

EMPLOYEES' ABILITY IN USING COMPUTER TERMINOLOGY AT SEI RENGAS II URBAN VILLAGE OFFICE, MEDAN

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ABSTRACT

The rapid development of information technology has encouraged the digital transformation of public services, requiring government employees to understand and use computer terminology effectively. This study aimed to analyze employees' ability in using computer terminology and identify factors influencing their understanding. A quantitative descriptive method was employed. The population consisted of all employees at Sei Rengas II Urban Village Office, Medan, and total sampling was applied. Data were collected through questionnaires, interviews, and observations and analyzed using descriptive statistics. The findings revealed that most employees experienced improvements in their understanding and application of computer terminology after receiving training. Approximately 60% of employees improved their competency category, while 40% showed score improvements but remained in the same category. The "Good" category was dominant (50%), followed by "Very Good" (25%) and "Fair" (25%). These results indicate that understanding computer terminology positively contributes to work effectiveness and administrative service quality. Therefore, continuous information technology training is recommended to enhance employees' digital literacy and performance.

Keywords: computer terminology, digital literacy, employees, information technology, public service.

INTRODUCTION

Digital transformation has significantly changed the way organizations perform administrative activities. Government institutions increasingly rely on information technology to improve efficiency and service quality. Consequently, employees are required not only to operate computer systems but also to understand various computer-related terms such as hardware, software, database, network, and file management.

Computer terminology is an important component of digital literacy. According to UNESCO (2021), digital literacy includes the ability to understand and utilize digital concepts and technologies effectively. Employees with inadequate knowledge of computer terminology may experience difficulties in communication, system operation, and decision-making processes.

Sei Rengas II Urban Village Office in Medan has implemented computer-based administrative systems. However, some employees still encounter difficulties in understanding technical terms used in daily operations. Therefore, this study aims to examine employees' abilities in using computer terminology and identify factors affecting their competence.

LITERATURE REVIEW

The development of information and communication technology has transformed various aspects of human life, including education, economics, government, and public services. In today's digital era, the ability to read and write alone is no longer sufficient to support the activities of modern society. Individuals are required to possess the ability to use digital technology effectively, critically, and productively. This ability is known as digital literacy.

One theory of digital literacy widely used in research is the theory developed by Jan van Dijk (2020). Van Dijk explains that digital literacy is not only related to the ability to operate technological devices, but also includes the ability to understand information, evaluate it, and use technology to achieve specific goals. Van Dijk's theory is important because it explains why the digital skills gap persists in society despite increasingly widespread access to technology. According to him, the digital divide is not only caused by limited access to devices, but also by differences in skills in using that technology. Van Dijk defines digital literacy as a set of skills needed to use digital technology effectively in everyday life, work, and social activities. In theory, digital skills develop gradually, from basic skills to more complex ones. According to Van Dijk, there are four main types of interrelated digital skills: Operational Skills, Formal Skills, Information Skills, Strategic Skills. These four skills form

a hierarchy, where a person must master basic skills before being able to advance to higher-level skills.

One of the most important initiatives supporting this transformation is the implementation of the **Electronic-Based Government System (SPBE)** or **Sistem Pemerintahan Berbasis Elektronik**. SPBE serves as the national framework for integrating information and communication technology into governmental operations and public service delivery. Sistem Pemerintahan Berbasis Elektronik (SPBE) is the administration of government functions through the integrated utilization of information and communication technology to provide services to government institutions, civil servants, businesses, and citizens. SPBE was formally established through Presidential Regulation Number 95 of 2018 concerning Electronic-Based Government Systems issued by the Government of Indonesia. The regulation provides a legal framework for the implementation of digital government across ministries, agencies, and local governments. The policy aims to create government administration that is efficient, effective, transparent, accountable, and capable of delivering high-quality public services.

2.1 Computer Terminology

Computer terminology refers to technical terms used in information technology to describe hardware, software, networks, databases, and computer processes. According to Shelly and Vermaat (2010), computer terminology is essential for understanding computer systems and their functions. Laudon and Laudon (2018) emphasize that computer terminology serves as the foundation of information systems and supports communication within organizations. Understanding these terms enables users to operate systems more efficiently. Throughout the literature a variety of terms have been used that are associated with the technology aspect of the digital divide. ICT, digital technology, digital systems, digital resources and others are often used interchangeably. Scheerder et al. (2017) investigated the terms used in literature about the digital divide and found that when referring to skills, “online skills”, “digital skills” and “internet skills” were frequently used terms. “Digital literacy”, “digital competence” and “information literacy” were also used. In our experience with the literature, often it was not explicitly stated what the terms used referred to, about the author(s) understanding them to mean, or why they chose some terms over others. Most authors shown to be referring to internet access and/or the tools available via the internet, even though some digital stuffs can be used without internet access.

2.2 Digital Literacy

Eshet-Alkalai (2004) defines digital literacy as the ability to understand and effectively utilize digital information and technologies. UNESCO (2021) and OECD (2021)

recognize digital literacy as one of the essential competencies required in the twenty-first century. Tinmaz et al. (2022) identified digital skills, digital competencies, and digital thinking as major dimensions of digital literacy. Understanding terminology is considered a fundamental aspect of these competencies.

2.3 Previous Studies

Asa and Nautwima (2025) found that digital literacy is necessary for workforce readiness in the twenty-first century. Caroline et al. (2024) reported that digital literacy positively affects employability and innovative work behavior. Pauh et al. (2025) demonstrated that digital competence significantly influences communication and collaboration skills. However, studies focusing on government employees remain limited, particularly concerning computer terminology.

METHODS

This study employed a quantitative descriptive approach. The research was conducted at Sei Rengas II Urban Village Office, Medan.

3.1 Population and Sample

The population of this study consisted of all employees working at the Sei Rengas II Urban Village Office, Medan. Since the total number of employees was relatively small and manageable, the researcher employed a total sampling technique. Total sampling is a sampling method in which all members of the population are included as research participants. This technique is appropriate when the population size is limited and when the researcher aims to obtain comprehensive and accurate information from every member of the population.

Therefore, all twenty employees of the Sei Rengas II Urban Village Office participated in this study as research respondents. By involving the entire population, the study minimized sampling bias and provided a more complete representation of employees' competencies in understanding and using computer terminology within the workplace.

The use of total sampling also increased the reliability of the findings because the results reflected the actual conditions of all employees in the institution rather than a selected subset of participants.

3.2 Data Collection Techniques

Data for this study were collected using four main techniques: questionnaires, interviews, observations, and pre-test and post-test assessments. The use of multiple data collection methods was intended to obtain comprehensive and reliable information regarding employees' understanding and use of computer terminology.

a. Questionnaires

Questionnaires were used to gather quantitative data concerning employees' knowledge, familiarity, and frequency of using computer terminology in their daily work activities. The questionnaire consisted of structured questions and statements measured using a Likert scale ranging from strongly disagree to strongly agree. This instrument enabled the researcher to identify participants' levels of understanding and perceptions regarding computer-related terms and digital technologies.

b. Interviews

Interviews were conducted to obtain more detailed and in-depth information about participants' experiences, difficulties, and learning needs related to computer terminology. Semi-structured interviews allowed respondents to explain their opinions and experiences freely while still focusing on the objectives of the study. The interview data provided additional insights that could not be fully captured through questionnaires alone.

c. Observations

Observations were carried out to examine how employees applied computer terminology in real workplace situations. During the observation process, the researcher recorded participants' interactions with digital systems, software applications, and computer-related tasks. This method helped verify whether employees' self-reported abilities corresponded with their actual practices in the workplace.

d. Pre-test and Post-test Assessments

Pre-test and post-test assessments were administered to measure the effectiveness of the training or intervention program related to computer terminology. The pre-test was conducted before the training to determine participants' initial level of knowledge and understanding. After the completion of the training program, a post-test was administered to evaluate any improvement in participants' knowledge and skills. The comparison between pre-test and post-test results provided evidence of learning outcomes and training effectiveness.

By combining questionnaires, interviews, observations, and pre-test and post-test assessments, this study employed a mixed-method approach that strengthened the validity and reliability of the findings.

3.3 Data Analysis

The data collected from questionnaires, interviews, observations, and pre-test and post-test assessments were analyzed using descriptive statistical methods. Descriptive analysis was employed to summarize, organize, and interpret the data in order to provide a clear description of employees' competencies in understanding and using computer terminology. Quantitative data obtained from questionnaires and tests were analyzed by calculating percentages and mean scores. Percentages were used to determine the proportion of

respondents demonstrating specific levels of understanding, while mean scores were used to identify the overall level of competency among employees.

The percentage of respondents' scores was calculated using the following formula:

$$[P = \frac{F}{N} \times 100\%]$$

where:

- **P** = Percentage
- **F** = Frequency of respondents in a particular category
- **N** = Total number of respondents

To facilitate interpretation, employees' competencies were classified into four categories as follows:

Score Range Competency Level

86 – 100	Excellent
61 – 85	Good
36 – 60	Fair
0 – 35	Poor

The classification was used to determine the level of employees' understanding and use of computer terminology in the workplace.

In addition, the results of the pre-test and post-test assessments were compared to identify improvements in employees' competencies after participating in the training program or learning intervention. An increase in mean scores between the pre-test and post-test indicated the effectiveness of the training in enhancing employees' knowledge and understanding of computer terminology.

Qualitative data obtained from interviews and observations were analyzed descriptively through data reduction, data categorization, and interpretation. The qualitative findings were used to support and explain the quantitative results, particularly regarding factors influencing employees' understanding of computer terminology and their experiences in using digital technologies in the workplace.

By combining quantitative and qualitative analyses, this study provided a comprehensive understanding of employees' digital competencies and their ability to use computer terminology effectively in supporting digital transformation initiatives within government institutions.

RESULTS

Pre-test and post-test results indicated improvements in employees' understanding of computer terminology. Out of twenty participants: there are twelve employees (60%) improved their competency categories, eight employees (40%) improved their scores but remained within the same category, ten employees (50%) were classified as Good, five employees (25%) achieved the Very Good category, and five employees (25%) remained in the Fair category.

These findings suggest that training positively influenced employees' knowledge and usage of computer terminology.

Reporting Research Results

The implementation of training programs demonstrated significant improvements in employees' understanding of computer terminology. Participants showed better comprehension of terms related to software, hardware, file management, and digital communication.

Furthermore, employees exhibited increased confidence in utilizing computer systems during administrative processes. The majority of respondents indicated that understanding technical terms facilitated communication and improved work performance.

DISCUSSION

The findings of this study demonstrate that the training program had a positive impact on employees' understanding and use of computer terminology. The comparison between pre-test and post-test results revealed measurable improvements in participants' competencies. Among the twenty participants involved in the study, twelve employees (60%) improved their competency classification, while eight employees (40%) increased their scores although they remained within the same competency category. Following the training program, ten employees (50%) were classified in the **Good** category, five employees (25%) achieved the **Very Good** category, and only five employees (25%) remained in the **Fair** category. These results indicate that the training intervention was effective in enhancing employees' digital competencies, particularly in relation to computer terminology.

The improvement in participants' scores suggests that employees were able to acquire new knowledge and strengthen their understanding of fundamental computer concepts after participating in the training sessions. Increased familiarity with terms related to software, hardware, file management, internet usage, and digital communication enabled employees to perform computer-based administrative tasks more efficiently. This finding supports the

argument that understanding technical terminology is not merely a linguistic skill but an essential component of workplace digital competence.

The results are consistent with the digital skills framework proposed by Jan van Dijk, which emphasizes that operational and informational digital skills are fundamental requirements for effective participation in digital environments. Employees who understand computer terminology are better equipped to operate digital systems, navigate software applications, and interpret technical instructions provided within government information systems. Therefore, terminology comprehension can be considered an important indicator of employees' digital literacy levels.

The findings also support the concept of digital literacy proposed by Wan Ng, who argues that digital literacy consists of technical, cognitive, and socio-emotional dimensions. Computer terminology knowledge contributes primarily to the technical and cognitive dimensions because employees must not only recognize digital terms but also understand their meanings and applications within workplace contexts.

Furthermore, the findings align with the study conducted by Sule Tinmaz and colleagues (2022), who argued that terminology comprehension is an integral component of digital literacy development. Their research suggested that individuals with stronger understanding of technological terminology tend to demonstrate higher levels of digital engagement and more effective use of digital resources.

Similarly, the findings support the conclusions of Caroline and colleagues (2024), who emphasized that digital literacy contributes significantly to employability, innovation, and workplace adaptability. Employees with better digital competencies are generally more capable of responding to technological changes and adopting new digital systems introduced within organizations.

In the context of public administration, the findings are particularly relevant to the implementation of the Sistem Pemerintahan Berbasis Elektronik (SPBE) initiative in Indonesia. The digital transformation of government services requires public employees to interact regularly with electronic systems, databases, digital archives, and online communication platforms. Consequently, understanding computer terminology becomes essential for ensuring effective system utilization and improving the quality of public service delivery.

The study also found that employees demonstrated increased confidence in using computer systems after participating in the training program. Many respondents reported that understanding technical terms reduced confusion when using applications, following instructions, or communicating with colleagues and technical support personnel. Improved

communication regarding technical issues can reduce operational errors and increase workplace productivity.

Despite these positive outcomes, several challenges remain. One of the primary challenges is the rapid emergence of new technological terms resulting from continuous advancements in information technology. Concepts such as cloud computing, artificial intelligence, cybersecurity, and digital collaboration tools continue to evolve, requiring employees to update their knowledge regularly. Additionally, limited opportunities for continuous professional development may hinder employees from maintaining adequate levels of digital competence.

Another challenge identified in this study relates to differences in participants' educational backgrounds, prior computer experience, and levels of exposure to digital technologies. These factors may explain why some participants improved their scores but remained within the same competency category after the intervention. This finding suggests that a single training program may not be sufficient for all employees and that differentiated or ongoing training approaches may be necessary. From the perspective of adult learning theory, particularly the andragogical principles proposed by Malcolm Knowles, the positive outcomes may be explained by the relevance of the training content to employees' daily work activities. Adult learners tend to learn more effectively when learning materials are practical, problem-centered, and directly applicable to their professional responsibilities.

Therefore, organizations should establish continuous digital literacy development programs that include regular workshops, refresher courses, and practical training sessions focusing on emerging technologies and computer terminology. Such initiatives would not only improve employees' technical competencies but also support organizational readiness for ongoing digital transformation.

Overall, the findings of this study highlight the importance of computer terminology knowledge as a foundation for digital literacy and effective workplace performance. Improving employees' understanding of technological terms can contribute significantly to administrative efficiency, communication accuracy, and successful implementation of digital government initiatives.

developments.

CONCLUSION

Based on the research results, it can be concluded that improving employees' computer terminology skills has a positive impact on job performance. Most employees performed well after training, indicating they have a better understanding and use of computer

terminology to support task completion, work communication, and more effective and efficient use of information technology in the office environment.

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