



The Impact of Upskilling and Reskilling of Government Employees on Modern Public Services Through Adaptability

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ABSTRAK

Transformasi digital dan perubahan lingkungan kerja di sektor publik menuntut aparatur pemerintah memiliki kompetensi yang adaptif, inovatif dan responsif terhadap kebutuhan masyarakat. Dalam pelayanan publik modern, kualitas SDM tidak hanya ditentukan oleh kualifikasi formal, tetapi juga kemampuan upskilling dan reskilling. Penelitian ini dilatarbelakangi oleh masih adanya kesenjangan kompetensi akibat perkembangan teknologi dan perubahan birokrasi yang cepat, yang berpotensi menurunkan efektivitas pelayanan publik. Penelitian ini bertujuan menganalisis pengaruh upskilling dan reskilling terhadap pelayanan publik modern dengan kemampuan beradaptasi sebagai variabel mediasi. Objek penelitian adalah Badan Pengelolaan Keuangan dan Pendapatan Daerah Kabupaten Pamekasan dengan populasi 113 pegawai dan sampel 88 responden yang dipilih menggunakan probability sampling. Penelitian menggunakan pendekatan kuantitatif asosiatif melalui observasi, wawancara, dan kuesioner. Analisis data dilakukan menggunakan SEM-PLS melalui SmartPLS. Hasil penelitian menunjukkan bahwa kemampuan beradaptasi memediasi pengaruh reskilling terhadap pelayanan publik modern, namun tidak memediasi pengaruh upskilling. Secara langsung, upskilling dan kemampuan beradaptasi berpengaruh positif dan signifikan terhadap pelayanan publik modern, sedangkan reskilling tidak berpengaruh signifikan. Selain itu, upskilling tidak berpengaruh signifikan terhadap kemampuan beradaptasi sedangkan reskilling berpengaruh signifikan. Temuan ini menunjukkan bahwa peningkatan kualitas pelayanan publik modern memerlukan penguatan reskilling dan kemampuan adaptasi pegawai.

Kata Kunci: Digitalisasi; Upskilling; Reskilling; Pelayanan; Adaptasi.

ABSTRACT

Digital transformation and changes in the public sector work environment require government officials to have adaptive, innovative and responsive competencies to meet the needs of the community. In modern public services, the quality of human resources is not only determined by formal qualifications, but also by upskilling and reskilling capabilities. This research is motivated by the persistence of competency gaps due to rapid technological developments and bureaucratic changes, which have the potential to reduce the effectiveness of public services. This study aims to analyze the effect of upskilling and reskilling on modern public services with adaptability as a mediating variable. The object of the study was the Regional Financial and Revenue Management Agency of Pamekasan Regency with a population of 113 employees and a sample of 88 respondents selected using probability sampling. The study used an associative quantitative approach through observation, interviews, and questionnaires. Data analysis was conducted using SEM-PLS through SmartPLS. The results showed that adaptability mediated the effect of reskilling on modern public services, but did not mediate the effect of upskilling. Directly, upskilling and adaptability had a positive and significant effect on modern public services, while reskilling had no significant effect. Furthermore, upskilling did not significantly impact adaptability while reskilling did. This finding suggests that improving the quality of modern public services requires strengthening employee reskilling and adaptability.

Keywords: Digitalization; Upskilling; Reskilling; Service; Adaptation.

INTRODUCTION

Major changes in the global environment from the acceleration of digital technology to socio-economic dynamics are forcing public bureaucracies to move faster and be more flexible in adapting. Citizens are no longer satisfied with merely efficient and accurate services; they demand services that are responsive, transparent, and truly aligned with their needs. In the era of Industrial Revolution 4.0 and Society 5.0, government success is largely determined by the ability of government officials to adapt to evolving technological developments and digital work models (OECD, 2023).

Efforts to improve civil servant competency in the digital era also emphasize the importance of continuous skills renewal, especially for regional-level officials who are at the forefront of public service (Herwanto et al., 2024). However, various studies indicate that competency challenges remain significant. Many civil servants experience skill mismatch, a mismatch between their skills and actual job demands (Putri & Febriani, 2020). Even government training programs such as the Pre-Employment Card, while effective in improving technical skills, have not significantly changed the adaptive behavior of public sector employees (Rahmayani et al., 2025).

This phenomenon is not unique to Indonesia. Many countries face similar challenges, making continuous competency development and more flexible personnel policies key to enabling civil servants to adapt to service changes and innovation (OECD, 2023). International research shows that technological skills and digital literacy are positively related to public service innovation, as found in several regions in Italy (Bella & Santoro, 2024). Furthermore, in Bangladesh, upskilling and reskilling have been shown to increase workforce agility and employee adaptability, especially when supported by an organizational culture open to learning (Hasan et al., 2024). In the Indonesian context, adaptability is also a crucial element. A study on adaptive policy in public service innovation in Yogyakarta showed that an adaptive mindset “the ability to anticipate change, re-evaluate, and think across perspectives” is the foundation for successful implementation of innovative services (Syahputra, 2023). Furthermore, research on the digital skills gap among civil servants revealed that unequal digital literacy remains a barrier to effective e-government implementation (Silitonga, 2023).

Given these findings, this research is expected to provide a useful empirical model for policymakers in designing strategies to increase civil service capacity that better align with the demands of the digital era. The focus is not only on improving technical competence but also on strengthening bureaucratic adaptability so that public services can be more modern, efficient, and oriented towards public satisfaction. Based on this background, this study formulates three main questions: 1. how upskilling and reskilling affect the adaptability of civil servants in supporting modern public services; 2. to what extent adaptability contributes to improving service quality; and 3. Does adaptation play a role as a mediator in the relationship between upskilling and reskilling with modern public services?.

In the context of human resource development, upskilling is understood as a continuous learning process to deepen existing skills to remain relevant to technological developments and job requirements (Li, 2022). This practice is crucial for maintaining productivity amidst the rapid changes of the Industry 4.0 era. Indicators of upskilling include the suitability of training to tasks, opportunities to participate in training, the relevance of training outcomes, and leadership support. In contrast, reskilling is the process of learning new skills that allows employees to shift roles or adapt when jobs change due to automation or organizational transformation (Li, 2022). Given the potential for many jobs to change due to technology, reskilling is an important strategy for preparing employees for future demands. Reskilling indicators include readiness for task changes, the relevance of training to organizational

change, adaptability, and a supportive work environment. Ideally, these two processes should be part of an ongoing organizational learning culture.

Adaptability itself refers to an individual's capacity to adjust when faced with changing work conditions, unexpected situations, pressure, or new demands (Pulakos et al., 2000). Indicators of adaptability include: readiness to learn, cognitive flexibility, digital skills, emotional regulation, proactivity, and teamwork skills. Adaptability is essential to sustain performance in a dynamic and uncertain work environment. Work adaptability is also often associated with adaptive performance, namely flexible work behaviors that enable employees to adapt to change (Pelgrim et al., 2022; Tan & Antonio, 2022).

Meanwhile, modern public services are described as services transformed through digitalization, making them more responsive, citizen-centric, and data-driven (OECD, 2023). This transformation requires adaptive governance, robust digital infrastructure, and leadership capable of driving innovation. Recent research confirms that the integration of digital technology, open data, and digital human resource capabilities are the main foundations for creating effective, fast, and transparent public services (Ciancarini et al., 2024; Suri et al., 2024). Indicators of modern public services include service digitalization, citizen orientation, infrastructure, speed, transparency, accessibility, service quality and organizational agility.

METHOD

This research used a quantitative approach with an associative design, an approach aimed at understanding the strength of the relationships and influences between variables in a research model (Sugiyono, 2020). To obtain accurate data, the researchers combined several information collection techniques, including field observations, interviews with relevant employees, and questionnaire distribution to respondents. The research focused on the Regional Financial and Revenue Management Agency (BPKPD) of Pamekasan Regency. This agency has a total of 113 employees, consisting of 68 civil servants and 45 honorary employees. The number of respondents was determined using probability sampling techniques with the Slovin formula, resulting in a sample of 88 employees. All collected data was then analyzed using a statistical approach based on Structural Equation Modeling (SEM) through the SMART PLS application. This analysis included an evaluation of the outer model to assess the validity and reliability of the indicators, as well as an inner model to examine the relationships between variables within the research framework (Ghozali & Latan, 2015). A conceptual research model was also developed as a basis for analyzing the flow of influence and the relationships between the tested variables.

The hypothesis in this research is as follows :

H1 : The Impact of Upskilling on Modern Public Services

Upskilling allows employees to improve the technical and digital competencies needed in a modern workplace. These enhanced capabilities help employees complete work more quickly, accurately, and responsively, thereby improving the quality of public services. This finding is supported by research (Lopes & Sargento, 2023) and (Patel, 2023), which shows that skill enhancement contributes to the effectiveness of digital-based services.

H2 : The Impact of Reskilling on Modern Public Services

Reskilling helps employees acquire new competencies relevant to technological changes and organizational demands. These new capabilities enable employees to perform more adaptive work functions and support the transformation of public services. This relationship is reinforced by research (Bancin et al., 2023) and (Kasiami & Wulandari, 2026), which

emphasizes the importance of relearning in improving the performance of modern organizations.

H3 : The Effect of Upskilling on Adaptability

Upskilling programs not only improve technical skills but also expand employees' capacity to cope with job and technological changes. Employees with up-to-date skills tend to be more confident in adapting to new demands. This finding aligns with research (Peppler et al., 2020) and (Anjani & Alwi, 2025), which shows that increased competency contributes to individual adaptability.

H4 : The Effect of Reskilling on Adaptability

Reskilling requires individuals to learn new roles, knowledge, and skills, fostering flexibility in the face of organizational change. This learning process strengthens adaptability to a dynamic work environment. This relationship is supported by research (Pramudito et al., 2024) and (Saptarini & Mustika, 2023), which found that reskilling increases employee readiness for digital transformation.

H5 : The Influence of Adaptability on Modern Public Services

Adaptability is a crucial factor in modern public services because it enables employees to respond quickly to changing community needs, policies, and technology. Adaptive employees are better able to deliver effective and innovative services. This statement is supported by research (Ingsih et al., 2024) and (Andhika, 2025), which emphasizes the importance of adaptability in the success of digital service transformation.

H6 : The Mediating Role of Adaptation in the Relationship between Upskilling and Public Services

Upskilling skills improvement has the potential to result in better service delivery when employees are able to adapt these competencies to their daily work practices. Adaptability allows the transfer of training outcomes into tangible service performance. This argument is supported (Davis, 2020) and (Cahyani, 2026), who emphasize the importance of adaptability as a connecting mechanism between competency and performance.

H7 : The Mediating Role of Adaptation in the Relationship between Reskilling and Public Services

Reskilling produces new competencies that may not directly impact service quality. This impact will be more optimal when employees are able to adapt to changes in work processes and the accompanying technology. Therefore, adaptability plays a crucial role in linking reskilling to modern public services. This finding is supported (Almahatma et al., 2025) and (Kaur & Kaur, 2021).

RESULT AND DISCUSSION

Outer Model

The validity test results show that all indicators in the research variables Upskilling (X1), Reskilling (X2), Modern Public Services (Y1), and Adaptability (Z1) have loading factor values between 0.71 and 0.92. These values have exceeded the minimum limit of 0.70, so it can be concluded that each indicator is able to adequately represent the measured construct. Variables X1 and X2 have very strong loadings (≥ 0.86), indicating that the employee learning and training aspects are well measured (Hair et al., 2019). Meanwhile, the indicators in variables Y1 and Z1 also show stable and strong consistency so that they are suitable for use in subsequent analyses.

Table 1. Outer Loading

	X1 (Upskilling)	X2 (Reskilling)	Y1 (Modern Public Services)	Z1 (Adaptability)
X1.1	0.877			
X1.2	0.860			
X1.3	0.902			
X1.4	0.764			
X2.1		0.874		
X2.2		0.909		
X2.3		0.898		
X2.4		0.751		
Y1.1			0.753	
Y1.2			0.810	
Y1.3			0.716	
Y1.4			0.739	
Y1.5			0.706	
Y1.6			0.751	
Y1.7			0.753	
Y1.8			0.727	
Z1.1				0.733
Z1.2				0.792
Z1.3				0.800
Z1.4				0.788
Z1.5				0.776
Z1.6				0.809

Source: Processed data

Table 2. Cronbach Alpha, Composite Reability dan AVE Test

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
X1 (Upskilling)	0.874	0.914	0.727
X2 (Reskilling)	0.883	0.919	0.740
Y1 (Modern Public Services)	0.886	0.909	0.555
Z1 (Adaptability)	0.875	0.905	0.614

Source: Processed data

In terms of reliability, all variables had Cronbach's Alpha values above 0.80 and Composite Reliability values above 0.90. This confirms that the research instrument is consistent and reliable in measuring its construct. Furthermore, all AVE values were above 0.50, indicating that each variable met the convergent validity criteria (Hair et al., 2019). Among these variables, Reskilling had the highest AVE value (0.740), indicating its indicator's ability to describe the construct more strongly than the other variables.

Table 3. HTMT Test

	X1 (Upskilling)	X2 (Reskilling)	Y1 (Modern Public Services)	Z1 (Adaptability)
X1 (Upskilling)				
X2 (Reskilling)	0.198			
Y1 (Modern Public Services)	0.350	0.103		
Z1 (Adaptability)	0.166	0.341	0.328	

Source: Processed data

Table 4. Fornell Lacker Test

	X1 (Upskilling)	X2 (Reskilling)	Y1 (Modern Public Services)	Z1 (Adaptability)
X1 (Upskilling)	0.852			
X2 (Reskilling)	0.171	0.860		
Y1 (Modern Public Services)	0.333	0.072	0.745	
Z1 (Adaptability)	-0.096	-0.319	0.297	0.783

Source: Processed data

Discriminant validity testing using HTMT also showed good results. All HTMT values ranged from 0.103 to 0.350, well below the 0.85 threshold. This indicates no overlap between variables, indicating that each construct stands conceptually independently. These results were reinforced by the Fornell-Larcker test, which showed that the square root of the AVE for each construct was greater than all correlations between variables in the model. Thus, the model demonstrated strong discriminant validity.

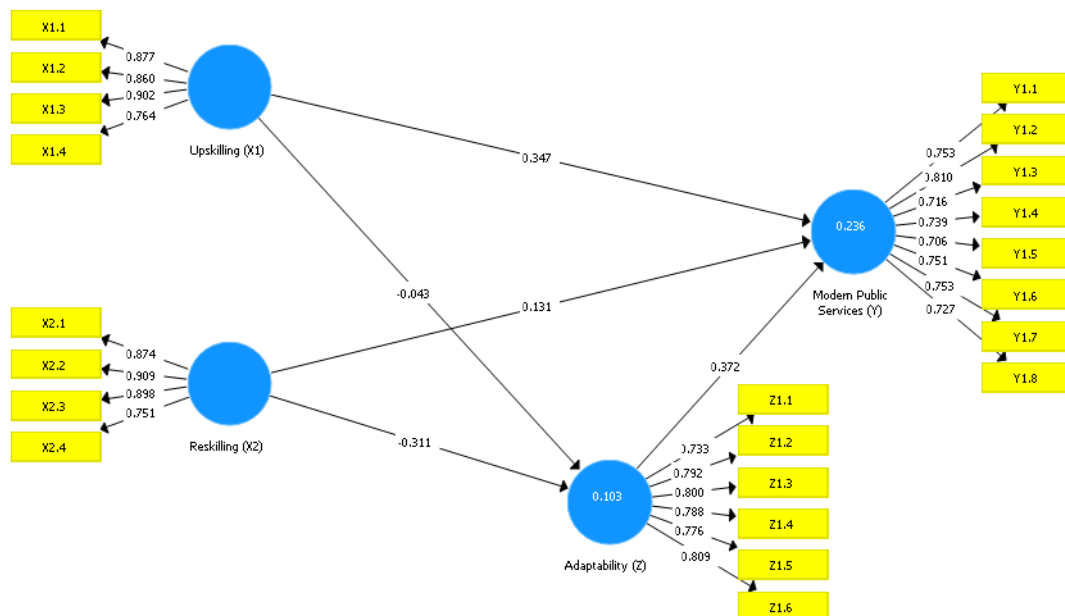


Figure 1. Outer Model

Inner Model

Furthermore, the R-square test results provide an overview of how much the independent variables explain the dependent variable. The Modern Public Service variable (Y1) has an R² value of 0.236, which means that Upskilling, Reskilling, and Adaptability are able to

explain 23.6% of the variation in service quality. This category is included in weak-moderate in social research but remains informative. For the Adaptability variable (Z1), the R² value of 0.103 indicates that employee adaptability is only explained to a small extent by Upskilling and Reskilling, so other variables such as organizational culture, leadership, or motivation also play an important role

Table 5. R Square

	R Square	R Square Adjusted
Y1 (Modern Public Services)	0.236	0.208
Z1 (Adaptability)	0.103	0.082

Source: Processed data

Table 6. Model Fit

	Saturated Model	Estimated Model
SRMR	0.075	0.075

Source: Processed data

The research model also demonstrated good model fit, indicated by an SRMR value of 0.075, which is still below the threshold of 0.08. This indicates that the structural model fits the empirical data and can be used to explain the relationships between variables.

Specific Indirect Effect and Path Coefisients

Table 7. Specific Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
X1 (Upskilling) -> Y1 (Modern Public Services)	0.347	0.361	0.075	4.635	0.000
X1 (Upskilling) -> Z1 (Adaptability)	-0.043	-0.037	0.116	0.371	0.711
X2 (Reskilling) -> Y1 (Modern Public Services)	0.131	0.130	0.088	1.492	0.136
X2 (Reskilling) -> Z1 (Adaptability)	-0.311	-0.327	0.093	3.332	0.001
Z1 (Adaptability) -> Y1 (Modern Public Services)	0.372	0.388	0.087	4.284	0.000

Source: Processed data

The results of the direct effect test revealed several important findings. First, upskilling was shown to have a positive and significant impact on Modern Public Services ($p = 0.000$). The higher the improvement in employee skills, the better the service they produce. However, upskilling did not show a significant effect on Adaptability ($p = 0.711$), indicating that technical training alone is not sufficient to build employee adaptability.

In contrast, reskilling had no direct impact on service quality ($p = 0.136$), but showed a significant impact on employee adaptability ($p = 0.001$). This means that reskilling becomes more meaningful when employees are able to internalize new skills and adapt them to changes in the work environment. Furthermore, adaptability was shown to have a strong and significant impact on modern public services ($p = 0.000$), confirming that adaptation is a key factor in improving services.

Table 8. Path Coeffisients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
X1 (Upskilling) -> Z1 (Adaptability) -> Y1 (Modern Public Services)	-0.016	-0.015	0.046	0.345	0.730
X2 (Reskilling) -> Z1 (Adaptability) -> Y1 (Modern Public Services)	-0.116	-0.126	0.044	2.633	0.009

Source: Processed data

Testing for mediation effects confirmed these findings. Adaptation was not shown to be a mediator between upskilling and modern public services ($p = 0.730$). However, adaptation was a full mediator between reskilling and modern public services ($p = 0.009$). In other words, reskilling only impacts service quality when accompanied by strong employee adaptability.

Discussion

H1 : The Impact of Upskilling on Modern Public Services

The results of the study indicate that upskilling has a strong and significant direct impact on modern public services ($p = 0.000$). This finding illustrates that improvements in the technical capabilities of civil servants can be immediately reflected in the quality of the services they provide. In other words, training designed to improve job competencies remains an effective tool in driving service improvements, without requiring additional adaptation. These results align with previous research emphasizing the significant role of upskilling and reskilling in improving human resource competencies, particularly in the digital economy sector (Arini & Respatiningsih, 2024) and in strengthening employee agility and adaptability (Hasan et al., 2024). Thus, upskilling not only serves as a tool for adaptation but also has a direct impact on agency service output.

H2 : The Impact of Reskilling on Modern Public Services

Reskilling did not show a significant impact on public services ($p = 0.136$). This indicates that learning new skills alone is not sufficient to directly impact service quality. Reskilling only has an impact when supported by a conducive work environment, organizational structure, and learning culture. Several studies confirm that without institutional support, reskilling results tend to be limited (Li, 2022). Therefore, public organizations need to build a training ecosystem involving various stakeholders so that reskilling implementation can have a tangible impact on services (Arini & Respatiningsih, 2024). Reskilling must be integrated with organizational adaptation and culture for the transformation to be felt in public services.

H3 : The Effect of Upskilling on Adaptability

Upskilling did not significantly impact employee adaptability ($p = 0.711$). This finding suggests that technical training alone is insufficient to help employees adapt to technological changes and work dynamics. Adaptation requires more than just technical expertise it requires organizational cultural support, an inclusive learning climate, and ongoing mentoring (Farawowan, 2025). Other research also suggests that mentoring and training infrastructure are crucial for skills development to truly transform into adaptability (Masriadi et al., 2025; Winarni et al., 2024). Therefore, agencies need to incorporate adaptability into their upskilling program designs so that training can serve not only to improve technical competency but also as a catalyst for employee adaptation.

H4 : The Effect of Reskilling on Adaptability

Unlike upskilling, reskilling significantly impacts adaptability ($p = 0.001$). This suggests that the process of learning new skills makes employees better prepared for change and more flexible in carrying out their duties. Reskilling is a more effective pathway to building adaptability because it requires employees to step out of their comfort zones and adapt to structural or technological changes (Masriadi et al., 2025; Winarni et al., 2024). Previous research also confirms that reskilling plays a crucial role in improving workforce agility and employee adaptability (Hasan et al., 2024). Therefore, reskilling should be viewed not merely as technical training, but as a core strategy in developing adaptive employees who are ready for digital transformation.

H5 : The Influence of Adaptability on Modern Public Services

Adaptability has been shown to have a significant impact on the quality of modern public services ($p = 0.000$). This finding emphasizes that employees who are able to adapt to changes in technology, policies, and public expectations will more easily provide responsive and effective services. Global research on the digitalization of public institutions also demonstrates the importance of institutional flexibility for rapid public service transformation (Vrabie, 2022). With the increasing demands of the digital era, public organizations require human resources who are not only technically proficient but also mentally and behaviorally prepared to adapt to change (Li, 2022). Therefore, adaptability needs to be a primary focus in civil service human resource development.

H6 : The Mediating Role of Adaptation in the Relationship between Upskilling and Public Services

Adaptability was not proven to be a mediator in the relationship between upskilling and modern public services ($p = 0.730$). This means that improving technical skills is sufficient to have a direct effect on service quality without the need for additional adaptation. This situation can occur when the training provided is directly related to the employee's duties and functions and therefore can be applied immediately. However, several studies have shown that for optimal training effects, collaborative support and an organizational culture that allows adaptation to thrive are needed (Arini & Respatiningsih, 2024; Farawowan, 2025). Therefore, even if adaptation does not mediate this relationship, organizations still need to consider training designs that combine technical skills and adaptive capabilities.

H7 : The Mediating Role of Adaptation in the Relationship between Reskilling and Public Services

The analysis shows that adaptation plays a significant role as a mediator in the relationship between reskilling and modern public services ($p = 0.009$). This means that reskilling only impacts service quality if employees are able to internalize new skills and adapt to the accompanying changes. This finding aligns with various studies demonstrating that adaptation is a crucial foundation for successful digital transformation and organizational change (Masriadi et al., 2025; Winarni et al., 2024). Therefore, reskilling must be designed comprehensively, incorporating elements of adaptation development, such as change simulations, work culture mentoring, and strengthening a digital mindset. In this way, reskilling can have a tangible impact on improving public services.

CONCLUSION AND SUGGESTION**Conclusion**

The results of this study indicate that developing civil servant competencies through upskilling and reskilling plays a significant role in strengthening the quality of modern public services, but

their influence pathways operate differently. Upskilling has been shown to have a direct impact on improving the quality of public services. This means that when civil servants receive relevant technical training, it can immediately improve their work effectiveness. However, this increase in technical competency has not been able to develop employee adaptability, so upskilling does not form a mediating pathway through adaptation.

Conversely, reskilling does not directly improve the quality of public services. However, reskilling has a significant impact on employee adaptability. In other words, training that helps employees learn new skills will have a significant impact when their adaptability develops accordingly. This adaptability then becomes a determining factor in transforming reskilling into improved service quality. These findings also confirm that adaptability has a dominant influence on realizing modern public services and acts as a full mediator in the relationship between reskilling and service quality.

In general, research findings confirm that the quality of modern public services is influenced by the ability of officials to combine technical skills and adaptive flexibility. In the context of increasingly rapid changes in the work environment, the digitalization of administration, and increasing public demands for fast, transparent, and responsive services, adaptability is a strategic aspect that must be strengthened.

Suggestion and Implication

Recommendations for Government Agencies : 1. Strengthen Adaptation-Based Reskilling Programs. Because reskilling impacts through adaptation, training materials need to emphasize work flexibility, change management, digital literacy, and simulations of new technology use; 2. Design a More Targeted Upskilling Program. Given that upskilling directly impacts service delivery, training materials must be truly aligned with employees' daily work needs, particularly regarding the use of digital systems, service applications, and data processing; 3. Integrate Adaptability Measurement into Performance Evaluation. Adaptability should be used as a performance assessment indicator, not just a technical aspect. This is crucial for the sustainability of digital transformation; 4. Building a Work Environment that Supports Innovation. Adaptability doesn't just come from training, but develops through the work environment. Therefore, organizations need to create a work culture that values change, collaboration, and self-directed learning.

Recommendations for Further Research : 1. Adding moderating variables such as transformational leadership, digital organizational culture, or technology support can enrich the research model; 2. Using the Mixed-Methods Method to obtain a deeper understanding of the dynamics of employee adaptation; 3. Expanding the research location so that the findings can be generalized to various government organizational contexts.

Some of the implications of the results of this research include : 1. Theoretical Implications. This research reinforces the theory that improving public servant competency cannot be achieved solely through technical training but also requires adaptability as a crucial element in the transformation of modern public services. The mediation pathway of reskilling → adaptation → public service reinforces the organizational capability theory, which emphasizes that organizations need adaptive capacity to transform. The finding that upskilling has a direct impact without adaptation also broadens the understanding that training characteristics and the organizational context determine whether or not mediation processes emerge; 2. Practical Implications. Practically, government agencies need to design training programs that not only aim to improve technical skills but also to change mindsets, strengthen flexibility, and foster an organizational culture that is responsive to change. Furthermore, employee adaptability evaluation should be included as an indicator of training success. Organizations also need to provide resources, including retraining or recruiting new personnel, to ensure optimal service digitization.

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DAFTAR PUSTAKA

- Almahatma, V. L., Wardoyo, D. T. W., & Surjanti, J. (2025). The Influence of Organizational Change And Career Adaptability on Employee Performance Mediated By Job Satisfaction at The Regional Office of The Ministry of Human Rights of Central Java. *JOURNAL OF MANAGEMENT Small and Medium Enterprises (SME's)*, 18(3), 2–11.
- Andhika, L. R. (2025). Public Service Management : An Emerging Research Trend. *Borneo Administrator Journal*, 21(1), 61–74. <https://doi.org/10.24258/jba.v21i1.1581>
- Anjani, R., & Alwi, Z. R. (2025). Enhancing Civil Servant Performance Through Digital Literacy and Organizational Adaptability. *Procuratio: Journal of Management and Business*, 4(1), 56–65.
- Arini, A., & Respatiningsih, H. (2024). Upskilling and Reskilling in Improving Competence of Competitive Human Resources in the Era of Digital Economy. *Brilliant International Journal Of Management And Tourism (BIJMT)*, 4(1), 137–150. <https://doi.org/10.55606/bijmt.v4i1.2738>
- Bancin, B. B., Sabrina, R., Khair, H., Tirtayasa, S., & Tanjung, H. (2023). Influence competence, transformas digital and update skills on employee performance. *Economic Journal*, 12(1), 551–559.
- Bella, M. V. L. La, & Santoro, P. (2024). The Modernization of Public Administration: The Impact of Public Employment on Digital Innovation in Italy. *International Journal of Public Administration*, 47(3), 234–250. <https://doi.org/10.1080/01900692.2024.2346784>
- Cahyani, D. R. (2026). The Effect of Change-Oriented Leadership and Employee Adaptability on Employee Performance, with Readiness for Change as a Mediating Variable : A Study at the Financial Education and Training Agency. *Interdisciplinary Social Studies*, 5(2), 909–920.
- Ciancarini, P., Giancarlo, R., & Grimaudo, G. (2024). Digital Transformation In The Public Administrations: A Guided Tour For Computer Scientists. *IEEE Access*, 1(1), 99. <https://doi.org/10.1109/ACCESS.2024.3363075>
- Davis, J. (2020). *The Moderating Effect of Leadership Adaptability on the Relationship between Employee Adaptability and Job Performance*. San Jose State University San Jose State University.
- Farawowan, F. F. (2025). Upskilling and Reskilling : Adaptive Strategies For HR Management in Facing The Industrial Revolution 5 . 0. *Journal of Management Economics and Accounting : OIKONOMIA*, 2(4), 49–57. <https://doi.org/10.61942/oikonomia.v2i4.406>
- Ghozali, I., & Latan, H. (2015). *Partial Least Squares: Concepts, Techniques and*

Applications Using SmartPLS 3.0 Program. Badan Penerbit Undip.

- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*. Annabel Ainscow. Cengage, Andover. <https://www.amazon.com/Multivariate-Data-Analysis-Joseph-Hair/dp/0138132631>
- Hasan, M., Haque, M. A., Nishat, S. S., & Hossain, M. M. (2024). Upskilling and Reskilling in a Rapidly Changing Job Market: Strategies for Organizations to Maintain Workforce Agility and Adaptability. *European Journal of Business and Management Research*, 9(6), 118–126. <https://doi.org/10.24018/ejbmr.2024.9.6.2502>
- Herwanto, T. S., Rohmansyah, H., Daga, A. K., & Roflebabin, B. G. (2024). Civil Service Competence in the Digital Era: A Conceptual Framework. *Kebijakan : Jurnal Ilmu Administrasi*, 15(02), 201–209. <https://doi.org/10.23969/kebijakan.v15i02.6582>
- Ingsih, K., Astuti, S. D., & Riyanto, F. (2024). The Role of Digital Competence in Improving Service Quality and Public Service Performance. *South African Journal of Human Resource Management*, 22, 1–9. <https://doi.org/10.4102/sajhrm.v22i0.2689>
- Kasiami, S., & Wulandari, S. (2026). Improving Human Resource Capacity to Achieve Quality Public Services in the Education Sector. *International Journal of Innovative Inventions in Social Science and Humanities*, 3(1), 13–21. <https://doi.org/10.58806/ijiiissh.2026.v3i1n02>
- Kaur, H., & Kaur, R. (2021). Career adaptability and job outcomes: a moderated mediation model of proactivity and job content plateau in educational sector. *Higher Education Skills and Work-Based Learning*, 11(4), 929–945. <https://doi.org/10.1108/HESWBL-07-2020-0150>
- Li, L. (2022). Reskilling and Upskilling the Future - ready Workforce for Industry 4 . 0 and Beyond. *Information Systems Frontiers*. <https://doi.org/10.1007/s10796-022-10308-y>
- Lopes, A. S., & Sargento, A. (2023). Training in Digital Skills — The Perspective of Workers in Public Sector. *Sustainability Journal*, 15(10577), 1–18. <https://doi.org/10.3390/su151310577>
- Masriadi, Marhati, Jumiaty, Sahid, A., & Malik, S. (2025). Reskilling and Upskilling Strategies as the Key to Workforce Adaptation in the Era of Automation and AI. *Perspektif Journal*, 14(4), 700–708. <https://doi.org/10.31289/perspektif.v14i4.15910>
- OECD. (2023). *OECD SME and Entrepreneurship Outlook 2023*. https://www.oecd.org/en/publications/oecd-sme-and-entrepreneurship-outlook-2023_342b8564-en.html
- Patel, T. (2023). *Employee Training and Upskilling for Digital Roles for a SME Company in IT Sector* (Issue December). Metropolia University of Applied Sciences.
- Pelgrim, E., Hissink, E., Bus, L., & Schaaf, M. Van Der. (2022). Professionals' adaptive expertise and adaptive performance in educational and workplace settings : an overview of reviews. *Advances in Health Sciences Education*, 27, 1245–1263. <https://doi.org/10.1007/s10459-022-10190-y>
- Peppler, K., Huang, J., Richey, M. C., Ginda, M., Börner, K., & Hart, A. J. (2020). Key principles for workforce upskilling via online learning: a learning analytics study of a professional course in additive manufacturing. *Computer Science > Human-Computer Interaction*. <https://doi.org/10.48550/arXiv.2008.06610>
- Pramudito, D., Suharnomo, & Mahfudz. (2024). Agricultural and Resource Economics : International Scientific E-Journal Agricultural and Resource Economics : International Scientific E-Journal. *Agricultural and Resource Economics: International Scientific E-*

Journal, 10(2), 242–270.

- Pulakos, E. D., Arad, S., Donovan, M. A., & Plamondon, K. E. (2000). Adaptability in the workplace: development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85(4), 612–624. <https://doi.org/10.1037/0021-9010.85.4.612>
- Putri, A. K., & Febriani, R. E. (2020). Labor in Southeast Asia. *Convergence : The Journal of Economic Development*, 2(2), 133–149.
- Rahmayani, N. D., Hanifah, A. U., Hamiansyah, A. N., Rahman, M. F., & Salsabila, N. (2025). Analysis of the Effectiveness of Reskilling and Upskilling Programs in Addressing the Skills Gap in Indonesia. *Jurnal Ilmu Ekonomi, Manajemen Dan Bisnis*, 3(2), 59–69. <https://doi.org/10.30787/jiemi.v3i2.2031>
- Saptarini, N. I., & Mustika, M. D. (2023). Workforce Agility And Adaptive Performance In Government Institution : The Mediating Role of Work. *Journal of Management and Entrepreneurship*, 25(1), 55–62. <https://doi.org/10.9744/jmk.25.1.55-62>
- Silitonga, M. S. (2023). The Public Sector's Digital Skills Gap in Indonesia: The Challenges and Opportunities. *Jurnal Good Governance*, 19(1), 70–79. <https://doi.org/10.32834/gg.v19i1.585>
- Sugiyono. (2020). *Quantitative, Qualitative, and RD Research Methods*. Alfabeta.
- Suri, D. M., Amri, P., & Hildawati. (2024). Leadership and Institutional Design in Public Service Digitalization. *Jurnal Manajemen Pelayanan Publik*, 8(2), 447. <https://doi.org/10.24198/jmpp.v8i2.53807>
- Syahputra, N. K. (2023). *Adaptive Policy Dalam Inovasi Pelayanan Publik : Studi Kasus Mal Pelayanan Publik Di Kota Yogyakarta*. Universitas Muhammadiyah Yogyakarta.
- Tan, R., & Antonio, F. (2022). New insights on employee adaptive performance during the COVID-19 pandemic : Empirical evidence from Indonesia. *Journal of Entrepreneurship, Management and Innovation*, 18(2), 175–206. <https://doi.org/10.7341/20221826>
- Vrabie, C. (2022). *Smart-optimism, Uncovering the Resilience of Romanian City Halls in Online Service Delivery*. <https://doi.org/DOI:10.48550/arXiv.2410.15189>
- Winarni, E., Mujannah, S., Halik, A., & Pardosi, P. (2024). Reskilling and Upskilling : HR Adaptation Strategies to Digital Transformation in the Traditional Sector. *EKOMA : Jurnal Ekonomi, Manajemen, Akuntansi*, 4(1), 2747–2756.

