



Faculty of Cognitive Sciences and Human Development

**EXPLORING THE ACCEPTANCE OF NEW TECHNOLOGY AMONG
NONMANAGERIAL EMPLOYEES IN SARAWAK PUBLIC SECTOR**

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EXPLORING THE ACCEPTANCE OF NEW TECHNOLOGY AMONG NONMANAGERIAL EMPLOYEES IN SARAWAK PUBLIC SECTOR

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ABSTRACT

Digital transformation in the public sector continues to face challenges, particularly in ensuring that nonmanagerial employees are fully supported during the adoption of new technologies. Therefore, this study aims to raise awareness among public sector leadership about the realities faced by frontline employees during digital implementation, especially in public sector in Sarawak. This study explores the factors that influence technology acceptance, the challenges faced by employees, and the strategies needed to support them. Using a qualitative research approach and semi-structured interviews with seven nonmanagerial employees, this study provides valuable insights into the emotional, technical, and organizational barriers encountered during digital transformation. Key challenges identified include lack of structured training, limited digital infrastructure, emotional resistance, and the absence of consistent guidance. The study also highlights the employees' willingness to adapt, supported by self-learning and peer support. Suggested strategies include providing clear training programmes, mentorship systems, and inclusive digital policies that promote psychological safety and engagement. These findings are consistent with existing literature that emphasizes the importance of supportive leadership, emotionally intelligent communication, and employee-centered change management. The study holds significant implications for public sector organizations, policy makers, and future researchers, highlighting the need for inclusive planning, emotional readiness programmes, and long-term strategies that empower employees at all levels. This research contributes to building a more human-centered, sustainable, and inclusive approach to digital transformation in the public sector.

ABSTRAK

Transformasi digital dalam sektor awam terus berdepan pelbagai cabaran, khususnya dalam memastikan kakitangan bukan pengurusan mendapat sokongan sepenuhnya semasa proses penerapan teknologi baharu. Oleh itu, kajian ini bertujuan untuk meningkatkan kesedaran dalam kalangan kepimpinan sektor awam mengenai realiti yang dihadapi oleh kakitangan barisan hadapan semasa pelaksanaan inisiatif digital, terutamanya di sektor awam Sarawak. Kajian ini meneroka faktor-faktor yang mempengaruhi penerimaan teknologi, cabaran yang dihadapi oleh kakitangan, serta strategi yang diperlukan untuk menyokong mereka. Menggunakan pendekatan penyelidikan kualitatif dan temu bual separa berstruktur bersama tujuh orang kakitangan bukan pengurusan, kajian ini memberikan pandangan bermakna berkaitan halangan dari segi emosi, teknikal, dan organisasi yang timbul sepanjang proses transformasi digital. Antara cabaran utama yang dikenalpasti termasuklah kekurangan latihan yang berstruktur, infrastruktur digital yang terhad, rintangan emosi terhadap perubahan, serta ketiadaan panduan yang konsisten. Kajian ini turut menekankan kesediaan kakitangan untuk menyesuaikan diri, yang disokong oleh usaha pembelajaran sendiri dan sokongan rakan sekerja. Antara strategi yang dicadangkan termasuk penyediaan program latihan yang jelas, sistem bimbingan dan dasar digital yang inklusif serta menyokong keselamatan psikologi dan penglibatan aktif. Dapatan kajian ini selari dengan literatur sedia ada yang menekankan kepentingan kepimpinan yang menyokong, komunikasi yang berteraskan kecerdasan emosi, dan pengurusan perubahan yang berfokuskan kepada kakitangan. Kajian ini membawa implikasi penting kepada organisasi sektor awam, pembuat dasar, dan penyelidik masa hadapan, dengan menekankan keperluan kepada perancangan yang inklusif, program kesiapsiagaan emosi, dan strategi jangka panjang yang memperkasa kakitangan di semua peringkat. Kajian ini menyumbang ke arah pembangunan pendekatan transformasi digital sektor awam yang lebih berfokuskan manusia, mampan, dan inklusi

CHAPTER ONE

INTRODUCTION

1.0 Background of Study

The rapid advancement of technology has significantly impacted public sector organizations worldwide, including in Malaysia. This trend aligns with Malaysia's Madani Economy framework, which emphasizes sustainable, inclusive growth and prioritizes socioeconomic development through technology, innovation, and digitalization (Ministry of Economy, Malaysia, 2023). The framework seeks to build a prosperous, just society by ensuring that all citizens, including those in rural and developing regions, benefit from technological progress and digital transformation. In this regard, Sarawak's Post-COVID-19 Development Strategy (PCDS) 2030 echoes the Madani principles by promoting a high-income, resilient society through digital economy initiatives aimed at improving public services and increasing efficiency (Sarawak Government, 2021).

For Malaysia's public sector, particularly in regions like Sarawak, nonmanagerial employees play a vital role in implementing these digitalization efforts. However, the acceptance and effective use of new technologies by these employees are crucial to realizing the full potential of the Madani Economy framework and PCDS 2030 (Ramli et al., 2022). Nonmanagerial employees, who are often responsible for daily operations, may encounter challenges such as resistance to change, lack of familiarity with new systems, and insufficient training, which can impact technology adoption (Venkatesh et al., 2021).

Factors like perceived ease of use, usefulness, and organizational support influence workers' acceptance and readiness to adopt these technologies, and understanding these factors is essential for crafting effective strategies (Davis, 1989; Yusoff & Musa, 2023).

Nonmanagerial employees in the public sector often face additional challenges in adopting new technology due to limited access to training and resources. Cultural and structural barriers, such as routine-based roles and limited incentives for skill development, can also impact their engagement with new technology (Achievers, 2025; BCG, 2023). Employees' attitudes and acceptance levels are critical to operational efficiency and quality service delivery. Understanding how support staff perceive, adapt to, and engage with new technology is essential to improving operational efficiency and maximizing technology investments.

The role of nonmanagerial employees in the public sector is often underestimated, yet their contribution is critical to the seamless execution of digitalization initiatives. These employees serve as frontline operators, managing day-to-day processes that form the backbone of government services. Their ability to adapt to new technology not only impacts organizational efficiency but also influences the quality of service delivery to the public. Research indicates that when nonmanagerial employees feel confident in using technology and perceive its benefits, the overall effectiveness of digital initiatives improves significantly (Ali & Wahab, 2023). Conversely, low levels of engagement or resistance to technological change can lead to delays, inefficiencies, and underutilization of valuable resources.

Training and capacity-building are critical factors in fostering technology acceptance among nonmanagerial employees. A lack of adequate training is frequently cited as one of the primary reasons for low technology adoption rates in the public sector (Ahmad & Omar, 2021). Many nonmanagerial employees express apprehension about adapting to digital tools due to

insufficient opportunities to develop the required skills. Effective training programs that are practical, inclusive, and continuous can bridge this gap. Additionally, pairing these efforts with mentorship or peer support mechanisms has been shown to improve technology acceptance, as it creates a sense of community and shared learning among employees (Ali & Wahab, 2023). For Sarawak, these initiatives must also consider the state's unique geographic and infrastructural challenges to ensure accessibility for nonmanagerial employees in rural areas.

The shift toward digital transformation in Malaysia's public sector is closely tied to global trends emphasizing innovation and efficiency. Internationally, governments have recognized the role of technology in reducing administrative burdens, improving transparency, and enhancing public service delivery (Venkatesh et al., 2021). Malaysia's efforts to align with these trends have been encapsulated in initiatives like the Madani Economy framework, which emphasizes the use of technology as a tool for socioeconomic upliftment. For Sarawak, this global alignment is further localized under PCDS 2030, reflecting a unique combination of global standards and regional priorities. The integration of these frameworks highlights the need for nonmanagerial employees, often the backbone of operational efficiency, to adapt to global best practices while addressing local challenges.

Furthermore, fostering an inclusive digital culture is essential for ensuring the success of technology adoption initiatives. This involves not only providing adequate tools and resources but also creating an environment that encourages collaboration, innovation, and continuous learning. Leadership plays a pivotal role in this process, as supportive management can help mitigate resistance and build trust among employees during technological transitions (Lewin, 2020). Encouraging open communication and feedback can also help identify specific challenges faced by nonmanagerial employees, enabling organizations to tailor their strategies accordingly. By

aligning these efforts with national and regional development goals, Malaysia can create a more adaptive and resilient public sector workforce, capable of meeting the demands of an increasingly digitalized world.

1.1 Problem Statement

The Malaysian public sector is undergoing a period of rapid digital transformation, catalyzed by strategic frameworks such as the Madani Economy and Sarawak's Post-COVID-19 Development Strategy (PCDS) 2030, which prioritize technology-driven, inclusive growth (Ministry of Economy, Malaysia, 2023; Sarawak Government, 2021). These frameworks aim to enhance governmental operations, promote innovation, and drive economic development by adopting digital solutions across various sectors. The transformation seeks to improve service delivery, streamline bureaucratic processes, and increase overall efficiency by integrating advanced technologies such as artificial intelligence, cloud computing, and big data analytics. However, the success of such initiatives does not solely depend on the implementation of these technologies. Rather, it is crucial to recognize the importance of employee engagement and the acceptance of digital tools as essential components for successful adoption (Albrecht et al., 2015; Venkatesh et al., 2003). Without understanding how these technologies impact employees at all levels, particularly nonmanagerial employees, the intended benefits of digital transformation could be significantly undermined.

Digital transformation has become a cornerstone of Malaysia's development strategy, aimed at enhancing service delivery, improving efficiency, and fostering inclusive growth across industries. By adopting advanced technologies such as artificial intelligence (AI), cloud computing, and big data, organizations across both public and private sectors are striving to

modernize their operations. These technologies promise to automate repetitive tasks, streamline workflows, and provide data-driven insights for better decision-making. However, while the technological infrastructure is crucial, the human aspect of digital transformation is equally vital. Nonmanagerial employees, who are responsible for implementing these changes on the ground, play a pivotal role in ensuring the success of these initiatives. Their ability to adapt to and embrace these changes is key to realizing the full potential of Malaysia's digital transformation agenda.

The journey of digital transformation in Malaysia is not without its challenges, particularly when it comes to technology acceptance. Nonmanagerial employees often face a lack of adequate training and support, leaving them ill-prepared to handle the complexities of new systems (Ramli et al., 2022). Many organizations fail to provide the necessary resources or allocate sufficient time for employees to learn and adapt, resulting in frustration and disengagement. Additionally, the fear of job displacement due to automation further complicates the adoption process. Employees may perceive new technologies as a threat to their job security, leading to defensive attitudes and resistance (Ali et al., 2021). Moreover, poorly designed interfaces and overly complicated systems create usability barriers, making it difficult for employees to integrate digital tools into their daily workflows. Without addressing these challenges, organizations risk derailing their digital transformation efforts, causing delays, inefficiencies, or even outright failures (Hamid et al., 2020).

Nonmanagerial employees are the backbone of any organization, responsible for essential tasks such as managing public services, processing documents, and maintaining operational workflows. Their direct interaction with digital tools makes them critical to the success of transformation initiatives. Despite this, these employees are often overlooked during the planning and implementation phases of digital projects (Ali et al., 2021). Many organizations prioritize training for managerial staff while assuming that nonmanagerial employees will adapt to changes

with minimal support. This oversight leads to a lack of confidence, disengagement, and resistance among employees, which can significantly hinder the adoption process. To address this, organizations must adopt a more inclusive approach by providing comprehensive and hands-on training tailored to employees' skill levels. Simplifying technology interfaces and ensuring user-friendliness can reduce barriers to adoption, while fostering open communication can help alleviate fears about job displacement. By prioritizing the needs and contributions of nonmanagerial employees, Malaysia can create a more supportive environment for digital transformation, ensuring that it is not only technologically advanced but also equitable and sustainable.

1.2 Research Objectives

The research objectives consist of general objectives and specific objectives.

1.2.1 General Objective

This research aims to identify the factors and challenges influencing the acceptance of new technology among nonmanagerial employees in the public sector.

1.2.2 Specific Objectives

Below are the specific objectives of this study:

- i. To explore the willingness of the employee to accept and engage in these digital transformation initiatives.
- ii. To explore the challenges faced in implementing new technology among nonmanagerial employees in the public sector.
- iii. To identify effective strategies for reducing resistance to adoption of technology among nonmanagerial employees.

1.3 Research Question

The research questions in this study are consisting of general questions and specific questions.

1.3.1 General Research Questions

How can nonmanagerial employees in the public sector be supported to accept and engage with digital transformation initiatives effectively?

1.3.2 Specific Research Questions

- i. What is the willingness of employees to accept and engage in digital transformation initiatives?
- ii. What challenges do nonmanagerial employees in the public sector face when implementing new technology?
- iii. What are the effective strategies for reducing resistance to technology adoption among nonmanagerial employees?

1.4 Significance of the Study

This study is important for understanding and analyzing the factors that influence the acceptance of new technology among nonmanagerial employees in Sarawak's public sector. By focusing on the challenges these employees face, such as inadequate training and fear of job displacement, the study will provide valuable insights into their experiences and perceptions. The findings can help other researchers by offering contextual data on the barriers to technology adoption, the factors affecting engagement, and strategies to improve employee readiness in the

public sector. This research aims to fill existing knowledge gaps related to technology acceptance among nonmanagerial employees in the public sector.

Moreover, the study will contribute critical information about the challenges and effects of implementing new technology, particularly in Sarawak's public sector context. It will explore how nonmanagerial employees experience digital transformation and their perspectives on using new tools and systems in their daily roles. By investigating these aspects, the study seeks to understand their concerns, motivations, and suggestions for improving engagement with digital initiatives. This research will also shed light on effective strategies to enhance acceptance, making technology more accessible and less intimidating for employees.

The results of this study will be highly beneficial for public sector organizations, particularly Human Resources and management teams. The findings will help practitioners develop targeted training programs, create supportive work environments, and implement strategies to reduce resistance to technology adoption. By addressing these issues, the study aims to foster a more inclusive workforce, improve employee satisfaction, and boost overall efficiency in the public sector. Ultimately, the study's conclusions can serve as a guide for public sector leaders to better prepare employees for digital transformation, ensuring the successful implementation of technological advancements in Sarawak (Ramli et al., 2022; Ali et al., 2021).

1.5 Limitations of Study

This study has two main limitations that could affect its findings and overall comprehensiveness. First, the reliance on qualitative data collected through semi-structured interviews may lead to subjectivity in both the responses and their interpretation. Participants' answers could be influenced by personal biases, social desirability, or discomfort in discussing

sensitive challenges, potentially resulting in incomplete or skewed insights. Additionally, the subjective nature of qualitative research requires the researcher to analyze and interpret the data, which may inadvertently introduce their own biases or assumptions into the findings. While qualitative methods are valuable for exploring complex phenomena in depth, this limitation could impact the study's reliability and its ability to provide a fully objective understanding of the factors influencing technology acceptance.

Secondly, the qualitative approach demands significant time and effort for data collection and analysis, posing challenges related to time constraints. Semi-structured interviews require thorough preparation, careful execution, and detailed analysis to ensure the richness and accuracy of the data. However, a limited timeframe may restrict the depth of exploration, leaving insufficient opportunity to probe deeper into participants' responses or conduct follow-up interviews to clarify or expand on critical points. This constraint could result in missed opportunities to uncover nuanced perspectives or adapt to emerging themes during the research process. Consequently, the study may only partially capture the complex realities of technology acceptance among nonmanagerial employees, potentially leaving certain aspects unexplored.

1.6 Definition of Terms

In this research, there are two definitions of terms which are conceptual and operational.

1.6.1 Technology

Conceptual

Technology refers to the tools, systems, and methods developed through scientific knowledge to solve problems and enhance efficiency in various tasks. In the public sector,

this includes digital innovations such as artificial intelligence, cloud computing, and big data analytics aimed at transforming workflows and service delivery (Dwivedi et al., 2021).

Operational Definition

In this study, technology refers to digital tools and systems introduced to improve processes and service delivery in the Malaysian public sector.

1.6.2 Nonmanagerial Employees

Conceptual Definition

Nonmanagerial employees are individuals within an organization who perform operational, administrative, or technical tasks without holding supervisory or managerial responsibilities. They are essential to the daily functioning of the organization (McClean et al., 2020).

Operational Definition

In this study, nonmanagerial employees refer to public sector workers in Malaysia who are responsible for routine operational tasks and do not hold supervisory or managerial positions. These employees typically fall under various service classifications such as *Pentadbiran dan Sokongan*, *Keselamatan dan Pertahanan Awam*, *Perubatan dan Kesihatan*, and others, and are commonly designated under grades such as Gred N11 to N28, Gred KP11 to KP28, Gred U11 to U28, and equivalent categories. These grades reflect their non-executive status and are associated with roles like *Pembantu Tadbir (Perkeranian/Operasi)*, *Penghantar Notis*, *Pembantu Kesihatan Awam*, and *Pengawal Keselamatan*, among others.

1.6.3 Public Sector

Conceptual Definition

The public sector consists of government-controlled organizations and institutions that provide essential services to the public, funded and managed by the state. This includes various government departments and agencies responsible for implementing policies and delivering public services (Mergel et al., 2020).

Operational Definition

In this study, the public sector refers to government departments and agencies in Malaysia that provide public services and implement digital transformation initiatives.

1.7 Summary

An overview of the research on the factors and challenges influencing the acceptance of new technology among nonmanagerial employees in the Sarawak public sector is provided in this chapter. In addition, a comprehensive outline of the problem statement, research objectives, research questions, significance of the study, limitations of study and definitions of key terms are included. The next chapter will delve into the literature review, exploring relevant studies and theories related to digital transformation and technology adoption.

CHAPTER TWO

LITERATURE REVIEW

This chapter will focus on the relevant literature in related fields on the acceptance of new technology among nonmanagerial employees in public sector. This chapter will discuss issues related to this study, theory and model, previous research findings and a summary of this chapter.

2.1 Issues Related to Technology Acceptance

2.1.1 Technology Acceptance

Technology acceptance among nonmanagerial employees in the public sector is a critical factor influencing the success of digital transformation initiatives. These employees, who perform essential roles such as document processing, data entry, and frontline service delivery, often encounter significant challenges when adopting new technologies. A major issue is the lack of adequate training and support, which leaves employees ill-equipped to handle the complexity of new systems (Ramli et al., 2022; Ali et al., 2021). Unlike managerial staff, nonmanagerial employees are less likely to receive comprehensive training or access to resources that could ease their transition to digital tools. This knowledge gap often leads to frustration and reduced confidence, further impeding their willingness to engage with technological changes. Moreover, many nonmanagerial employees perceive automation and digital advancements as a threat to their job security, fostering defensive attitudes and resistance to change (Venkatesh & Davis, 2000; Hamid et al., 2020).

Structural and cultural barriers within public sector organizations also contribute to low levels of technology acceptance. Bureaucratic environments, characterized by rigid workflows and hierarchical decision-making processes, often exclude nonmanagerial employees from discussions about technology implementation (Kotter, 1996; Ramli et al., 2022). This lack of involvement leaves employees feeling disconnected from the changes and less motivated to embrace new systems. Furthermore, the routine-based nature of their roles and limited incentives for skill development can create a sense of inertia, where employees see little value in adopting unfamiliar technologies (Ali et al., 2021; Hamid et al., 2020). Poor communication regarding the purpose and benefits of these technologies exacerbates the issue, as employees may view the changes as disruptive rather than beneficial. These challenges highlight the critical role of nonmanagerial employees in digital transformation efforts and underscore the need to address their unique experiences and concerns for successful implementation.

2.1.2 Factors of Technology Acceptance

Nonmanagerial employees in the public sector accept new technology based on a combination of personal, organizational, and technological factors. Employee-related aspects, such as age, educational background, and technological proficiency, are particularly influential. Younger employees, who often have greater exposure to digital tools in their personal and academic lives, tend to adapt more quickly to workplace technologies (Dwivedi et al., 2021). Similarly, employees with higher educational attainment or previous experience with technology demonstrate greater confidence and willingness to adopt new systems. On the other hand, employees with limited digital skills may perceive new technology as overwhelming or irrelevant, creating barriers to acceptance. According to McClean et al. (2020), employees are more likely to accept technology when they believe it reduces workload and enhances job efficiency. This

suggests that personal attitudes and perceptions play a critical role in shaping technology adoption among nonmanagerial employees.

Technology-related factors are another significant determinant of acceptance in the public sector. Employees are more likely to embrace technologies that are user-friendly, intuitive, and compatible with existing systems and workflows. When new tools integrate seamlessly into their daily responsibilities, employees perceive the transition as less disruptive and more beneficial (Yusoff & Musa, 2023; Ramli et al., 2022). The concept of perceived usefulness, as outlined in the Technology Acceptance Model (TAM), underscores this point, suggesting that employees are more likely to adopt technology if they believe it improves their performance or helps achieve organizational objectives (Venkatesh et al., 2015). Conversely, overly complex or poorly designed systems can create resistance, as employees may struggle to see the value in investing time and effort to learn new technologies. Addressing these technology-related factors is crucial to fostering a positive attitude toward digital tools.

Organizational culture and management strategies also play a pivotal role in shaping technology acceptance among nonmanagerial employees. Transparent communication about the purpose and benefits of adopting new technology can reduce uncertainties and build trust among employees. For instance, when leaders provide clear explanations of how technology will improve workflows or enhance service delivery, employees are more likely to perceive the change as positive. Moreover, a supportive work environment that emphasizes collaboration and provides access to training resources can empower employees to engage with technology more confidently (Ramli et al., 2022; Achievers, 2025). Conversely, in environments where employees feel excluded from decision-making processes or unsupported during the implementation phase, resistance is more likely to emerge. Therefore, addressing organizational factors is just as essential as focusing

on employee- and technology-related aspects to ensure successful adoption and integration of new systems in the public sector.

2.1.3 Challenges of Technology Acceptance

Nonmanagerial employees in the public sector play a crucial role in the implementation of new technologies, yet they often face significant challenges in adapting to digital transformation. A prominent issue is the lack of adequate training and technical support. Many organizations underestimate the importance of providing role-specific training, leaving employees ill-prepared to handle new systems. Without proper guidance, these employees may struggle to understand the functionality and benefits of advanced tools, which can lead to frustration and disengagement (Ramli et al., 2022). This issue is exacerbated in public sector environments, where rigid bureaucratic structures and resource constraints often delay the implementation of comprehensive training programs. As a result, nonmanagerial employees may develop negative perceptions of technology, viewing it as a burden rather than an opportunity to enhance their work.

Another significant challenge is the fear of job displacement caused by automation and digital tools. Nonmanagerial employees often associate technological advancements with a potential loss of job security, leading to defensive attitudes and mistrust in organizational leadership. According to Ali et al. (2021), this fear is particularly prevalent among employees in repetitive or routine-based roles, where automation can replace human labor. Such concerns not only hinder individual acceptance of technology but can also create a ripple effect of resistance throughout the organization. Employees may perceive management's push for digital transformation as a threat rather than an initiative aimed at improving efficiency and productivity. This mistrust can result in a lack of engagement and active resistance, further complicating the successful implementation of new technologies.

Cultural and structural barriers within public sector organizations also contribute to the challenges faced by nonmanagerial employees. Bureaucratic hierarchies often limit these employees' involvement in decision-making processes, leaving them feeling excluded and undervalued (Kotter, 1996; Yusoff & Musa, 2023). When employees are not consulted or informed about the purpose of adopting new technologies, they may view the changes as irrelevant or disruptive to their established workflows. Additionally, the absence of incentives for skill development discourages employees from investing time and effort into learning new tools (Ramli et al., 2022). This issue is further compounded by the complexity of some digital systems, which can overwhelm employees and make the transition even more challenging. Addressing these barriers requires a deeper understanding of the unique experiences and concerns of nonmanagerial employees to ensure their successful integration into the digital transformation process.

These challenges highlight the critical role that organizational culture, communication, and support systems play in shaping technology acceptance among nonmanagerial employees. By acknowledging and addressing these difficulties, public sector organizations can create a more inclusive and supportive environment, paving the way for smoother transitions and more effective technology adoption. As Ramli et al. (2022) and Ali et al. (2021) suggest, a failure to overcome these barriers not only risks employee resistance but also jeopardizes the overall success of digital transformation initiatives.

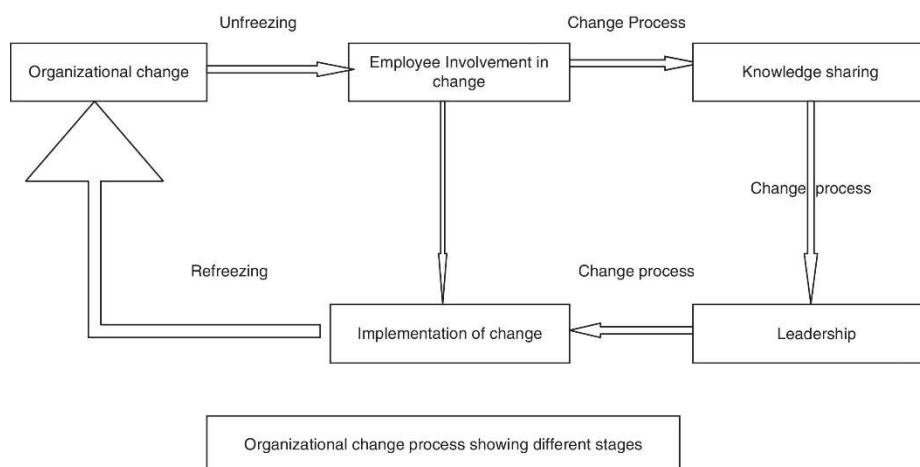
2.2 Theory and Model Related to The Study

This research is using Lewin's Planned Change Model to relate with the acceptance of new technology especially for nonmanagerial employees at the public sector.

2.2.1 Lewin's Planned Change Model

Lewin's Planned Change Model serves as the foundational framework for this study. Lewin's Planned Change Model (1947) aligns with the process of introducing new technology in the public sector by providing a framework to manage employee resistance and guide them through the stages of change. The adoption of new technology is intrinsically tied to established theoretical models, with Lewin's Planned Change Model offering a structured framework for navigating the complexities of attitude and behavior shifts among workers. This model, consisting of three stages—unfreezing, changing, and refreezing, is particularly relevant in addressing the challenges faced by nonmanagerial employees in the public sector. The model not only provides a step-by-step process to facilitate change but also emphasizes the need for leadership, communication, and sustained support. Its relevance becomes even more pronounced in the context of public sector digitalization efforts in Malaysia, which aim to align workforce capabilities with broader objectives like the Madani Economy and Sarawak's PCDS 2030 (Lewin, 2020; Ramli et al., 2022).

Figure 1: Lewin's Planned Change Model Framework



Note. Adapted from "Adoption of new technology in public sector organizations: Analyzing factors and trends," by ScienceDirect, 2016, ScienceDirect, (<https://www.sciencedirect.com/science/article/pii/S2444569X16300087>). Copyright 2016 by ScienceDirect.

The unfreezing stage is the foundation of change, focusing on preparing workers by disrupting the status quo and addressing resistance to innovation. This involves creating awareness of the need for change, which can be achieved through clear communication of the benefits of new technology and its alignment with organizational and national goals. For instance, in public sector contexts, fears related to job redundancy or lack of skills are common barriers that need to be addressed during this stage. Leadership plays a critical role by fostering a supportive environment where employees feel valued and informed. Studies have shown that transparent communication and participatory leadership are effective in reducing resistance and fostering a positive outlook toward change (Hashim & Noh, 2024). Additionally, establishing a sense of urgency and highlighting the benefits of digital transformation, such as improved efficiency and service quality, can help workers accept the necessity of adopting new technology (Venkatesh et al., 2021).

The changing stage represents the active phase of transition, where employees begin adopting new behaviors and attitudes. This stage is critical as nonmanagerial employees start to engage with new technological tools and integrate them into their workflows. Successful transition requires comprehensive, well-designed training programs that are tailored to the specific needs and learning preferences of the workers. Hands-on learning, peer mentoring, and practical demonstrations have been found to significantly boost confidence and competence in using technology (Ali & Wahab, 2023). Facilitating conditions, such as accessible resources, responsive IT support, and peer collaboration, are essential to minimize frustration and enhance engagement.

According to Venkatesh et al. (2021), the availability of these resources plays a vital role in overcoming resistance and ensuring a smoother adoption process.

The final stage, refreezing, focuses on solidifying new behaviors and ensuring the long-term sustainability of the changes. At this stage, the organization must embed the new technology into daily operations and foster a culture that normalizes its use. This can be achieved by implementing policies that encourage consistent use of technology, providing ongoing support, and recognizing employees who successfully adopt the changes. Reward systems and public acknowledgment can serve as powerful motivators for workers to maintain their commitment to the new processes (McLeod & MacDonell, 2022). Furthermore, periodic evaluations and feedback mechanisms ensure that any challenges faced during the refreezing stage are promptly addressed, reinforcing workers' confidence in their ability to use the technology effectively.

By integrating Lewin's Planned Change Model, this study provides a robust framework for understanding and facilitating the adoption of new technology among nonmanagerial employees in the public sector. The unfreezing, changing, and refreezing stages emphasize the need to address both individual and organizational factors to ensure a smooth transition. Effective change management strategies, supported by leadership and tailored training, not only foster positive attitudes but also ensure sustainable adoption. These strategies are critical in achieving Malaysia's digital transformation goals, aligning with the broader objectives of the Madani Economy and Sarawak's PCDS 2030, which aim to create a resilient, inclusive, and digitally empowered society (Yusoff & Musa, 2023; Sarawak Government, 2021).

2.3 Review of Past Studies

2.3.1 Acceptance of New Technology Among Nonmanagerial Employees

The adoption of new technology in public sector organizations has been widely studied, with researchers focusing on the challenges, facilitators, and outcomes of technology acceptance among employees. Studies consistently highlight the complexity of implementing digital transformation in the public sector, emphasizing the interplay between individual attitudes, organizational culture, and external policy frameworks. In particular, nonmanagerial employees, who form the backbone of daily operations, face unique challenges that necessitate tailored approaches to adoption of technology.

Research on technology acceptance models, such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), has provided valuable insights into factors influencing employee adoption of new systems. Ahmad and Omar (2021) found that perceived ease of use and perceived usefulness are pivotal in shaping workers' willingness to adopt technology. Their study in Malaysia's public sector revealed that employees who believe technology will enhance their productivity and reduce workload are more likely to embrace it. However, the study also noted that the lack of user-friendly interfaces and unclear benefits could hinder adoption, particularly among nonmanagerial employees with limited technical expertise.

Leadership commitment and organizational culture have also emerged as significant factors in past studies. A supportive organizational culture that values innovation and adaptability can foster positive attitudes toward change. Research by Hashim and Noh (2024) highlighted the importance of participatory leadership styles, where managers actively involve employees in

decision-making processes related to technology implementation. This approach not only builds trust but also reduces resistance to change, ensuring smoother transitions. Similarly, Ramli et al. (2022) emphasized that leadership commitment, including resource allocation and continuous communication, is essential for addressing employee concerns and aligning technological initiatives with organizational goals.

Training and development programs play a crucial role in enabling technology adoption. Studies have shown that inadequate training and resource accessibility are major barriers to successful implementation. Ali and Wahab (2023) examined the effectiveness of customized training programs tailored to employees' learning preferences in the Malaysian public sector. Their findings indicated that hands-on workshops, interactive sessions, and ongoing technical support significantly enhanced workers' confidence and competence in using new technologies. These programs also mitigated anxiety; a common issue identified in studies examining emotional barriers to adoption.

Emotional and psychological factors, such as stress, anxiety, and fear of job redundancy, have been highlighted in recent research as critical determinants of technology acceptance. Yusoff and Musa (2023) investigated the role of emotional support in facilitating technology adoption among public sector workers. They found that organizations that addressed workers' concerns about automation and job security through transparent communication and supportive programs were more successful in achieving buy-in. Additionally, McLeod and MacDonell (2022) emphasized the need for stress management initiatives and peer support systems to help workers navigate the emotional challenges associated with technological change.

Finally, studies have also underscored the importance of aligning national and regional development strategies with organizational objectives to facilitate technology adoption. For

example, research on Malaysia's Madani Economy and Sarawak's Post-COVID-19 Development Strategy (PCDS) 2030 has shown that aligning these frameworks with employee needs ensures greater coherence and effectiveness in implementation (Yusoff & Musa, 2023). These studies advocate for a holistic approach that considers both macro-level policy goals and micro-level workforce dynamics.

In conclusion, past studies reveal that successful technology adoption in the public sector requires a multidimensional approach that integrates leadership commitment, tailored training, emotional support, and alignment with broader development strategies. These findings provide a strong foundation for understanding the complexities of technology acceptance among nonmanagerial employees and inform the development of effective strategies to enhance their engagement in digital transformation efforts.

2.3.2 Strategies

Clear and transparent communication is fundamental in addressing employees' concerns and fostering a positive attitude toward new technology. According to Dwivedi et al. (2021), organizations that effectively explain the purpose, benefits, and impact of new technologies are more likely to gain employee buy-in. In their study, the authors emphasized the importance of tailoring communication to the specific needs and contexts of the workforce. In the Sarawak public sector, where diverse cultural and linguistic backgrounds exist, adopting multilingual communication strategies can further enhance understanding and acceptance. Other studies have echoed similar findings. For instance, McKnight et al. (2017) found that clear communication about the value of technology significantly reduced employee resistance in public sector organizations. This is particularly relevant for nonmanagerial employees, who may feel

disconnected from higher-level decision-making processes. Employee involvement in the decision-making process is another critical strategy for encouraging technology acceptance. Parker et al. (2019) highlighted that actively engaging employees by seeking their input and feedback fosters a sense of ownership. This involvement can manifest in various forms, such as focus groups, pilot programs, or participatory workshops. A study by Hee and Shanmugam (2019) on Malaysian public sector employees revealed that organizations that allowed employees to participate in technology-related discussions reported higher acceptance rates. Similarly, Venkatesh and Davis (2000) noted that the Technology Acceptance Model (TAM) underscores the importance of perceived ease of use and perceived usefulness, which can be enhanced through direct employee involvement.

In the Sarawak public sector, cultural and organizational contexts play a crucial role in shaping technology acceptance. Hofstede's cultural dimensions theory suggests that high power distance and collectivist tendencies, often prevalent in Asian contexts, may influence how nonmanagerial employees perceive technological changes (Hofstede, 2011). Adapting strategies to align with these cultural nuances, such as emphasizing collective benefits over individual gains, can be more effective. Next, comprehensive training programs are essential to equip employees with the skills and confidence needed to adopt new technologies. Studies by Abdullah et al. (2020) in the Malaysian public sector demonstrated that targeted training sessions significantly improved technology adoption rates among nonmanagerial staff. Additionally, ongoing support, such as help desks and peer mentoring, can alleviate anxiety and build long-term acceptance. Effective leadership and structured change management strategies are indispensable. Leaders who actively endorse and model the use of new technology can inspire employees to follow suit. Kotter's (1996) change management model suggests that creating a sense of urgency, forming a guiding coalition,

and generating short-term wins are critical steps in facilitating organizational change. In Sarawak, public sector leaders can adopt these principles to ensure smoother transitions to new technologies.

2.4 Summary

A discussion of acceptance of new technology, particularly against nonmanagerial employees, has been covered in this chapter. The study-related issues, study-related theory and model, and previous research findings have been extensively discussed in this chapter. The next chapter will explore the methodology used in this research.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter covers the methods used to collect and process the data. There are eight sections in this chapter. They include research design; sampling procedure; research instrument; authenticity and trustworthiness; ethics of the study; data collection procedure; data analysis procedure and summary.

3.1 Research Design

According to (Harwell, 2008, p. 148), knowing a study's research design is crucial since it conveys information about the main characteristics of the investigation, which can vary depending on whether the study uses mixed, qualitative, or quantitative approaches. It linked all the components of research together by identifying the steps that researchers must take to accomplish their goal. A reasonable conclusion for the research is achieved by the inquiry, plan, strategy, and structure of the research design.

This research will use a qualitative research methodology to explore the factors and strategies influencing the acceptance of new technology among nonmanagerial employees in the public sector. Identifying and understanding the experiences, perspectives, and opinions of those involved is the main goal of qualitative research techniques. In other words, qualitative research investigates reality, meaning, and purpose (Hiatt, 1986; Harwell, 2008, p. 148; Hesse-Biber, 2017). An activity which situates the observer in the world is qualitative research. This degree of qualitative research takes a naturalistic, interpretive stance towards the world, meaning that to make sense of or interpret events in terms of the meaning's individuals assign to them, qualitative

researchers investigate things in their natural environments (Denzin & Lincoln, 2005, p. 3; Harwell, 2008, p. 148).

In this study, semi-structured interview sessions will be conducted with informants. This approach allows informants to freely express their opinions, emotions, preferences, desires, and attitudes regarding various phenomena they encounter at work or in other organizational contexts (Dunwoodie et al., 2022). Qualitative interviews provide valuable insights into how individuals interpret their social experiences, unlike quantitative research, which primarily focuses on testing causal relationships (Denzin & Lincoln, 2000; Dunwoodie et al., 2022). Compared to surveys, which may constrain the flow of information, semi-structured interviews create a more relaxed and open environment where participants feel at ease to share their thoughts and experiences.

3.2 Sampling Procedure

This study will use a purposive sampling method to select informants. Purposive sampling is a non-probability sampling technique that strategically selects participants who possess specific characteristics or experiences relevant to the research topic, ensuring the collection of meaningful and rich data. In this case, the sample will include nonmanagerial employees working in the Land and Survey Department in Sarawak who can provide valuable insights into the acceptance of new technology. The research will focus on the Land and Survey Department in Sarawak as the location for data collection. Semi-structured interviews with key informants from the communities will form the basis of the assessment. Consistent with community readiness (CR) literature, it is recommended to conduct four to six key informant interviews to gather comprehensive data (Muellmann et al., 2021). Besides that, informants must have at least two years of work experience to ensure they possess sufficient practical knowledge and expertise. Additionally, they should be

proficient in using specific tools relevant to their field, including Geographic Information Systems (GIS), AutoCAD, the Sarawak Accounting System (SAS), CACTUS (Computer-Aided Control Technology Utilization Systems), and E-LASIS (Electronic Land Administration System). These criteria ensure the informants are experienced professionals with the necessary technical skills to provide meaningful insights.

3.3 Interview Guide

The primary data collection tool in this study will be an interview guide. The interview guide is written and conducted in both English and Malay. This will enable the participants to respond in any other language that is suitable for them in the interview session. 3 components are used as measuring tools in interview guides based on the objectives of the study which are factors in acceptance of new technology, challenges in acceptance of new technologies and the strategies for addressing the acceptance of new technologies. Therefore, Table 1 below shows the four sections of the interview guide that will be used for this study: Section A, Section B, Section C and Section D.

Table 1: Components in Interview Guide

Sections	Details
Section A	The questions in this section are based on the main objective of the research, which is to explore the willingness of the employee to accept and engage in these digital transformation initiatives.
Section B	The questions in this section are based on the main objective of the research, which is to explore the challenges faced in implementing new technology among nonmanagerial employees in the public sector.
Section C	The questions in this section are based on the main objective of the research, which is to give suggestions of strategies to address the acceptance of new technology among nonmanagerial employees in the public sector.
Section D	The participants' demographic data, including their age, position, professional growth stage, and educational background, is collected in this section.

3.4 Actual Study

Polkinghorne (1989), as cited in Creswell and Creswell (2018), recommends that researchers conduct interviews with a minimum of five and a maximum of twenty-five individuals who possess firsthand knowledge of the phenomenon under investigation. In line with this guideline, the study included five to ten informants employed in the Sarawak public sector, continuing until data saturation was achieved.

3.5 Ethics of the Study

Ethics refers to the professional standards of conduct communicated to participants before their full involvement in this research. Before beginning the interview session, the researcher will provide a clear explanation of the interview's purpose, the overarching research objectives, and seek consent to utilize the information shared by the participants. The researcher will explicitly inform the participants that all data collected during the interview will be used solely for research purposes and will be treated with the utmost confidentiality. Participants will have full autonomy to withdraw from their study at any point without any consequences. Once the participants provide their consent, they will be asked to sign an ethical agreement prepared by the researcher.

3.6 Data Collection Procedure

First, the researcher was going to get an approval letter from the faculty office before submitting it to the organization. Once the approval letter is approved, the researcher will submit the letter, consent form, and information sheet approved by the supervisor to the organization and await their answer. After obtaining approval from the organization, the researcher will schedule

interviews with informants. During the interview, all data or information provided by the respondents will be collected and documented. After the interview, the researcher will analyse the information that was collected.

3.7 Data Analysis Procedure

The first step involves organizing and preparing the data for analysis. This includes transcribing audio recordings of interviews and research questions. The researcher will listen to the recordings, catalog visual materials, and systematically categorize the acquired data based on their sources. The second step entails thoroughly reading and examining the data to gain an initial understanding. In this phase, the researcher will review and analyze the data collected. The third step is coding the data, which involves identifying statements or pieces of information relevant to the research topics and categorizing them into meaningful groups. The fourth step focuses on creating descriptions and themes. This involves analyzing the coded data to develop a comprehensive description and thematic patterns for interpretation. Finally, the fifth step is the presentation of descriptions and themes. In this phase, the qualitative narrative will integrate the developed descriptions and themes. The researcher will articulate the findings and draw conclusions based on the analysis, ensuring the study's objectives are addressed.

3.8 Summary

This chapter provides an overview of the methodology to conduct the research. This chapter also guides gathering information, data, and approaches that can be used before establishing the results in the study findings and discussions.

CHAPTER FOUR

FINDINGS

This chapter discusses the findings of the study. The study aims the acceptance of new technology among nonmanagerial employees in Sarawak public sector. All the data were collected from nonmanagerial employees that worked at Sarawak public sector to analyze. The demographic data for the informants was the first section of this chapter, which was then followed by an overview of the research findings and a chapter summary.

Employee identities are represented by codes in order to protect their personal characteristics and privacy. This chapter contains the following five codes: E1 represents the first employee, E2 the second, E3 the third, E4 the fourth, E5 the fifth, E6 the sixth and E7 the seventh. Additionally, quotes that indicate responses from employees are provided in *Italic*.

4.1 Informants' Background

During data collection, seven employees (identification of informants have been hidden) from the same public sector but in two different divisions were interviewed. Next, this research includes four sections which are factors in acceptance of new technology, challenges in acceptance of new technology and strategies for addressing the acceptance of new technology. Interviewees include employees who have been employed for a minimum of 2 years to a maximum of 35 years. In addition, the interviewees must be users of Geographic Information System (GIS), AutoCAD, Sarawak Accounting System (SAS), Correspondence And Case Tracking Unified System (CACTUS) and Electronic Land and Survey Information System (eLASIS).

Informant 1 is 56 years old woman with 33 years of work experience. She is married and has 5 children. She works as a financial administrative assistant at Administration section, and she had qualification of education which is Sijil Pelajaran Malaysia (SPM). Informant 2 is a 41 years old woman with 17 years of work experience. She is married and has 3 children. She work as a assistant administrative officer and she had qualification of education which is Bachelor's in Public Administration. Informant 3 is 29 years old man with 5 years of working experience. He is not married yet. He work as a assistant officer town and village planner at Planning section and he had qualification of education which is diploma in Surveying. Informant 4 is 35 years old woman with 11 years of working experience. She is married and has 2 children. She works as administrative assistant (Clerical/Operations) and she had qualification of education which is Sijil Pelajaran Malaysia (SPM). Informant 5 is 32 years old man with 8 years of working experience. He is married and has 2 children. He works as an assistant engineer and he had qualification of education which is Technical Certificate (AutoCAD & Civil Engineering). Informant 6 is 30 years old woman with 7 years of working experience. She is married but does not have any children yet. She work as an administrative assistant (Clerical/Operation) and she had qualification of education which is diploma in Office Management. Last but not least, informant 7 is 26 years old woman with 3 years of working experience. She is not married yet. She works as an administrative assistant (Clerical/Operations) and she had qualification of STPM (Pre-University Certificate).

Table 2 below displays the informants' demographics data.

Table 2: Informant's Demographic
Characteristic

Frequency

Gender	Female	5
	Male	2
Education	SPM	2
	STPM/Diploma	3
	Technical Certificate	1
	Degree	1
Age	18-30 years old	3
	30-60 years old	4
Tenure	2-5 years	2
	6-10 years	2
	More than 10 years	3
Status	Married	5
	Single	2

4.2 Research Findings

There are four sections covering in the research findings. The findings of experience of using new technology at workplace are presented in the first section. The findings of factors in acceptance of new technology among nonmanagerial employees are presented in the second section. The findings on challenges in acceptance of new technology are presented in the third section. The fourth section is the findings of strategies for addressing the acceptance of new technology.

4.2.1 Experience of Using New Technology at Workplace

The experience of engaging with new technology in consumer relations can be significantly affected when individuals, organizations, or governments treat people differently based on personal attributes such as gender, sexual orientation, or race rather than on their professional competencies. Such discriminatory practices may hinder individuals from accessing employment opportunities, earning promotions, or receiving equitable compensation (Mor Barak, 2008). The shift from manual systems to digital platforms has profoundly altered the daily operations and work experiences of non-managerial employees in the Land and Survey Department. While this transition undeniably brought about improvements in speed, accessibility, and efficiency, it also introduced a host of challenges, especially for long-serving staff who had grown accustomed to traditional work methods. For many informants, the experience was a double-edged sword: full of potential, yet fraught with uncertainty and self-imposed pressure.

One of the most consistent themes that emerged was the lack of structured support during the initial transition phase. Most employees encountered new technologies without any formal orientation or systematic training. This absence of guidance left many feeling unprepared and overwhelmed, forcing them to take ownership of their own learning in an often ad-hoc and reactive manner (Kirkwood & Price, 2014; Noe, Clarke, & Klein, 2014). For instance, E1, with over three decades of service, recalled this shift with a blend of nostalgia and resignation. She noted:

“Back then, everything was done manually, it took time but was less stressful. Now, everything is fast-paced, but we need strong ICT skills to cope.”- (E1)

Her reflection underscores not just the technical leap involved, but also the psychological shift required moving from a familiar, steady rhythm of manual work to the dynamic, sometimes chaotic pace of digital systems (Berg, Zukin, Jackson, & McCrory, 2018).

Other informants echoed similar sentiments, particularly those who were introduced to complex digital platforms such as AutoCAD, GIS, CACTUS, and E-LASIS. These were not intuitive systems, and without formal training modules, employees resorted to alternative learning methods. For example, E5 described his early experiences as intimidating:

“At the beginning, I was scared to use AutoCAD because I was not confident. There was no one teaching us formally. I just watched YouTube and experimented during real jobs.”- (E5)

This self-learning model, while resourceful, placed immense pressure on employees to succeed without a safety net. Mistakes carried real consequences, and learning was often done on-the-job, increasing anxiety and reducing room for experimentation (Tannenbaum, Beard, & McNall, 2011; van Deursen & van Dijk, 2014).

Interestingly, younger staff members such as E7 adapted more quickly, often leveraging peer support and informal knowledge-sharing networks. However, even they faced hurdles due to the lack of proper onboarding. E7 admitted:

“I never used E-LASIS before. I kept asking my colleagues how to do it. After a few times, I managed to get it, but it would have been faster with proper training.” – (E7)

This highlights a key issue while adaptability varied across age and experience, the burden of adaptation was universally shouldered by the employees themselves, regardless of their tech-savviness. Many reported that had there been a more structured approach, such as scheduled training sessions, user manuals, or even internal workshops, the transition would have been significantly less stressful (Salas, Tannenbaum, Kraiger, & Smith-Jentsch, 2012).

In essence, while the digital transformation at the workplace was necessary and brought undeniable benefits in terms of operational efficiency and productivity, the implementation lacked human-centric planning. The absence of proactive training and support mechanisms resulted in a patchwork of self-taught skills, peer coaching, and trial-and-error problem solving. This not only

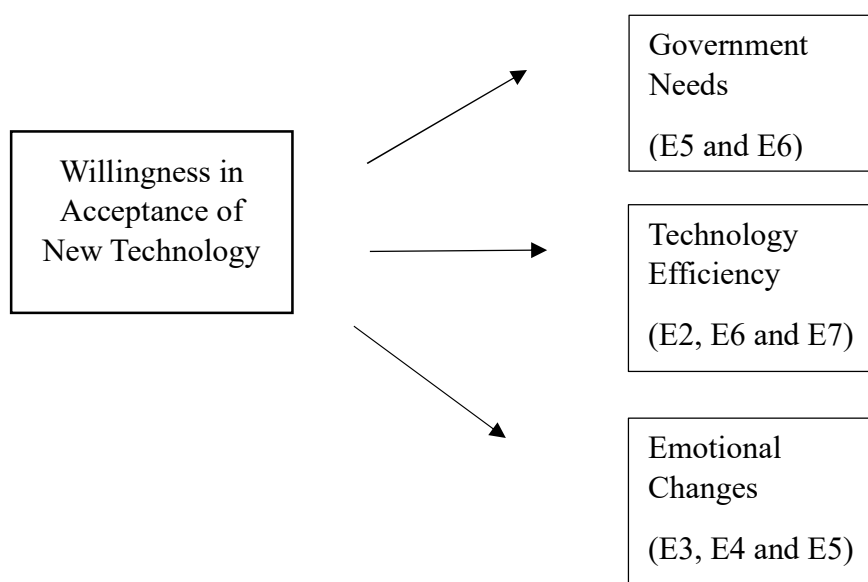
delayed the full realization of the technology's benefits but also led to stress, lowered confidence, and in some cases, resistance among employees (Venkatesh, Morris, Davis, & Davis, 2003).

The experience of these informants suggests that technology adoption is not merely a technical process, it is deeply human. Moving forward, organizations must recognize that the success of digital systems hinges not only on the tools themselves, but on how well people are equipped and supported to use them (Bélanger & Carter, 2008; Davis, 1989).

4.2.2 Willingness in Acceptance of New Technology

Based on findings on this research, there are three most important issues of the willingness to accept the new technology among nonmanagerial employees in the public sector. Such as, government needs, technology efficiency and emotional changes.

Figure 2: Framework of Willingness in Acceptance of New Technology



Theme 1: Government Needs

A dominant theme that surfaced across all interviews is the absence of formal digital training and the consequent reliance on self-learning and peer assistance. Every informant stated that they had not attended any official training programmes for systems such as AutoCAD, GIS, CACTUS (Correspondence and Case Tracking Unified System), E-LASIS, or SAS. Instead, their competence was acquired through trial and error, user manuals, and informal support from colleagues.

“I never attended any official training. Everything I know about CACTUS and E-LASIS came from manuals and watching how others do it.” (E6).

This form of digital adaptation highlights a resilient learning culture among non-managerial employees. It also suggests that the department’s approach to technology integration may assume a level of digital literacy that staff are not systematically supported to achieve. While informants expressed pride in their ability to adapt, the process was often described as slow, frustrating, and at times intimidating, especially for older or less tech-savvy employees.

“It was stressful at first. I was scared to make a mistake. But I had no choice but to explore the system on my own.” (E5)

This theme underscores the need for formalised, structured training programmes that do not merely distribute manuals but actively teach skills through real-case simulations and follow-up guidance.

Theme 2: Technology Efficiency

Three informants, which are E2, E6 and E7, highlighted that digital tools significantly improve their daily work processes, especially in terms of speed, organization, and confidence in managing tasks. As digitalization continues to reshape the public sector's administrative landscape, their insights reflect a broader trend where system usability and user adaptability directly influence work efficiency, even in the absence of formal training.

... I use CACTUS every day for most of my administrative work. It's now a part of my routine, from handling staff records, managing files, to processing leave applications. At first, I felt overwhelmed, but over time I became more confident. Now, I feel proud that I can fully utilize the system and manage my work faster and more systematically. (E2)

...CACTUS is an essential part of my daily job. From managing reports, tracking correspondences, to recording office documents, everything goes through the system. Although I didn't go through any structured training, I learned a lot by observing my seniors and referring to manuals. Now, I feel much more confident and capable. (E6)

... Yes, I use CACTUS daily for most of my work. I slowly learned by studying the manuals and learning from my teammates. Eventually, I became more skillful, and now I feel more efficient and satisfied in doing my tasks. (E7)

All three informants expressed that despite the lack of formal training, their confidence and efficiency increased through peer support, self-learning, and daily system usage. This shows how informal learning methods can still lead to notable improvements in performance and system adoption. Therefore, public sector organizations should not only focus on system implementation but also support user adaptability through accessible resources and collaborative learning environments.

Theme 3: Emotional Changes

Three informants, which are E3, E4 and E5, reflected on their emotional journeys in adapting to digital tools such as GIS, AutoCAD, E-LASIS, and CACTUS. Their experiences illustrate that digital transformation is not just a technical shift, but also an emotional one. Initially marked by feelings of nervousness, confusion, and frustration, each informant described how those emotions gradually transformed into confidence, pride, and improved job satisfaction as they became more proficient with the technologies.

... Honestly, I was nervous in the beginning because the software looked very complicated. But I enjoy challenges, so I took it as an opportunity to improve my skills... Now, I actually enjoy using the systems because they make my job more efficient and accurate. (E3)

... In the beginning, it was confusing. The system had many functions that I didn't understand. I was frustrated at first, but eventually, I got used to it. Now, I feel that it makes my work so much easier... and I don't have to deal with mountains of paperwork like before. (E4)

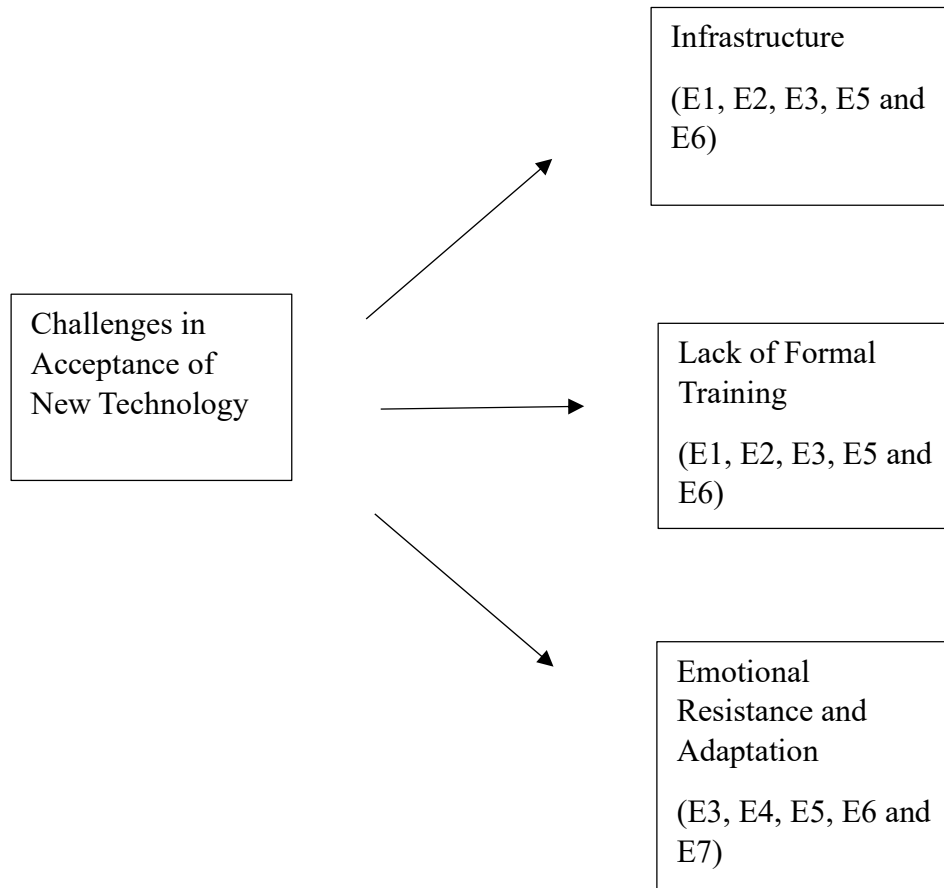
... At first, I was a bit lost, especially with complex software like AutoCAD and GIS. But I kept trying and learning. Now I'm very confident using these tools, and they've greatly improved the quality of my work. (E5)

All three informants experienced a similar emotional progression from initial anxiety and confusion to growing confidence and satisfaction. Their experiences highlight the importance of emotional intelligence, peer support, and personal initiative in navigating technological change. As such, digital transformation strategies should not only focus on system implementation but also consider the emotional well-being of users. Creating supportive environments that promote self-learning, peer guidance, and reassurance can make the journey smoother and more empowering for employees undergoing digital transitions.

4.2.3 Challenges in Acceptance of New Technology

Based on findings on this research, there are three most noticeable challenges in acceptance of new technology among nonmanagerial employees in the public sector such as infrastructure, lack of formal training and emotional resistance and adaptation.

Figure 3: Framework of Challenges in Acceptance of New Technology



Theme 1: Infrastructure

Several informants, which are E1, E2, E3, E5 and E6, highlighted ongoing infrastructure challenges that undermine the effectiveness of digital tools. While these systems are designed to enhance administrative efficiency and precision, issues related to system performance, internet stability, outdated hardware, and insufficient technical support continue to impact users' ability to work effectively.

... I often face internet issues and system lag, especially during peak hours. It really disrupts the workflow and makes it hard to focus, especially when I'm trying to get things done quickly. (E1)

... One of the main issues I face is the system slowing down, especially during peak hours when many users are logged in. Sometimes, CACTUS crashes unexpectedly, which forces me to repeat my work or wait until it recovers. This disrupts my flow and can be quite stressful, especially when I have deadlines. (E2)

... I occasionally experience network disruptions, which affect my ability to work with online systems like E-LASIS. Even minor bugs in the software can interrupt the entire planning workflow. It's frustrating when you've done hours of mapping work, and then the system lags or doesn't save properly. (E3)

... Yes, the tools and systems are in place, but when something goes wrong, the response time can be slow. For example, if there's a technical error, we have to wait for IT to respond. Faster troubleshooting would make the system more reliable. (E5)

... Sometimes we're not fully guided on how to use them efficiently. More tutorials or job aids would be helpful. The hardware is there, but it's the user support and training that's lacking. (E6)

These accounts reveal that despite the availability of digital systems, infrastructural weaknesses continue to pose barriers to productivity and user confidence. System crashes, lag and unreliable networks slow down task completion and affect morale, especially when users are under pressure. Additionally, the lack of responsive IT support and inadequate user guidance materials further widen the gap between system availability and actual usability. In short, the effectiveness of digital transformation is limited when basic infrastructure fails to support the operational demands of end-users. The informants' experiences highlight the urgent need for organizations to invest not just in digital tools, but also in the infrastructure that supports them. This includes upgrading hardware, improving internet stability, ensuring faster IT support response times, and providing clear, updated training resources to help users fully utilize the tools available to them.

Theme 2: Lack of Formal Training

All informants consistently highlighted the lack of formal training as a critical challenge in adapting to new digital systems. The absence of structured onboarding or instructional programs forced users to rely on self-learning and peer guidance, resulting in a fragmented and inconsistent learning experience. While some managed to cope through trial-and-error and supportive colleagues, others expressed ongoing uncertainty and stress due to the lack of proper institutional support.

... Lack of training made it hard to use the systems efficiently in the beginning. (E1)

... There was no official training, but I found the user manual very helpful. I also watched how my colleagues used the system. Their informal support showing me shortcuts or explaining how certain functions work made a big difference. (E2)

... We didn't get formal training, but thankfully, the technical manuals were clear enough to help me start. Also, having colleagues who were familiar with the system made it easier. If I got stuck, they'd walk me through it. (E3)

... There were no structured workshops or training sessions, so I relied on self-learning. I took time to read the instructions, try things out, and ask colleagues when I didn't understand something. Their step-by-step guidance was what really helped me gain confidence. (E4)

... Since I didn't have official training, I had to learn by doing. The software manuals and tutorials online were useful, and my peers were very generous with their time. (E5)

... No formal training was given. I learned through trial and error... my colleagues were always willing to help when I asked questions. (E6)

...Lack of hands-on practice reduced user confidence initially. (E7)

Although peer support and available manuals played a helpful role, the reliance on informal methods led to slower adaptation and feelings of uncertainty. This was especially evident among informants who were not as familiar with digital systems. These findings reflect core concepts

from adult learning theory, which emphasizes self-directed learning as a strength (Knowles, 1984), but they also expose its limitations when institutional guidance is absent. Furthermore, the reliance on peer mentoring aligns with Vygotsky's (1978) social development theory, which underscores the importance of collaborative learning. However, without formal scaffolding, users risk inconsistent skill development and reduced confidence, potentially hindering technology acceptance and long-term productivity (Bandura, 1997; Compeau & Higgins, 1995). In summary, the informants' experiences underline the urgent need for formal, hands-on training programs to complement system rollout. While informal learning has filled the void, it cannot replace the clarity, structure, and confidence that formal training provides. To fully realize the benefits of digital transformation, organizations must invest in systematic onboarding, user manuals tailored to real-world scenarios, and ongoing support mechanisms that empower users beyond basic functionality.

Theme 3: Emotional Resistance and Adaptation

Five informants which are E2, E3, E4, E6, and E7 agree that the emotional response to digital transformation must be addressed by organizations to ensure smooth adaptation and adoption of new technologies.

... yes, especially among some of the older staff who were very used to the manual way of doing things. They were hesitant to switch because they didn't feel confident using the system and feared making mistakes. (E2)

... some colleagues, particularly those less exposed to digital tools, struggle to keep up. They worry they won't understand the system or that they'll make errors. (E3)

... when I first started using CACTUS, I had trouble understanding its structure... without formal training, it was trial and error for me, and that took time and patience. (E4)

... technical glitches happen now and then... since we didn't get proper training, I sometimes feel unsure whether I'm using all the features correctly. My colleagues were always willing to help when I asked questions... Without their help, I might have struggled for much longer. (E6)

... in the beginning, I was really afraid of making mistakes on the system because everything was new to me. I worried I might accidentally delete something or enter the wrong data. That fear held me back from exploring the system fully. But after observing others, I became more confident. (E7)

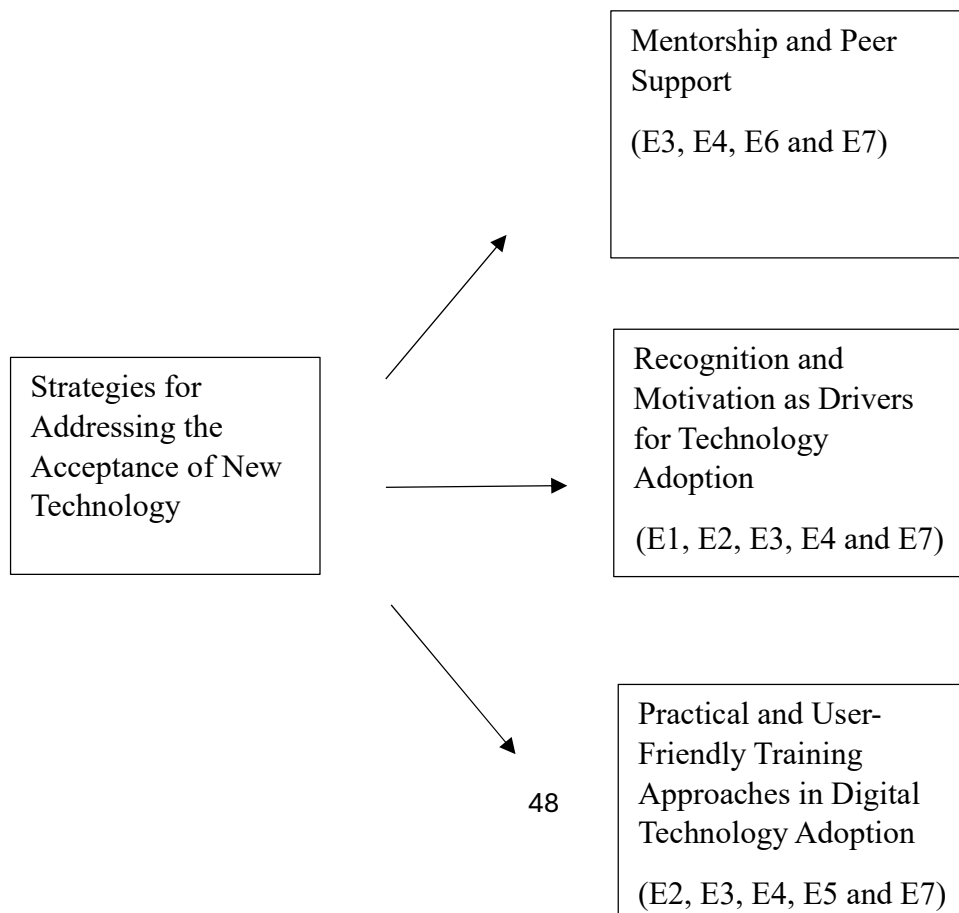
These finding highlights three key strategies to support employees' emotional transition during digital transformation, as suggested by the informants. Firstly, recognizing the emotional resistance phase including fear of errors, confusion, and reduced confidence is essential to reduce psychological barriers and encourage engagement with digital tools (Fisher, 2000; Bandura, 1997). Secondly, bridging the digital literacy gap through targeted training and continuous support is necessary, particularly for older employees or those unfamiliar with digital systems (Kotter, 1996). Lastly, fostering a culture of peer support and informal mentoring allows employees to learn from

one another, boosting their confidence and enhancing system adoption over time (Vygotsky, 1978). By acknowledging and managing the emotional aspect of change, organizations can ensure a more human-centered and sustainable digital transformation process (Goleman, 1995).

4.2.4 Strategies for Addressing the Acceptance of New Technology

This section discusses the findings from interviews conducted with informants about strategies to addressing the acceptance of new technology among nonmanagerial employees which are mentorship and peer support, recognition and motivation as drivers for technology adoption and practical and user-friendly training approaches in digital technology adoption. Additionally, it highlights other effective strategies to address and reduce this issue in the future.

Figure 4: Framework of Strategies for Addressing the Acceptance of New Technology



Theme 1: Mentorship and Peer Support

Five informants, which are E2, E3, E4, E6, and E7 agree that mentorship and peer support are critical enablers for effective digital transformation, especially in helping employees overcome emotional and technical challenges when adopting new digital systems.

... I think regular training sessions even if they're informal would be really helpful... mentorship programs would allow employees to learn step by step. Having someone that have experienced, we can turn to when we're unsure makes all the difference. (E2)

... I've learned many shortcuts and practical tips from my seniors that I never would've found in a manual. They've become my go-to resource. (E3)

... peer mentors explain things in a way that's easy to understand better than the manual, honestly. They can relate to our struggles because they were in our position before. (E4)

... I feel much more confident when I have someone guiding me directly... instead of just reading about it. (E6)

... some of us are shy to ask for help in big meetings. But when we're paired with someone more experienced, we can learn in a more relaxed way. It makes the learning process feel less intimidating and more encouraging. (E7)

These findings highlight three key strategies to enhance digital readiness through mentorship and peer learning, as suggested by the informants. Firstly, establishing structured and informal mentoring programs can significantly improve digital confidence, especially in the early stages of technology adoption. Mentorship offers employees real-time, personalized support, creating a learning environment grounded in trust and empathy (Lave & Wenger, 1991). Secondly,

creating psychologically safe peer-learning spaces such as buddy systems or small group sessions encourages more open and effective sharing knowledge among employees who may feel intimidated in formal training settings (Goleman, 1995). Thirdly, leveraging experienced staff as peer mentor's bridges both technical and emotional gaps in learning by offering relatable, context-specific guidance. This aligns with Vygotsky's (1978) Zone of Proximal Development, where learners benefit from scaffolding provided by more knowledgeable peers until they achieve independent competency. By recognizing that digital transformation is not just a technical shift but also a human journey, organizations can support employees more holistically building not only skillsets but also resilience and emotional intelligence in the workforce.

Theme 2: Recognition and Motivation as Drivers for Technology Adoption

Five informants, which are E1, E2, E3, E5, and E7 agree that recognition and motivation play a crucial role in encouraging employees to adopt digital systems and participate more actively in the digital transformation process.

... verbal encouragement from supervisors makes a difference. (E1)

... in our department, we had a small recognition program for the 'best digital performer.'

Even though it wasn't big, it felt good to be appreciated, and it motivated me to continue exploring and using the system more confidently. That small recognition made a big impact on my self-esteem. (E2)

... small awards were given during staff meetings for those who used the system well. It may seem minor, but it really boosted morale. It made me feel that my efforts were seen, and I noticed others trying harder too. (E3)

... one year our use of digital tools was considered during performance appraisals. Knowing that our system usage would influence our yearly evaluation pushed me to really learn and apply what I could. It was definitely an effective motivator. (E5)

... being recognized by my supervisor during a department meeting really boosted my confidence. I felt seen, and it encouraged me to learn more. It made me believe I was capable, even though I had doubts in the beginning. (E7)

These finding highlights three key strategies to enhance motivation and reinforce digital adoption in the workplace, as suggested by informants. Firstly, non-material recognition such as verbal praise and public acknowledgment is a low-cost yet impactful way to uplift morale and foster self-confidence. These forms of appreciation satisfy psychological needs for validation, in line with Herzberg's Two-Factor Theory (1959), which identifies recognition as a core workplace motivator. Secondly, creating small-scale recognition programs or awards for digital engagement such as "digital performer of the month" or public shoutouts during team meetings can energize participation and foster a positive, competitive spirit among peers (Deci & Ryan, 1985). Thirdly, linking digital tool usage to formal evaluation criteria reinforces accountability and signals that technological competency is valued and rewarded within the organization. This approach transforms system usage from an optional skill into a strategic performance metric, aligning personal goals with organizational change objectives. Overall, these insights affirm that motivation is not purely driven by salary or promotions, but also by consistent emotional reinforcement. As Skinner (1953) emphasized through his theory of reinforcement, positive feedback increases the likelihood of repeat behaviors. Furthermore, Goleman (1995) emphasized that emotionally intelligent leadership, including timely recognition, can builds trust, strengthen resilience, and increases long-term commitment, especially during periods of organizational change.

Theme 3: Practical and User-Friendly Training Approaches in Digital Technology Adoption

Five informants which are E2, E3, E4, E5, and E7 agree that training programs for digital transformation should be practical, hands-on, emotionally safe, and tailored to real work tasks, rather than overly theoretical or impersonal.

... I learn best by doing, so if the trainer allows us to use the system hands-on, with real examples, I'm more likely to remember and apply the knowledge. (E2)

... workshops that simulate actual work situations are the most useful for me. If I can practice something that's directly related to what I do every day, the learning is more meaningful. Theory alone doesn't stick to it. I need to see how it applies to my job. (E3)

... I prefer small group sessions where we get one-on-one guidance. In a big group, I feel embarrassed to ask questions. But in a small session, I feel more relaxed and comfortable to ask even the basic things. (E4)

... offering workshops that go beyond the basics focusing on advanced features can be very empowering. Providing certifications or skills badges could help us feel more confident. (E5)

... the simpler, the better. If the training starts from the basics, like where to click and what each button does. I feel more comfortable. It builds my foundation before I move to more advanced functions. (E7)

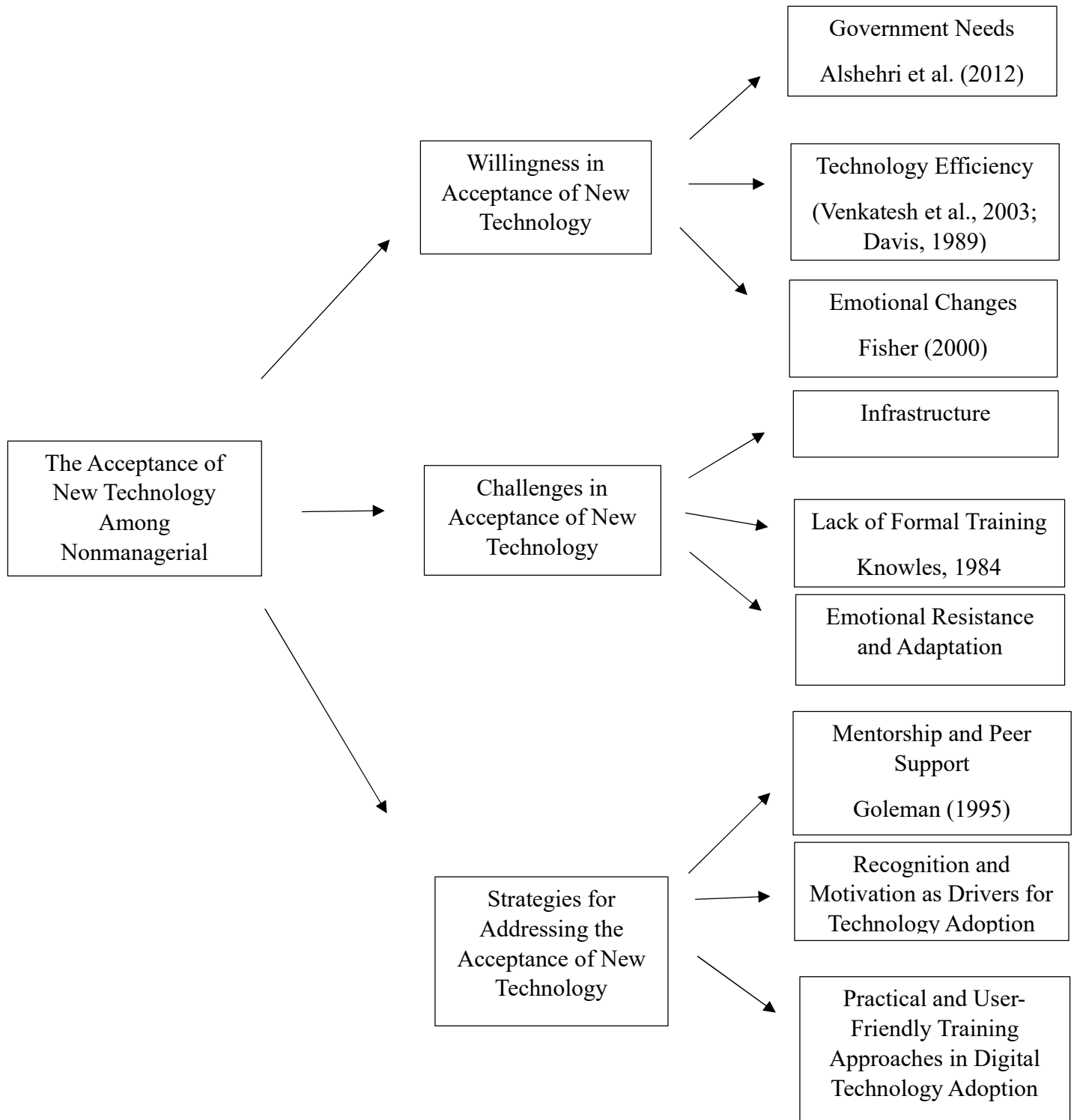
These finding highlights three key strategies to improve the effectiveness of digital training programs, as proposed by the informants. Firstly, adopting hands-on, scenario-based training that mimics daily work situations is more impactful than theoretical lectures. This reflects Knowles' (1984) adult learning theory (andragogy), which emphasizes relevance, experience, and problem-

solving as key to adult motivation and retention. Secondly, delivering training in smaller, emotionally safe settings allows employees to ask questions without embarrassment and boosts learner engagement. This aligns with Goleman's (1995) emotional intelligence framework, which advocates for psychologically safe environments to promote learning and team performance. Thirdly, structuring training to be progressive, starting from basic functionality to more advanced skills that ensures inclusivity for beginners and growth opportunities for experienced users. This approach echoes Bruner's (1978) scaffolded learning and Kolb's (1984) experiential learning theory, emphasizing the importance of learning through doing, reflection, and gradual complexity.

4.3 Summary of Findings

Based on the findings presented, the adoption of digital technology in the workplace is significantly influenced by issues related to infrastructure, training, emotional adaptation, and support systems. Employees commonly face technical challenges such as system lag, unstable internet connections, and outdated hardware, which hinder their ability to use digital tools efficiently. In addition, the lack of formal training forces employees to rely on trial-and-error learning, manuals, and peer support, creating inconsistency in digital competency across the workforce. Emotional responses such as fear, confusion, and low confidence are prevalent, particularly among employees unfamiliar with digital platforms. However, over time and with informal guidance, many employees develop greater confidence and acceptance of the systems. This emotional transition underscores the importance of fostering a supportive and safe learning environment. Strategies shared by informants to enhance technology adoption include implementing mentorship or “digital buddy” programs, providing hands-on and scenario-based training, simplifying system interfaces, and recognizing digital achievements through formal and informal rewards. These suggestions highlight the need for practical, user-centered training and emotionally intelligent leadership. The findings emphasize that successful digital transformation requires more than just system implementation. It demands organizational commitment to infrastructure improvement, inclusive training, motivational incentives, and supportive peer relationships. Creating a culture that values learning, emotional support, and peer collaboration can accelerate technology adoption and empower employees to adapt confidently in a digitally evolving workplace. The framework below outlines the key factors, impacts, and strategies for increasing technology adoption as identified in the interviews with informants.

Figure 5: The Acceptance of New Technology Among Nonmanagerial Employees in Sarawak Public Sector



4.4 Summary

This chapter has presented the profiles of the informants, an overview of the findings, and the data collected based on the study's research objectives. The next chapter will discuss the discussion in light of previous research, study implications, the recommendations of the study, and limitations of the study.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

This chapter discusses the findings based on previous research studies. It also addresses the study's limitations, followed by its implications, recommendations for future research, and concludes with a summary of the entire study.

5.1 Discussion

The purpose of this study is to explore and examine the willingness, challenges, and strategies influencing the acceptance of new technology among nonmanagerial employees in the public sector, with a specific focus on Sarawak. This research adopts a qualitative methodology using semi-structured interviews with seven informants from the public sector in Sarawak. This approach provides a naturalistic and interpretive perspective to better understand how individuals perceive, engage with, and adapt to digital transformation in their daily work environments (Denzin & Lincoln, 2005; Harwell, 2008).

Based on the findings in Chapter 4, the study outlines three main objectives which are, to explore employees' willingness to accept and engage in digital transformation initiatives, to identify challenges faced by nonmanagerial employees when using new technology, and to suggest effective strategies to address these challenges and enhance technology acceptance.

Findings revealed that despite general willingness to engage with digital tools, employees face significant barriers including limited infrastructure, lack of formal training, and emotional resistance. These challenges are consistent with existing literature, where lack of technical support,

outdated hardware, and poor system performance negatively impact users' confidence and productivity (Ramli et al., 2022; Venkatesh et al., 2003).

Furthermore, emotional resistance such as fears of making mistakes and lack of self-confidence, particularly among older staff, presents a major obstacle to successful adoption. This aligns with Bandura's (1997) theory of self-efficacy and Fisher's (2000) Process of Transition model, where users undergo emotional shifts from anxiety to adaptation when exposed to change. Without emotional support mechanisms and peer mentoring, these users may remain disengaged (Goleman, 1995; Kotter, 1996).

Nevertheless, informants demonstrated adaptability through self-learning, peer support, and informal mentoring. These findings support the Social Development Theory by Vygotsky (1978), which emphasizes the role of collaboration in overcoming skill gaps. Moreover, the application of Lewin's Planned Change Model (1947) further validates the importance of unfreezing old habits, supporting transitions through training, and reinforcing new behaviors through consistent reinforcement and recognition (Hashim & Noh, 2024). From the findings, three key strategies emerged which are, practical and user-friendly training, mentorship and peer support, and employee motivation through recognition. These suggestions are strongly supported by past research indicating that clear communication, continuous learning, and supportive leadership significantly enhance employee engagement with technology (Dwivedi et al., 2021; Ali & Wahab, 2023).

5.2 Implications of Study

5.2.1 Implications for Employees

The findings from this study highlight that employees are generally willing to learn and adapt to new technologies, but they require better tools, clearer guidance, and consistent support to do so effectively. It reveals that emotional struggles, lack of structured training, and system limitations often affect their confidence and performance. When employees are provided with the right resources and a supportive environment, both technically and emotionally, they become more confident, less resistant to change, and more motivated to contribute to organizational goals. For employees, this study shows that they are ready to embrace digital transformation but need better tools and guidance to fully unlock their potential and perform at their best.

5.2.2 Implications for Organizations Policy

The findings from this study underline the critical need for organizations, particularly in the public sector, to review and strengthen their existing policies in line with current digital transformation efforts. It is essential for organizational policies to go beyond basic technology implementation and instead focus on creating structured onboarding processes, providing continuous technical support, and incorporating emotional resilience programmes to help employees cope with the changes. This includes offering clear guidelines, accessible resources, and responsive support systems tailored to the real needs of nonmanagerial employees. Moreover, policies should ensure that employees at all levels, especially those on the ground, are actively involved in decision-making processes related to new technologies. Aligning these efforts with national agendas such as the Madani Economy and Sarawak's PCDS 2030 will ensure that transformation is not only top-down but inclusive and people-centered. Such inclusive policies can

foster higher engagement, improve overall system usability, increase employee satisfaction, and encourage a culture of innovation and adaptability in the workplace. Ultimately, supportive and inclusive organizational policies will contribute to better service delivery, higher efficiency, and a more future-ready public sector.

5.2.3 Implications for Future Researchers

This study will provide future researchers with a deeper understanding of the factors and challenges that influence technology acceptance among nonmanagerial employees in the public sector. Additionally, it will highlight research gaps, particularly in emotional adaptation, infrastructural readiness, and user support systems, allowing future researchers to explore these areas in greater depth. This includes examining the long-term psychological and emotional effects of digital transformation and how organizational culture impacts employee adaptability. Future studies may also investigate how factors such as ethnicity, age, gender, or geographic location intersect with technology acceptance, especially in underserved or rural regions like Sarawak. Furthermore, researchers may develop and evaluate targeted programmes aimed at improving digital literacy and emotional resilience among specific employee groups. By focusing on these aspects, future researchers can contribute to building a more inclusive, supportive, and sustainable digital transformation strategy for the public sector.

5.3 Recommendations

5.3.1 Recommendations for Employees

This study recommends that nonmanagerial employees be given better support to help them adapt to new technology more confidently. While many employees are willing to learn, but the lack of proper guidance often leads to stress and uncertainty. To make this easier, employees should

have access to clear job aids, simple training materials, and learning platforms they can use anytime. Regular feedback from supervisors can also help them improve and feel supported. Having mentorship or peer support programmes can make learning more comfortable, as employees can learn from each other. Recognizing their efforts, even in small ways, can boost motivation and encourage continued learning. With the right support, employees will feel more confident, less stressed, and more prepared to succeed in a digital work environment.

5.3.2 Recommendations for Organizations

Organizations should create clear and inclusive digital transformation plans that focus not just on technology, but also on supporting their employees. This includes doing regular checks on employees' digital skills, offering easy-to-follow training, and setting up peer mentoring systems so staff can help each other learn. It's also important to build a safe and supportive environment where employees feel comfortable trying new tools without fear of making mistakes. Following Kotter's change model, celebrating small successes and building strong support teams can help keep the transformation moving forward. Leaders should be open, honest, and understanding when communicating with staff to build trust and reduce fear. When employees feel included and supported, they are more likely to accept and use new technology with confidence.

5.3.3 Recommendations for Future Researchers

Future researchers are encouraged to expand on this study by employing hybrid methodologies that combine both quantitative and qualitative approaches to gain a more comprehensive understanding of technology acceptance, resistance, and emotional adaptation among public sector employees. While qualitative insights offer rich, personal experiences, integrating quantitative data such as survey results can provide measurable patterns and broader

generalizability across different departments or regions. Researchers should also consider exploring the long-term effects of digital transformation, particularly in the context of post-pandemic realities where remote work, hybrid setups, and digital communication have become increasingly common. These shifts have introduced new challenges related to digital competency, self-motivation, work-life balance, and access to reliable infrastructure issues that may be more severe in rural or under-resourced areas like parts of Sarawak. Furthermore, future research could benefit from including more diverse informants across various age groups, job classifications, and locations to better understand how factors such as gender, education level, digital literacy, and workplace culture influence employees' willingness and ability to embrace technological change. This broader perspective would allow researchers to design more targeted interventions, contributing to the development of inclusive and effective strategies for digital transformation in the public sector.

5.4 Limitations of Study

There are several limitations that can be identified in this study on the acceptance of new technology among nonmanagerial employees in the public sector. Firstly, this study employed a qualitative research approach, which focuses on collecting detailed insights through semi-structured interviews. While this method provides rich and meaningful perspectives, it also has its limitations. One key limitation is that qualitative data is subjective and based on personal experiences and emotions, making it difficult to measure accuracy or generalize findings to a larger population. Additionally, qualitative research is time-consuming and heavily dependent on the willingness of informants to share their honest views. Some participants may have hesitated to

express negative feelings or challenges due to concerns about confidentiality or workplace repercussions.

Besides that, this study was conducted specifically within the public sector in Sarawak, involving only a small group of nonmanagerial employees. As a result, the findings may not reflect the experiences of employees in other government departments or in different geographical regions. Public sector employees in other fields such as healthcare, education, or enforcement may face different challenges or possess different levels of digital readiness. Therefore, the results of this study are most relevant to nonmanagerial employees in Sarawak public sector only.

Lastly, the study mainly focuses on the short-term experiences and responses of employees adapting to digital systems. Long-term impacts such as digital fatigue, burnout, or the risk of skill obsolescence were not extensively explored during the data collection process. Additionally, this study did not include the perspectives of managerial staff or policy makers, which limits the ability to understand how organizations address these employee challenges from a leadership or policy point of view. Future research could be improved by involving a wider group of participants, including those from different departments and organizational levels, and by examining both short-term and long-term outcomes of digital transformation in the public sector.

5.5 Conclusion

In conclusion, this chapter has discussed the main findings, implications, limitations, and recommendations of the study regarding the acceptance of new technology among nonmanagerial employees in the public sector. This study explored the experiences, perceptions, and challenges faced by employees during the process of digital transformation, using a qualitative approach through semi-structured interviews with seven informants from the public sector in Sarawak.

These insights provide a deeper understanding of the human side of digital adoption, which is often overlooked in technology implementation strategies.

The findings reveal that while many employees are willing to learn and engage with new technology, they face several barriers including emotional stress, lack of formal guidance, limited digital infrastructure, and fear of making mistakes. These factors contribute to varying levels of resistance and self-doubt among staff, especially those with limited exposure to digital tools. Despite these challenges, employees showed a strong sense of resilience and adaptability by relying on peer support, self-learning, and informal mentoring. This highlights the importance of emotional and social support alongside technical readiness in any digital transformation process.

Moreover, this study has outlined key strategies proposed by informants to enhance employee engagement with technology, including structured training programmes, peer mentoring, user-friendly systems, and regular feedback. These strategies align with existing research and suggest that when employees feel emotionally safe, well-guided, and appreciated, they are more likely to embrace change and contribute positively to organizational goals. Leadership, therefore, plays a crucial role in shaping an inclusive and supportive digital culture.

The implications of this study extend to employees, organizations, and future researchers. It emphasizes the need for people-centered policies and inclusive digital planning that truly reflect the needs of employees at every level. For organizations, particularly in the public sector, the findings stress the urgency of equipping employees not only with tools but also with emotional resilience and digital confidence. For researchers, this study highlights the importance of exploring long-term effects and diverse employee experiences in future investigations.

Lastly, this study hopes to raise awareness among public sector institutions in Sarawak and beyond about the ongoing challenges faced by nonmanagerial employees during digital transformation. While national agendas like the Madani Economy and PCDS 2030 emphasize the importance of a digital-ready workforce, it is vital that the voices of everyday employees are included in these efforts. The researcher also hopes that this study will inspire further research and practical initiatives aimed at ensuring digital transformation is not only efficient but also human-centered, inclusive, and sustainable for all.

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APPENDICES



Research: Exploring the Acceptance of New Technology Among Nonmanagerial Employees in Sarawak Public Sector.

Participant

I have read the participant Information Sheet, which explains the nature of the research.

The information has been explained to me, and all my questions have been satisfactorily answered.

I have been given a copy of the Information Sheet to keep.

I am happy to be interviewed and for the interview to be tape-recorded as part of this research.

I understand that I do not have to answer questions if I do not want to and that

I can withdraw at any time without consequences to myself.

I agree that research data gathered from the results of the study may be published
provided my name or any identifying data is not used.

I have also been informed that I may not receive any direct benefits from participating in
this study.

I understand that all information provided by me is treated confidential and will not be
released by the researchers to a third party unless required to do so by law.

Signature of Participant

Date

Provided by: Hazimah binti Mohd Farriq (83991)

Supervisor Final Year Project: A.P Dr. Surena binti Sabil

English Version

Interview Questions: Exploring the Acceptance of New Technology Among Nonmanagerial Employees in Sarawak Public Sector.

Target Sample: Public Sector, Nonmanagerial Employees (7)

Section: A, B, C and D

Opening Questions:

1. Could you please share about yourself and your experience throughout your career, leading up to where you are today?
2. Do you think working in the past (before the emergence of new technologies) was more enjoyable, considering there was no need to deal with internet-related constraints, since everything was done manually?

Section A: Readiness to Accept and Engage in Digital Transformation Initiatives

1. Have you ever used new technology in your job? If yes, how frequently do you use it?
2. How do you feel about the use of new digital tools and systems in the workplace?
3. What factors influence your willingness to accept and use new technology?
(For example: ease of use, perceived benefits, influence of colleagues)
4. Have you ever received any training or support to help you adapt to new technology? If yes, was it effective?
5. Do you believe that digital transformation will improve your work efficiency and job satisfaction? Why or why not?

Section B: Challenges in Implementing New Technology

1. What difficulties have you encountered when using new technology at work?
(For example: lack of skills, complex systems, network issues)
2. How does the availability of training and support affect your ability to use new technology effectively?
3. Have you or your colleagues ever faced resistance in using new technology? If yes, what were the main causes?
4. Do you feel that the organisation provides sufficient resources and infrastructure for smooth adoption of digital technology?
5. How do management and supervisors respond to employees' difficulties in using new technology?

Section C: Strategies to Increase Technology Adoption

1. What types of support or initiatives do you think could encourage employees to accept and use new technology?
2. Have you ever experienced any motivational programmes (e.g., incentives, recognition) that promoted the use of new technology? If yes, were they effective?
3. What type of training or workshops do you find most beneficial in improving your digital skills?
4. Do you think having a “technology champion” or mentor at the workplace could help in adopting new technology?
5. What are your suggestions for improving overall acceptance of digital transformation in your workplace?

Section D: Demographic Information

1. How old are you?
2. What is your current job position?
3. How many years have you worked in the public sector?
4. What is your highest educational qualification?
5. Have you attended any digital skills training in the past two years?

Versi Bahasa Melayu

Soalan Temu Bual: Menerokai Penerimaan Teknologi Baharu Dalam Kalangan Pekerja Bukan Pengurusan (Nonmanagerial) Di Sektor Awam Sarawak

Sampel Sasaran: Sektor Awam, Pekerja Bukan Pengurusan (7)

Bahagian: A, B, C dan D

Soalan Pembuka:

1. Boleh tuan/puan terangkan tentang diri dan pengalaman tuan/puan sepanjang kerjaya tuan/puan, sehingga tuan/puan berada pada tahap sekarang ini?
2. Adakah bekerja pada masa lalu (sebelum adanya teknologi baharu) lebih menyeronokkan kerana tidak perlu memikirkan masalah kekangan internet, memandangkan semua kerja dilakukan secara manual?

Bahagian A: Kesediaan untuk Menerima dan Melibatkan Diri dalam Inisiatif Transformasi Digital

1. Adakah anda pernah menggunakan teknologi baharu dalam pekerjaan anda? Jika ya, seberapa kerap anda menggunakannya?
2. Bagaimanakah perasaan anda tentang penggunaan alat dan sistem digital baharu di tempat kerja?
3. Apakah faktor yang mempengaruhi kesediaan anda untuk menerima dan menggunakan teknologi baharu? (Contoh: kemudahan penggunaan, manfaat yang dirasakan, pengaruh rakan sekerja)
4. Adakah anda pernah menerima latihan atau sokongan untuk membantu anda menyesuaikan diri dengan teknologi baharu? Jika ya, adakah ia berkesan?
5. Adakah anda percaya bahawa transformasi digital akan meningkatkan kecekapan kerja dan kepuasan kerja anda? Mengapa atau mengapa tidak?

Bahagian B: Cabaran dalam Pelaksanaan Teknologi Baharu

1. Apakah kesukaran yang anda hadapi semasa menggunakan teknologi baharu di tempat kerja? (Contoh: kurang kemahiran, sistem yang kompleks, masalah rangkaian)
2. Bagaimanakah ketersediaan latihan dan sokongan mempengaruhi keupayaan anda untuk menggunakan teknologi baharu dengan berkesan?
3. Adakah anda atau rakan sekerja anda pernah mengalami rintangan dalam menggunakan teknologi baharu? Jika ya, apakah punca utama?
4. Adakah anda merasakan organisasi menyediakan sumber dan infrastruktur yang mencukupi untuk penerapan teknologi digital yang lancar?
5. Bagaimanakah pihak pengurusan dan penyelia bertindak balas terhadap kesukaran pekerja dalam menggunakan teknologi baharu?

Bahagian C: Strategi untuk Meningkatkan Penerimaan Teknologi

1. Apakah jenis sokongan atau inisiatif yang anda fikir boleh menggalakkan pekerja untuk menerima dan menggunakan teknologi baharu?
2. Adakah anda pernah mengalami program motivasi (contoh: insentif, pengiktirafan) yang menggalakkan penggunaan teknologi baharu? Jika ya, adakah ia berkesan?
3. Apakah jenis latihan atau bengkel yang anda rasa paling bermanfaat untuk meningkatkan kemahiran digital anda?
4. Adakah anda fikir mempunyai “juara teknologi” atau mentor di tempat kerja boleh membantu dalam penerapan teknologi baharu?
5. Apakah cadangan anda untuk meningkatkan penerimaan transformasi digital secara keseluruhan di tempat kerja anda?

Bahagian D: Maklumat Demografi

1. Berapakah umur anda?
2. Apakah jawatan anda sekarang?
3. Berapa tahun anda telah bekerja dalam sektor awam?
4. Apakah kelayakan pendidikan tertinggi anda?
5. Adakah anda pernah menghadiri latihan kemahiran digital dalam tempoh dua tahun yang lepas?