

# Assessing the Level of Computer Literacy Among the Land Transportation Office – Registration Towards Effective Public Service Delivery

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## ABSTRACT

This study assessed the level of computer literacy among Land Transportation Office (LTO) registration personnel in Cebu City and examined its relevance to effective public service delivery. Grounded in computer literacy, human capital, adult learning, public administration, and digital era governance theories, the research addressed the growing need for digitally competent government employees in increasingly computerized frontline services. A descriptive-correlational design was employed involving 140 respondents, composed of 100 LTO employees and 40 clients from selected LTO offices in Cebu City. Data were gathered through a structured survey questionnaire and analyzed using frequencies, percentages, weighted means, Pearson correlations, t-tests, and one-way ANOVA. Findings showed that employees generally demonstrated high computer literacy in MS Word, MS Excel, and MS PowerPoint, as well as in internet usage, with PowerPoint receiving the highest rating. Respondents also strongly agreed that computer skills enhanced efficiency, accuracy, responsiveness, and timeliness in service delivery. Clients also rated the LTO's service delivery highly for efficiency, timeliness, accuracy, accessibility, and satisfaction. However, correlational results revealed no statistically significant relationships between employees' computer literacy and the measured dimensions of public service delivery, nor between service delivery and organizational performance. The study concludes that while computer literacy remains an important competency, effective public service also depends on broader organizational factors. A computer literacy-based service delivery enhancement strategy was proposed to strengthen digital capability and sustain service quality in the agency.

**Keywords:** computer literacy, public service delivery, Land Transportation Office, government employees, digital competence, service efficiency, service timeliness, service accuracy, client satisfaction, Cebu City

## INTRODUCTION

In the contemporary era, computer technology has become an indispensable component of organizational operations across both the public and private sectors, particularly in developing countries such as the Philippines

The integration of computers into administrative and managerial functions has significantly transformed how institutions perform routine tasks, including record management, data processing, communication,

and service delivery. Casiano (2007) emphasized that computers offer extensive capabilities for administrative and managerial use, enabling more efficient processes such as enrollment systems, record preparation, financial transactions, and instructional support. These technological advancements have also facilitated the development of multimedia applications, fostering more interactive and efficient learning and working environments (Lim, 2017).

The pervasive role of computers in everyday life is further underscored by Albano (2007), who noted that computer technology is deeply embedded in various domains, including education, employment, communication, business, governance, and entertainment. In the context of globalization and rapid technological advancement, computer literacy has shifted from being an optional skill to a fundamental requirement. Individuals who fail to acquire basic computer competencies risk exclusion from modern systems of work and communication (Censon). As a result, computer literacy is now widely recognized as a critical life skill necessary for effective participation in contemporary society.

Computer literacy may be understood through multiple dimensions, including awareness, knowledge, and interaction. Awareness refers to an individual's understanding of the importance, versatility, and widespread application of computers in society. Knowledge encompasses familiarity with computer functions, basic technical terminology, and operational concepts. Interaction, on the other hand, involves the practical use of computers for everyday tasks such as document preparation, electronic communication, internet-based research, and data management. These dimensions collectively determine an individual's ability to utilize computer technology effectively in the workplace.

In developing countries such as the Philippines, computer literacy is particularly vital given the increasing reliance on digital systems to enhance efficiency, transparency, and accountability. Government offices routinely use computers for documentation, data storage, report generation, electronic mail, and inter-agency communication. The Philippine government's push toward e-governance, digital recordkeeping, and online public services further heightens the need for computer-literate government personnel (*The Philippine Government's Digital Transformation through DICT's e-Government Initiatives – DAP*, 2025). However, in the Cebu branch, some operational challenges have been observed due to insufficient computer literacy among certain personnel. Employees who lack adequate computer skills may experience difficulty in navigating registration systems, accurately encoding vehicle information, retrieving records, and processing online or computerized transactions (Etcuban et al., 2016). As a result, essential tasks such as vehicle registration processing, data verification, document printing, and transaction recording may slow down or become error-prone. These issues can contribute to longer queues, delayed transactions, inaccurate data entry, and reduced efficiency in public service delivery.

A lack of adequate computer skills may therefore hinder employees' ability to meet the technological demands of modern public service (Lopes et al., 2023b). Hence, assessing the level of computer literacy among LTO-Registration personnel is crucial in determining existing competency gaps and providing a basis for interventions, such as targeted training programs and digital skill development initiatives, that may strengthen employee performance and promote more effective public service delivery.

As Reynolds (2007) explained, computer literacy involves not only familiarity with hardware and software but also an understanding of how these technologies enhance professional performance and learning experiences. In government settings, this understanding directly affects how employees perform administrative tasks and interact with citizens.

Despite the widely acknowledged importance of computer literacy, disparities in digital skills continue to persist among government personnel. Many employees across national and local government agencies

still experience limited access to structured computer training and capacity-building programs. In some offices, particularly those that rely on long-established administrative practices, manual and paper-based processes remain prevalent. Although computers and digital tools are increasingly available in government workplaces, the level of proficiency and confidence among personnel in using these technologies effectively varies significantly. This situation raises concerns regarding operational efficiency and the consistent delivery of quality public services.

While a substantial body of research has examined computer literacy in educational institutions and private-sector organizations, empirical studies on government personnel remain limited, particularly in the Philippine context. Existing literature tends to prioritize students, teachers, or corporate employees, often overlooking public-sector workers who play a critical role in governance and service provision (UNITED NATIONS DEPARTMENT FOR ECONOMIC AND SOCIAL AFFAIRS, 2024). As a result, there is insufficient understanding of how computer literacy levels among government personnel affect day-to-day administrative functions and public interactions. This gap highlights the need for focused research on digital competencies within the government workforce.

In light of these considerations, this study aims to assess the level of computer literacy among government personnel in the Philippines and examine its implications for public service delivery. The findings may serve as a foundation for developing targeted training programs, strengthening capacity-building efforts, and guiding policy decisions related to digital transformation in government. Enhancing computer literacy can enable government personnel to adapt more effectively to technological advancements, improve productivity, and deliver more efficient, transparent, and responsive services to the public.

## **RELATED LITERATURE**

The related literature indicates that computer literacy has become a basic competency for effective work in modern organizations, as computers are now used for record-keeping, communication, data processing, documentation, and service transactions (Casiano, 2007; Albano, 2007). Computer literacy is commonly understood not only as knowledge of hardware and software but also as the ability to use digital tools for practical tasks such as preparing documents, managing data, searching information, and communicating electronically (Reynolds, 2007). Mason and McMorro (2006) explain that computer literacy involves both awareness of the importance of technology and competence in applying computer skills to actual work situations. In the context of the Land Transportation Office, these competencies are necessary because registration personnel regularly handle computerized transactions, electronic records, client information, and document processing. Studies on digital skills emphasize that employees with stronger computer competence are better able to perform tasks accurately, reduce errors, and adapting to technology-based work systems (Van Deursen & Van Dijk, 2011; Lopes et al., 2023). The uploaded study likewise identifies MS Word, MS Excel, MS PowerPoint, and internet usage as the major areas of computer literacy relevant to LTO personnel's daily functions. Thus, the literature supports the view that computer literacy is no longer optional but essential for government employees who are expected to deliver efficient and responsive public service.

In public administration, computer literacy is closely related to service efficiency, transparency, accountability, and citizen satisfaction because government offices increasingly depend on digital systems to manage public transactions (Dunleavy et al., 2006; United Nations Department of Economic and Social Affairs, 2024). Human Capital Theory explains that investment in employee skills, including ICT competence, improves productivity and organizational performance (Schultz, 1961; Becker, 1964). Adult

Learning Theory also supports the need for practical and job-related ICT training because adult employees learn best when training is connected to their actual work responsibilities (Knowles, 1980). Public Administration Theory further stresses that competent personnel, clear procedures, and reliable administrative systems are necessary for effective governance (Wilson, 1887; Weber, 1922). In the Philippine setting, laws such as Republic Act No. 8792, Republic Act No. 11032, Republic Act No. 10173, Republic Act No. 10844, and Executive Order No. 2, s. 2016 strengthen the need for digitally capable government workers. These legal foundations require electronic transactions, efficient service delivery, data privacy protection, ICT development, and accessible government information. Therefore, the related literature affirms that computer literacy among LTO personnel is both a workplace competency and a governance requirement to improve public service delivery.

Empirical studies suggest that digital competence contributes to better employee performance, faster transaction processing, improved records management, and higher service quality in public organizations (Insih et al., 2024; Idzi & Gomes, 2022). Research on e-governance also indicates that digital transformation does not automatically improve public service unless employees have the skills to operate, maintain, and apply digital systems effectively (“Digital Literacy and E-Governance Adoption for Service Delivery in Cross River State Civil Service,” 2023). This is relevant to LTO registration services because employees must encode vehicle information, retrieve records, verify data, print documents, and respond to clients within expected timelines. The uploaded study found that LTO employees generally demonstrated high computer literacy in MS Word, MS Excel, MS PowerPoint, and internet usage, while clients rated service delivery positively in efficiency, timeliness, accuracy, accessibility, and satisfaction. However, the study also reported no statistically significant relationship between computer literacy and the measured dimensions of public service delivery, suggesting that digital skills alone do not fully determine service outcomes. This finding is consistent with literature emphasizing that public service performance is also affected by workflow design, staffing, system reliability, organizational support, and administrative coordination (Qureshi, 2023; Latupeirissa et al., 2024). Hence, the reviewed literature supports the development of a computer-literacy-based service-delivery enhancement strategy, while recognizing that training must be complemented by broader organizational improvements.

## **OBJECTIVES OF THE STUDY**

This study assessed the level of computer literacy among government employees of the Land Transportation Office (LTO) in Cebu City in relation to public service delivery during CY 2025–2026, as a basis for a computer literacy-based service delivery enhancement strategy. Specifically, it examined the demographic profile of employee and client respondents, including age, gender, educational attainment, position level, years of government service, and ICT-related training attended. It also assessed employees’ level of computer literacy in MS Word, MS Excel, MS PowerPoint, and internet use. Moreover, the study evaluated the status of LTO service delivery in terms of efficiency, timeliness, accuracy, accessibility, and client satisfaction. It further investigated whether a significant relationship exists between employees’ computer literacy and public service delivery, as well as between public service delivery and organizational performance. Based on the findings, the study proposed a computer literacy-based service delivery enhancement strategy for the LTO in Cebu City.

## **METHODOLOGY**

This study employed a descriptive-correlational research design to assess the level of computer literacy

among government employees of the Land Transportation Office (LTO) in Cebu City and to examine its implications for public service delivery. This design was appropriate because it allowed the researcher to describe existing conditions and explore relationships among variables without manipulating them. Descriptive-correlational designs were commonly used in social science and public administration research where variables naturally occurred in organizational settings.

The descriptive component of the design focused on determining the respondents' demographic profile and assessing their level of computer literacy in MS Word, MS Excel, MS PowerPoint, and internet usage. Descriptive research provided a systematic and accurate portrayal of characteristics within a given population, enabling researchers to quantify and interpret patterns of behavior and competencies (Creswell, 2014). In this study, it allowed for a clear assessment of the digital skills of LTO personnel as they existed in the workplace (Research Design, 2026).

The correlational aspect of the research design examined the relationship between computer literacy and public service delivery. Correlational research determined the degree to which two variables were related, without establishing cause-and-effect relationships (Fraenkel, Wallen, & Hyun, 2019). This approach was suitable for identifying whether higher levels of computer literacy were associated with improved work efficiency, service quality, and overall organizational performance in LTO offices (6.3: Correlational Research - Social Sci LibreTexts, n.d.). The study by Creswell (2018) adopted a quantitative research approach, collecting data through structured survey questionnaires and analyzing it using statistical methods. Quantitative research was appropriate when the goal was to measure variables objectively and test hypotheses using numerical data (Huyler & McGill, 2019).

## RESULTS AND DISCUSSION

This section presents, analyzes, and interprets the data gathered from the respondents regarding the level of computer literacy among government employees of the Land Transportation Office (LTO) in Cebu City and its relationship to public service delivery. The discussion is organized around the study's specific problems, including the respondents' demographic profile, computer literacy in selected applications, service delivery performance, and the significant relationships among the study variables. The findings provide the basis for identifying strengths, gaps, and possible areas for improvement in developing a computer literacy-based service delivery enhancement strategy.

**Table 1**  
**Distribution of Respondents**  
N= 140

<b>Respondents</b>	<b>Number of Respondents</b>	<b>Percentage (%)</b>
LTO Employees	100	71.43
Clients	40	28.57
<b>Total</b>	<b>140</b>	<b>100.00</b>

Table 1 presented the distribution of the 140 respondents included in the study. It showed that the respondents were divided into two groups: LTO employees and clients. The majority of the respondents were LTO employees, with 100 individuals representing 71.43% of the total sample. Meanwhile, 40

respondents or 28.57% were clients. This indicated that most of the data gathered for the study came from employees rather than clients, although both groups were represented in the survey.

**Table 2**  
**Rate of Responses According to Age – Employees**

Age	Frequency (f)	Percentage (%)
18-25 years old	12	12.00
26-35 years old	26	26.00
36-45 years old	25	25.00
46-55 years old	23	23.00
56 years old and above	14	14.00
<b>TOTAL</b>	<b>100</b>	<b>100.00</b>

Table 2 shows that most respondents are concentrated in the middle age groups. The largest proportion is from the 26–35 age bracket (26.0%), followed by the 36–45 age bracket (25.0%) and the 46–55 age bracket (23.0%). Combined, these groups make up 74.0% of the sample, indicating that the workforce is largely composed of employees in their prime and established career stages. In contrast, younger employees aged 18–25 (12.0%) and those aged 56 and above (14.0%) are less represented.

This distribution is consistent with broader labor-market and organizational research. OECD data show that employment participation is generally highest among prime working-age adults, particularly those in the 25–54 age range, which helps explain why the 26–55-year-old cohorts dominate the present sample (OECD, 2024). The more modest representation of employees aged 56 years and above is also supported by the literature, which notes that late-career participation is often shaped by retirement processes, employer demand, and age-related barriers, including age discrimination and reduced opportunities in hiring (Wang & Huang, 2024). Collectively, these studies strengthen the interpretation that the observed pattern reflects a workforce centered on prime and mid-career employees, while younger and older workers remain comparatively underrepresented for structural labor-market reasons.

**Table 3**  
**Rate of Responses According to Gender – Employees**

Gender	Frequency (f)	Percentage (%)
Male	46	46.00
Female	54	54.00
Prefer Not To Say	0	0.00
<b>TOTAL</b>	<b>100</b>	<b>100.00</b>

Table 3 shows that the employee respondents were almost evenly distributed by gender, with females comprising a slight majority at 54.00% and males accounting for 46.00%. No respondent selected “Prefer

Not to Say,” indicating full disclosure for this demographic variable. Overall, the results suggest that the sample reflects representation from both male and female employees, although the modest female predominance should be considered when interpreting gender-related findings.

Prior studies support this interpretation by emphasizing that gender-disaggregated data improve the rigor and clarity of research reporting, particularly when demographic characteristics may shape respondents’ workplace experiences (Wainer & Carcel, 2019). The literature also notes that balanced gender representation enhances the inclusivity and interpretability of empirical findings by adequately reflecting both male and female perspectives in the sample. In the context of work and employment, the International Labor Organization has likewise stressed that gender remains a significant dimension of opportunity, treatment, and experience in the workplace, making the present distribution relevant for analysis (ILO, 2025).

**Table 4**  
**Rate of Responses According to Age – Client**

Age	Frequency (f)	Percentage (%)
18-25 years old	3	7.50
26-35 years old	1	2.50
36-45 years old	16	40.00
46-55 years old	13	32.50
56 years old and above	7	17.50
<b>TOTAL</b>	<b>40</b>	<b>100.00</b>

Table 4 shows that the client population is largely concentrated in the middle-adult age groups. Respondents aged 36–45 years recorded the highest proportion (40.00%,  $f = 16$ ), followed by those aged 46–55 years (32.50%,  $f = 13$ ), indicating that 72.50% of all clients were between 36 and 55 years old. In contrast, younger adults were underrepresented, with only 7.50% ( $f = 3$ ) in the 18–25 group and 2.50% ( $f = 1$ ) in the 26–35 group, while those aged 56 years and older comprised 17.50% ( $f = 7$ ). Overall, the findings suggest that the service is used primarily by middle-aged adults, with comparatively lower engagement among younger and older clients.

This pattern is supported by prior research showing that middle-aged adults often account for a substantial share of service utilization because this life stage is associated with increasing responsibilities, health needs, and contact with formal support systems. A scoping review by Ng et al. (2024) found that middle-aged adults constitute a significant group of healthcare users, with utilization patterns shaped by multimorbidity and socioeconomic factors. For older adults, access barriers such as mobility, socioeconomic constraints, and digital exclusion may reduce service engagement despite potential need (Garcia et al., 2025).

**Table 5**  
**Rate of Responses According to Gender – Client**

Gender	Frequency (f)	Percentage (%)
Male	26	65.00
Female	14	35.00
Prefer Not to Say	0	0.00
<b>TOTAL</b>	<b>40</b>	<b>100.00</b>

Table 5 indicates that the respondents were predominantly male: 26 of 40 clients (65.00%) identified as male and 14 (35.00%) as female, with none selecting “Prefer Not to Say.” This suggests that males comprised the larger proportion of clients in the study, which may reflect the gender profile of those who more frequently engage with registration-related public services. As a descriptive finding, this implies that the assessment of computer literacy and service efficiency relied more heavily on male clients than on female respondents.

This pattern is supported by studies noting that gender remains a relevant factor in access to and use of digital technologies. Qazi et al. (2022) reported that gender differences in ICT use and skills persist across contexts, although their extent varies by context. Likewise, the OECD noted that gender gaps persist in education, skills, and digital transformation, which can influence participation in technology-based systems and services. UNESCO further emphasizes the need to address inequalities in digital skills development across populations, including those shaped by gender (OECD, 2025).

**Table 6**  
**Rate of Responses According to Highest Educational Attainment**

Highest Educational Attainment	Frequency (f)	Percentage (%)
High School	2	2.00
College	40	40.00
Technical/Vocational	15	15.00
Graduate Studies	43	43.00
<b>TOTAL</b>	<b>100</b>	<b>100.00</b>

Table 6 indicates that most respondents had relatively high educational attainment. The largest group was those with Graduate Studies (43.00%), followed by College-level respondents (40.00%), while fewer came from Technical/Vocational education (15.00%), and only 2.00% were high school graduates. This suggests that the respondents generally have strong formal educational backgrounds, which may contribute to a better capacity to learn and apply computer-related skills in office-based public service tasks.

The OECD Survey of Adult Skills found that adults with tertiary education tend to perform better in literacy, numeracy, and technology-rich problem-solving environments. Similarly, Yamashita et al. (2024)

reported that higher education and literacy levels were positively associated with computer use and online transactions. In the public sector, Villaseñor (2024) also emphasized that government personnel with stronger educational and digital foundations are better positioned to adapt to technology-driven service delivery, although continuous training remains necessary.

**Table 7**  
**Rate of Responses According to Position Level**

<b>Position Level</b>	<b>Frequency (f)</b>	<b>Percentage (%)</b>
Rank-and-File	32	32.00
Supervisory	36	36.00
Managerial	32	32.00
<b>TOTAL</b>	<b>100</b>	<b>100.00</b>

Table 7 indicates a balanced distribution of respondents across position levels, with supervisory personnel comprising the largest group at 36.00% (n = 36), while rank-and-file and managerial employees each accounted for 32.00% (n = 32). This pattern suggests that the findings capture views from employees performing frontline, supervisory, and decision-making functions, making the results more reflective of the organization as a whole. The slightly higher representation of supervisory staff is also significant, as they commonly mediate between policy direction and day-to-day operations, placing them in a strong position to assess how computer literacy supports work efficiency and service implementation.

This interpretation is supported by prior studies showing that digital competence is needed across all levels of an organization. The European Commission’s DigComp framework explains that digital competence spans multiple proficiency levels and applies across employment contexts, reinforcing the view that computer-related skills are relevant to rank-and-file, supervisory, and managerial personnel alike. Venkatesh et al. (2003) further show that technology use in organizations depends on user expectations, ease of use, and facilitating conditions, which can vary by role and responsibility. In the public sector, recent research likewise emphasizes that digital transformation requires diverse competencies across organizational levels, with leadership and workforce capability both contributing to better service processes and more effective delivery.

**Table 8**  
**Rate of Responses According to Years of Government Service**

<b>Years of Government Service</b>	<b>Frequency (f)</b>	<b>Percentage (%)</b>
0-5 years	24	24.00
6-10 years	29	29.00
11-15 years	32	32.00
16 years and above	15	15.00
<b>TOTAL</b>	<b>100</b>	<b>100.00</b>

The table indicates that most respondents are relatively experienced government employees. The largest group has 11–15 years of service (32%), followed by 6–10 years (29%), 0–5 years (24%), and 16 years and above (15%). This means that 76% of the respondents have already spent at least six years in government service, suggesting a workforce with substantial institutional experience and familiarity with office procedures. In relation to the findings, this may imply that many respondents have had repeated exposure to administrative technologies and routine digital tasks; however, length of service alone does not necessarily guarantee stronger computer literacy, since digital competence also depends on continuous use, confidence, and training.

Compeau & Higgins (1995) showed that computer self-efficacy strongly influences computer use, meaning that employees become more capable when they are confident and supported in using technology. Similarly, research on older and more experienced workers found that digital skills can still improve significantly when employees are regularly exposed to technology-rich work and learning opportunities (Konig & Seifert, 2022). In the public-sector setting, recent literature also indicates that digitalization improves service delivery, but its success depends on employees’ digital readiness and organizational capacity building (Latupeirissa et al., 2024a).

**Table 9**

**Rate of Responses According to ICT-Related Training Attended in the Last Two Years**

<b>ICT-Related Training Attended</b>	<b>Frequency (f)</b>	<b>Percentage (%)</b>
None	17	17.00
1-2	34	34.00
3-4	32	32.00
5 and above	17	17.00
<b>TOTAL</b>	<b>100</b>	<b>100.00</b>

Table 9 shows that most respondents had attended ICT-related training within the last two years, as 83.00% reported participating in at least one training, while only 17.00% had not attended any. The highest proportion attended 1–2 trainings (34.00%), followed by 3–4 trainings (32.00%), and 17.00% attended 5 or more. These results suggest that the respondents generally have recent exposure to ICT capacity-building activities, indicating a moderate level of continuing digital skills development that may support more efficient and technology-based public service delivery.

This finding is consistent with studies showing that ICT training improves digital competence and workplace performance. UNESCO (2023) emphasized that digital literacy is strengthened through continuous skills development and training. Likewise, Burtscher et al. (2024) noted that regular upskilling of public personnel is essential for effective digital government services. In a related empirical study, Inakefe et al. (2023) found that limited ICT training reduces digital readiness, while sustained training enhances employees’ ability to perform technology-assisted tasks effectively.

**Table 10**  
**Level of Agreement of the Respondents on Their Perceived Level of Computer Literacy in Terms of MS Word Application**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I can create, save, and organize documents in folders.	4.22	0.72	Strongly Agree
2. I can format documents with fonts, spacing, alignment, and bullet points.	4.13	0.73	Agree
3. I can insert and format tables for reports.	4.17	0.78	Agree
4. I can use page layout tools such as margins, headers, and footers.	4.18	0.73	Agree
5. I can edit documents using comments or track changes.	4.08	0.76	Agree
<b>Aggregate Weighted Mean:</b>	<b>4.16</b>		<b>Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.74</b>	

**Legend:**

- |  |                                     |
|--|-------------------------------------|
| 1.00 – 1.80 >>> Strongly Disagree (SD) | 3.41 – 4.20 >>> Agree (A)           |
| 1.81 – 2.60 >>> Disagree (D)           | 4.21 – 5.00 >>> Strongly Agree (SA) |
| 2.61 – 3.40 >>> Neutral (N)            |                                     |

Table 10 shows that respondents have a generally high level of perceived computer literacy in MS Word, as evidenced by the aggregate weighted mean of 4.16 and standard deviation of 0.74, both interpreted as Agree. The highest-rated skill was creating, saving, and organizing documents in folders (WM = 4.22; Strongly Agree), while formatting documents, inserting tables, using page layout tools, and editing through comments or track changes all remained within the Agree range. Overall, the findings suggest that respondents possess practical word-processing competencies that can support efficient documentation and routine administrative work, although collaborative editing functions may still need further enhancement.

This result is supported by previous studies showing that computer and digital literacy are positively associated with employee efficiency and workplace performance. Amar (2022) reported that computer literacy among employees in government and non-government agencies is essential for office-related performance and recommended continued training to strengthen weaker areas, while Deschênes (2024) found among 5,141 public service workers that stronger technical digital literacy significantly supports the use of collaborative workplace technologies. In the same vein, UNESCO’s digital competency framework for civil servants emphasizes that strengthening digital skills is necessary for more effective public-sector work and improved service delivery.

**Table 11**  
**Level of Agreement of the Respondents on Their Perceived Level of Computer Literacy in Terms of MS Excel Application**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I can encode and organize data accurately in worksheets.	4.13	0.69	Agree
2. I can use basic formulas such as SUM, AVERAGE, and IF.	4.23	0.75	Strongly Agree
3. I can sort and filter data to retrieve information.	4.11	0.69	Agree
4. I can create charts or graphs for reports.	4.05	0.80	Agree
5. I can summarize data for reporting purposes.	4.12	0.73	Agree
<b>Aggregate Weighted Mean:</b>	<b>4.13</b>		<b>Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.73</b>	

**Legend:**

- |  |                                     |
|--|-------------------------------------|
| 1.00 – 1.80 >>> Strongly Disagree (SD) | 3.41 – 4.20 >>> Agree (A)           |
| 1.81 – 2.60 >>> Disagree (D)           | 4.21 – 5.00 >>> Strongly Agree (SA) |
| 2.61 – 3.40 >>> Neutral (N)            |                                     |

Table 11 shows that respondents have a high perceived level of competence in MS Excel, with an aggregate weighted mean of 4.13 and an aggregate standard deviation of 0.73, interpreted as Agree. The highest-rated skill was the use of basic formulas such as SUM, AVERAGE, and IF (WM = 4.23), interpreted as Strongly Agree, while the other indicators—data encoding and organization, sorting and filtering, chart creation, and data summarization—were all rated Agree. These results suggest that respondents are generally capable of performing essential spreadsheet tasks for record management, reporting, and other routine office functions, thereby supporting efficient and effective service delivery. This finding is supported by previous studies showing that computer and spreadsheet literacy improves workplace productivity and job performance. Oladimeji et al. (2024) found that digital literacy significantly enhanced employee productivity in local government settings, especially when supported by access to ICT. Lagon (2019) likewise reported that employees with stronger computer skills, including spreadsheet use, demonstrated better work performance. In addition, Weathers & Swain (2024) emphasized that Microsoft Excel is widely used for organizing, summarizing, and visualizing data, highlighting its importance in administrative and reporting tasks.

**Table 12 Level of Agreement of the Respondents on Their Perceived Level of Computer Literacy in Terms of MS PowerPoint Application**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I can create slide presentations using templates or blank slides.	4.17	0.74	Agree

2. I can insert and format images, tables, and charts in my slides.	4.30	0.69	Strongly Agree
3. I can apply consistent design and layout to my presentations.	4.20	0.75	Agree
4. I can run slide presentations confidently.	4.28	0.67	Strongly Agree
5. I can save or export presentations in different formats (e.g., PDF).	4.13	0.76	Agree
<b>Aggregate Weighted Mean:</b>	<b>4.22</b>		<b>Strongly Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.72</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)
- 1.81 – 2.60 >>> Disagree (D)
- 2.61 – 3.40 >>> Neutral (N)
- 3.41 – 4.20 >>> Agree (A)
- 4.21 – 5.00 >>> Strongly Agree (SA)

Table 12 shows that the respondents have a high perceived level of computer literacy in using MS PowerPoint, as reflected by the aggregate weighted mean of 4.22 (Strongly Agree) and standard deviation of 0.72, indicating generally consistent responses. The highest-rated skills were inserting and formatting images, tables, and charts (WM = 4.30) and running slide presentations confidently (WM = 4.28), while the other indicators also received favorable ratings. Overall, the results suggest that the respondents possess practical PowerPoint skills that can support effective communication, reporting, and other work-related tasks in public service settings.

This finding is supported by studies showing that digital literacy strengthens employee performance and service efficiency. Inakefe et al. (2023) emphasized that stronger digital skills among public personnel contribute to more effective service delivery, while Lopes et al. (2023) noted that digital competence is essential for successful organizational digitalization. Similarly, Lyu & Luo (2024) found that digital literacy positively influences job performance. These studies support the present result that respondents’ strong PowerPoint skills reflect a level of computer literacy that can contribute to workplace effectiveness.

**Table 13**

**Level of Agreement of the Respondents on Their Perceived Level of Computer Literacy in Terms of Internet Usage**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I use email effectively for official communication.	4.17	0.68	Agree
2. I search the internet efficiently using appropriate keywords.	4.15	0.80	Agree
3. I download and upload documents online.	4.13	0.72	Agree
4. I use online government systems or digital forms.	4.01	0.77	Agree

5. I practice safe and responsible internet use.	4.04	0.67	Agree
<b>Aggregate Weighted Mean:</b>	<b>4.10</b>		<b>Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.73</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)
- 1.81 – 2.60 >>> Disagree (D)
- 2.61 – 3.40 >>> Neutral (N)
- 3.41 – 4.20 >>> Agree (A)
- 4.21 – 5.00 >>> Strongly Agree (SA)

The table shows that respondents generally agreed that they possess adequate internet-related computer literacy, as reflected in the aggregate mean of 4.10. The highest-rated skills were using email for official communication (4.17), searching the internet efficiently (4.15), and uploading or downloading documents online (4.13). This suggests that respondents are more confident in routine digital tasks commonly needed in office operations and service delivery. Although using online government systems or digital forms obtained the lowest mean (4.01), it still falls within the Agree category, indicating that respondents remain functionally capable in system-based online transactions.

Van Laar et al. (2017) identified technical, information, and communication skills as core dimensions of digital skills in work environments, which supports the respondents’ stronger ratings in email use, internet searching, and file transfer tasks. Similarly, a systematic review by Tinmaz et al. (2022) found that digital skills and digital competencies are central components of digital literacy, reinforcing the view that proficiency in routine online tasks reflects functional computer literacy. In the Philippine public-sector context, studies on digital frontliners further show that stronger digital capabilities contribute to more efficient, transparent, and accessible government service delivery, while also highlighting the need for continued support for more system-dependent digital functions (D. R. M. Villaseñor, 2024).

**Table 14**  
**Level of Agreement of the Respondents on Their Perceived Level of Computer Literacy and Public Service Delivery**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. My computer skills enable me to complete work tasks more efficiently.	4.22	0.77	Strongly Agree
2. Using computer applications improves the accuracy of the services I provide.	4.27	0.69	Strongly Agree
3. Computer literacy helps reduce errors in public service transactions.	4.18	0.77	Agree
4. My ability to use computers allows me to respond more quickly to client needs.	4.40	0.67	Strongly Agree
5. Computer skills contribute to the timely delivery of public services.	4.30	0.69	Strongly Agree
<b>Aggregate Weighted Mean:</b>	<b>4.27</b>		<b>Strongly Agree</b>

<b>Aggregate Standard Deviation:</b>		<b>0.72</b>	
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**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)                      3.41 – 4.20 >>> Agree (A)
- 1.81 – 2.60 >>> Disagree (D)                                      4.21 – 5.00 >>> Strongly Agree (SA)
- 2.61 – 3.40 >>> Neutral (N)

Table 14 shows that respondents generally have a high level of perceived computer literacy that supports effective public service delivery, as reflected in the aggregate weighted mean of 4.27 interpreted as Strongly Agree. The highest-rated indicator was the ability to use computers to respond more quickly to client needs (WM = 4.40, SD = 0.67), followed by contributions to the timely delivery of services (WM = 4.30, SD = 0.69) and improved service accuracy (WM = 4.27, SD = 0.69). Overall, the findings suggest that computer literacy strengthens efficiency, responsiveness, and accuracy in service performance. This finding is supported by studies showing that digital competence improves workplace performance and public-sector service outcomes. Criado, Fernández-Izquierdo, and Villodre (2023) found that stronger digital literacy enhances the use of collaborative technologies and improves work effectiveness in public organizations. Ongena (2023) likewise emphasized that data and digital literacy contribute to better governmental performance, while Yang, Gu, and Albitar (2024) reported that digital transformation increases government efficiency. These studies support the view that stronger computer literacy among personnel helps improve the quality and timeliness of public service delivery (Yang et al., 2024).

**Table 15**  
**Level of Agreement of the Respondents on Their Perceived Level of Public Service Delivery and Performance**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I complete service transactions within the prescribed processing time.	4.14	0.78	Agree
2. I rarely commit mistakes when handling client documents or records.	4.11	0.71	Agree
3. I can easily retrieve information needed for service delivery.	4.22	0.77	Strongly Agree
4. I respond promptly to client inquiries and service requests.	4.21	0.70	Strongly Agree
5. Clients are generally satisfied with the services I provide.	4.19	0.71	Agree
<b>Aggregate Weighted Mean:</b>	<b>4.17</b>		<b>Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.73</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)                      3.41 – 4.20 >>> Agree (A)
- 1.81 – 2.60 >>> Disagree (D)                                      4.21 – 5.00 >>> Strongly Agree (SA)
- 2.61 – 3.40 >>> Neutral (N)

Table 15 shows that respondents positively assessed public service delivery and performance, with an aggregate weighted mean of 4.17 (Agree) and a standard deviation of 0.73, indicating generally consistent responses. The highest-rated indicators were the ability to retrieve needed information for service delivery (WM = 4.22) and respond promptly to client inquiries and service requests (WM = 4.21), both interpreted as Strongly Agree. These findings suggest that stronger computer-related competencies support better efficiency, responsiveness, and overall client service performance.

In Nigeria, Bassey et al. (2023) found that civil servants’ digital literacy and in-service training significantly supported e-governance implementation and improved service delivery outcomes. Similarly, a study on governmental performance reported that employees’ data literacy is positively associated with both internal and external government performance, highlighting the value of information-handling skills in improving efficiency and service responsiveness (Reggi et al., 2018). Further, recent evidence indicates that stronger digital capabilities in public-sector agencies contribute to improved organizational performance, particularly when digital tools are effectively integrated into citizen services and internal operations (Atobishi et al., 2024).

**Table 16**  
**Level of Agreement of the Respondents on the Status of the Service Delivery of the LTO as to Efficiency**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I experienced a faster processing time during my transaction because the staff used computer systems.	4.45	0.50	Strongly Agree
2. I observed that the use of computers helped the LTO staff process my registration efficiently.	4.33	0.73	Strongly Agree
3. I received my registration documents within a reasonable timeframe.	4.15	0.48	Agree
4. I noticed that the computerized system helped reduce delays during my transaction.	4.35	0.70	Strongly Agree
5. I felt my transaction was handled quickly because the staff used computer systems effectively.	4.25	0.49	Strongly Agree
<b>Aggregate Weighted Mean:</b>	<b>4.31</b>		<b>Strongly Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.58</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)
- 1.81 – 2.60 >>> Disagree (D)
- 2.61 – 3.40 >>> Neutral (N)
- 3.41 – 4.20 >>> Agree (A)
- 4.21 – 5.00 >>> Strongly Agree (SA)

Table 16 shows that respondents generally viewed the office’s service delivery as highly efficient, with

an aggregate weighted mean of 4.31 (Strongly Agree) and an aggregate standard deviation of 0.58, indicating fairly consistent responses. The highest-rated indicators were faster transaction processing due to staff use of computer systems (WM = 4.45, SD = 0.50), reduced delays through computerized systems (WM = 4.35, SD = 0.70), and more efficient registration processing (WM = 4.33, SD = 0.73). Even the lowest-rated item, "receiving registration documents within a reasonable timeframe" (WM = 4.15, SD = 0.48), still fell under "Agree". Overall, the findings suggest that computer use among personnel was strongly associated with quicker processing, better workflow management, and more effective frontline public service delivery.

This interpretation is supported by studies showing that digital technologies improve efficiency and service quality in government institutions. Hilhorst et al. (2022) found that information technology generates measurable efficiency gains in municipal public service delivery, indicating that digital systems can improve operational performance in government settings. Similarly, a recent study in Ghana reported that digital technology adoption in the public sector had a significant positive effect on service delivery and quality, highlighting improvements in accessibility, responsiveness, and user satisfaction (Ibrahim et al., 2025). In the same vein, research on government digital transformation showed that digitalization enhances overall governmental efficiency, especially when implementation is coordinated across departments (Albitar et al., 2024).

**Table 17**

**Level of Agreement of the Respondents on the Status of the Service Delivery of the LTO as to Timeliness**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I receive my vehicle registration service within a reasonable amount of time.	4.50	0.64	Strongly Agree
2. I notice that the staff efficiently use computer systems to speed up the registration process.	4.23	0.70	Strongly Agree
3. I experience minimal delays when my registration information is processed through the computer system.	4.30	0.65	Strongly Agree
4. I am satisfied with how quickly my registration documents are generated through the computerized system.	4.10	0.63	Agree
5. I observe that the staff's computer skills help reduce waiting time during registration.	4.20	0.72	Agree
<b>Aggregate Weighted Mean:</b>	<b>4.27</b>		<b>Strongly Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.67</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)
- 1.81 – 2.60 >>> Disagree (D)
- 2.61 – 3.40 >>> Neutral (N)
- 3.41 – 4.20 >>> Agree (A)
- 4.21 – 5.00 >>> Strongly Agree (SA)

Table 17 shows that respondents gave a very positive assessment of service timeliness, with an aggregate weighted mean of 4.27 interpreted as Strongly Agree. This indicates that the computerized registration process is generally perceived as fast, organized, and effective in reducing delays. The highest-rated item, receiving vehicle registration service within a reasonable time (WM = 4.50), suggests that respondents clearly felt the system improved processing speed. The strong ratings for minimal delays in processing information (WM = 4.30) and the efficient use of computer systems by staff (WM = 4.23) further imply that computer literacy and system utilization contributed to smoother workflow and shorter waiting time. Although the quick generation of documents (WM = 4.10) and the effect of staff computer skills on reducing waiting time (WM = 4.20) were rated slightly lower, they still reflect favorable perceptions, showing that digital competence among personnel supports timely and reliable public service delivery. This interpretation is supported by prior research showing that stronger digital skills among public employees improve the accessibility and effectiveness of government services. The OECD notes that digital government depends on civil servants’ technology-related competencies to deliver more effective and responsive services (OECD, 2021). In the same way, recent research on e-government service experience found that service design features such as accessibility, self-service capability, and support significantly shape users’ positive service perceptions, including efficiency and convenience (Chan et al., 2025). This is also consistent with World Bank findings that digital government transformation improves public service delivery by making services more efficient, responsive, and citizen-centered.

**Table 18**  
**Level of Agreement of the Respondents on the Status of the Service Delivery of the LTO as to Accuracy**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I receive accurate information from the computerized system when processing my vehicle registration at the Land Transportation Office.	4.35	0.48	Strongly Agree
2. I notice that the details of my personal and vehicle information are correctly recorded in the LTO computer system.	4.23	0.73	Strongly Agree
3. I feel confident that the computerized registration process reduces errors in my transaction.	4.55	0.50	Strongly Agree
4. I observe that the receipts and documents generated by the LTO computer system contain correct and consistent information.	4.35	0.48	Strongly Agree
5. I believe that the use of computers in the registration process helps ensure the accuracy of my transaction records.	4.38	0.63	Strongly Agree
<b>Aggregate Weighted Mean:</b>	<b>4.37</b>		<b>Strongly Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.57</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)                      3.41 – 4.20 >>> Agree (A)
- 1.81 – 2.60 >>> Disagree (D)                                      4.21 – 5.00 >>> Strongly Agree (SA)
- 2.61 – 3.40 >>> Neutral (N)

Table 18 shows that respondents had a very positive assessment of service accuracy, with an aggregate weighted mean of 4.37 and a verbal interpretation of Strongly Agree. This means the computerized registration system is widely perceived as dependable in providing correct information, maintaining accurate personal and vehicle records, and producing consistent receipts and documents. The highest-rated item, reduction of errors in transactions (WM = 4.55, SD = 0.50), suggests that computerization is especially valued for minimizing mistakes during processing. The lowest-rated indicator, correct recording of personal and vehicle details (WM = 4.23, SD = 0.73), still falls within the Strongly Agree range, showing that respondents generally trust the system’s data accuracy. The aggregate standard deviation of 0.57 further indicates that these views were relatively consistent across respondents.

This finding is supported by research showing that information quality and system quality are major predictors of user satisfaction and perceived system effectiveness, especially when systems produce accurate, reliable, and useful outputs. DeLone and McLean’s review of information systems success literature emphasized that high-quality systems and information are strongly linked to better user evaluations and organizational benefits (Petter et al., 2008). Likewise, studies on electronic records systems show that digital documentation can improve record accuracy and reduce errors when properly designed and implemented (Wurster et al., 2022). In public service settings, recent evidence also shows that digital technologies improve service quality, efficiency, and reliability, supporting respondents' strong agreement on the accuracy of computerized service delivery (Kumah et al., 2025).

**Table 19**  
**Level of Agreement of the Respondents on the Status of the Service Delivery of the LTO as to Accessibility**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I find it easy to access the Land Transportation Office (LTO) registration services on computers or other digital devices.	4.25	0.74	Strongly Agree
2. I can use the available computers, kiosks, or online systems at the LTO to process my registration.	4.38	0.59	Strongly Agree
3. I can easily navigate the LTO’s online registration platforms and digital services.	4.43	0.59	Strongly Agree
4. I have sufficient access to devices (such as computers or smartphones) and an internet connection to use LTO’s digital registration services.	4.65	0.48	Strongly Agree

5. I find the LTO’s digital registration services accessible whenever I need to complete my transactions.	4.48	0.64	Strongly Agree
<b>Aggregate Weighted Mean:</b>	<b>4.44</b>		<b>Strongly Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.61</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)
- 1.81 – 2.60 >>> Disagree (D)
- 2.61 – 3.40 >>> Neutral (N)
- 3.41 – 4.20 >>> Agree (A)
- 4.21 – 5.00 >>> Strongly Agree (SA)

The findings show that respondents viewed the accessibility of the agency’s digital registration services very positively, as reflected in the aggregate weighted mean of 4.44, interpreted as Strongly Agree, with a low aggregate standard deviation of 0.61 indicating relatively consistent responses. The highest-rated indicator was having sufficient access to devices and internet connectivity (WM = 4.65, SD = 0.48), followed by the accessibility of services whenever transactions needed to be completed (WM = 4.48, SD = 0.64) and the ease of navigating online platforms (WM = 4.43, SD = 0.59). Even the lowest-rated item, ease of accessing registration services through digital devices, still received a strong positive rating (WM = 4.25, SD = 0.74). Overall, the results suggest that respondents generally possess the digital readiness and access needed to engage effectively with online public services, which supports more efficient and responsive service delivery.

This interpretation is consistent with prior studies showing that digital literacy and ease of system use are key drivers of e-government accessibility and adoption. AbdulKareem and Oladimeji (2024) found that digital literacy strengthens citizens’ acceptance of e-government services by improving perceived usefulness and ease of use, while Inakefe et al. reported that better digital literacy leads to more effective e-governance implementation and service delivery. Likewise, Hyytinen, Tuimala, and Hammar (2022) demonstrated that improving citizens’ engagement with digital public services significantly increases actual service uptake, especially among slower adopters. These studies support the present finding that accessible platforms, available technology, and user capability are crucial conditions for effective digital public service delivery.

**Table 20**

**Level of Agreement of the Respondents on the Status of the Service Delivery of the LTO as to Client Satisfaction**

Statements	Weighted Mean	Standard Deviation	Categorical Response
1. I am satisfied with how efficiently the LTO registration staff uses computer systems during my transaction.	4.23	0.83	Strongly Agree
2. I feel that the staff’s ability to use computers helps make my registration process faster and more organized.	4.38	0.54	Strongly Agree

3. I am satisfied with the accuracy of the information and documents processed through the LTO’s computerized system.	4.28	0.82	Strongly Agree
4. I feel satisfied with the overall quality of service I receive because of the staff’s use of computer technology.	4.40	0.55	Strongly Agree
5. I am satisfied with how the computerized processes at the LTO make my transactions smoother and more convenient.	4.33	0.73	Strongly Agree
<b>Aggregate Weighted Mean:</b>	<b>4.32</b>		<b>Strongly Agree</b>
<b>Aggregate Standard Deviation:</b>		<b>0.69</b>	

**Legend:**

- 1.00 – 1.80 >>> Strongly Disagree (SD)
- 1.81 – 2.60 >>> Disagree (D)
- 2.61 – 3.40 >>> Neutral (N)
- 3.41 – 4.20 >>> Agree (A)
- 4.21 – 5.00 >>> Strongly Agree (SA)

Table 20 shows that respondents had a consistently favorable assessment of service delivery in relation to client satisfaction, with an aggregate weighted mean of 4.32 and an aggregate standard deviation of 0.69, both interpreted as Strongly Agree. The highest-rated indicator was the statement that the staff’s use of computer technology improved the overall quality of service received (WM = 4.40, SD = 0.55), followed by the view that computer use made the registration process faster and more organized (WM = 4.38, SD = 0.54). High ratings were also recorded for transaction convenience (WM = 4.33), accuracy of information processing (WM = 4.28), and efficient use of the system by registration staff (WM = 4.23). These results indicate that respondents associated employees’ effective use of computers with greater efficiency, accuracy, convenience, and overall client satisfaction.

Further support is provided by Gu et al. (2023), who found that greater use of e-government services was associated with higher satisfaction with government, partly because digital systems improved perceived transparency and public understanding of government performance. Likewise, an empirical study on a Chinese government service evaluation system reported that online or digital interfaces increased citizen satisfaction compared with offline channels, suggesting that technology-enabled transactions can improve users’ service experience (Chengwei Wang and Liang Ma, 2022). These studies reinforce the present finding that when public services are delivered through efficient, accessible, and well-managed computerized systems, clients are more likely to view the service as organized, reliable, and satisfactory.

**Table 21 Significant Relationship Between the Level of Computer Literacy of Government Employees of the Land Transportation Office (LTO) in Cebu City and the Status of Public Service Delivery in Terms of Efficiency**

Paired Variables		Pearson Correlation Coefficient (r)	p-Value	Decision	Interpretation
Variable 1	Variable 2				
MS Word Application	Efficiency	0.016	0.923	Failed to Reject H0	No Significant Relationship

MS Excel Application	Efficiency	-0.114	0.484	Failed to Reject H0	No Significant Relationship
MS PowerPoint Application	Efficiency	-0.174	0.283	Failed to Reject H0	No Significant Relationship
Internet Usage	Efficiency	-0.078	0.633	Failed to Reject H0	No Significant Relationship

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 21 shows that employees’ computer literacy in MS Word, MS Excel, MS PowerPoint, and internet use was not significantly related to the efficiency of public service delivery, since all correlations were negligible to very weak ( $r = 0.016$  to  $-0.174$ ) and all p-values were greater than 0.05. This means that, in this set of findings, higher skill in common office applications did not automatically correspond to more efficient service performance. The pattern suggests that efficiency is likely influenced more by broader operational factors—such as workflow systems, process design, coordination, and organizational support—than by basic application-level computer skills alone.

A systematic review in Government Information Quarterly found that the effects of digitalization in the public sector are shaped not only by employee capability, but also by organizational structures, implementation quality, and the broader public-value context in which services are delivered (Fischer et al., 2021). Likewise, a recent review of public service digitization reported that efficiency gains are most evident when digital skills are matched with technological readiness, process redesign, and institutional support, rather than when staff computer literacy is treated as a standalone determinant of performance (Latupeirissa et al., 2024). These studies reinforce the present finding that proficiency in common office applications alone may have only a limited direct influence on service efficiency unless supported by enabling organizational and system-level conditions.

**Table 22**

**Significant Relationship Between the Level of Computer Literacy of Government Employees of the Land Transportation Office (LTO) in Cebu City and the Status of Public Service Delivery in Terms of Timeliness**

Paired Variables		Pearson Correlation Coefficient (r)	p-Value	Decision	Interpretation
Variable 1	Variable 2				
MS Word Application	Timeliness	0.053	0.744	Failed to Reject H0	No Significant Relationship
MS Excel Application	Timeliness	-0.202	0.211	Failed to Reject H0	No Significant Relationship
MS PowerPoint Application	Timeliness	-0.184	0.256	Failed to Reject H0	No Significant Relationship

Internet Usage	Timeliness	-0.195	0.228	Failed to Reject H0	No Significant Relationship
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\*\* . Correlation is significant at the 0.05 level (2-tailed).

The table shows that computer literacy variables—MS Word, MS Excel, MS PowerPoint, and internet usage—were not significantly related to timeliness in public service delivery, as all p-values were above the 0.05 level. Although MS Word showed a very weak positive correlation ( $r = 0.053$ ), and Excel, PowerPoint, and internet usage showed weak negative correlations ( $r = -0.202, -0.184, \text{ and } -0.195$ , respectively), these values were too small to indicate a meaningful association. This means that employees’ basic computer literacy, by itself, did not significantly influence the timeliness of services; rather, timeliness may depend more on workflow systems, staffing, coordination, and institutional processes.

Further support is provided by a systematic review of digitally induced change in the public sector, which found that the outcomes of digital reform depend heavily on organizational conditions such as leadership, administrative capacity, coordination, and implementation context, not simply on employees’ technical skills (Haug et al., 2024). Likewise, Shonubi (2025) found that while digital technologies can strengthen service quality and delivery, their effectiveness is often limited by persistent institutional and system-level barriers, indicating that technology adoption alone does not necessarily result in timely or efficient public service delivery (Shonubi, 2025). Taken together, these studies reinforce the present finding that basic computer literacy may be necessary for government work, yet timeliness in service delivery is more strongly influenced by broader organizational and operational factors than by application-level skills alone.

**Table 23**

**Significant Relationship Between the Level of Computer Literacy of Government Employees of the Land Transportation Office (LTO) in Cebu City and the Status of Public Service Delivery in Terms of Accuracy**

Paired Variables		Pearson Correlation Coefficient ®	p-Value	Decision	Interpretation
Variable 1	Variable 2				
MS Word Application	Accuracy	0.003	0.984	Failed to Reject H0	No Significant Relationship
MS Excel Application	Accuracy	0.107	0.512	Failed to Reject H0	No Significant Relationship
MS PowerPoint Application	Accuracy	0.096	0.554	Failed to Reject H0	No Significant Relationship
Internet Usage	Accuracy	0.036	0.825	Failed to Reject H0	No Significant Relationship

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 23 shows that employees’ computer literacy in MS Word, MS Excel, MS PowerPoint, and Internet use was not significantly related to the accuracy of public service delivery, as all computed p-values were greater than 0.05 and all Pearson r values were negligible. This means that, although employees may possess functional computer skills, these competencies alone did not produce measurable differences in service accuracy. In practical terms, accuracy appears to depend more on how work is organized and controlled—such as the presence of clear procedures, reliable information systems, supervision, and quality-check mechanisms—than on basic proficiency in common office applications.

Similarly, research on public organizations reported that digital capabilities contribute to organizational performance only when they are translated into broader operational capacities rather than treated as stand-alone technical competencies. OECD work on digital government also emphasizes that civil servants’ digital skills must be paired with training systems, supportive work environments, and organizational readiness to improve service delivery (Nosratabadi et al., 2024). Taken together, these studies reinforce the present finding that basic computer literacy alone is not enough to produce significant gains in service accuracy.

**Table 24**

**Significant Relationship Between the Level of Computer Literacy of Government Employees of the Land Transportation Office (LTO) in Cebu City and the Status of Public Service Delivery in Terms of Accessibility**

Paired Variables		Pearson Correlation Coefficient (r)	p-Value	Decision	Interpretation
Variable 1	Variable 2				
MS Word Application	Accessibility	-0.045	0.782	Failed to Reject H0	No Significant Relationship
MS Excel Application	Accessibility	0.045	0.784	Failed to Reject H0	No Significant Relationship
MS PowerPoint Application	Accessibility	0.015	0.926	Failed to Reject H0	No Significant Relationship
Internet Usage	Accessibility	0.101	0.535	Failed to Reject H0	No Significant Relationship

\*\*. Correlation is significant at the 0.05 level (2-tailed).

The table shows that employees’ skills in MS Word, MS Excel, MS PowerPoint, and internet use were not significantly related to public service delivery accessibility, as all correlation coefficients were negligible ( $r = -0.045$  to  $0.101$ ) and all p-values were above 0.05. This means that differences in basic computer literacy did not correspond to meaningful differences in how accessible public services were perceived or delivered. The findings suggest that accessibility is shaped less by employees’ routine proficiency with office applications and more by broader service conditions, such as workflow design, system availability, institutional support, and the organization's overall readiness to translate digital capacity into citizen-facing outcomes.

Idzi & Gomes (2022) found that digital governance outcomes are shaped by a combination of institutional design, public policy, technological infrastructure, and governance barriers, rather than by employees' technical skills alone. Similarly, a recent analysis of social inclusion in public services reported that limited digital literacy is only one part of the accessibility problem; infrastructural gaps, institutional barriers, and uneven policy implementation also strongly affect citizens' access to digital public services (Djatkiko et al., 2025). Taken together, these studies reinforce the present finding that basic computer literacy alone is insufficient to produce significant improvements in service accessibility unless supported by broader organizational and system-level conditions.

**Table 25**

**Significant Relationship Between the Level of Computer Literacy of Government Employees of the Land Transportation Office (LTO) in Cebu City and the Status of Public Service Delivery in Terms of Client Satisfaction**

Paired Variables		Pearson Correlation Coefficient (r)	p-Value	Decision	Interpretation
Variable 1	Variable 2				
MS Word Application	Client Satisfaction	0.116	0.476	Failed to Reject H0	No Significant Relationship
MS Excel Application	Client Satisfaction	0.119	0.463	Failed to Reject H0	No Significant Relationship
MS PowerPoint Application	Client Satisfaction	0.149	0.360	Failed to Reject H0	No Significant Relationship
Internet Usage	Client Satisfaction	-0.024	0.883	Failed to Reject H0	No Significant Relationship

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 25 shows that employees' computer literacy in MS Word, MS Excel, MS PowerPoint, and Internet use has no significant relationship with client satisfaction in public service delivery, since all correlation coefficients are very weak ( $r = 0.116, 0.119, 0.149,$  and  $-0.024$ ) and all p-values are above 0.05 (0.476, 0.463, 0.360, and 0.883). This means the null hypothesis is retained for all variables. In research terms, the finding suggests that basic computer skills alone do not directly determine how clients evaluate government services; client satisfaction is more likely influenced by broader service factors such as responsiveness, process efficiency, clarity of information, and overall service quality.

This interpretation is supported by previous studies. A systematic review by Fathya et al. (2023) found that satisfaction with electronic public services is shaped by multiple dimensions—not only employee capability, but also technological, behavioral, psychological, and social factors. Another related study is Patergiannaki & Pollalis (2024), who found that citizens' satisfaction with e-government services is significantly influenced by the quality of the system and the quality of service delivery, emphasizing that positive public service outcomes depend on how well the digital service performs and responds to users' needs, not merely on technical competence alone. This supports the present finding that even when personnel possess computer-related skills, client satisfaction may remain unaffected unless these skills are reinforced by efficient systems, responsive service processes, and a supportive service environment.

**Table 26**

**Significant Relationship Between the Status of Public Service Delivery and Performance of the Land Transportation Office (LTO) in Cebu City**

Paired Variables		Pearson Correlation Coefficient (r)	p-Value	Decision	Interpretation
Variable 1	Variable 2				
Efficiency	Performance	-0.180	0.266	Failed to Reject H0	No Significant Relationship
Timeliness	Performance	-0.123	0.448	Failed to Reject H0	No Significant Relationship
Accuracy	Performance	0.149	0.359	Failed to Reject H0	No Significant Relationship
Accessibility	Performance	0.061	0.707	Failed to Reject H0	No Significant Relationship
Client Satisfaction	Performance	0.303	0.058	Failed to Reject H0	No Significant Relationship

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 26 shows that the status of public service delivery is not significantly related to LTO performance, since all tested dimensions yielded p-values above the 0.05 threshold. Although client satisfaction posted the highest positive correlation ( $r = 0.303$ ,  $p = 0.058$ ), it still did not reach statistical significance; the same pattern was observed for efficiency ( $r = -0.180$ ,  $p = 0.266$ ), timeliness ( $r = -0.123$ ,  $p = 0.448$ ), accuracy ( $r = 0.149$ ,  $p = 0.359$ ), and accessibility ( $r = 0.061$ ,  $p = 0.707$ ). These results suggest that variations in organizational performance cannot be explained by service-delivery indicators alone. In this context, the findings imply that performance is likely shaped by other operational factors, particularly employees' capacity to use digital systems effectively, the quality of process execution, and internal administrative support.

Another supporting study is the work of van Loon, Leisink, Knies, and Brewer, which showed that public service performance is influenced not only by service outputs but also by employees' competencies, organizational support, and internal work systems. Their findings suggest that when institutional capacity and employee capability are uneven, improvements in service dimensions may not automatically produce measurable gains in organizational performance (Edelmann et al., 2023). This supports the present finding that service-delivery indicators alone were insufficient to explain LTO performance, underscoring the importance of workforce competence and organizational conditions in shaping effective service outcomes.

**CONCLUSIONS**

The study concludes that LTO personnel in Cebu City generally possess a high level of computer literacy and can use common digital tools used in their daily work. It also concludes that clients perceive the LTO's computerized services as efficient, timely, accurate, accessible, and satisfactory. Despite these positive descriptive results, the statistical findings indicate that basic computer literacy alone does not significantly explain variations in public service delivery outcomes. This suggests that service performance is influenced not only by employees' digital skills but also by broader organizational factors, including

workflow design, system reliability, staffing, coordination, and administrative support. Therefore, while computer literacy remains an important competency, it should be viewed as one contributing factor within a larger system of public service effectiveness rather than as a sole determinant of performance.

## RECOMMENDATIONS

The study recommends that LTO management continue to strengthen employees' digital competencies through regular, needs-based ICT training, especially in areas that received comparatively lower ratings, such as online government systems, collaborative editing, and more advanced application use. It also recommends aligning training with actual job demands so that employees can apply digital skills directly to registration, records handling, reporting, and client service processes. Beyond training, management should improve organizational systems by reviewing workflows, reducing procedural bottlenecks, and ensuring adequate technological and administrative support to maximize the benefits of employees' computer literacy. Periodic assessment of both employee digital competence and client service experience should also be institutionalized to monitor progress and identify gaps early. Finally, the proposed computer literacy-based service delivery enhancement strategy should be implemented as a long-term intervention to support more responsive, efficient, and sustainable public service delivery in the LTO.

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