

The research concentrated on determining the effect of a modernized work environment on the work performance of Department of Public Works and Highways personnel. It utilized descriptive research; data gathered from the respondents was tabulated and computed to determine the level of work performance of the Department of Public Works and Highway personnel. 509 personnel from the Department of Public Works and Highways Laguna 1st, second and third – District Engineering Office were surveyed using a self-administered questionnaire. Statistical tools such as regression were used to evaluate the data gathered. This study revealed a statistically significant modernized work environment in terms of technology integration and organization culture and the work performance of the Department of Public Works and Highways personnel. Based on the findings, it is recommended the conduct of intense research and discovering more information and new variables for a modernized work environment for personnel productivity to strengthen further findings of the study.

KEYWORDS: Modernized work environment, technology integration, organizational culture, work performance

INTRODUCTION

In modern times, organizations are experiencing difficulties due to the dynamic nature of the environment. A modernized work environment implies that technology integration, such as office layout, office equipment, internet access, video conference, organizational culture, organizational values, leadership style, and diversity, affects the employees' work performance or individual performance. Satisfying its workforce is one of the numerous problems an organization faces in fulfilling its mission in an ever-evolving and changing environment. To ensure the increase of the personnel's work performance in terms of quality and efficiency, the organization needs to meet the demands of its workers by offering a good, modernized work environment.

Gitahi et al. (2015) posit that organizations with a pleasant environment will probably have a competitive advantage since they can draw in and keep highly qualified workers. The modernized work environment, the working environment has a significant influence on the achievement and performance of employees in the organization. According to a case study, an employee's performance is greatly influenced by their working environment, which is interrelated with performance Naharuddin & Sadegi, (2018). In addition, Naharuddin says that their productivity can reflect the employee's performance level in terms of activity-based, performance-based and outcome-based.

An organization's work environment significantly impacts a modernized work environment. A modernized work environment is essential to employee performance and productivity (El-Zeiny, 2013). Modernized work environment factors like technology and culture affect the work performance of an employee's organization.

Employee performance is crucial for the organization to achieve its goals and objectives. Modernized work environments, such as technology and culture, also significantly impact employees' work performance. The modernized work environment dramatically contributes to the success of the work performance of the employees and the organization.

MATERIALS AND METHOD

The researcher used a descriptive method to determine the modernized work environment and the work performance of DPWH personnel at Laguna 1st, Laguna 2nd, and Laguna 3rd District Engineering Office.

The study's main goal was to figure out the effect of a modernized work environment in terms of technology integration and organizational culture on the work performance of DPWH personnel. Specifically, the study determined the level of technology integration in terms of office layout, office equipment, internet access and video conference and also the level of organizational culture in terms of organizational values, leadership style and diversity in terms of religion, belief and ethnicity and the work performance such as quality and efficiency—also, the significant effect of technology integration and organization culture on the work performance of DPWH personnel.

The primary instrument used for gathering the data for this study is a self-made questionnaire, which can help gather the information that will answer the problem. The researcher prepared seven (7) questions each for modernized work environments such as technology in terms of office layout, office equipment, internet access and video conference and culture in



terms of organization values, leadership style and five (5) questions for diversity which include religion, belief and ethnic of groups. Seven (7) questions were each for the dependent variable: quality and efficiency.

The questionnaire was used to measure the modernized work environment and the work performance of DPWH personnel at Laguna 1st, Laguna 2nd and Laguna 3rd District Engineering Office.

RESULTS AND DISCUSSION

The level of technology integration in terms of office layout is verbally interpreted as highly integrated for job orders and permanent personnel. The level of technology integration in terms of office equipment is verbally interpreted as highly integrated for job orders and permanent personnel. The level of technology integration regarding internet access is verbally interpreted as highly integrated for job orders and permanent personnel. For the level of technology integration in terms of video conference with the verbally interpreted as integrated for job orders personnel and high integrated for permanent personnel. The level of organizational culture in terms of organizational values is verbally interpreted as high participation for job orders and permanent personnel. The level of organizational culture in terms of leadership style is verbally interpreted as high participation for job orders and permanent personnel. The level of organizational

culture regarding diversity in religion is verbally interpreted as high participation for job orders and permanent personnel. The level of organizational culture in terms of diversity in beliefs is verbally interpreted as high participation for job orders and permanent personnel. The level of organizational culture in terms of diversity in ethnicity is verbally interpreted as high participation for job orders and permanent personnel. The level of work performance in terms of quality is verbally interpreted as excellence for job orders and permanent personnel. The level of work performance in terms of efficiency is verbally interpreted as very efficient for job orders and permanent personnel.

The significant effect of a modernized work environment in terms of technology integration and organizational culture on the quality of work performance of DPWH employees, as revealed by the data that the level of modernized work environment in terms of technology integration, which is the office layout, office equipment, internet access and video conference and in organizational culture in terms of organization values, leadership style and diversity in terms of religion, beliefs and ethnicity have a significant effect on the quality of work performance of DPWH employees. The null hypothesis is rejected since the significance level is at .05 and the computed p-value is <.001. Therefore, a modernized work environment significantly affects the quality of work performance of DPWH employees in terms of technology integration and organizational culture.

Table 12 Model Fit Measures When Quality of Work Performance is Regressed on Modernized Work Environment Variables

R	R ²	Adjusted R ²	Overall model test			
			F	df ₁	df ₂	p
.276	.076	.060	4.58	9	499	<.001

The technology integration and organizational culture variables were the predictors of quality of work performance at .05 level significant, statistically significant, $F(9,499) = 4.58$, $p < .001$, which means that at least one of the predictors is statistically significant. The table also accounts for 7.6% of the total variation

in the quality of work performance. Based on the analyzed data, the interpretation of the modernized work environment in terms of technology integration and organizational culture significantly affects the quality of work performance for DPWH employees.

Table 13 Model Coefficients When Quality of Work Performance is Regressed on Modernized Work Environment Variables

Predictor	B	SE	t	p
Intercept	2.419	0.325	7.440	<.001
<i>Technology integration</i>				
Office Layout	0.097	0.050	1.948	.052
Office equipment	0.076	0.049	1.552	.121
Internet access	-0.052	0.054	-0.967	.334
Video conference	0.079	0.053	1.489	.137
<i>Organizational culture</i>				
Organizational values	0.073	0.073	1.438	.151
Leadership style	0.090	0.090	1.810	.071
<i>Diversity</i>				
Religion	0.036	0.036	0.739	.460
Beliefs	0.025	0.025	0.452	.651
Ethnicity	0.091	2.235	2.235	.026



The coefficients of the predictors and their significance shows that in technology integration in terms of the office layout ($B=0.097, p=.052$), office equipment ($B=0.076, p=.121$), internet access ($B=-0.052, p=.334$) and video conference ($B=0.079, p=.137$) in organizational culture in terms of organizational values ($B=0.073, p=.151$), leadership style ($B=0.090, p=.071$) and diversity in terms of region ($B=0.036, p=.460$), beliefs ($B=0.025, p=.651$) and ethnicity ($B=0.091, p=.026$).

Another research (Genzorová, 2017) is relevant to employee productivity.

A successful employee performs the desired outcomes individually and collectively within a specified time frame and satisfies standards, predetermined criteria, aims, objectives, and goals.

Table 14 Model Fit Measures When Quality of Work Performance is Regressed on Modernized Work Environment Variables

R	R ²	Adjusted R ²	Overall model test			
			F	df ₁	df ₂	p
.416	.173	.158	11.616	9	499	<.001

Table 14 shows the significant effect of a modernized work environment in terms of technology integration and organizational culture on the efficiency of work performance of DPWH employees. It is evident from the data that the level of modernized work environment in terms of technology integration, which is the office layout, office equipment, internet access and video conference and in organizational culture in terms of organization values, leadership style and diversity in terms of religion, beliefs and ethnicity have a significant effect on the quality of work performance of DPWH employees. The null hypothesis is rejected since the significance level is at .05 and the computed p-value is <.001. Therefore, a modernized work environment significantly affects the quality of work performance of DPWH employees in terms of technology integration and organizational culture.

organizational culture significantly affects the efficiency of work performance for DPWH employees.

Table 15 shows the coefficients of the predictors and their significance; it shows that in technology integration in terms of the office layout ($B=0.076, p=.010$), office equipment ($B=0.130, p=.004$), internet access ($B=-0.053, p=.289$) and video conference ($B=0.086, p=.081$) in organizational culture in terms of organizational values ($B=0.084, p=.078$), leadership style ($B=0.133, p=.004$) and diversity in terms of region ($B=0.041, p=.371$), beliefs ($B=0.006, p=.912$) and ethnicity ($B=0.091, p=.026$).

Table 14, where the modernized work environment in terms of technology integration and organizational culture variables were the predictors of quality of work performance, is at .05 level significant, statistically significant, $F(9,499) = 11.616, p=<.001$ me, and that at least one of the predictors is statistically significant. The table also accounts for 17.3% of the total variation in the efficiency of work performance. Based on the analyzed data, the interpretation of the modernized work environment in terms of technology integration and

The study by Mohamad Shammout (2021) examines the connection between worker performance and the workplace and ascertains how the workplace affects workers' performance there. Employee benefits, support from managers and coworkers, training and development opportunities, a suitable workload, and the actual physical work environment were used to gauge the work environment. The findings demonstrate a substantial and favourable correlation between every variable and worker performance. Employee perks, which significantly impact Investor Global employees' work performance, were deemed the most important factor overall. The aforementioned connected research is highly relevant to the current investigation since it delineates the impact of the workplace environment on employee performance.

Table 15 Model Coefficients When Quality of Work Performance is Regressed on Modernized Work Environment Variables

Predictor	B	SE	t	p
Intercept	1.297	0.303	4.279	<.001
<i>Technology integration</i>				
Office Layout	0.076	0.046	1.648	.010
Office equipment	0.130	0.046	2.865	.004
Internet access	0.053	0.050	1.061	.289
Video conference	0.086	0.049	1.748	.081
<i>Organizational culture</i>				
Organizational values	0.084	0.047	1.766	.078
Leadership style	0.133	0.046	2.884	.004
Diversity				



Religion	0.041	0.896	0.896	.371
Beliefs	0.006	0.111	0.111	.912
Ethnicity	0.091	2.235	2.235	.026

CONCLUSIONS

Since all the regression analysis results are at a .05 level of significance, the null hypothesis is rejected. It concludes that the research hypothesis confirmed that the modernized work environment in terms of technology integration and organizational culture significantly affects the work performance of DPWH personnel.

RECOMMENDATIONS

The following recommendations were made in light of the study's conclusion: Management should make every effort to create an environment at work that inspires, motivates, and keeps people engaged to improve productivity. Management should provide a positive work atmosphere to improve personnel morale and increase productivity. In order to confirm the substantial effect of the modernized work environment on employee performance, future researchers should conduct a similar study to support the current findings. To do this, they should find new variables and additional information about the modernized work environment for employees.

REFERENCES

1. Awan, A. (2015). *Impact of working environment on employees' productivity: A case study of bank and insurance companies in Pakistan*. *European Journal of Business and Management*, 7(1), 2222-2839.
2. Chopra, H. (2016). *Importance of a Good Working Environment*
3. Davis, R.V. and Lofquist, L.H. (1984). *A psychological theory of work adjustment: An individual-differences model and its applications*. Minnesota, MI: University of Minnesota Press.
4. El-Zeiny, R. M. A. (2013). *Interior design of workplace and performance relationship: Private sector corporations in Egypt*. *Asian Journal of Environment-Behavior Studies*.
5. Genzorová, T. (2017). *Employee Benefits as One of the Factors of Work Motivation*. *CBU International Conference Proceedings*.
6. Gitahi N. J, Waigajo, M and Koima J (2015). *Effect of Workplace Environment on the Performance of Commercial Banks Employees in Nakuru Town; International Journal of Managerial Studies and Research (IJMSR) Vol. 3 Issue 12, PP 76-89*.
7. Harris K. J. (2015). *Resources loss from technology overload and its impact on work-family conflict*
8. Hendra, H. (2020). *Pengaruh Lingkungan Kerja dan Stres Kerja Terhadap Kinerja Karyawan Pada PT Gunung Mas Internasional*. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 8(1), 659-671.
<https://doi.org/10.35794/emba.v8i1.28036>
9. Khaled Al-Omari and Haneen Okasheh (2017). *The Influence of Work Environment on Job Performance: A Case Study of Engineering Company in Jordan*. *International Journal of Applied Engineering Research ISSN 0973-4562 Volume 12, Number 24 (2017) 15544-15550*
10. Naharuddin, N., & Sadegi, M. (2018). *Factors of workplace environment that affect employee's performance: A case study of Miyazu Malaysia*. *International Journal of Independent Research and Studies*, 2(2), 66-78
11. Tayfun, A. R. A. R., & Oneren, M. (2021). *Role of Emotional Intelligence and Work-Life Balance in Relationship between Workplace Happiness and Perceived Performance in Academic Setting*. *Ege Academic Review*, 21(4), 391-406.
12. Zajak, S. Egels-Zanden, N., & Piper, N. (2017). *Networks of labour activism: Collective action across Asia and beyond. An introduction to the debate*. *Development and Change*, 48(5), 899-921.