

The Impact of Technostress, Self-Efficacy, and Work-Life Balance on Employee Performance at LLDIKTI Region II

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Abstract

This study aims to analyze the influence of technostress, self-efficacy, and work-life balance on employee performance at LLDIKTI Region II. A quantitative approach was used with a saturated sampling technique. Data were collected through questionnaires completed by 60 respondents and analyzed using multiple linear regression with IBM SPSS version 27. The results show that technostress, self-efficacy, and work-life balance all have a positive and significant effect on employee performance, both partially and simultaneously. Among these, work-life balance has the greatest influence, followed by self-efficacy and technostress. The coefficient of determination (R^2) of 53.1% indicates that these three variables explain more than half of the variation in employee performance.

These findings imply that in facing digital transformation, LLDIKTI Region II needs to pay special attention to the factors affecting employee performance, particularly in managing technostress and enhancing self-efficacy. Practical recommendations for LLDIKTI Region II include providing regular technology training, implementing mentorship programs for senior employees, and offering self-efficacy enhancement programs through coaching and mentoring. Additionally, adopting flexible work policies is crucial to support employees' work-life balance, ensuring optimal productivity in a dynamic digital work environment.

Keywords: *Technostress; Self-Efficacy; Work-Life Balance; Employee Performance*

INTRODUCTION

The rapid advancement of technology has brought significant changes to the world of work, particularly in the areas of digital systems and the use of information technology across various sectors, including education and public services. Digitalization not only improves work efficiency but also introduces new challenges for employees, such as the pressure associated with using technology, commonly referred to as *technostress*. According to Ayu et al. (2022), technological developments such as artificial intelligence (AI), cloud computing, and the Internet of Things (IoT) are increasingly being applied in the workplace to enhance organizational competitiveness. However, the rapid adoption of these technologies often leaves employees feeling overwhelmed, especially those who are not well-prepared to face technological changes.

The phenomenon of technostress is becoming increasingly apparent in various organizations, including the Higher Education Service Institution (LLDIKTI) Region II Palembang, where employees are required to adapt to ever-evolving technology-based work systems. Employees unfamiliar with digital systems tend to experience difficulties in completing tasks effectively, which can ultimately lead to a decline in performance. However, the level of *self-efficacy*, or an employee's belief in their own ability to handle technological challenges, can be a determining factor in mitigating the negative impact of technostress. Employees with high self-efficacy are more capable of adapting to technological changes and remaining productive in their work (Laura & Meidina, 2022).

In addition to technostress and self-efficacy, *work-life balance* is also an important factor in determining employee performance. With easier access to technology, the boundaries between work and personal life have become increasingly blurred. Employees often feel the need to remain connected to work outside office hours, which can potentially lead to prolonged fatigue and stress. If not properly

managed, this imbalance can negatively affect employee motivation and work effectiveness (Putri & Wibowo, 2023). Therefore, maintaining a balance between work demands and personal life is a critical consideration in enhancing employee performance in the digital era.

Several previous studies have examined the relationships among technostress, self-efficacy, work-life balance, and employee performance, but the results have been inconsistent. Yumiko & Saryatmo (2024) found that self-efficacy and work-life balance significantly influence employee performance, whereas Grace et al. (2024) concluded that these variables do not have a significant impact. These differences suggest that the influence of these factors may vary depending on organizational context and employee characteristics.

Additionally, research by Ningtyas & Sugiarto (2022) showed that technostress partially affects employee performance, which is consistent with findings by Mudrikah et al. (2022), who found that technostress and self-efficacy simultaneously affect employee performance. These studies suggest that excessive use of technology can induce stress and reduce performance, but self-efficacy may serve as a moderating factor that helps employees remain productive.

However, there are also studies indicating that work-life balance and technostress do not always significantly influence performance. Hutama & Suharnomo (2023) found that work-life balance had a positive but insignificant effect on performance, while technostress had a significantly negative impact. These differing findings reveal a research gap in understanding how these three variables affect employee performance in different work environments and situations.

Based on the identified phenomena and research gaps, this study aims to analyze the influence of technostress, self-efficacy, and work-life balance on employee performance at LLDIKTI Region II Palembang. The results of this research are expected to contribute to a better understanding of how organizations can manage technological pressure, improve employee self-efficacy, and foster a balance between work and personal life to support improved performance in the digital era.

METHOD

This study uses a descriptive quantitative approach to analyze the effects of technostress, self-efficacy, and work-life balance on employee performance at LLDIKTI Region II Palembang. The population consists of 60 employees, and due to the relatively small number, a saturated sampling technique was used, meaning the entire population was included in the sample. Data were collected through a five-point Likert scale questionnaire.

The *technostress* variable was measured using five dimensions developed by Tarafdar et al. (2007): techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. The *self-efficacy* variable refers to the indicators by Brown et al. (as cited in Hasanah et al., 2019), including belief in task completion, self-motivation, dealing with difficulties, and effort consistency. The *work-life balance* variable was measured using dimensions from Fisher et al. (2009), namely PLEW (Personal Life Enhancement from Work), WIPL (Work Interference with Personal Life), WEPL (Work Enhancement of Personal Life), and PLIW (Personal Life Interference with Work). Meanwhile, employee performance was measured using indicators of quality, quantity, timeliness, effectiveness, and independence.

The validity test was conducted using the Corrected Item-Total Correlation method, and all items had values above 0.30. The reliability test used Cronbach's Alpha and showed the following results: technostress (0.865), self-efficacy (0.857), work-life balance (0.843), and employee performance (0.861), all of which are considered reliable. Classical assumption tests included the normality test (Kolmogorov-Smirnov), multicollinearity test (VIF and Tolerance), and heteroscedasticity test (Glejser). The data analysis was conducted using multiple linear regression to determine both simultaneous and partial effects. The *t-test* was used to assess the partial effect of each independent variable, while the *F-test* was used to examine the simultaneous effect of all three variables on employee performance.

RESULTS AND DISCUSSION

Multiple Linear Regression Analysis

According to Darma (2021), multiple linear regression analysis is used to determine the direction and magnitude of the influence of independent variables on a dependent variable. In

this study, multiple linear regression analysis was applied to measure the influence of the independent variables technostress (X1), self-efficacy (X2), and work-life balance (X3) on the dependent variable, namely employee performance (Y). The results of the multiple linear regression analysis in this study are presented in the following table:

Table 1. Multiple Linear Regression Analysis

	Model	Unstandardized Coefficients ^a		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.329	6.143		.216	.830
	Technostress	.453	.135	.322	3.351	.001
	Self Efficacy	.490	.143	.334	3.435	.001
	Work Life Balance	.528	.130	.387	4.071	.000

Source: Processed Data from SPSS Output Version 27 (2024)

Based on Table 2, the results of the regression analysis show that the coefficients for the variables are as follows: technostress = 0.453, self-efficacy = 0.490, and work-life balance = 0.528, with a constant of 1.329. Thus, the regression equation obtained is:

$$Y = 1.329 + 0.453 \text{ Technostress} + 0.490 \text{ Self-Efficacy} + 0.528 \text{ Work-Life Balance} + e$$

The above regression equation shows the partial relationship between the independent variables and the dependent variable. From this equation, it can be concluded that:

1. The constant (a) is 1.329, which means that if technostress, self-efficacy, and work-life balance are all equal to zero, the predicted employee performance would be 1.329.
2. The coefficient for technostress (b1) is 0.453, indicating that each one-unit increase in technostress leads to an increase in employee performance by 0.453 units, assuming other variables remain constant. The significance value of 0.001 (< 0.05) indicates that technostress has a positive and significant effect on employee performance.
3. The coefficient for self-efficacy (b2) is 0.490, meaning that a one-unit increase in self-efficacy will increase employee performance by 0.490 units. The significance value of 0.001 (< 0.05) shows that the effect is positive and significant.
4. The coefficient for work-life balance (b3) is 0.528, which implies that a one-unit increase in work-life balance will increase employee performance by 0.528 units. The significance value of 0.000 (< 0.05) shows that work-life balance has a positive and significant effect on employee performance.
5. The Adjusted R² value of 0.507 indicates that approximately 50.7% of the variation in employee performance can be explained by the three independent variables. The remaining 49.3% is influenced by other factors outside the model.

These results indicate that all three independent variables have a significant impact on employee performance, with work-life balance having the strongest influence.

Hypothesis Testing Results

Partial Test or t-Test

The t-test in multiple regression is used to determine whether an independent variable has a significant partial effect on the dependent variable (Mardiatmoko, 2020). In this study, the t-test was conducted to examine the effect of technostress (X1), self-efficacy (X2), and work-life balance (X3) on employee performance (Y). The test was performed by comparing the calculated t-value (t-count) with the critical t-value (t-table) and by observing the significance level at $\alpha = 0.05$. The decision rule states that if the sig. value < 0.05 , then the independent variable has a significant effect on the dependent variable. The t-table value is determined using the formula $df = n - k - 1$, where n is the number of observations and k is the number of independent variables. The results of the t-test are presented in Table 2 below.

Tabel 2. Partial Test or t-Test

Variabel	Koefisien Regresi	t hitung	Sig.
<i>Technostress</i>	0.453	3.351	0.001
<i>Self Efficacy</i>	0.490	3.435	0.001
<i>Work Life Balance</i>	0.528	4.071	0.000

Source: Processed Data from SPSS Output Version 27 (2024)

Based on the results of the t-test, the analysis was conducted to measure the significance of the influence of technostress, self-efficacy, and work-life balance on employee performance. The t-test results show that technostress has a significant effect on employee performance, with a t-value of 3.351, which is greater than the t-table value of 2.003, and a significance level of 0.001 (< 0.05). The regression coefficient of 0.453 indicates that each increase in technostress can improve employee performance, provided it is well managed. Furthermore, self-efficacy also has a significant effect on employee performance, with a t-value of 3.435, which exceeds the t-table value of 2.003, and a significance level of 0.001 (< 0.05). The regression coefficient of 0.490 shows that the higher the employees' self-efficacy, the better their performance, as belief in one's own ability plays an essential role in task completion. In addition, work-life balance has a significant influence on employee performance, with a t-value of 3.835, greater than the t-table value of 2.003, and a significance level of 0.000 (< 0.05). The regression coefficient of 0.528 suggests that a balanced relationship between work and personal life can optimally enhance employee performance. These results confirm that all three independent variables significantly contribute to improving employee performance at LLDIKTI Region II Palembang.

F-Test Results (Simultaneous Test)

The F-test is used to determine whether the independent variables have a simultaneous and significant effect on the dependent variable. According to Kasmir (2022), the F-value is tested by comparing the calculated F-value (F-count) with the critical F-value (F-table). If $F\text{-count} < F\text{-table}$, the independent variables do not have a simultaneous effect; whereas if $F\text{-count} \geq F\text{-table}$, a significant simultaneous effect exists. The complete F-test results are presented in Table 3 below:

Tabel 3. F-Test Results

Variabel	Koefisien Regresi	t_{hitung}	Sig.	F_{hitung}	Sig.
<i>Technostress</i>	0.453	3.351	0.001	21.106	0.000
<i>Self Efficacy</i>	0.490	3.435	0.001		
<i>Work Life Balance</i>	0.528	4.071	0.000		

Source: Processed Data from SPSS Output Version 27 (2024)

The results of the F-test show that the calculated F-value of 21.106 is greater than the F-table value of 2.77, with a significance level of $0.000 < 0.05$. This indicates that the regression model used is statistically significant, leading to the rejection of H_0 and acceptance of H_1 . Therefore, it can be concluded that the independent variables technostress, self-efficacy, and work-life balance simultaneously have a significant effect on employee performance.

The Influence of Technostress on Employee Performance

The regression analysis results show that technostress has a positive and significant effect on employee performance, with a regression coefficient of 0.453. This indicates that the higher the level of technostress experienced by employees, the greater its impact on their performance. This suggests that technostress can act as a performance driver, depending on employees' ability to manage technological pressure in the workplace. Further hypothesis testing supports this finding, with a t-value of 3.351 exceeding the critical value of 2.003, and a significance level of 0.001 (< 0.05). Thus, H_0 is rejected and H_1 is accepted, confirming that technostress has a positive and significant effect on employee performance.

These results are consistent with the findings of Saleim et al. (2021) and Murti et al. (2024), who also demonstrated that technostress positively and significantly affects employee performance. Employees who are able to effectively manage technostress tend to be more productive, focused, and less affected by stress in responding to technology-driven work demands.

LLDIKTI Region II can leverage these findings by developing regular digital literacy training programs and providing counseling sessions to help employees cope with stress caused by technology usage. For instance, training in digital time management or technology-based application handling may reduce psychological pressure from digital workloads. It is important to note, however, that this study used a relatively limited sample size, which may affect the generalizability of the findings. In addition, the use of a questionnaire-based data collection method may introduce perception bias from respondents.

The Influence of Self-Efficacy on Employee Performance

The regression analysis results show that self-efficacy has a positive and significant effect on employee performance, with a regression coefficient of 0.490. This indicates that the higher employees' confidence in their ability to complete tasks and face work challenges, the better their performance. In other words, self-efficacy plays a crucial role in enhancing employees' productivity and work quality. Hypothesis testing further supports this finding, with a t-value of 3.435, exceeding the critical value of 2.003, and a significance level of 0.001 (< 0.05). Thus, H_0 is rejected and H_1 is accepted, confirming that self-efficacy has a positive and significant effect on employee performance.

These findings are consistent with the results of Yumiko & Saryatmo (2024) and Maksum et al. (2022), which revealed that self-efficacy has a partial and significant effect on employee performance. Employees with high self-efficacy tend to be more confident in facing work challenges, take initiative in completing tasks independently, and demonstrate perseverance in achieving organizational goals.

LLDIKTI Region II can enhance employees' self-efficacy through mentoring programs, providing regular positive feedback, and offering recognition for work achievements. These capacity-building programs should be structured and sustained over time. It should be noted that perceptions of self-efficacy can be highly subjective, and the use of a questionnaire instrument alone may not fully reflect actual capabilities. Future research could use observations or in-depth interviews as part of a data triangulation approach.

The Influence of Work-Life Balance on Employee Performance

The regression analysis results show that work-life balance has a positive and significant effect on employee performance, with a regression coefficient of 0.528. This means that the better the balance between employees' work and personal life, the better their performance. A healthy work-life balance allows employees to focus on their tasks without feeling overwhelmed by personal matters, thus contributing to improved quality and productivity at work. Hypothesis testing also supports this finding, with a t-value of 4.071, exceeding the critical value of 2.003, and a significance level of 0.000 (< 0.05). Therefore, H_0 is rejected and H_1 is accepted, indicating that work-life balance has a positive and significant effect on employee performance.

These results align with the findings of Septiyandini et al. (2024) and Wulandari & Hadi (2021), which revealed that work-life balance has a partial and significant effect on employee performance. Employees with a good work-life balance tend to be more productive, able to effectively manage time between work and personal life, and report higher job satisfaction.

LLDIKTI Region II can develop flexible work policies such as limited work-from-home options or adjustable working hours, as well as provide supporting facilities such as lactation rooms, daycare services, or work recreation programs. Responses to work-life balance can be greatly influenced by the personal context of each employee. This study did not classify respondents based on marital status or family responsibilities, which could affect their perceptions of work-life balance.

The Influence of Technostress, Self-Efficacy, and Work-Life Balance on Employee Performance

The simultaneous regression analysis shows that technostress, self-efficacy, and work-life balance have a positive and significant effect on employee performance, with a regression coefficient of 0.728 and an R-Square value of 0.531. This indicates that the three independent variables can explain 53.1% of the variation in employee performance, while the remaining portion is influenced by other factors not included in this study's model. Simultaneous hypothesis testing strengthens this finding, with an F-value of 21.106 and a significance level of 0.000 (< 0.05), meaning that technostress, self-efficacy, and work-life balance collectively have a significant effect on employee performance.

These results align with the study by Yumiko & Saryatmo (2024), which stated that technostress, self-efficacy, and work-life balance have a simultaneous and significant effect on employee performance. Based on these findings, it is recommended that organizations address technostress through regular training and consultation sessions, allowing employees to better manage the pressures associated with technology usage. Moreover, to enhance self-efficacy, companies can provide mentoring or coaching programs and give positive feedback on employees' achievements to boost motivation and confidence in their work.

LLDIKTI Region II is advised to develop an integrated strategy that includes technology training, work motivation enhancement programs, and work-life balance policies. For instance,

developing a digital-based HR development roadmap, establishing an employee welfare unit, and regularly evaluating workload could be beneficial. Since this study relied solely on one type of quantitative method (questionnaires), its results may be influenced by subjective bias. Future research is recommended to use a mixed-methods approach for a deeper and more comprehensive understanding.

CONCLUSION

Based on the results of the research processed using SPSS version 27, it was found that technostress, self-efficacy, and work-life balance have a positive and significant effect on employee performance at LLDIKTI Region II. Technostress can enhance performance when well-managed, while self-efficacy helps employees feel more confident in completing tasks. Additionally, a balanced work-life balance allows employees to work more focused and productively. Simultaneously, all three variables have been proven to significantly contribute to improving employee performance.

The implications of these findings suggest that LLDIKTI Region II needs to take strategic steps in creating a supportive work environment, such as providing regular technology training, establishing programs to enhance self-efficacy through coaching or mentoring, and implementing policies that support work-life balance for employees.

For future research, it is recommended that the methodology not be limited to questionnaires alone but also supplemented with in-depth interviews or observations to obtain a more comprehensive understanding of employee behavior and perceptions. Further research could also add other relevant variables, such as leadership, organizational culture, or job satisfaction, to examine additional factors that may influence employee performance more holistically.

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