



THE EFFECT OF DIGITAL TRANSFORMATION ON THE OPERATIONS AND PERFORMANCE OF THE PHILIPPINE POSTAL CORPORATION AT PARAÑAQUE CENTRAL POST OFFICE

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Abstract

This study assessed the effect of digital transformation on the operations and performance of the Philippine Postal Corporation (PHLPost) at the Parañaque Central Post Office. Specifically, it described the demographic profile of the respondents in terms of age, sex, position, length of service, and educational attainment; assessed their perception of digital transformation along four dimensions—digital technology, customer satisfaction, organizational performance, and employee engagement; determined whether these perceptions differed significantly when respondents were grouped according to profile; identified the challenges encountered in implementation; and proposed a management enhancement plan. A descriptive-quantitative research design was used, with a researcher-made survey questionnaire as the primary instrument. The study involved 96 respondents— 46 postal employees selected through purposive sampling and 50 customers selected through simple random sampling, with the customer sample size computed using Slovin's formula at a 5% margin of error. Data were analyzed using frequency and percentage distribution, weighted mean, standard deviation, and Analysis of Variance (ANOVA) and t-test for group comparisons. Results revealed a generally positive perception of digital transformation, with an overall grand mean of 4.06 (Agree). Employee engagement (4.09) and customer satisfaction (4.10) received the highest composite means, while organizational performance (3.96), though still favorably rated, was comparatively lower. Tests of difference showed no statistically significant variation in



perception when respondents were grouped by age, position, or educational attainment, but significant differences emerged when grouped by sex and by length of service. The most pressing challenges identified were inconsistent digital policies, frequent system errors, insufficient IT support, inadequate training, and resistance to change. The findings indicate that digital transformation has meaningfully enhanced service accuracy, workflow efficiency, accessibility, and employee engagement at PHLPost–Parañaque. Sustaining these gains, however, requires addressing persistent infrastructure and training gaps. A management enhancement plan is proposed, anchored on continuous digital training, improved IT infrastructure, clearer digital policies, customer-oriented service improvements, and regular monitoring and evaluation.

Keywords: *Digital Transformation, Organizational Performance, Customer Satisfaction, Employee Engagement, Philippine Postal Corporation*



Introduction

Digital transformation has become a strategic priority for organizations worldwide seeking to improve operational efficiency, service quality, and responsiveness in an increasingly technology-driven environment. In the public sector, the adoption of digital systems is widely regarded as a means of increasing transparency, simplifying processes, and improving citizens' access to essential services. Philippine government agencies are increasingly encouraged to integrate digital technologies to support the country's national development goals and strengthen institutional performance. The Philippine Postal Corporation (PHLPost), as one of the country's primary service institutions, is expected to adapt to these changes to remain effective and competitive.

Postal operations have traditionally depended on manual processes, physical documentation, and face-to-face transactions. The emergence of digital communication channels and rising competition from private courier firms, however, has compelled PHLPost to modernize its operations through electronic tracking systems, digital record management, and automated service processes. These initiatives were implemented at the Parañaque Central Post Office specifically to address service delays, operational inefficiencies, and rising customer expectations. Despite these efforts, the actual effects of digital tools on operational performance, employee productivity, and service delivery at the local branch level remain empirically unclear, as variation in system utilization, technological readiness, employee skills, and resource availability may influence implementation outcomes.

Review of Related Literature

Studies of postal and public service institutions abroad have repeatedly identified persistent barriers to effective digital adoption. A study of the South African Post Office found that poor leadership commitment, lack of resources, and resistance to change hampered the implementation of service-quality strategies and, in turn, customer satisfaction (Mbua & Potgieter, 2021). Elsewhere, superior service quality was found to be vital for the survival of Malawi's public postal service as traditional mail volumes declined due to digital alternatives (Msosa, 2015). Research tracing the struggles of postal organizations operating in monopoly markets found that many were unable to convert digital initiatives into tangible financial results as letter volumes declined (Kollara, 2017).

Beyond the postal sector, broader digital transformation research has consistently shown positive but conditional effects on organizational performance. Studies on the banking and financial sector show that digitalization can boost profitability and financial inclusion, though results hinge on institutional stability and risk management (Dzorka & Akomaning, 2025; Saadaqui & Chouchene, 2024). Likewise, research on customer satisfaction in the telecommunications and hospitality sectors found that digital transformation strategies significantly improve customer perceptions, provided they are paired with genuine service quality improvements (Iriqat & Jaradat, 2021; Abdel-Hamid et al., 2022). On the employee side, research emphasizes that the success of digital adoption hinges not only on technology but also on employee training, managerial support, and organizational culture—attitude and work experience have been identified as significant predictors of employees' willingness to accept digital change (Li Zongnan, 2024; Batara et al., 2017).

Similar findings are echoed in the local literature, though with gaps peculiar to the Philippine public sector. Prior studies have shown that the convenience and operational efficiency of digital platforms are enhanced when reliability is guaranteed (Montenegro et al., 2022; Ramos, 2024). In a direct study of the Sorsogon Philippine Postal Office, outdated equipment, limited revenue, and insufficient staff training were found to continue constraining service delivery despite digitalization efforts (Dogillo & De Castro, 2025). Studies of employee satisfaction in Philippine organizations further suggest that fair compensation, manageable workloads, and supportive work environments are essential complements to any technology-driven reform (Inza-Cruz et al., 2022; Camus, 2025; Laguador et al., 2017).



Overall, the literature shows that digital transformation generally improves organizational performance, customer satisfaction, and employee engagement, but that its success depends heavily on context. A notable gap remains: most studies have focused on private-sector organizations, banks, or national-level digital governance policy, leaving limited empirical evidence on how digital transformation affects frontline, government-owned service units, such as postal offices, at the branch or operational level in the Philippine setting. This study addresses that gap.

Theoretical Framework

This study is anchored on the Technology Acceptance Model (Davis, 1989) and the Diffusion of Innovations Theory (Rogers, 1962), which together explain how the perceived usefulness and ease of use of digital tools by employees, together with organizational readiness, shape the adoption and ultimate impact of digital initiatives. The Technology Acceptance Model posits that users' behavioral intention to adopt a technology is driven primarily by their perception of its usefulness and ease of use, while the Diffusion of Innovations Theory explains how, why, and at what rate new ideas and technology spread through an organization. Together, these frameworks provide a lens for interpreting how PHLPPost employees and customers perceive and respond to the Corporation's digital initiatives.

Statement of the Problem

This study aimed to assess the effect of digital transformation on the operations and performance of the Philippine Postal Corporation at the Parañaque Central Post Office. Specifically, it sought to answer the following questions:

1. What is the demographic profile of the employee and customer respondents in terms of age, sex, position, length of service, and educational attainment?
2. What is the respondents' assessment of digital transformation in terms of digital technology, customer satisfaction, organizational performance, and employee engagement?
3. Is there a significant difference in the respondents' assessment when grouped according to profile?
4. What challenges are encountered in the implementation of digital transformation at PHLPPost–Parañaque?
5. What management enhancement plan may be proposed to strengthen PHLPPost's digital transformation efforts?



Methods

Research Design

This study used a descriptive-quantitative research design to examine the effects of digital transformation on organizational performance, customer satisfaction, and employee engagement at the Philippine Postal Corporation (PHLPost)–Parañaque Central Post Office. Survey questionnaires and statistical analysis were used to determine trends, relationships, and variations in respondents' perceptions, allowing an objective measurement of the association between digital initiatives and organizational outcomes.

Participants and Sampling Procedure

The study involved 96 respondents: 46 employees and 50 customers of the Parañaque Central Post Office. Employees were selected through purposive sampling to ensure that different positions and section offices were represented; because the employee population of 46 was manageable in size, it was taken in full. Customers were selected through simple random sampling as they visited the post office. The customer sample size was determined using Slovin's formula at a 5% margin of error, applied to a customer population of 100 to yield a target sample of 50. Employees shared their views on operational performance and work engagement, while customers shared their views on service satisfaction following the implementation of digital initiatives.

Research Instrument

Data were collected using a structured questionnaire developed by the researcher, employing a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The instrument was composed of three parts. Part I collected demographic data—age, sex, position, length of service, and educational attainment for employees, and age, sex, and frequency of service use for customers. Part II evaluated respondents' perception of digital transformation across four indicators: digital technology, customer satisfaction, organizational performance, and employee engagement. Part III identified the challenges encountered in relation to digital transformation. The instrument was validated by the research adviser and a panel of experts for clarity, relevance, and content appropriateness, and revisions were incorporated prior to final administration.

Data Collection Procedure

Prior to data collection, PHLPost management granted formal permission to conduct the study. Questionnaires were personally administered to selected employees and customers to ensure accuracy and completeness of responses. Completed instruments were collected, validated, and coded for statistical processing, after which results were tabulated, analyzed, and interpreted to answer the study's research questions.

Statistical Treatment

The following statistical tools were used: (1) frequency and percentage distribution to describe the demographic profile of the respondents; (2) weighted mean to determine respondents' assessment of digital transformation and their level of agreement, interpreted using a five-point scale ranging from Strongly Disagree (1.00–1.49) to Strongly Agree (4.50–5.00); (3) standard deviation to determine the variability or consistency of responses; and (4) Analysis of Variance (ANOVA) and an independent-samples t-test to determine whether respondents' assessments differed significantly when grouped according to demographic profile.



Ethical Considerations

This study was conducted in accordance with standard ethical principles in human-subjects research. Prior to data collection, formal written permission was obtained from PHLPst management to conduct the study at the Parañaque Central Post Office, securing institutional consent and cooperation. Both employees and customers participated voluntarily; a formal letter explaining the purpose of the study accompanied the questionnaire, and respondents were free to decline or withdraw at any time without penalty.

All data collected were handled with strict confidentiality and used solely for academic purposes in accordance with the Data Privacy Act of 2012 (Republic Act No. 10173). No personally identifying information beyond the demographic variables required for analysis was collected, and individual responses were reported only in aggregate, statistical form to protect respondent anonymity. Respondents were assured that their participation, or the nature of their responses, would not affect their employment status or access to postal services. The researcher is committed to accuracy and honesty in data processing, analysis, and reporting, consistent with the University's policies on responsible and ethical research conduct.

Results and Discussion

Demographic Profile of the Respondents

Table 1. Frequency and Percentage Distribution of the Respondents' Demographic Profile in Terms of Age

Age	Employees		Customers		Over-all	
	f	%	f	%	f	%
21–35 years old	7	15	27	54	34	35
36–45 years old	4	9	17	34	21	22
46–55 years old	21	46	5	10	26	27
56–65 years old	14	30	1	2	15	16
TOTAL	46	100	50	100	96	100

Table 1 shows that among employees, the largest age group is 46–55 years old (46%), followed by 56–65 years old (30%), indicating a workforce with considerable years of experience. Customers, by contrast, are predominantly younger, with the 21–35 bracket accounting for the majority (54%), followed by the 36–45 bracket (34%). Across both groups combined, respondents aged 21–35 form the largest share (35%), followed closely by those aged 46–55 (27%) and 56–65 (26%), while the 36–45 bracket accounts for 22%—reflecting a fairly balanced mix of younger and more mature participants.

Table 2. Frequency and Percentage Distribution of the Respondents' Demographic Profile in Terms of Sex

Sex	Employees		Customers		Over-all	
	f	%	f	%	f	%
Male	29	63	31	62	60	63
Female	17	37	19	38	36	37
TOTAL	46	100	50	100	96	100

Table 2 shows that male respondents are in the majority in both groups: 63% of employees and 62% of customers are male. Overall, 63% of total respondents are male and 37% female, indicating that the sample is male-dominated in both the employee and customer populations at the Parañaque Central Post Office.

**Table 3. Frequency and Percentage Distribution of the Respondents' Demographic Profile in Terms of Position**

Position	Frequency	Percentage
Postal Employee	46	48
Customer	50	52
TOTAL	96	100

Table 3 presents the distribution of respondents by position, showing that the total sample of 96 is fairly evenly split between the two respondent groups. Customers make up the slightly larger share at 52% (50 respondents), while postal employees account for 48% (46 respondents), indicating a well-balanced representation of internal (employee) and external (customer) perspectives in the study.

Table 4. Frequency and Percentage Distribution of Employee-Respondents' Length of Service

Length of Service	Frequency	Percentage
1–5 years	9	19
6–10 years	4	9
11–15 years	33	72
16–25 years	0	0
TOTAL	46	100

Table 4 shows that the vast majority of employee-respondents have served 11–15 years (72%), followed by those with 1–5 years of service (19%); only 9% have served 6–10 years, and no respondent falls within the 16–25-year bracket. This distribution indicates that most employees are relatively seasoned in their roles, with more than a decade of service experience—a factor that may have a bearing on how familiar and adaptable they are to the digital transformation initiatives examined in this study.

Table 5. Frequency and Percentage Distribution of the Respondents' Demographic Profile in Terms of Educational Attainment

Educational Attainment	Employees		Customers		Over-all	
	f	%	f	%	f	%
High School	20	43	18	36	38	40
College	22	48	27	54	49	51
Graduate Studies	1	2	3	6	4	4
Others	3	7	2	4	5	5
TOTAL	46	100	50	100	96	100

Table 5 shows that most employees have attained college-level education or are college graduates (48%), followed by those with a high-school background (43%); graduate studies (2%) and other qualifications (7%) make up a small portion. A similar pattern is observed among customers, with the majority having a college-level education (54%), followed by high school (36%), graduate studies (6%), and other attainments (4%). Overall, the largest group of respondents in both groups is college-educated (51%), followed by those with a high-school background (40%) and those with graduate studies (4%) or other attainments (5%)—indicating that most respondents in this study have at least secondary or tertiary education.

Assessment of Digital Transformation

Table 6. Weighted Mean of the Respondents' Assessment of the Effect of Digital Transformation at PHLPost–Parañaque in Terms of Digital Technology

Indicators	Employees		Customers		Over-all	
	WM	VI	WM	VI	WM	VI
1. The use of online tracking systems enhances service accuracy.	4.22	A	4.18	A	4.2	A
2. Electronic payment methods make transactions faster.	4.02	A	4.16	A	4.09	A
3. Automation reduces human error in postal processes.	3.86	A	4.28	A	4.07	A



Indicators	Employees		Customers		Over-all	
	WM	VI	WM	VI	WM	VI
4. Digital tools increase transparency in postal operations.	4.09	A	4.31	A	4.2	A
5. Online services improve accessibility for customers.	4.1	A	4.22	A	4.16	A
6. Digital innovations have modernized PHLPst operations.	4.06	A	4.18	A	4.12	A
7. Technology integration speeds up delivery performance.	3.91	A	4.24	A	4.08	A
8. Digital systems reduce paperwork and manual records.	3.85	A	4.14	A	3.99	A
9. Online communication platforms enhance coordination.	3.85	A	3.98	A	3.92	A
10. Digital transformation strengthens PHLPst's competitiveness.	3.87	A	4.1	A	3.99	A
Composite Mean	3.98	A	4.18	A	4.08	A

Table 6 presents respondents' evaluation of digital transformation in terms of digital technology. Both employees and customers agreed on all ten indicators, yielding an overall composite mean of 4.08. Customers (4.18) rated digital technology somewhat more favorably than employees (3.98), suggesting that customers perceive digital technology as having a stronger positive impact on their transactions than employees perceive in their day-to-day work. Among employees, the highest-rated indicator was the use of online tracking systems that improve service accuracy (4.22), and the lowest was online communication platforms that enhance coordination (3.85); customers gave the highest rating to digital tools that improve transparency (4.31) and the lowest to the same coordination item (3.98). Overall, respondents strongly perceive that digital technology—particularly online tracking, transparency, and accessibility features—has meaningfully improved postal service delivery at the Parañaque Central Post Office.

Table 7. Weighted Mean of the Respondents' Assessment of the Effect of Digital Transformation at PHLPost–Parañaque in Terms of Organizational Performance

Indicators	Employees		Customers		Over-all	
	WM	VI	WM	VI	WM	VI
1. Digital systems improve workflow efficiency.	4.11	A	3.98	A	4.04	A
2. Automation increases accuracy in postal records.	3.96	A	4.06	A	4.01	A
3. Online platforms help manage performance effectively.	3.98	A	4	A	3.99	A
4. Digitalization reduces delays in service delivery.	3.69	A	4.26	A	3.98	A
5. Technology improves internal communication.	3.89	A	4.1	A	4	A
6. Digital tools support faster decision-making.	3.85	A	4.03	A	3.94	A
7. Automation increases productivity among employees.	3.89	A	4.06	A	3.98	A
8. Electronic data management enhances record accuracy.	3.85	A	4.06	A	3.96	A
9. Digital monitoring ensures accountability in operations.	3.74	A	3.89	A	3.82	A
10. Digitalization contributes to PHLPost's growth and success.	3.89	A	3.92	A	3.91	A
Composite Mean	3.88	A	4.04	A	3.96	A

Table 7 shows respondents' assessment of digital transformation in terms of organizational performance, with an overall composite mean of 3.96 (Agree). As with digital technology, organizational performance was rated higher by customers (4.04) than by employees (3.88), suggesting that employees may be more sensitive to internal operational issues that customers do not directly encounter. Among employees, digital systems improving workflow efficiency was rated highest (4.11) and digital monitoring ensuring accountability lowest (3.74); among

customers, digitalization reducing service delays was rated highest (4.26) and digital monitoring ensuring accountability again lowest (3.89). Overall, digital transformation is perceived to have improved workflow efficiency, accuracy, and service delivery at PHLPost, with accountability monitoring remaining a comparatively weaker area for both respondent groups.

Table 8. Weighted Mean of the Respondents' Assessment of the Effect of Digital Transformation at PHLPost–Parañaque in Terms of Employee Engagement

Indicators	Employees		Customers		Over-all	
	WM	VI	WM	VI	WM	VI
1. Employees are motivated to learn digital tools.	4.11	A	4.19	A	4.15	A
2. Digital training enhances employee confidence.	4.19	A	4.16	A	4.18	A
3. Technology improves collaboration among staff.	4.02	A	4.29	A	4.16	A
4. Digital systems reduce repetitive tasks for employees.	3.87	A	4.3	A	4.08	A
5. Employees feel more productive using digital tools.	3.98	A	4.22	A	4.1	A
6. Staff adapt well to new digital innovations.	3.96	A	4.24	A	4.1	A
7. Employees support the ongoing digital transformation efforts.	4.09	A	4.14	A	4.12	A
8. Digital communication increases teamwork efficiency.	3.98	A	4.03	A	4.01	A
9. Automation helps employees focus on high-value tasks.	3.93	A	4.1	A	4.02	A
10. Digital tools make employees' work easier and more satisfying.	4.09	A	3.98	A	4.04	A
Composite Mean	4.02	A	4.16	A	4.09	A

Table 8 presents respondents' assessment of digital transformation's influence on employee engagement, which received the highest overall composite mean (4.09) of the four dimensions assessed. As in the preceding tables, customers rated this dimension more favorably (4.16) than employees themselves (4.02). Among employees, digital training enhancing confidence was rated highest (4.19) and digital systems reducing repetitive tasks lowest (3.87); customers rated the reduction of repetitive tasks highest (4.30) and digital tools making work easier and more satisfying lowest (3.98)—notably the inverse of the employees' own ranking. Overall, digital transformation appears to have had a strong, positive effect on employee motivation, confidence, and collaboration at PHLPPost, with employee engagement emerging as the most positively rated dimension in the study.

Table 9. Summary of the Respondents' Assessment of the Effect of Digital Transformation at PHLPPost–Parañaque

Indicators	Composite Mean	Verbal Interpretation
1. Digital Technology	4.08	Agree
2. Customer Satisfaction	4.1	Agree
3. Organizational Performance	3.96	Agree
4. Employee Engagement	4.09	Agree
Grand Mean	4.06	Agree

Table 9 presents respondents' overall assessment of digital transformation across the four indicators. Customer satisfaction received the highest composite mean (4.10), followed by employee engagement (4.09) and digital technology (4.08); organizational performance received the lowest composite mean (3.96) but remained favorably rated. All four indicators were interpreted as “Agree,” yielding a grand mean of 4.06, likewise interpreted as “Agree.” This indicates that respondents generally hold a strong, positive view of digital transformation's impact at PHLPPost, with the most pronounced gains observed in customer satisfaction and employee engagement, and comparatively more moderate gains in organizational performance.

Tests of Significant Difference in Respondents' Assessment

Table 10. ANOVA on the Respondents' Assessment of the Effect of Digital Transformation When Grouped According to Age

Dimension / Source of Variation	df	Sum of Squares	Mean Square	F-value	Sig.	Decision
Digital Technology						
Between Groups	3	1.78	0.59	0.43	0.6	Not Significant

Dimension / Source of Variation	df	Sum of Squares	Mean Square	F-value	Sig.	Decision
Within Groups	92	124.23	1.35			
Total	95	126.01				
Organizational Performance						
Between Groups	3	1.63	0.54	0.36	0.6	Not Significant
Within Groups	92	136.01	1.48			
Total	95	137.64				
Employee Engagement						
Between Groups	3	1.72	0.57	0.404	0.6	Not Significant
Within Groups	92	130.08	1.41			
Total	95	131.8				

Table 10 presents the ANOVA results testing whether respondents' evaluation of digital transformation differs significantly by age group across digital technology, organizational performance, and employee engagement. The F-values for all three dimensions (0.43, 0.36, and 0.404, respectively) fell well below the critical value, with significance levels of 0.60—well above the 0.05 alpha level. The null hypothesis was therefore accepted for all three dimensions, indicating that age does not produce statistically significant differences in respondents' perceptions of the effect of digital transformation on technology use, organizational performance, or employee engagement at the Parañaque Central Post Office. This finding is broadly consistent with research on a Chinese automobile manufacturer, which likewise found that age did not significantly affect employees' digital-transformation-related job satisfaction, although educational background and job position did (Li Zongnan, 2024).

The absence of a significant age effect suggests that PHLPst's digital initiatives are perceived as accessible and effective across generations, pointing to sound usability design and reducing the need for age-differentiated training or rollout plans. This consistency across age groups lends some support to the scalability of current digital efforts to other branches, though it should be interpreted with caution, given the uneven distribution of respondents across age brackets, which may limit statistical power to detect true differences.

Table 11. *t*-Test of Difference in the Respondents' Assessment of the Effect of Digital Transformation When Grouped According to Sex

Dimension / Source of Variation	df	Sum of Squares	Mean Square	t / p-value	Sig.	Decision
Digital Technology						
Between Groups	1	0.71	0.71	0.54	0.011	Significant
Within Groups	94	123.33	1.31			
Total	95	124.04				
Organizational Performance						
Between Groups	1	0.66	0.66	0.46	0.001	Significant
Within Groups	94	132.11	1.41			
Total	95	132.11				
Employee Engagement						
Between Groups	1	0.73	0.73	0.53	0.001	Significant
Within Groups	94	128.01	1.36			
Total	95	128.84				

Table 11 presents the *t*-test results examining whether respondents' assessment of digital transformation differs significantly when grouped by sex. All three dimensions were significant at $p < 0.05$ ($p = 0.011$ for digital technology; $p = 0.001$ for both organizational performance and employee engagement), leading to rejection of the null hypothesis in all three cases. This indicates that male and female respondents perceive the effects of digital transformation on postal operations, organizational efficiency, and employee involvement differently—possibly reflecting differences in roles, exposure, or interaction with digital systems in the course of their work. A comparable pattern was observed in a study of an Asian academic institution, where gender, together with other profile variables such as age and tenure, meaningfully shaped organizational satisfaction outcomes (Laguador et al., 2017).

The significant sex-based difference suggests that a uniform, one-size-fits-all digital transformation strategy may overlook real gaps in how male and female employees and customers experience change. PHLPst management

may therefore benefit from designing gender-responsive strategies—such as tailored training programs and user-centered system design—to help ensure that both groups benefit equally from ongoing and future digital initiatives. This result also points to a useful direction for further research to identify the specific roles or experiences driving this gender difference, particularly since it diverges from some comparable studies abroad that found no significant gender effect.

Table 12. ANOVA on the Respondents' Assessment of the Effect of Digital Transformation When Grouped According to Position

Dimension / Source of Variation	df	Sum of Squares	Mean Square	F-value	Sig.	Decision
Digital Technology						
Between Groups	1	0.61	0.61	0.38	0.6	Not Significant
Within Groups	94	148.01	1.57			
Total	95	148.62				
Organizational Performance						
Between Groups	1	0.57	0.57	0.35	0.601	Not Significant
Within Groups	94	151.03	1.61			
Total	95	151.6				
Employee Engagement						
Between Groups	1	0.54	0.54	0.31	0.6	Not Significant
Within Groups	94	160.01	1.7			
Total	95	160.55				

Table 12 presents the ANOVA results comparing respondents' assessment of digital transformation by position (postal employee vs. customer). All three dimensions produced F-values well below the critical value (0.38, 0.35, and 0.31, respectively), with significance levels of 0.60 and 0.601—both well above the 0.05 alpha level—leading

to acceptance of the null hypothesis in all three cases. This indicates that respondents' position does not significantly affect their perception of digital transformation's effect on technology use, organizational performance, or employee engagement; assessments are largely similar whether respondents interact with PHLPost's digital platforms as internal employees or as external customers. A comparable pattern of demographic-neutral technology perception was reported in a study of Egyptian hotels, where satisfaction with information technologies varied by nationality but not by age or gender (Abdel-Hamid et al., 2022).

The absence of a significant position effect suggests that the benefits of digitalization—in technology use, organizational performance, and employee engagement—are being realized relatively evenly and inclusively across both stakeholder groups. This consistency suggests that management need not develop position-specific strategies to address perception gaps between employees and customers, and can instead focus resources on the variables found to be significant—sex and length of service—while maintaining confidence that the digital transformation program is broadly understood and accepted across the organization's internal and external stakeholders.

Table 13. ANOVA on the Respondents' Assessment of the Effect of Digital Transformation When Grouped According to Length of Service

Dimension / Source of Variation	df	Sum of Squares	Mean Square	F-value	Sig.	Decision
Digital Technology						
Between Groups	3	1.88	0.63	0.66	0.001	Significant
Within Groups	92	88.11	0.96			
Total	95	89.99				
Organizational Performance						
Between Groups	3	1.78	0.59	0.79	0.001	Significant
Within Groups	92	68.33	0.74			
Total	95	70.11				
Employee Engagement						
Between Groups	3	1.9	0.63	0.75	0.0001	Significant

Dimension / Source of Variation	df	Sum of Squares	Mean Square	F-value	Sig.	Decision
Within Groups	92	76.13	0.83			
Total	95	78.03				

Table 13 presents the ANOVA results testing whether respondents' assessment of digital transformation differs significantly by length of service. Significance values for all three dimensions were well below the 0.05 threshold (0.001, 0.001, and 0.0001, respectively), leading to rejection of the null hypothesis in all cases. This indicates that the length of service significantly influences respondents' views on the effect of digital transformation on technology use, organizational efficiency, and employee engagement—staff with longer tenure appear to perceive these effects differently from those with shorter tenure, likely reflecting differences in exposure to legacy manual processes relative to newer digital systems. This finding aligns with research on local e-government transformation, which found that the length of work experience significantly moderated government employees' attitudes toward digital transformation (Batara et al., 2017).

This significant relationship suggests that PHLPPost management should consider tenure-sensitive digital transformation strategies, such as targeted refresher training for long-serving staff, structured mentoring or peer-support programs pairing newer and more tenured employees, and continuous change-management initiatives, rather than a uniform rollout, so that digital adoption is embraced consistently regardless of how long an employee has been with the organization.

Table 14. ANOVA on the Respondents' Assessment of the Effect of Digital Transformation When Grouped According to Educational Attainment

Dimension / Source of Variation	df	Sum of Squares	Mean Square	F-value	Sig.	Decision
Digital Technology						
Between Groups	3	1.36	0.45	0.35	0.6	Not Significant
Within Groups	92	120.01	1.3			
Total	95	121.37				
Organizational Performance						
Between Groups	3	1.21	0.4	0.28	0.6	Not Significant

Dimension / Source of Variation	df	Sum of Squares	Mean Square	F-value	Sig.	Decision
Within Groups	92	131.11	1.42			
Total	95	132.32				
Employee Engagement						
Between Groups	3	1.08	0.36	0.36	0.6	Not Significant
Within Groups	92	92.22	1			
Total	95	93.8				

Table 14 presents the ANOVA results for educational attainment. F-values for all three dimensions (0.35, 0.28, and 0.36, respectively) were well below the critical value, with significance levels of 0.60—well above the 0.05 alpha level—resulting in acceptance of the null hypothesis across all three dimensions. This indicates that educational attainment does not produce statistically significant differences in how respondents perceive the effects of digital transformation on technology use, organizational performance, or employee engagement: regardless of whether a respondent has a high-school, college, or graduate-level education, overall assessment of PHLPost’s digital initiatives remains largely consistent. This reinforces the broader pattern of demographic-neutral technology perception also observed for position (Table 12) and reported in the Egyptian hotel-industry study cited above (Abdel-Hamid et al., 2022).

This finding implies that PHLPost’s digital initiatives are perceived as accessible and effective regardless of formal education level, suggesting that the interfaces and processes involved are sufficiently intuitive to be understood and appreciated across educational backgrounds. Management, therefore, does not need education-differentiated training or communication strategies, and can instead treat sex and length of service—the two significant factors identified in this study—as more meaningful targets for tailored intervention than educational attainment.

Challenges Encountered in Digital Transformation

Table 15. Challenges Encountered by Respondents in the Digital Transformation of PHLPost–Parañaque (Digital Technology)

Challenges Encountered	Weighted Mean	Verbal Interpretation
1. Frequent system errors affect online tracking reliability.	3.8	Agree

Challenges Encountered	Weighted Mean	Verbal Interpretation
2. Limited access to stable internet slows digital operations.	3.74	Agree
3. Insufficient training limits employee use of digital tools.	3.8	Agree
4. High maintenance costs hinder digital upgrades.	3.73	Agree
5. Some employees prefer traditional methods over digital ones.	3.83	Agree
6. Technical issues delay online payments and transactions.	3.8	Agree
7. System downtime disrupts operational efficiency.	3.78	Agree
8. Lack of IT support affects service continuity.	3.8	Agree
9. Inconsistent digital policies cause confusion among staff.	3.85	Agree
10. Resistance to change slows digital transformation adoption.	3.8	Agree

Table 15 presents the challenges respondents encountered in PHLPost's digital transformation, with all ten items rated "Agree" and weighted means ranging from 3.73 to 3.85. The most pressing concern was inconsistent digital policies causing confusion among staff (3.85), while high maintenance costs hindering digital upgrades were rated lowest, though still notable (3.73). Other persistent concerns included frequent system errors affecting tracking reliability (3.80), lack of IT support (3.80), and insufficient training (3.80). Overall, while digital transformation has brought considerable benefits to PHLPost, its adoption continues to face a combination of technical (system errors, downtime, connectivity, maintenance costs), organizational (unclear policies, inadequate training, and IT support), and human factors (resistance to change, preference for traditional methods) that need to be addressed to realize its full potential.

Table 16. Challenges Encountered by Respondents in Digital Transformation (Organizational Performance)

Challenges Encountered	Weighted Mean	Verbal Interpretation
1. Technical issues disrupt operational flow.	3.91	Agree
2. Lack of resources delays system upgrades.	3.98	Agree
3. Limited employee skills hinder productivity.	3.83	Agree

Challenges Encountered	Weighted Mean	Verbal Interpretation
4. Inadequate system integration causes inefficiency.	3.78	Agree
5. High workload reduces employee accuracy.	3.85	Agree
6. Lack of coordination among departments causes delays.	3.8	Agree
7. Unstable systems affect data accuracy.	3.82	Agree
8. Limited management support impacts performance.	3.89	Agree
9. Slow IT response times delay problem resolution.	3.89	Agree
10. Outdated software limits organizational performance.	3.78	Agree

Table 16 shows the challenges respondents identified regarding organizational performance, with all ten items rated “Agree” and weighted means ranging from 3.78 to 3.98. Lack of resources delaying system upgrades was the most significant challenge (3.98), followed by technical issues disrupting operational flow (3.91). Inadequate system integration and outdated software tied for the lowest, though still notable, ratings (3.78 each). Other concerns included limited management support (3.89), slow IT response times (3.89), and high workload reducing employee accuracy (3.85). Overall, PHLPost’s organizational performance continues to be constrained by resource-related (funding, upgrades, legacy software), technical (system instability, poor integration), and managerial (limited support, coordination gaps) issues that must be addressed to fully realize the operational benefits of digital transformation.

Table 17. Challenges Encountered by Respondents in Digital Transformation (Employee Engagement)

Challenges Encountered	Weighted Mean	Verbal Interpretation
1. Lack of digital training affects employee confidence.	3.91	Agree
2. Some employees resist using new technologies.	3.76	Agree
3. Increased workload causes digital fatigue.	3.73	Agree
4. Technical issues create frustration among employees.	3.82	Agree
5. Unclear policies affect digital implementation.	3.73	Agree

Challenges Encountered	Weighted Mean	Verbal Interpretation
6. Inadequate incentives reduce motivation for digital adaptation.	3.78	Agree
7. Limited IT support discourages digital learning.	3.69	Agree
8. Employees struggle to balance digital and manual tasks.	3.62	Agree
9. Lack of leadership support lowers engagement in digital programs.	3.64	Agree
10. Rapid technological change causes stress among employees.	3.6	Agree

Table 17 shows the challenges respondents identified regarding employee engagement, with all ten items rated “Agree” and weighted means ranging from 3.60 to 3.91. The most significant challenge was the lack of digital training affecting employee confidence (3.91), followed by technical issues causing frustration (3.82); rapid technological change causing employee stress was rated lowest, though still significant (3.60). Other concerns included employees’ difficulty balancing digital and manual tasks (3.62), limited leadership support (3.64), resistance to new technologies (3.76), and limited IT support discouraging digital learning (3.69). Overall, deficiencies in training and support, together with human factors such as resistance to change, fatigue, and stress, significantly impede employee engagement in PHLPost’s digital transformation—suggesting that strengthening training programs, incentive schemes, and leadership support would be pivotal to improving employees’ confidence and engagement with digital tools.

Proposed Management Enhancement Plan

Table 18. Proposed Management Enhancement Plan to Strengthen Digital Transformation at PHLPost–Parañaque

Key Result Area	Objectives	Strategies / Activities	Persons Involved	Time Frame
Organizational Performance	To strengthen operational performance through digital transformation initiatives.	1. Introduce digital performance-monitoring systems. 2. Automate reporting and documentation processes. 3. Establish key performance indicators (KPIs) linked to digital operations. 4. Conduct periodic performance evaluation using digital dashboards.	Postmaster, Admin Officers, HR Personnel, IT Staff	6–12 months

Key Result Area	Objectives	Strategies / Activities	Persons Involved	Time Frame
Digital Technology	To enhance the utilization of digital technologies in postal operations.	1. Upgrade existing postal information systems and tracking platforms. 2. Conduct regular ICT training for employees on digital tools and automation systems. 3. Implement digital queue management and online service-request systems. 4. Improve cybersecurity and data-management protocols.	Postmaster, IT Personnel, System Administrators, Postal Staff	6–12 months
Employee Engagement	To enhance employee participation and motivation in digital transformation initiatives.	1. Conduct training workshops on digital competencies. 2. Establish employee recognition programs for innovation in digital service. 3. Encourage employee participation in digital process-improvement programs. 4. Provide internal communication platforms for collaboration.	HR Department, Postmaster, Employees, IT Staff	6–12 months
Customer Satisfaction	To improve the quality of service and ensure customer satisfaction through digital services.	1. Implement an online feedback and complaint-management system. 2. Develop SMS/email notification for parcel-tracking updates. 3. Provide digital customer-service kiosks in the post office. 4. Conduct customer-service training programs for employees.	Postmaster, Customer Service Personnel, IT Staff	6 months

Table 18 presents the proposed Management Enhancement Plan for PHLPost–Parañaque Central Post Office, organized around four key result areas. To strengthen organizational performance, the plan proposes digital performance monitoring, automated reporting, and KPI-linked evaluation dashboards, to be carried out by the



postmaster, admin officers, HR, and IT staff over 6–12 months. For digital technology, it recommends upgrading postal information and tracking systems, conducting regular ICT training, implementing digital queue management, and strengthening cybersecurity, within the same 6–12-month timeframe. To enhance employee engagement, it proposes digital-competency training, recognition programs, employee participation in process improvement, and internal collaboration platforms, led by HR and IT over 6–12 months. Finally, to improve customer satisfaction, it recommends an online feedback and complaint system, SMS/email tracking notifications, digital customer-service kiosks, and customer-service training, to be implemented within a shorter six-month period. The plan offers a comprehensive, area-specific roadmap that directly addresses the challenges identified in Tables 15–17, aimed at strengthening both the technological infrastructure and the human and organizational readiness needed to sustain PHLPPost’s digital transformation.



Conclusion

This study assessed the effect of digital transformation on the operations and performance of the Philippine Postal Corporation (PHLPost) at the Parañaque Central Post Office, as perceived by 96 respondents comprising postal employees and customers. The findings indicate that digital transformation has had a generally positive effect on the institution, improving service accuracy, workflow efficiency, accessibility, employee engagement, and overall organizational performance. Respondents specifically attributed faster transactions, improved staff collaboration, minimized manual errors, and enhanced operational transparency to digital initiatives such as electronic payment systems, online tracking, and automated processes, with all four assessed dimensions rated “Agree” and an overall grand mean of 4.06.

Certain demographic factors shaped how respondents evaluated digital transformation, while others did not. Statistical testing revealed no significant differences in perception across age, position, or educational attainment, indicating a consistent perception of PHLPost’s digital initiatives among these groups. Sex and length of service, however, were significant differentiators, suggesting that gender-based role differences and differential exposure to legacy versus digital systems meaningfully shape how digital transformation is experienced within the organization.

At the same time, the study found that digital transformation at PHLPost continues to be hindered by ongoing issues such as frequent system errors, limited IT support, inadequate employee training, resistance to change, unclear digital policies, and high maintenance costs. These barriers are consistent with those identified in related local and international literature and imply that technological adoption alone is not sufficient without corresponding investment in human capital and organizational support systems.

Taken together, these findings support the view that digital transformation, when implemented well and backed by adequate support, can contribute positively to postal service delivery, organizational effectiveness, and employee engagement. Its full potential, however, will only be realized through continued investment in employee training, infrastructure upgrades, clear and consistent digital policies, and strong management support—particularly strategies sensitive to gender- and tenure-based differences in perception—so that PHLPost’s digital transformation efforts remain inclusive, resilient, and sustainable over the long term.

Recommendations

Based on the findings and conclusions of this study, the following are recommended:

1. PHLPost management should sustain and expand continuous digital-skills training for employees, with particular attention to closing the gap in comfort and proficiency associated with length of service, as identified in Table 13.
2. Management should invest in IT infrastructure upgrades and dedicated technical support to reduce the frequent system errors, downtime, and connectivity issues identified as leading challenges in Tables 15 and 16.
3. Clear, consistent, and well-communicated digital policies should be developed and disseminated to reduce the confusion among staff identified as the top challenge in Table 15.
4. Gender-responsive strategies—such as tailored training content and user-centered system design—should be explored to address the significant difference in perception by sex found in Table 11.
5. Customer-facing digital services (online tracking, feedback and complaint management, SMS/email notifications, and service kiosks) should continue to be expanded, given the consistently high ratings customer satisfaction and digital technology received from customer-respondents.



6. The proposed management enhancement plan (Table 18) should be adopted and monitored through periodic evaluation, using the key result areas, strategies, and timeframes identified as a working roadmap.
7. Future research should extend this study to other PHLPost branches or regions to test the generalizability of these findings, and could incorporate qualitative methods to further explore the drivers of the sex- and tenure-based differences identified here.



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