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Implementing Employee Competencies for Geographic Information System (GIS) Website Digitalization

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ABSTRACT

The rapid advancement of technology has become integral to all aspects of modern life. This research examines the relationship between employee competency and the use of a digitalized GIS website for managing customer data, focusing on employees at PDAM Surabaya City. The study involved 100 participants and employed a quantitative descriptive approach, utilizing data collection techniques such as observation, interviews, and surveys through questionnaires. Findings reveal that while employees generally believe their education and technological skills are well-suited to their job roles and support their performance, there are notable issues with the GIS website's reliability and error management. The high consensus on the need for improvements highlights the importance of ongoing maintenance and user support. Statistical analysis confirms that employee competencies significantly impact the effective use of the GIS website, underscoring the importance of skill development in optimizing digital tool utilization and enhancing organizational efficiency. The research implies that improving employee competencies and addressing technical issues with the GIS website are essential for enhancing its utilization and overall organizational performance.

Keywords: Customer Data Management; Digitalization; Employees Competencies; GIS Website; Human Resource Management

INTRODUCTION

The development of the modern era requires technology and information to reach all aspects of life. This is no exception to the implementation of management activities in an agency or organization to make it easier for everyone to carry out their work. Apart from that, rapid technological developments are one of the causes of improvements in the information sector and the digitization of work data (Fauzi et al., 2023).

Every agency established and formed to achieve good goals requires competent human resources to carry out all work activities. Quality performance can be influenced by several factors, such as the agency's culture or environment and employee competency. On the other hand, an agency fails because there are human resource performance factors that could make it more competent to complete its work tasks (Alam et al., 2022).

Competency is the ability of each individual to carry out their work, which includes aspects of skills, knowledge, and attitudes that are in accordance with standardization. The quality of human resources determines the success of an agency; competence encourages each individual to perform at the best level in the agency. Each individual's competency can have an impact on the agency's employment targets, one of which is whether an employee's skills can master the job well or not (Robbins & Judge, 2019).

PDAM Kota Surabaya leverages advances in information technology through a Geographic Information System (GIS) website. This GIS website is an information system that manages, stores, integrates, and visualizes data in geographic form, accessible via the Internet. Additionally, the data processed by the GIS website is stored on a cloud server, allowing users to access it from anywhere and at any time.

This GIS website can be used to analyze information both spatially (objects on the surface of the earth), non-spatial data (name and address of plot owner, length of the road, area of the building), or known as geographic reference data to complete information about the land history, and survey data (observations or measurements in the field) (Abdillah et al., 2021). This GIS website has a menu that can store print archives in the form of paper that have been transferred into digital archives by scanning, conversion, and importing with the help of an internet or Wi-Fi network. Then, it is uploaded and saved using the GIS website to input printed archive data or information into digital archives. With the existence of electronic media such as computers, central processing units, and scanners, the process of managing customer data archives will become easier. It will not take a long time, making the retrieval process easier. The GIS website can store all digital data or information starting from customer monitoring data, RAB-SR documents (budget plans), pipe networks for collecting records for easy access to data, and water usage.

The use of the GIS website at PDAM Kota Surabaya has been implemented. However, several obstacles have been identified, such as the GIS website frequently requiring fixes. The internet network also needs improvement, hampering the digitization process of customer data. Some employees struggle to use the GIS website due to the lack of expertise, knowledge, and skills, which differs from manual data processing. Handling, operating, and being responsible for customer data or digitizing archives on the GIS website still needs improvement. Therefore, competent human resources are needed to ensure that each employee is not overburdened with the work of others, allowing tasks to be completed efficiently and effectively.

Additionally, there is a shortage of human resources to input and update budget plan data for customers and the pipeline network. Many customer data meters still need validation, necessitating special handling to facilitate future use. These archives are an important asset for PDAM Surya Sembada Surabaya City. Therefore, it is necessary to assess employee competence in using the GIS website to digitize customer data at PDAM Kota Surabaya.

This study investigates the relationship between employee competencies and the effective utilization of a digitalized GIS website. By examining these variables, the research aims to understand how employee capabilities influence the successful implementation and application of GIS technology within the organization. The findings of this study will contribute to a deeper understanding of the factors that drive successful technology adoption and utilization in organizational settings.

LITERATURE REVIEW

Management

According to Pangestu et al. (2021), management is working with people to achieve organizational goals by carrying out the functions of planning, organizing, staffing, direction and leadership, and supervision. Controlling). Meanwhile, according to Hasanah and Permana (2020), management involves coordinating and overseeing the work activities of others so that their activities are completed efficiently and effectively, or can be interpreted as management which involves coordinating and supervising the work activities of other people so that their activities can be completed efficiently and effectively. According to Hutahaean (2020), management is the art of getting things done through people, or it can be interpreted as the art of achieving a goal through other people. This definition implies that a manager only does some of the work himself to achieve organizational or agency goals. A manager can carry out work involving the abilities of other people to carry out various tasks and achieve predetermined goals.

Management can also be interpreted as the process of directing and providing work facilities to people organized in a formal group to achieve goals (Kapur, 2022). Thus, management is a series of direction processes that provide instructions or guidance from a superior to his subordinates. Apart from that, the process of providing work facilities is to provide facilities and infrastructure to facilitate the work of a superior to his subordinates to achieve goals well.

Human Resource Management (HRM)

Human resources (HR) are individuals who act as the driving force, thinkers, and planners for an organization, working to realize its goals (Mualim et al., 2023). HR is a crucial asset for any organization or company because its function cannot be replaced by other resources (Rumawas, 2018) . To achieve the organization's vision, mission, and goals effectively, human resources must align with these strategic elements. Therefore, employees need to possess qualities that reflect self-value and potential (Kim & Beehr, 2018).

HR encompasses the collective attributes, skills, and abilities of an organization's workforce, which are essential for driving productivity and innovation. An organization's success depends on the capacity and commitment of its human resources to adapt, grow, and meet evolving challenges. Consequently, investing in the development of human resources through training, continuous education, and fostering a positive work environment is vital. This investment not only enhances individual performance but also contributes to the overall growth and sustainability of the organization.

Competency

According to Fuller et al. (2018), competency is defined as the underlying characteristic of a person that contributes to effective work and superior performance. Similarly, Rios et al. (2020) emphasize that both natural aptitudes and learned capabilities are crucial for successfully completing tasks. Effective job performance hinges on a combination of inherent talent and acquired skills, tailored to the specific qualifications required for each job position. Not all employees will possess the same characteristics or abilities, which highlights the importance of aligning competencies with job descriptions.

For individuals to perform their tasks effectively, they need both the will and the skills to understand and accomplish their work. Employee motivation and competence play a significant role in achieving organizational goals. High work competence generally correlates with meeting target goals, whereas low competence can impede progress. Competence thus reflects a person's level of understanding and knowledge, facilitating efficient task execution and contributing to the attainment of organizational objectives.

Cakranegara and Fetesond (2022) define competency as the capacity of individuals to apply their knowledge, skills, experience, and attitudes to succeed in their respective fields. Competence encompasses the traits that enable an individual to demonstrate effective work performance, supported by skills, knowledge, understanding, interests, values, and positive work attitudes (Anjani, 2019). Aligning individual competencies with work standards not only enhances task completion but also promotes professional excellence and fosters a supportive work culture, leading to improved overall work performance.

According to Elizar and Tanjung (2018) and Pinatik (2021), to meet competency indicators, employees must fulfill several key criteria as follows.

Knowledge

Extensive knowledge is crucial for employees to perform effectively in their field of work. Employees should be open to trying new things and willing to enhance their ideas, thoughts, knowledge, and experience. This continuous improvement enables them to make wise work decisions. Activities such as processing, analyzing, and understanding data or work problems are supported by this knowledge, allowing tasks to be carried out accurately and efficiently.

Skill

Expertise or technical skills appropriate to the field of work are essential. Skills are divided into two categories: hard skills and soft skills. Hard skills refer to technical abilities or intelligence needed to perform a task well, including the ability to identify problems and provide solutions. Soft skills, on the other hand, involve the ability to adapt, interact, and respond to others. These interpersonal skills include effective communication, teamwork, and leadership abilities.

Attitude

The attitudes or work behavior of employees in carrying out their duties and responsibilities must align with the regulations and code of ethics established by the company or organization. Attitude involves positioning oneself with the appropriate thought patterns, feelings, and beliefs derived from work experience. This mindset enables employees to respond effectively to various objects and situations within the company or organization.

By integrating these elements—knowledge, skills, and attitudes—employees can significantly contribute to achieving organizational goals and maintaining a high standard of work performance.

Digitalization

According to Ritter and Pedersen (2020), digitalization refers to the increasing availability of digital data, supported by advancements in creating, transmitting, storing, and displaying this data. This process integrates, realizes, and influences the world in the era of Globalization 4.0. Digitalization involves the use of digital technology to innovate various businesses and create new assets. Consequently, the current era of globalization offers significant opportunities for companies and industries to expand their digital capabilities.

Leggett (2020) defines digitalization as the process of converting printed data into electronic form through scanning and transfer, resulting in electronic pages suitable for computer storage, retrieval, and transmission. The primary goal of digitalization is to enhance document storage and security, protecting them from emergencies such as disasters. Furthermore, digitalization improves the quality of documents by enhancing resolution, images, and sound, resulting in more stable and reliable digital records.

These definitions highlight the critical role digitalization plays in modern business and industry, enabling more efficient data management and providing robust solutions for document preservation and quality enhancement.

Digitalization Security

Data security is a method for safeguarding digital information or data to protect it from corruption, theft, or unauthorized access. This encompasses hardware devices, software applications, storage devices, user access controls, and company or organizational procedures. Effective data security employs tools and technologies that enhance the visibility of a company's or organization's data and how it is utilized. These tools protect data through processes such as data hiding, encryption, and the redaction of sensitive information (Wulandari & Hwihanus, 2023).

Implementing robust data security measures is crucial for any organization to ensure the integrity, confidentiality, and availability of its data. By using advanced technologies and stringent processes, organizations can prevent data breaches and unauthorized access, thereby maintaining trust and compliance with regulatory standards. Enhanced data security not only protects sensitive information but also supports the overall operational efficiency and resilience of an organization in the digital age.

Digital Archives

According to Ahyar et al. (2021), archives are written or printed records that hold significant meaning for an organization. These records, which serve as communication and information materials, are systematically stored on various media such as paper, film, and digital formats, allowing for precise and quick retrieval when needed. Hardiyanti and Melita (2018) describe archives similarly, noting that they include any written or printed records, letters, numbers, or images, recorded on media such as cards, forms, slides, microfilms, diskettes, magnetic tapes, and photocopies. Therefore, archives are crucial records that serve as communication materials and company management information, stored in either digital or conventional formats.

Digital archives, as defined by Ahyar et al. (2021), store and transmit data in the form of binary codes, which can be accessed, created, or deleted using computerized tools capable of processing binary data. These digital archives can be utilized effectively in organizational contexts. Additionally, Ahyar et al. (2021) explain that digital archives contain information recorded on magnetic media through electronic devices or as moving images, static images, and sound recordings. These are created during the course of organizational or individual activities and serve as a new category of media archives. Therefore, digital archives encompass the creation, management, and maintenance of records using electronic devices or digital media to support organizational and individual functions.

GIS (Geographic Information System) Website

GIS is designed to create, store, update, manage, analyze, and display geographic information, such as customer data on leaking pipe networks, enabling the identification and repair of issues based on specific locations (Reddy, 2018). A GIS website, as described by Mahendra (2023), is a digital platform that leverages the internet to distribute, publish, and present spatial and non-spatial information, including text, digital maps, and images, integrated with their geographical positions. This type of GIS website functions as a central repository for managing, analyzing, and distributing geographical information and serves as a valuable tool for evaluating areas and planning geographic space data according to users' needs.

Website Indicators

According to Hidayati et al. (2017), a website functions effectively when it meets several key indicators that ensure optimal performance and user satisfaction, they are reliability, operability, error tolerance, maintainability, and usability. Reliability refers to the software's ability to remain dependable with a low failure rate, ensuring that the website or application remains usable over time. Operability measures how easily the software can be navigated and used by its intended audience, emphasizing the need for user-friendliness. Error tolerance involves the software's capacity to mitigate risks to an acceptable level, thus safeguarding against potential dangers. Maintainability addresses how easily the software can be updated or enhanced to meet evolving requirements and incorporate new features. Finally, usability focuses on the ease with which users can interact with the website or application, underscoring the importance of clear instructions and adequate information. Meeting these indicators ensures that a website not only performs well but also provides a positive and efficient user experience.

Hypotheses Development

The research aims to investigate the relationship between employee competencies and the utilization of GIS website digitalization. To this end, the following hypotheses are formulated:

H0: There is no influence of employee competencies on GIS website digitalization.
H1: There is an influence of employee competencies on GIS website digitalization.

Previous research supports the notion that employee competencies are crucial for effective technology implementation. Sitompul et al. (2019) emphasized the role of asset management applications in enhancing employee proficiency. Similarly, Odja et al. (2020) highlighted the positive impact of HR and organizational communication on employee performance. Recent research by Chinnapong et al. (2021) further underscores the importance of IT capabilities and HR competencies in boosting innovative performance, demonstrating that technology proficiency not only enhances employee skills but also drives organizational adaptability and innovation.

By examining the influence of employee competencies on GIS website digitalization, this research contributes to a deeper understanding of the factors that facilitate successful technology adoption within organizations.

RESEARCH METHOD

Data Types and Sources

The research utilizes descriptive data with a quantitative approach, focusing on numerical information obtained from questionnaires, facts, and company records. This quantitative data consists of responses or scores from participants, which are processed using mathematical techniques. The data sources for this research are categorized into two types: (1) Primary Data: This includes data directly collected from the research subjects. The researcher gathered primary data by distributing questionnaires to relevant parties, conducting face-to-face interviews with respondents, and making observations related to the research problem; and (2) Secondary Data: This consists of data collected indirectly through intermediaries, such as agency records. Secondary data includes general company documentation, such as the history of the company, the total number of employees, and the organizational structure at PDAM Kota Surabaya.

Data Collection Techniques

In this research, a combination of data collection techniques was employed to gather comprehensive and reliable information. According to Jailani (2023), observation is a distinctive data collection method that involves directly studying the research subjects to ensure clarity, detail, and organization. Observations were specifically conducted on employees of PDAM Kota Surabaya to gain direct insights into their behaviors and practices.

In addition to observations, a questionnaire was utilized as a primary tool for collecting data. This method involves presenting respondents with written questions or statements designed to gather information from individuals who meet the predetermined criteria and sample size. The questionnaire employed a Likert scale to measure various variables, including knowledge, skill, attitude, reliability, operability, error tolerance, maintainability, and usability. Respondents could express their level of agreement on a scale ranging from Strongly Disagree to Strongly Agree.

To further validate the findings from the questionnaire, interviews were conducted with selected respondents. These interviews provided deeper insights and helped to reinforce the data obtained from the questionnaires, ensuring a more thorough understanding of the research topics.

RESULTS

Respondents' Demographic Profiles

The description of respondents based on the gender of employees at PDAM Kota Surabaya can be seen in Table 1.

Table 1. Gender Information of the Respondents

No	Gender	Total	Percentage (%)
1.	Male	78	78%
2.	Female	22	22%
Total		100	100%

Source: Results of Primary Data Processing (2023)

Table 1 shows a total of 100 respondents, 78 respondents (78%) were male, while respondents who 22 respondents (22%) were female.

Table 2. Respondents' Length of Work

No	Length of work	Total	Percentage (%)
1.	1-5 years	7	7%
2.	6-11 years	43	43%
3.	11-15 years	11	11%
4.	16-21 years	19	19%
5.	< 21 years	20	20%
Total		100	100%

Source: Results of Primary Data Processing (2023)

Table 2 presents the educational background of the 100 respondents. The distribution is as follows: 49 respondents (49%) have completed SMA/SMK, 13 respondents (13%) hold a D3 diploma, 35 respondents (35%) have a D4/S1 degree, 3 respondents (3%) have obtained an S2 degree, and none of the respondents (0%) have completed an S3 degree.

Table 3. Demographics of Respondents by Department/Work Unit

No	Section / Work Unit	Total	Percentage (%)
1.	Western Distribution System	15	15%
2.	Eastern Distribution System	18	18%
3.	Water Usage	19	19%
4.	Customer Control Relations	15	15%
5.	Distribution Process Control and GIS	10	10%
6.	Eastern Technical Services	13	13%
7.	Western Technical Services	10	10%
Total		100	100%

Source: Results of Primary Data Processing (2023)

Table 3 presents the distribution of 100 respondents across various departments. The breakdown is as follows: 15 respondents (15%) work in the Western Distribution System, 18 respondents (18%) are part of the Eastern Distribution System, 19 respondents (19%) are employed in the Water Usage Section, and 15 respondents (15%) work in the Customer Control Relations Section. Additionally, 10 respondents (10%) are involved in the Distribution Process Control and GIS Section, 13 respondents (13%) work in the Eastern Technical Services Section, and 10 respondents (10%) are part of the Western Technical Services Department.

Employees' Competencies

Table 4. Employees' Competencies Results

Statements		Measurement				
		SA	A	N	D	SD
Knowledge						
1.	My last education is linear with my current job.	16 (16%)	58 (58%)	14 (14%)	10 (10%)	2 (2%)
2.	My technological knowledge and experience in my field of work support me in doing my job.	29 (29%)	59 (59%)	9 (9%)	1 (1%)	2 (2%)
Skill						

3.	I usually try new things to deepen my understanding and improve my skills.	35 (35%)	60 (60%)	5 (5%)	0 (0%)	0 (0%)
4.	I usually build relationships and teamwork to make it easier to complete my work in accordance with my field of work.	49 (49%)	49 (49%)	1 (1%)	1 (1%)	0 (0%)
Attitude						
5.	I am disciplined and responsible for completing the work assigned by my leader.	54 (54%)	38 (38%)	3 (3%)	4 (4%)	1 (1%)

The questionnaire data in Table 4 provides a comprehensive overview of employees' perspectives on their competencies (knowledge, skills, and attitudes) in relation to their current job roles.

Knowledge

Regarding the alignment between employees' education and their current job roles, the majority of respondents (74%) agree that their last education is linear with their current job, with 16% strongly agreeing and 58% agreeing. This suggests that most employees feel their educational background is relevant to their current work, potentially contributing to their confidence and effectiveness on the job. However, a notable minority (12%) expressed disagreement or strong disagreement, indicating that for some, their education may not fully align with their job requirements, which could impact their ability to perform certain tasks effectively.

When asked about their technological knowledge and experience in their field of work, an even higher percentage (88%) of respondents agree that these factors support them in doing their job, with 29% strongly agreeing and 59% agreeing. This reflects a strong confidence in their technical competencies, which are crucial for navigating modern work environments, especially those involving complex digital tools. Nonetheless, a small fraction (3%) expressed disagreement, suggesting that despite overall confidence, a few employees may feel underprepared or lack sufficient technological expertise, potentially hindering their job performance.

Skill

The data on skill development and teamwork reveal a strong commitment among employees to continuous improvement and collaboration. A significant majority (95%) of respondents agree that they usually try new things to deepen their understanding and improve their skills, with 35% strongly agreeing and 60% agreeing. This indicates a proactive approach to personal and professional development, which is essential for adapting to new challenges and technologies in the workplace. Notably, there were no respondents who disagreed, highlighting a universally positive attitude towards skill enhancement.

In terms of building relationships and teamwork, the responses are similarly positive, with 98% of respondents agreeing that they usually engage in these activities to facilitate their work. Both strongly agree and agree responses are equally split at 49%, underscoring the importance of collaboration in achieving work-related goals. Only a small minority (2%) were neutral or disagreed, suggesting that while teamwork is highly

valued, there may be a few individuals who prefer working independently or may face challenges in building effective work relationships.

Attitude

Discipline and responsibility are clearly prioritized by the respondents, as evidenced by the fact that 92% agree that they are disciplined and responsible for completing work assigned by their leader, with 54% strongly agreeing and 38% agreeing. This high level of agreement reflects a strong work ethic and a commitment to fulfilling job responsibilities. However, a small portion of respondents (5%) expressed neutral or negative views, which might indicate occasional challenges in maintaining discipline or meeting expectations, potentially due to personal or work-related factors.

Overall, the questionnaire data paints a picture of a workforce that is largely confident in its knowledge and skills, proactive in seeking improvement, and committed to collaboration and discipline. However, the responses also highlight the existence of a small but significant group of employees who may face challenges in aligning their education with their job, feeling confident in their technological skills, or maintaining discipline, pointing to areas where additional support or resources might be beneficial.

The Usage of GIS Website Digitization for Customer Data

Table 5. The Usage of GIS Website Digitization for Customer Data Results

Statements		SA	A	N	D	SD
Reliability						
6.	The GIS website speeds up the process of distributing data to my division appropriately.	32 (32%)	62 (62%)	4 (4%)	1 (1%)	0 (0%)
Operability						
7.	I can access the GIS website with a laptop, computer, or personal computer and smartphone.	21 (21%)	67 (67%)	11 (11%)	1 (1%)	0 (0%)
8.	Information or data on the GIS website is easy for me to find and understand.	17 (17%)	66 (66%)	16 (16%)	1 (1%)	0 (0%)
Error Tolerance						
9.	I often experience problems or errors on the GIS website.	11 (11%)	50 (50%)	26 (26%)	8 (8%)	2 (2%)
Maintainability						
10.	Efforts are needed to fix errors on the GIS website.	41 (41%)	52 (52%)	5 (5%)	2 (2%)	0 (0%)
Usability						
11.	Availability of user instructions or manual books to facilitate the operation of the GIS website.	22 (22%)	67 (67%)	11 (11%)	0 (0%)	0 (0%)

The questionnaire data in Table 5 offers a nuanced view of employee experiences with the GIS website digitization for customer data, covering aspects such as reliability, operability, error tolerance, maintainability, and usability.

Reliability

When it comes to the reliability of the GIS website in speeding up the process of distributing data to their division, a strong majority of respondents (94%) expressed satisfaction, with 32% strongly agreeing and 62% agreeing. This indicates that most users find the website effective in facilitating the timely and accurate distribution of data, which is crucial for efficient operations. However, a small minority (1%) disagreed, suggesting that for some users, the website may not always perform as expected, possibly due to occasional delays or inconsistencies in data distribution.

Operability

Regarding operability, particularly the accessibility of the GIS website across different devices, the majority of respondents (88%) agreed that they can access the site using a laptop, computer, or smartphone, with 21% strongly agreeing and 67% agreeing. This reflects a generally positive experience with the website's cross-platform compatibility, essential for modern work environments. Nonetheless, 11% of respondents were neutral, and 1% disagreed, indicating that a small portion of users might face difficulties with accessibility on certain devices or find the experience less seamless than expected.

Similarly, when asked about the ease of finding and understanding information on the GIS website, 83% of respondents agreed that the data is accessible and comprehensible, with 17% strongly agreeing and 66% agreeing. This suggests that the majority of users are comfortable navigating the site and interpreting the information provided. However, 16% were neutral, and 1% disagreed, indicating that there might be some challenges related to information organization or presentation that affect a minority of users.

Error Tolerance

In terms of error tolerance, a significant portion of respondents (61%) reported frequently encountering problems or errors on the GIS website, with 11% strongly agreeing and 50% agreeing. This highlights a prevalent issue that could be impacting the efficiency and effectiveness of the website's usage. On the other hand, 26% of respondents were neutral, and 10% disagreed or strongly disagreed, suggesting that while errors are common, they may not be a universal experience, or some users may not perceive these issues as problematic.

Maintainability

The necessity of efforts to fix errors on the GIS website is strongly supported by the data, with 93% of respondents agreeing that such efforts are needed, including 41% who strongly agreed. This overwhelming consensus underscores the importance of ongoing maintenance and improvements to ensure the website operates smoothly and meets user needs. Only a small fraction (2%) of respondents disagreed, indicating that for the vast majority, the current error management on the site is insufficient and requires significant attention.

Usability

Finally, regarding usability, particularly the availability of user instructions or manuals to facilitate the operation of the GIS website, 89% of respondents agreed on their usefulness, with 22% strongly agreeing. This suggests that most users find these resources helpful in navigating the site and performing necessary tasks. However, 11% of respondents were neutral, indicating that while manuals are generally appreciated, there may be some who either do not use them or prefer other methods of learning, such as online resources or direct experience.

Overall, the questionnaire data reveals a largely positive user experience with the GIS website, particularly in terms of reliability, operability, and usability. However, it also highlights areas of concern, such as the frequent errors encountered and the need for better maintenance and possibly enhanced user support resources, to ensure that the website meets the diverse needs of its users effectively.

Statistical Results

Table 6. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.810[a]	0.656	0.653	2.111
a. Predictors: (Constant), Employee Competency				

The R-squared value of 0.656 in Table 6 indicates that 65.6% of the variance in the dependent variable can be explained by the independent variables in the model.

Table 7. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	833.080	1	833.080	186.926	0.000[b]
	Residual	436.760	98	4.457		
	Total	1269.840	99			
a. Dependent Variable: Use of GIS Web Digitization						
b. Predictors: (Constant), Employee Competency						

The ANOVA results in Table 7 indicate a statistically significant difference in GIS website digitalization across different levels of employee competency ($p < .001$). This finding supports the alternative hypothesis (H1), suggesting that employee competencies significantly influence the utilization of the GIS website.

DISCUSSION

Employees' Competencies

Knowledge

The findings reveal that 16% of respondents strongly agree, and 58% agree that their last education aligns with their current job. This alignment is crucial for enhancing work performance, as higher education levels can improve employees' abilities, expertise, and skills, which directly impact job effectiveness (Basyit et al., 2020). However, the data also highlights that 12% of respondents disagree with the idea that their education has adequately prepared them for their current role, particularly in using digital tools such as the GIS website. This finding reflects Eliana's (2020) observation that employees with non-linear educational backgrounds may lack the specific skills needed for their job responsibilities. Despite this, many of these employees can still perform effectively due to their work experience and training.

The survey data indicates that 29% of respondents strongly agree and 59% agree that their technological knowledge and experience in their field of work support their job performance. This aligns with the view that knowledge and proficiency in information technology are essential for completing tasks efficiently and saving time, as noted by Sari et al. (2021). The ability to use technology effectively, such as the GIS website digitization, aids employees in managing tasks more easily and quickly.

However, 3 respondents disagreed with this assertion, reflecting Wesly et al.'s (2021) observation that despite the importance of knowledge gained through learning and practice, not all employees may feel adequately supported by their technological

expertise. This suggests that while the majority of respondents benefit from their technological knowledge and experience, there are exceptions where individuals might struggle to leverage these tools effectively. This discrepancy highlights the need for continued support and training to ensure that all employees can fully utilize technology to enhance their job performance.

Skill

The data from the survey indicates that a significant majority of respondents are proactive in their professional development and collaboration. Specifically, 35% strongly agree and 60% agree that they actively try new things to deepen their understanding and improve their skills. This aligns with the research highlighting the importance of employee training in enhancing knowledge, skills, and attitudes through continuous learning and practice (Wahyuningsih, 2019; Zuama et al., 2023). The universal agreement on the value of seeking new challenges reflects a commitment to personal growth and skill development, although some employees might feel that their current abilities are sufficient, as suggested by Meidita (2019).

Additionally, 49% of respondents strongly agree and 49% agree that they build relationships and teamwork to effectively complete their work. This supports the notion that effective teamwork, which combines diverse skills and goals, leads to better outcomes than individual efforts alone (Ibrahim et al., 2021). Building strong relationships within teams enhances motivation, communication, and shared experiences, thereby improving collective performance (Pangestu et al., 2020). However, one respondent disagreed with this view, suggesting that tasks can sometimes be performed better independently. This perspective is supported by Nurhayati and Suprapti (2019), which emphasizes the significant contribution of individual performance to organizational success. This divergence underscores the complex interplay between individual capabilities and team dynamics in achieving optimal performance.

Attitude

The survey results reveal that a substantial majority of respondents—54% strongly agree and 38% agree—feel disciplined and responsible for completing work assigned by their leader. This aligns with the notion that high work discipline is crucial for achieving better performance and meeting organizational goals (Utama, 2020). The disciplined approach of employees at PDAM Surabaya City, including timely completion of tasks and adherence to schedules and dress codes, underscores the importance of work discipline in effective job performance.

However, the data also indicates that 5% of respondents disagree with the idea of being disciplined and responsible for their assigned tasks. This suggests that despite the overall positive view of work discipline, there are instances where employees may struggle with meeting expectations or feel less accountable, which can impact their performance.

In terms of technical proficiency, employees' knowledge and skills in using the GIS website are essential for the efficient distribution, management, and maintenance of customer data across departments (Budiman et al., 2021). The ability to update and validate data accurately is crucial for smooth operations. Nonetheless, 3% of the respondents disagreed with the idea that their technological proficiency fully supports their work, highlighting that errors in data input can lead to operational issues and delays in other divisions, as noted by Hidayat et al. (2017). This highlights that while technical skills are important, ensuring data accuracy and error management remains a critical challenge.

The Usage of GIS Website Digitization for Customer Data

Reliability

The data indicates that a significant majority of respondents—32% strongly agree and 62% agree—believe that the GIS website effectively accelerates the process of distributing data to their divisions. This high level of agreement suggests that the GIS website is largely successful in streamlining data distribution workflows, enabling more efficient and timely dissemination of information. The minimal dissent, with only 1% disagreeing and none strongly disagreeing, further reinforces the positive perception of the website's impact on operational efficiency. This widespread approval highlights the website's role in enhancing organizational productivity by facilitating quicker data transfer and management, which is crucial for maintaining smooth and effective division operations. The data supports the notion that the GIS website is a valuable tool in optimizing data distribution processes within the organization.

Operability

The survey data reveals that 21% of respondents strongly agree and 67% agree that they can access the GIS website using various devices, including laptops, computers, and smartphones. This is consistent with Nugraha et al.'s (2021) findings, which highlight the GIS website's flexible design, allowing access across different platforms and devices. The high level of agreement underscores the website's effectiveness in providing broad accessibility.

Similarly, 17% of respondents strongly agree and 66% agree that information on the GIS website is easy to find and understand. This supports Fatimatuzahra and Somantri's (2023) assertion that the GIS website effectively presents both spatial and non-spatial data through a well-integrated system. The positive feedback reflects the website's capability to facilitate user interaction and data retrieval.

However, despite the generally favorable responses, interviews with 16 respondents revealed some concerns. They noted discrepancies between the displayed data and real-world conditions, as well as issues with data visualization and navigation. One respondent specifically mentioned difficulties with unclear navigation features, suggesting that while the website is broadly accessible and usable, there are areas for improvement in the accuracy of information and user interface design to enhance the overall user experience.

Error Tolerance

The survey data shows that 11% of respondents strongly agree and 50% agree that they frequently experience problems or errors on the GIS website. This significant percentage of users encountering issues underscores widespread concerns about the website's reliability and performance. The 26% of respondents who are neutral on this issue further highlights a level of uncertainty or variability in user experiences, while the 8% who disagree and 2% who strongly disagree suggest that a minority do not face these problems.

The data aligns with interview feedback indicating specific issues, such as sluggish tool menu responses, poor page navigation, and data accuracy concerns like incorrect locations and duplicate entries. Additionally, 26 respondents noted that the website's performance worsens without a strong internet connection, and 10 experienced long loading times and freezing when multiple users accessed the site simultaneously.

These concerns echo the broader issues highlighted by Aelani (2021), who also discussed problems related to slow data retrieval and inadequate user access control. Despite these challenges, the fact that 7 respondents reported the presence of error notifications on the website suggests some level of support for users in managing these issues. Overall, the feedback highlights a critical need for improvements in website performance, error management, and data accuracy to better meet user needs and enhance operational efficiency.

Maintainability

The data revealing that 41% of respondents strongly agree and 52% agree that significant efforts are needed to fix errors on the GIS website reinforces the critical need for ongoing maintenance and repairs. This overwhelming consensus underscores the serious reliability issues faced by the website and highlights the urgent necessity for addressing these problems.

This perspective is aligned with the high percentage of users who report frequent issues with the website, such as unresponsive icons, slow page transitions, and difficulties in data validation and digitization due to errors like duplicate entries and inaccurate location data. The need for effective error management, as emphasized by Oktafina et al. (2021), is evident. Addressing these issues not only requires identifying and fixing errors but also implementing solutions to prevent future problems. The strong agreement on the need for extensive error-fixing efforts reflects a widespread recognition of the website's performance deficiencies and the imperative to improve its reliability and functionality.

Usability

The data indicating that 22% of respondents strongly agree and 67% agree on the availability and usefulness of user instructions or manuals for operating the GIS website underscores the significant role these resources play in facilitating website use. With the majority of respondents acknowledging the value of clear instructions or manuals, it is evident that these resources are crucial for efficiently handling tasks such as inputting and updating customer data.

Interview feedback corroborates this finding, highlighting that most users rely on these structured guides to ensure the effective operation of the website. Despite this general consensus, 11 respondents expressed a preference for online references over traditional manuals. This suggests that while the majority find manuals essential, a minority of users are comfortable using alternative resources like internet searches to find the information they need. This divergence points to a need for balancing the provision of detailed manuals with accessible online support options to cater to varying user preferences.

Statistical Analysis

The analysis of the GIS website's reliability, operability, error tolerance, maintainability, and usability highlights the significant impact of employee competencies on its utilization. This is further supported by the statistical analysis presented. The R-squared value of 0.656, as shown in Table 6, indicates that 65.6% of the variance in the dependent variable—likely related to GIS website performance or usage—can be explained by the independent variables, which include factors like employee competency, training, and experience.

The ANOVA results in Table 7 further reinforce this connection, revealing a statistically significant difference in GIS website digitalization across different levels of employee competency ($p < .001$). This finding supports the alternative hypothesis (H1), confirming

that employee competencies are a critical factor influencing how effectively the GIS website is utilized.

In the context of the earlier findings, this statistical evidence underscores the importance of ensuring that employees are well-trained and possess the necessary skills to use the GIS website effectively. As identified, while the website is generally accessible and easy to use, frequent issues with data accuracy, navigation, and performance persist, affecting a majority of users. These problems may be mitigated by enhancing employee competencies, thereby improving the overall reliability and effectiveness of the GIS website. The significant relationship between competency levels and website utilization suggests that targeted training and continuous skill development could play a crucial role in addressing these challenges and optimizing the website's performance.

CONCLUSION

In conclusion, this research highlights the crucial relationship between employee competency and the utilization of a digitalized GIS website for managing customer data. The data reveals that a majority of employees perceive their education and technological knowledge as aligned with their job roles and supportive of their performance. This alignment is crucial as it enhances their ability to effectively use the GIS website and manage customer data.

The findings indicate that employees are generally proactive in developing their skills and value teamwork, with significant agreement on their commitment to trying new things and fostering collaborative relationships. This proactive and disciplined attitude contributes to their overall effectiveness in utilizing digital tools like the GIS website.

However, the research also identifies areas of concern. Despite the high level of satisfaction with the website's ability to speed up data distribution and its accessibility across devices, a significant portion of users report encountering frequent problems and errors. This underscores the need for improved error management and website maintenance to enhance reliability and performance. The overwhelming consensus on the need for ongoing efforts to address these issues further emphasizes the importance of continuous improvement in the website's functionality.

The data also highlights that user instructions and manuals are generally valued by the majority of respondents, though some prefer alternative resources. This suggests a need for a balanced approach to user support, combining traditional manuals with modern online resources.

The statistical analysis supports the hypothesis that employee competencies significantly influence the effective use of the GIS website, as evidenced by the strong R-squared value and significant ANOVA results. This correlation confirms that enhancing employee competencies is critical for maximizing the benefits of digital tools and improving organizational performance.

Overall, while employees show a high level of competency and positive engagement with the GIS website, addressing the identified issues and continuing to support employee development will be key to optimizing the utilization of digital tools and achieving greater operational efficiency.

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REFERENCES

Abdillah, M. Z., Nawangnugraeni, D. A., & Yuniarto, A. H. P. (2021). Geographic information system (GIS) for mapping greenpark using leaflet JS. *Jurnal Teknik Informatika Kaputama, 5*(2), 259-266.

Aelani, K. (2021). Pengujian Kualitas Website menggunakan Metode McCall Software Quality (Studi Kasus smkn4bdg. sch. id) [Website Quality Testing using the McCall Software Quality Method (Case Study smkn4bdg. sch. id)]. *Journal of Information Technology, 3*(1), 25-32. https://doi.org/10.47292/joint.v3i1.43

Ahyar, J., Zainuddin, Z., Maulana, I., & Kurniawan, R. (2021). Optimalisasi digitalisasi arsip pada Kantor Mahkamah Syar'iyah [Optimization of archive digitization at the Sharia Court Office]. *Asia-Pacific Journal of Public Policy, 7*(1), 49-67. https://doi.org/10.52137/apjpp.v7i1.62

Alam, N., Tajang, A. R., & Taufik, A. (2022). Pengaruh budaya organisasi dan kompetensi terhadap kinerja pegawai Kantor Kelurahan Daya Kota Makassar [The influence of organizational culture and competence on the performance of employees at the Daya Subdistrict Office, Makassar City]. *Jurnal Online Manajemen ELPEI, 2*(1), 286-300. https://doi.org/10.58191/jomel.v2i1.65

Anjani, A. (2019). Pengaruh kompetensi dan motivasi kerja terhadap kinerja karyawan [The influence of competence and work motivation on employee performance]. *Jurnal Inspirasi Bisnis dan Manajemen, 3*(1), 3-5 https://doi.org/10.33603/jibm.v3i1.2191

Basyit, A., Sutikno, B., & Dwiharto, J. (2020). Pengaruh tingkat pendidikan dan pengalaman kerja terhadap kinerja karyawan [The influence of education level and work experience on employee performance]. *Jurnal Ekonomi Manajemen, 5*(1), 12-20. http://dx.doi.org/10.47335/ema.v5i1.44

Budiman, A., Sunariyo, S., & Jupriyadi, J. (2021). Sistem informasi monitoring dan pemeliharaan penggunaan SCADA (Supervisory Control and Data Acquisition) [Information system for monitoring and maintenance of SCADA (Supervisory Control and Data Acquisition) usage]. *Jurnal Tekno Kompak*, *15*(2), 168-179. https://doi.org/10.33365/jtk.v15i2.1159

Cakranegara, P., & Fetesond, M. (2022). Pengaruh literasi keuangan, kemampuan akademis dan pengalaman berkerja terhadap prilaku keuangan mahasiswa [The influence of financial literacy, academic ability and work experience on students' financial behavior]. *Jurnal Ekonomi Dan Bisnis, 9*(1), 259–274. https://doi.org/10.34308/eqien.v9i1.333

Chinnapong, P., Aujirapongpan, S., Koompai, S., Dowpiset, K., & Jiraphanumes, K. (2021). The effect of information technology and dynamic capabilities on human resources competencies and innovative performance. *ABAC Journal, 41*(4), 198-223. https://doi.org/10.14456/abacj.2021.10

Eliana, E. (2020). Pengaruh pendidikan dan pelatihan (DIKLAT) terhadap kinerja pegawai pada BPSDM Aceh [The influence of education and training (DIKLAT) on employee performance at BPSDM Aceh]. *ZONAsi: Jurnal Sistem Informasi*, *2*(2), 84-95. https://doi.org/10.31849/zn.v2i2.4864

Elizar, E., & Tanjung, H. (2018). Pengaruh pelatihan, kompetensi, lingkungan kerja terhadap kinerja pegawai [The influence of training, competence, work

environment on employee performance]. *Maneggio: Jurnal Ilmiah Magister Manajemen, 1*(1), 46-58. https://doi.org/10.30596/maneggio.v1i1.2239

Fatimatuzahra, D. T., & Somantri, S. (2023). Perancangan Web Geographic Information System (WebGIS) kehutanan pada wilayah Sukabumi [Design of Web Geographic Information System (WebGIS) for forestry in Sukabumi area]. *Jurnal Tekno Kompak, 17*(1), 184-195. https://doi.org/10.33365/jtk.v17i1.2433

Fauzi, A. A., Kom, S., Kom, M., Budi Harto, S. E., Mm, P. I. A., Mulyanto, M. E., ... & Rindi Wulandari, S. (2023). *Pemanfaatan Teknologi Informasi di Berbagai Sektor Pada Masa Society 5.0. [Utilization of Information Technology in Various Sectors in the Society 5.0 Era].* PT Sonpedia Publishing Indonesia.

Fuller, M., Heijne-Penninga, M., Kamans, E., van Vuuren, M., de Jong, M., & Wolfensberger, M. (2018). Identifying competence characteristics for excellent communication professionals: A work field perspective. *Journal of communication management, 22*(2), 233-252. https://doi.org/10.1108/JCOM-07-2016-0051

Hardiyanti, U., & Melita, D. (2018). Sistem penyimpanan arsip pada Kantor Imigrasi Kelas 1 Palembang [Archive storage system at the Class 1 Palembang Immigration Office]. *Prosiding Semhavok, 1*(1), 26-35.

Hasanah, Y. M., & Permana, P. S. (2020, November). Implementation management of character education. In *International Conference Fakultas Tarbiyah dan Keguruan Universitas Islam Negeri Imam Bonjol Padang* (pp. 82-88). Redwhite Press.

Hidayati, A., Oktariza, E., Rosmaningsih, F., & Lathifah, S. A. (2017). Analisa kualitas perangkat lunak sistem informasi akademik menggunakan McCall [Analysis of academic information system software quality using McCall]. *Jurnal Multinetics, 3*(1), 47-51.

Hutahaean, W. S. (2021). *Dasar Manajemen [Management Basics].* Ahlimedia Book.

Ibrahim, F. E., Djuhartono, T., & Sodik, N. (2021). Pengaruh kerjasama tim terhadap kinerja karyawan di PT LION Superindo [The influence of teamwork on employee performance at PT LION Superindo]. *Jurnal Arastirma, 1*(2), 316-325.

Jailani, M. S. (2023). Teknik pengumpulan data dan instrumen penelitian ilmiah pendidikan pada pendekatan kualitatif dan kuantitatif [Data collection techniques and instruments for scientific educational research using qualitative and quantitative approaches]. *IHSAN: Jurnal Pendidikan Islam, 1*(2), 1-9. https://doi.org/10.61104/ihsan.v1i2.57

Kapur, R. (2022). Leadership management and development in organizations. *International Journal of Information, Business and Management, 14*(2), 47-57.

Kim, M., & Beehr, T. A. (2018). Organization-based self-esteem and meaningful work mediate effects of empowering leadership on employee behaviors and well-being. *Journal of Leadership & Organizational Studies, 25*(4), 385-398. https://doi.org/10.1177/1548051818762337

Leggett, E. R. (2020). *Digitization and Digital Archiving: A Practical Guide for Librarians (Vol. 71)*. Rowman & Littlefield Publishers.

Mahendra, H. (2023). Perancangan dan implementasi Sistem Informasi Geografis (SIG) dengan teknologi Global Positioning System (GPS) untuk pemetaan dan navigasi [Design and implementation of Geographic Information Systems (GIS) with Global Positioning System (GPS) technology for mapping and navigation]. *Review Jurnal SIG, 3*(5), 1-16.

Meidita, A. (2019). Pengaruh pelatihan dan kompetensi terhadap kepuasan kerja melalui motivasi kerja [The influence of training and competence on job satisfaction through work motivation]. *Maneggio: Jurnal Ilmiah Magister Manajemen*, *2*(2), 226-237. https://doi.org/10.30596/maneggio.v2i2.3772

Mualim, A., Srisulistiowati, D. B., Rejeki, S., & Anggiani, S. (2023). Developing human resource management in increasing sustainable competitive advantage in SMAN

4 Bekasi Student. *Jurnal Ekonomi, Manajemen, dan Akuntansi, 9*(6), 2960-2970. https://doi.org/10.35870/jemsi.v9i6.1873

Nugraha, F. A., Muryono, S., & Utami, W. (2021). Membangun sistem informasi penggunaan tanah berbasis bidang tanah di Desa Blimbing Kecamatan Gatak Kabupaten Sukoharjo [Building a land use information system based on land areas in Blimbing Village, Gatak District, Sukoharjo Regency]. *Jurnal Tunas Agraria*, *4*(1), 146-157. https://doi.org/10.31292/jta.v4i1.140

Nurhayati, R., & Suprapti, S. (2019). Kinerja pegawai dilihat dari kemampuan kerja, disiplin kerja dan team work pada pegawai Dinas Kesehatan Kabupaten Pemalang [Employee performance is seen from work ability, work discipline and team work of the Pemalang Regency Health Service employees]. *Serat Acitya, 8*(1), 41. http://dx.doi.org/10.56444/sa.v8i1.1036

Odja, M., Hamzah, N., & Arifin, Z. (2020). Pengaruh kompetensi SDM, teknologi informasi dan komunikasi organisasi terhadap kinerja pegawai Dinas Lingkungan Hidup Kota Makassar [The influence of HR competency, information technology and organizational communication on the performance of employees of the Makassar City Environmental Service]. *Journal of Management Science, 1*(1), 105-119.

Oktafina, A., Jannah, F. A., Rizky, M. F., Ferly, M. V., Tangtobing, Y. D., & Natasia, S. R. (2021). Website usability evaluation using heuristic evaluation method (study case: XYZ City Public Works Office). *Antivirus: Jurnal Ilmiah Teknik Informatika, 15*(2), 134-146. https://doi.org/10.35457/antivirus.v15i2.1553

Pangestu, A., Siregar, M. Y., & Lailikhatmisafitri, I. (2020). Pengaruh pengembangan sumber daya manusia dan human relations (hubungan antar manusia) terhadap kinerja karyawan Badan Pengawas Obat dan Makanan Kota Medan [The influence of human resource development and human relations on the performance of employees of the Medan City Food and Drug Supervisory Agency]. *Jurnal Ilmiah Manajemen dan Bisnis, 1*(1), 1-10. https://doi.org/10.31289/jimbi.v1i1.362

Pinatik, S. (2021). The effect of auditor's emotional intelligence, competence, and independence on audit quality. *International Journal of Applied Business and International Management, 6*(2), 55-67. https://doi.org/10.32535/ijabim.v6i2

Reddy, G. O. (2018). Geographic information system: Principles and applications. *Geospatial Technologies in Land Resources Mapping, Monitoring and Management*, 45-62. https://doi.org/10.1007/978-3-319-78711-4_3

Rios, J. A., Ling, G., Pugh, R., Becker, D., & Bacall, A. (2020). Identifying critical 21st-century skills for workplace success: A content analysis of job advertisements. *Educational Researcher, 49*(2), 80-89. https://doi.org/10.3102/0013189X19890600

Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management, 86*, 180-190. https://doi.org/10.1016/j.indmarman.2019.11.019

Robbins, S. P., & Judge, T. A. (2019). *Perilaku Organisasi [Organizational Behavior]* (16th ed.). Salemba Empat.

Rumawas, W. (2018). The role of human capital to the improvement of employee performance in fisheries companies in North Sulawesi Province. *International Journal of Applied Business and International Management, 3*(2), 71-78. https://doi.org/10.32535/ijabim.v3i2.160

Sari, K. A. D. P., Suryandari, N. N. A., & Putra, G. B. B. (2021). Pengaruh pemanfaatan teknologi, partisipasi pemakai, kemampuan teknik pemakai, pengalaman kerja dan jabatan terhadap efektivitas sistem informasi akuntansi [The influence of technology utilization, user participation, user technical skills, work experience

and position on the effectiveness of accounting information systems]. *Kumpulan Hasil Riset Mahasiswa Akuntansi*, *3*(1), 104-109.

Sitompul, J., Sihombing, S. Y., Pesik, L. N., & Riyanto, I. (2019) Sistem Penggunaan Aplikasi Aset Management Berbasis GIS Web di PT Multitech Yasa Guna [Web-based GIS Asset Management Application Usage System at PT Multitech Yasa Guna]. *Jurnal Fakultas Teknik Universitas Budi Luhur*, *3*(2), 73-79

Utama, S. T. (2020). Pengaruh disiplin kerja dan pengembangan karir sumber daya manusia terhadap kinerja dan prestasi perusahaan [The influence of work discipline and human resource career development on company performance and achievements]. *Jurnal Manajemen Pendidikan dan Ilmu Sosial, 2*(1), 281-287. https://doi.org/10.38035/jmpis.v2i1.449

Wahyuningsih, S. (2019). Pengaruh pelatihan dalam meningkatkan produktivitas kerja karyawan [The influence of training in increasing employee work productivity]. *Jurnal Warta Dharmawangsa*, *13*(2), 11-15. https://doi.org/10.46576/wdw.v0i60.413

Wesly, J., Kristiana, V., Bong, T., & Saputra, N. (2021). Pengaruh digital leadership, total quality management, dan knowledge management terhadap sustainability management pada perusahaan di DKI Jakarta [The influence of digital leadership, total quality management, and knowledge management on sustainability management in companies in DKI Jakarta]. *Studi Ilmu Manajemen dan Organisasi, 2*(2), 97-124. https://doi.org/10.35912/simo.v2i2.543

Wulandari, I. W., & Hwihanus, H. (2023). Peran sistem informasi akutansi dalam pengaplikasian enkripsi terhadap peningkatan keamanan perusahaan [The role of accounting information systems in the application of encryption to improve corporate security]. *Jurnal Kajian dan Penalaran Ilmu Manajemen*, *1*(1), 11-25. https://doi.org/10.59031/jkpim.v1i1.46

Zuama, M., Sudiarditha, I. K. R., Wolor, C. W. (2023). Leadership determination and training effectiveness on employee performance through work motivation mediation. *International Journal of Applied Business and International Management*, *8*(2), 113-127. https://doi.org/10.32535/ijabim.v8i1.2132