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****Original Research****

# THE IMPACT OF COMPUTER LITERACY ON THE ADOPTION OF E-GOVERNMENT SYSTEMS IN KIGAMBONI MUNICIPAL COUNCIL

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## Abstract

Evaluate the impact of computer literacy on e-Government adoption among public sector workers at Kigamboni Municipal Council in Tanzania. A sample of 105 employees was surveyed and interviewed, with data analysis conducted using SPSS v.26. Thematic analysis of interview responses provided deeper insights, ensuring a comprehensive understanding of the findings. Statistical techniques, including descriptive statistics and linear regression, were used to explore relationships between variables, with strong internal consistency (Cronbach's Alpha > 0.8) indicating effective construct measurement. The results reveal that public sector employees' computer literacy and technological proficiency are crucial for successful e-Government implementation. Descriptive analysis shows that computer literacy (mean: 3.27, SD: 1.26) and proficiency (mean: 4.5, SD: 1.40) significantly influence e-Government usage. The study highlights the importance of computer training programs (mean: 3.8, SD: 1.34) in enhancing e-Government implementation at Kigamboni Municipal Council, where computer literacy (mean: 3.1, SD: 1.41) serves as both a critical factor for adoption and a significant barrier. The research emphasizes the need for continuous training to improve public sector employees' skills in using e-Government platforms, underscoring that computer literacy significantly affects the success of e-Government initiatives, particularly in tasks such as conducting transactions and accessing information.

***Keywords:*** *Computer literacy, Local government authorities, public sector workers, e-Government and Public sector.*

## 1.0 INTRODUCTION

The introduction of information and communication technologies (ICTs) has significantly transformed government operations and service delivery, including in Tanzania. Recognizing the potential of electronic government (e-Government) to enhance public services and governance, the Tanzanian government established an agency in 2012 to coordinate, oversee, and provide e-

Government activities across Ministries, Departments, Agencies, and Local Government Authorities (Kisoka, 2022). Despite these efforts, adoption and utilization of e-Government systems among public sector employees remain relatively low, particularly within local government authorities (Kanyika et al., 2021).

Public sector workers are expected to possess a comprehensive understanding of computer technology to effectively participate in modern work environments. Al Sayegh et al. (2023) emphasize that computer literacy significantly impacts the successful implementation of e-Government systems. The Tanzanian government has implemented various e-Government platforms, such as the Government Electronic Payment Gateway (GePG), the Tanzania National ID System (NIDA), and the Tanzania Immigration e-service portal, aimed at increasing service accessibility, efficiency, and transparency (Kanyika et al., 2021).

Rodríguez-Hevía et al. (2020) and Maphangwa and Dwivedi (2018) highlight the critical role of computer literacy in the adoption and effective use of e-Government systems. Computer literacy, encompassing basic computer operations, internet use, and proficiency in various software applications, is essential for public sector employees to navigate digital platforms and perform administrative duties effectively. However, Charles (2020) found that many Tanzanian public sector workers lack adequate computer literacy skills, hindering the adoption and effective utilization of e-Government services. This situation underscores the need for comprehensive training and support to improve these skills.

Local government authorities play a crucial role in the deployment of e-Government initiatives in Tanzania. However, there is a limited understanding of how computer literacy influences the acceptance and use of e-Government systems among public sector employees in these settings. Kisoka (2022) and other scholars have emphasized the importance of computer literacy in this context, but there remains a gap in understanding its specific impact within Tanzanian local government authorities.

Previous studies have largely focused on general factors influencing e-Government adoption, such as perceived usefulness and ease of use (Ekanem and Kim, 2023). However, it is essential to explore the unique challenges faced by public sector workers with low computer literacy in utilizing e-Government technologies, particularly within Local Government Authorities (LGAs). This study, using the Kigamboni Municipal Council as a case study, seeks to understand the impact

of computer literacy on the adoption of e-Government in Tanzanian LGAs. Such insights are crucial for identifying barriers, developing effective strategies, and promoting inclusivity in digital governance.

## 2.0 OBJECTIVE OF THE STUDY

This study examined the influence of computer literacy on the adoption of e-Government systems among public sector employees within Tanzanian local government authorities. It assessed how familiarity with computer literacy affected the adoption process, investigated the correlation between the level of computer literacy and e-Government adoption, and evaluated the effectiveness of existing training programs in facilitating this adoption. The findings provided insights into optimizing strategies for enhancing computer literacy, thereby promoting broader and more efficient utilization of e-Government services.

## 3.0 LITERATURE REVIEW

It explores relevant theories, concepts, and empirical research that have looked at how computer literacy affects public sector employees' adoption of e-Government in local government agencies. This part tries to identify knowledge gaps that the current research attempts to fill and to build a theoretical framework by synthesizing and analyzing the existing literature. It provides a crucial foundation for comprehending the context of the research and guides the goals, methods, and conclusions of the study.

### 3.1 Theoretical Literature Review

The variables identified in this study are grounded in Social Learning Theory and the Technology Acceptance Model (TAM), as well as supported by empirical studies such as Dwivedi et al. (2019). Social Learning Theory, which emphasizes the importance of peer learning and mentorship, has been instrumental in guiding the selection of variables aimed at enhancing computer literacy. Similarly, the TAM model, which highlights perceived usefulness, has been crucial in understanding factors influencing technology acceptance. Dwivedi et al.'s study (2019) examined the acceptance of e-Government services in India, applying TAM to determine the factors shaping citizens' intentions to use these services. This empirical evidence underscores the relevance of these theoretical frameworks in understanding technology adoption across diverse contexts.

### 3.2 Empirical Literature Review

Kisera (2018) emphasizes the necessity of tailored training curricula that address the specific job duties and responsibilities of public sector employees, highlighting the importance of managerial support in enhancing computer literacy skills. This finding aligns with previous research, underscoring the value of targeted training and support in improving computer literacy among public sector workers. Additionally, Mmari and Kissaka (2019) identified challenges in implementing e-Government in Dodoma City Council, such as a lack of computer proficiency, insufficient resource allocation, and weak political commitment. They recommend providing targeted training and capacity-building programs, increasing budget allocations, and strengthening political will to ensure the successful implementation of e-Government initiatives.

Mohammed and Mbowe (2017) observed that the computer literacy level among teachers in Tanzania was rather poor, with only a small proportion possessing fundamental computer skills. Many educators had not undergone structured instruction in computer literacy. The study suggests that the government and other relevant parties should offer training and capacity-building initiatives to improve educators' proficiency in computer literacy. Additionally, the report emphasizes the need for government funding to enhance computer infrastructure in educational institutions, enabling teachers to access computers and other technical resources.

Rugaimukamu (2017) found that utilizing computers among primary school educators in Tanzania led to favorable outcomes, such as improved lesson preparation, enhanced pedagogical abilities, and increased motivation. However, challenges included insufficient proficiency in computer usage and limited availability of computer resources. The study recommends government funding for constructing computer infrastructure and providing training and capacity-building programs for teachers to increase their computer literacy. Addressing these challenges is essential to maximize the benefits of computer use on educators' efficacy.

Geofrey and Mosha (2018) identified factors such as perceived utility, perceived ease of use, trust, and social influence as significant influences on the adoption of Tanzanian e-Government services. They also noted that internet connectivity, computer proficiency, and computer accessibility were notable obstacles. The study calls for government action to increase internet access, fund computer infrastructure, and conduct capacity-building and training programs to advance computer literacy. These measures are crucial to removing barriers and increasing the use of e-Government services among Tanzanian individuals.

Yared and Jumanne (2019) highlight several barriers to integrating ICT in higher education institutions, including poor ICT infrastructure, limited financial resources, and insufficient training and capacity-building activities. The study suggests that higher education institutions allocate resources towards developing ICT infrastructure and offer training programs to strengthen the computer literacy skills of their students. Establishing policies and strategies to encourage ICT integration into teaching and learning processes is also deemed necessary.

## 4.0 METHODOLOGY

The study utilized an exploratory research design, which is particularly suitable for investi-gating topics that are relatively unfamiliar or not well understood. This approach is common-ly employed in the early stages of research when the goal is to gain a deeper understanding of the subject and generate new ideas or perspectives. The exploratory research design fo-cuses on exploring specific issues or topics to develop insights and formulate preliminary hy-potheses. The research was conducted in Tanzania's Kigamboni Municipal Council, which was established as a municipality in 2015 following the implementation of the Decentraliza-tion Policy. Prior to this, the Kigamboni District was under the jurisdiction of the Temeke Municipal Council.

### Research approach

This study utilized a mixed method approach, incorporating both quantitative and qualitative methods in its research approach. The rationale for employing this methodology is rooted in the imperative to acquire a comprehensive comprehension of the influence of computer literacy on the adoption of e-Government within the context of public sector employees in Tanzanian local government authorities. The integration of quantitative and qualitative methodologies in the research approach facilitates a more comprehensive and holistic comprehension of the intricate correlation between computer literacy and e-Government adoption among public sector workers in Local Government Authorities (LGAs). This study focused on the Kigamboni Municipal Council located in Tanzania

### Sampling

### Targeted population

The targeted population for this study was public sector workers in Kigamboni Municipal Council in Tanzania. This population was chosen because they are directly involved in the implementation and delivery of e-Government services at the local government level

**Sample size**

The sample size was determined using the formula for calculating sample size for a finite population, which is:

**n = N / (1 + N(e^2))**

where:

**n = Sample size**

**N = Total population size**

**e = Level of precision, set at 7% (0.07)**

Using the total staff population of 219 and a level of precision of 7%, the calculation for the sample size is as follows:

**n = 219/ (1 + 219(0.07^2))**

**n = 105.8**

Therefore, a sample size of 105 public sector workers is appropriate for this study, as it provides a representative sample of the total population while ensuring adequate participation and representation

**Sampling strategies**

The researcher used simple random sampling, assigning a unique identifier to each population member using a label system. Respondents were presented with papers written as NO or Yes, with those who chose the label YES being eligible for the study, and those who chose NO were excluded. The researcher had no control over selecting specific respondents for the study.

**Data collection methods**

The collection of quantitative data was conducted by means of questionnaires. The questionnaires were disseminated through the utilization of Google online forms. Qualitative data collection in the study was conducted through the utilization of interviews. The acquisition of abundant qualitative data was facilitated through the implementation of individual or group interviews with carefully chosen participants. This method enabled the researchers to pose probing questions, thereby facilitating a more comprehensive understanding of the participants' experiences

**Data analysis**

In this study the collected data were analysed both qualitatively and quantitatively and the findings were presented. Quantitative techniques such as inferential statistics and descriptive statistics were used in this study. In the quantitative approach, data analysis involves the use of statistical

techniques to organize, summarize, and interpret data. In this study, the descriptive analysis was conducted with the help of Statistical Package for the Social Sciences (SPSS) software v.26. Descriptive statistics such as frequencies, means, and standard deviations was be used to summarize the data. Additionally, linear regression analysis technique as a subset of inferential statistics was conducted to test the relationships between the variables and determine the significance of the findings

In the qualitative approach, data from interviews or open-ended survey questions were analyzed using thematic analysis done by reading a set of data and looking for patterns in the meaning of the data to find themes. Analyzing the qualitative data thematically by identifying recurring patterns, themes, and perspectives that emerge from the interviews helps to gain a deeper understanding of the computer literacy-related factors influencing e-Government adoption

**Validity and reliability**

In quantitative research, ensuring data reliability and internal consistency is crucial, and Cronbach's alpha coefficient serves as a key measure in this regard. This coefficient assesses how well a set of items measures a single, unidimensional latent construct. High Cronbach's alpha values indicate that the items in the questionnaire are reliably capturing the same underlying concept, which is essential for the integrity of the data. Additionally, a pilot study was conducted to test the clarity and comprehensibility of the interview questions in qualitative research. Feedback from this preliminary testing phase was used to refine the questionnaire, ensuring that the questions were easily understood and interpreted consistently by respondents. This step is vital in enhancing the reliability of qualitative data and ensuring that responses accurately reflect participants' experiences and views.

To establish the validity of the quantitative research, a multi-faceted approach was employed. The questionnaire was based on established research tools and underwent a face validity check, where experts reviewed the items to ensure they accurately represented the constructs being measured. Construct validity was also assessed to confirm that the items effectively captured the markers of the specific construct of interest, such as depression. Furthermore, qualitative findings were cross-referenced with secondary data from literature reviews to identify consistencies and discrepancies. This triangulation helps to validate the qualitative data and ensures a comprehensive understanding of the research topic. Ensuring reliability and validity in both qualitative and quantitative research is fundamental to producing robust, credible, and generalizable findings.

## 5.0 RESULTS

This section provides a detailed and structured overview of the research outcomes of this article. Results were related to the impact of computer literacy on e-Government adoption. It includes a comprehensive analysis of the collected data, which have been obtained through online questionnaires, individual or group interview. The presentation of results section highlights the key findings, such as the relationship between computer literacy and e-Government adoption, and any significant trends or patterns identified

### Demographic profile

The study analyzed the demographic profile of respondents, revealing that 7% were aged 18-24, 21% were aged 25-34, 38% were aged 35-44, 24% were aged 45-54, and 10% were aged 55-60. The gender distribution indicated a majority of males, with 62% male and 38% female respondents. In terms of educational attainment, 79% of respondents held a bachelor's degree, 13% had a master's degree, and 2% had a PhD. The duration of employment at the ministry varied, with 77% having worked for less than one year, 21% for 1 to 3 years, 30% for 4 to 6 years, 20% for 7 to 10 years, and 4% for more than 15 years.

***Table 1: Influence of computer literacy familiarity among public sector workers on the adoption of e-Government in Local Government Authorities***

| | N0 | Mean | Std. Deviation |
|---|---|---|---|
| I am aware of the technology regulatory frameworks in the country that govern e-government initiatives (e.g., data protection laws, and cybersecurity regulations) | 87 | 3.55 | 1.63 |
| Familiarity with computer literacy is important for effective e-Government adoption | 87 | 3.37 | 1.74 |
| I am comfortable with the digital technologies and applications used in the e-Government systems such as Mobile Applications, e-documents management, etc. | 87 | 3.40 | 1.81 |
| Computer literacy familiarity significantly affects your ability to effectively use e-Government platforms and services such as performing transactions and accessing information through websites and portals | 87 | 3.36 | 1.66 |

| | | | |
|---|---|---|---|
| I am proficient in communicating and collaborating with other government agencies through digital channels (e.g., email, online chat, video conferencing, etc.) | 87 | 4.19 | 1.78 |
| Conversant in computer literacy defines the state of data management, analysis, and privacy in e-Government initiatives | 87 | 4.01 | 1.64 |
| It is likely easy to adopt and utilize e-Government services through the improvement of computer literacy skills by public workers in Tanzanian local government authorities | 87 | 3.75 | 1.72 |
| In my job role, I often use computers and similar devices such as laptops, tablets, or smartphones while doing tasks related to e-Government services such as electronic payments | 87 | 3.56 | 1.84 |
| I am confident in using internet browsers (e.g., Chrome, Firefox, Safari) to navigate websites, search for information, and perform online tasks | 87 | 3.27 | 1.82 |
| I received the computer and similar technologies training and guidance on using e-government services and platforms. | 87 | 2.61 | 1.93 |
| Grand Mean | | 3.51 | 1.76 |

*Source: research data (2023)*

According to the results presented in Table 1, participants, who are public sector workers at Kigamboni Municipal, generally indicated a moderate level of awareness of computer literacy. The overall mean response for both positively and negatively formulated statements was 3.51, suggesting that most participants either strongly agreed or agreed with these statements. The standard deviation from the mean was 1.76, indicating a high degree of consistency in the responses among the participants.

***Table 2: Level of computer literacy among public sector workers and the adoption of e-Government in Local Government Authorities***

| | N0 | Mean | Std. Deviation |
|---|---|---|---|
| My overall computer literacy knowledge and skills are excellent | 87 | 4.09 | 1.169 |

| | | | |
|---|---|---|---|
| I am well conversant with Basic Computer Operations (e.g., turning on/off/restarting the computer, using the mouse and keyboard as well as managing files and folders) | 87 | 3.80 | 1.231 |
| I am proficient in computer software and hardware in the context of adopting e-Government technologies (e.g., installing and updating software, connecting peripherals like printers or scanners, and managing versions of operating systems technologies) | 87 | 4.09 | 1.169 |
| I can easily use Email and other Digital Communication channels in the context of e-Government communications aspects (e.g., composing and sending emails, attaching files, managing contacts, online chats etc.) | 87 | 3.25 | 1.513 |
| I am aware of data protection schemes, information security, and management including internet security and privacy practices employed in e-Government adoption and utilization (e.g., using strong passwords, avoiding suspicious websites, managing privacy settings) | 87 | 3.81 | 1.01 |
| I am confident in browsing the internet and using web-based applications (e.g., searching for information, filling out online forms, navigating websites etc.) | 87 | 1.47 | 0.745 |
| I am familiar with common troubleshooting techniques for computer-related issues (e.g., restarting the system, checking for software updates, running antivirus scans, etc.) | 87 | 2.34 | 1.642 |
| I received computer literacy training specific to my role in the local government authority | 87 | 1.75 | 0.816 |
| I frequently do encounter challenges or difficulties while using computer systems or software specific to e-Government platforms and systems | 87 | 1.54 | 0.712 |
| I am comfortable using online platforms or tools for collaboration, access information, and document sharing within the department and with other government entities in the context of e-Government adoption | 87 | 3.25 | 1.71 |
| Grand Mean and Standard Deviation | | **3.0** | **1.17** |

*Source: research data (2023)*

As indicated by the outcomes displayed in the **Table 2**: Participants (Public Sector Workers) at Kigamboni Municipal, on average, respondents rated their computer literacy knowledge and skills as law. The grand mean response of both (positive and negative formulated statements) as indicated in **Table 2** was 3.0 which infer that most participant either strongly agree or agree to the formulated statements regarding examining the Level of computer literacy among public sector workers and the adoption of e-Government in Local Government Authorities. The standard deviation from the mean for the formulated statements was 1.17 which demonstrates that respondents to a great extent held comparable conclusion. This finding establishes that even though the employees have received computer training, they still consider their skills as law. Most of the respondents disagreed that on the statement that their overall computer skills are excellent

***Table 3: Effectiveness of existing computer training programs in enhancing the adoption of e-Government***

| | N | Mean | Std. Deviation |
|---|---|---|---|
| There exist effective training programs in equipping public sector workers with the necessary computer literacy skills to engage with e-Government platforms | 87 | 3.45 | 1.116 |
| I feel confident in using the acquired computer literacy skills to effectively navigate and utilize e-Government services | 87 | 3.28 | 1.641 |
| Existing computer training programs has positively influenced workers' attitude towards using e-Government services in Local government authorities | 87 | 3.42 | 1.141 |
| I am confident with computer knowledge acquired to adapt new computer technologies and utilize them for e-Government purposes | 87 | 3.16 | 1.549 |
| I am comfortable with the current initiatives or strategies implemented by the government to promote computer literacy among public sector workers for successful e-Government adoption | 87 | 4.09 | 1.222 |
| It is valuable to have computer training programs that incorporate peer learning (learning from fellow participants) or mentorship (guidance and support from experienced individuals) components | 87 | 4.22 | 1.206 |
| Training programs offered meet my expectations in terms of enhancing my computer literacy skills for e-Government adoption | 87 | 3.81 | 1.115 |

| | | | |
|---|---|---|---|
| I am able to apply the knowledge and skills acquired from computer training programs in my work-related tasks that involve e-Government systems | 87 | 3.42 | 1.212 |
| Existing training programs has helped me improve my work performance with regards to e-Government adoption | 87 | 3.21 | 1.710 |
| I am provided with sufficient technical support and resources during and after the training programs to enhance my computer literacy for effective e-Government adoption | 87 | 2.41 | 1.212 |
| **Grand Mean and Standard Deviations** | | **3.45** | **1.31** |

*Source: research data (2023)*

As presented in Table 2, the participants, who are public sector workers at Kigamboni Municipal, generally rated their computer literacy knowledge and skills as low. The overall mean response for both positively and negatively formulated statements, as shown in Table 3, was 3.45. This suggests that the majority of respondents either strongly agreed or agreed with the statements assessing the effectiveness of existing computer training programs in enhancing the adoption of e-Government among public sector workers within Local Government Authorities. The standard deviation from the mean for these statements was 1.17, indicating a relatively high level of consensus among respondents. This suggests that while there is a moderate level of agreement regarding the effectiveness of these training programs, a minority of respondents may hold divergent views on this issue.

**Regression Analysis**

The study has adopted **linear regression** in order to measure the relationship between variable. The following equation was adopted:

- $Y$ = Adoption of e-Government among public sector workers in Local Government Authorities (dependent variable)
- $X1X1$ = Computer literacy familiarity (independent variable for objective i)
- $X2X2$ = Level of computer literacy (independent variable for objective ii)
- $X3X3$ = Effectiveness of existing computer training programs (independent variable for objective iii)

The regression equation can be written as:

$Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\varepsilon Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\varepsilon$

Where:

- $\beta0$is the intercept term,
- $\beta1,\beta2,\beta3\beta1,\beta2,\beta3$ are the coefficients representing the effect of each independent variable on the adoption of e-Government,
- $\varepsilon\varepsilon$ is the error term.

Scale:

- $\beta1$ indicates how much the adoption of e-Government changes for a one-unit change in computer literacy familiarity, holding other variables constant.
- $\beta2$ indicates how much the adoption of e-Government changes for a one-unit change in the level of computer literacy, holding other variables constant.
- $\beta3$ indicates how much the adoption of e-Government changes for a one-unit change in the effectiveness of existing computer training programs, holding other variables constant.

**Table 4: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .930[a] | .865 | .863 | .24404 |

a. Predictors: (Constant), Computer_literacy_familiarity, Level_of_computer literacy, Existing_computer_training_programs

The **R** Square value of the model presented in Table 4 is 0.865, indicating that approximately 86.5% of the variation in e-government adoption can be explained by the predictors included in the model. This demonstrates a strong correlation between the predictors and the adoption of e-government. The Adjusted **R** Square, which accounts for the number of predictors, is slightly lower at 0.863, suggesting that the predictors collectively provide a strong fit for the model. The Standard Error of the Estimate, at 0.24404, represents the average deviation of the observed values from the regression line, serving as a measure of the model's predictive accuracy.

***Table 5: The ANOVA table assesses the significance of the overall regression model***

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 72.071 | 3 | 24.024 | 403.398 | .000[b] |
| | Residual | 11.256 | 84 | .060 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Total | 83.326 | 87 | | | |

a. Dependent Variable: e-government adoption

b. Predictors: (Constant), Computer_literacy_familiarity, Level_of_computer literacy, Existing_computer_training_programs

The ANOVA table assesses the significance of the overall regression model. The F-statistic of 403.398 with a corresponding p-value of .000 indicates that the regression model is statistically significant. This means that at least one of the predictors significantly contributes to explaining the variance in e-government adoption.

**Table 6: Correlation analysis**

| | | | e-overnment_adoption | Computer_literacy_familiarity | Level_of_computer literacy | Existing_computer_training_programs |
|---|---|---|---|---|---|---|
| Spearman's rho | e-government adoption | Correlation Coefficient | 1.000 | .104 | .049 | .278 |
| | | Sig. (2-tailed) | . | .152 | .499 | .000 |
| | | N | 87 | 87 | 87 | 87 |
| | Computer literacy familiarity | Correlation Coefficient | .104 | 1.000 | .887 | .701 |
| | | Sig. (2-tailed) | .152 | . | .000 | .000 |
| | | N | 87 | 87 | 87 | 87 |
| | Level_of_computer literacy | Correlation Coefficient | .049 | .887 | 1.000 | .753 |
| | | Sig. (2-tailed) | .499 | .000 | . | .000 |
| | | N | 87 | 87 | 87 | 87 |
| | Existing_computer_training_programs | Correlation Coefficient | .278 | .701 | .753 | 1.000 |
| | | Sig. (2-tailed) | .000 | .000 | .000 | . |
| | | N | 87 | 87 | 87 | 87 |

*Source: research data (2023)*

The correlation analysis findings, as presented in the table, explore the relationships between e-government adoption, familiarity with computer literacy, the level of computer literacy, and

existing computer training programs within a sample population. The analysis reveals a significant positive correlation between e-government adoption and existing computer training programs (correlation coefficient = 0.278, $p < 0.001$). This suggests that an increase in the availability of computer training programs is associated with a higher adoption rate of e-government services. However, the correlations between e-government adoption and familiarity with computer literacy (correlation coefficient = 0.104, $p = 0.152$), as well as the level of computer literacy (correlation coefficient = 0.049, $p = 0.499$), are weak and statistically insignificant, indicating minimal association with e-government adoption in this sample population.

There is a strong positive correlation between familiarity with computers and the level of computer literacy (correlation coefficient = 0.887, $p < 0.001$), indicating that individuals who are more familiar with computers tend to have higher levels of computer literacy. Additionally, significant positive correlations exist between existing computer training programs and both computer literacy familiarity (correlation coefficient = 0.701, $p < 0.001$) and the level of computer literacy (correlation coefficient = 0.753, $p < 0.001$). These findings suggest that computer training programs are crucial in enhancing both computer literacy and familiarity among individuals in the sample population.

Overall, the correlation analysis underscores the importance of computer training programs in promoting computer literacy, which, in turn, supports e-government adoption. However, the findings also indicate that other factors, such as awareness, access, and the usability of e-government services, may significantly influence adoption rates. Further research is needed to delve into these factors and develop comprehensive strategies for effectively promoting e-government adoption.

**Thematic analysis**

The thematic analysis underscores the critical role of computer literacy in the adoption of e-government systems within local government authorities (LGAs). A key theme identified is digital skills and competency. Computer literacy directly influences the digital skills and competency levels of public sector workers, with those possessing higher computer literacy being more adept at using e-government tools, navigating digital interfaces, and efficiently utilizing various online platforms and services. This proficiency not only enhances their capacity to perform their duties more effectively but also supports the overall success of e-government initiatives by maximizing the potential of digital tools.

Another significant theme from the analysis is the ease of learning and training. Employees with strong computer literacy skills are typically quicker to learn and adapt to new e-government systems, often requiring less formal training. This ability to independently explore and master new technological tools reduces the resources needed for training and makes the deployment of e-government projects more efficient. Additionally, these employees can provide informal support to their colleagues, promoting a smoother transition to digital processes within the organization.

The third theme focuses on overcoming resistance to change. Resistance to new technologies is a common challenge across organizations, including public sector entities. However, higher levels of computer literacy can help mitigate this resistance. Employees who are comfortable with technology experience less fear and anxiety when using new systems, which fosters a more positive attitude toward e-government initiatives. This confidence encourages greater acceptance and proactive engagement with these new tools, leading to a more seamless implementation of e-government systems. Consequently, there are fewer disruptions, and the likelihood of achieving the intended benefits of improved service delivery and increased efficiency is significantly higher.

## 6.0 RESULTS

This study aimed to investigate the impact of computer literacy on the adoption of e-Government among public sector workers in Local Government Authorities (LGAs) in Tanzania. According to Griffen et al. (2022), the widespread implementation of information and communication technologies (ICTs) has significantly transformed how governments engage with citizens. E-Government, which involves using ICTs to enhance public service delivery, promote transparen-cy, and improve operational efficiency, relies heavily on the technological skills and computer literacy of public sector employees. These competencies are crucial for the successful implementa-tion of e-Government initiatives.

E-Government in Tanzania presents substantial opportunities for streamlining administrative processes, reducing corruption, enhancing transparency, and fostering citizen engagement (Nugraha & Susanto, 2022). While some LGAs have made significant strides in digitalizing services, others have faced challenges, including low levels of computer literacy among public sector employees (Charles, 2020). Nokele and Mukonza (2021) emphasize that computer literacy encompasses proficiency in using computers and related technologies to accomplish various tasks, which is essential for effectively navigating digital platforms, accessing and analyzing data, and engaging with citizens online. This aligns with Samuel et al. (2020), who found that public sector workers with

advanced computer literacy skills can more effectively manage and deliver services through online platforms, leading to faster response times and improved service quality for the public.

The study also revealed a mixed response among participants regarding their comfort with digital technologies and applications used in e-Government systems. While many participants expressed confidence in using these systems, a significant number reported discomfort, indicating a need for government strategies to enhance user experience and satisfaction. Samuel et al. (2020) also noted that digital technologies could streamline bureaucratic processes by reducing reliance on physical paperwork and manual tasks. Public sector employees proficient in computer skills can leverage e-Government systems to automate processes, significantly enhancing operational effi-ciency.

Computer literacy also plays a crucial role in how effectively individuals can use e-Government platforms and services, such as conducting transactions and accessing information through websites and portals. E-Government platforms can increase transparency by making information readily accessible (Kiettikunwong, 2022). Public sector employees with strong computer skills are essential for managing and updating these platforms efficiently, ensuring that the public receives accurate and timely information. Moreover, the ability of citizens to participate actively in decision-making processes is facilitated by e-Government, and computer-literate employees can enhance these interactions by utilizing digital channels effectively. However, the study found that while many respondents possessed the necessary skills for digital communication and collaboration, a considerable number still lacked proficiency in this area.

These findings underscore the need for ongoing government efforts to implement training programs that enhance the computer literacy of public sector employees, particularly in using e-Government platforms. The study confirms that computer literacy is vital for effective data management, analysis, and privacy within e-Government initiatives. This is particularly evident in LGAs, where many personnel use computer systems and similar devices for their professional responsibilities. Despite the Tanzanian government's efforts to provide training to support e-Government initiatives, a significant portion of survey participants remained unaware of the technological regulatory frameworks governing these initiatives.

The importance of computer literacy among public sector employees in Tanzanian LGAs is widely recognized as a key factor in the effective implementation of e-Government initiatives. However, challenges remain, particularly a lack of proficiency in executing these initiatives. The Tanzanian government can facilitate a more favorable environment for integrating e-Government into public service delivery by addressing these challenges and investing in training and skill development. Such integration would lead to increased citizen participation, greater transparency, and improved operational performance, ultimately contributing to a more connected and responsive

government that better meets the needs of its citizens.

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