

Assessment for Adaptation Training Programmes in Evolving Advanced Office Technologies in the Secretarial Profession in Tanzania

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Abstract

This study explores the adaptation training programmes for secretaries as a coping mechanism with emerging secretarial roles in the application of advanced office technologies in Tanzania. The study is guided by the theory of Technological Determinism, propounded by Marshall McLuhan (1964). A mixed-methods approach was used, and data were collected from 112 participants through questionnaires, interviews, and focus group discussions. The study involved eight regions of Tanzania. Quantitative data were analysed using IBM SPSS, and qualitative data were analysed thematically. The findings show that programmes such as Internet and Electronic Mailing Systems, Office Suite Software, cybersecurity awareness, data protection, and collaboration platforms have been introduced. The study recommends that the government of Tanzania, in collaboration with key stakeholders such as the Tanzania Personal Secretaries Association (TAPSEA), Secretarial Training Institutions, and Employers, should continue to revisit, redefine, and implement relevant training programmes in the secretarial profession to keep pace with ongoing technological advancements.

Keywords: Training programmes, Office Technologies, Secretarial Profession, Technological Advancement, modern office

1.0 Introduction

In recent decades, the adoption and application of advanced office technologies, such as integrated software systems, cloud computing, and communication tools, have revolutionised the way secretaries perform their duties worldwide and necessitated adaptation and training programmes (Johnson & Carter, 2022). The integration of digital technologies has significantly transformed organisational workflows worldwide, and several training programmes have been introduced to meet this need (Harris & Harris, 2020). Also, globally, digital training programmes for secretaries have increased over the past few decades (Fasae, 2023). Digital technology in the secretarial profession has completely changed the world of business and secretarial roles, and no industry is an exception, while internet training remains important for secretaries (Li, 2020). The United States, Sweden, and Germany have introduced digital training programmes, including the

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use of artificial intelligence tools, office management software, and virtual collaboration platforms, to facilitate office operations for secretaries and office bearers (Focacci & Perez, 2022).

In the United States, the importance of training secretaries in digital technology tools has grown exponentially as secretarial administrative tasks have been digitalised and automated (Sima et al., 2020). It is added that different secretarial roles are becoming obsolete and are being displaced, including computer operators (70%, executive secretaries and administrative assistants 63%, filing clerks 48%, data entry operators (36%, and other such roles which depend on technologies and work processes which are fast becoming obsolete (Sima et al., 2020). Training programmes, such as virtual meetings, are considered important for secretarial professionals in India (Upadhyay et al., 2024). Similarly, in Indonesia, ICT training programmes are put forward by public organisations because Digital technology helps increase the efficiency of secretarial and administrative tasks, as much as 56% in document filing management, 76% in managing databases, 70% in analysing data and information, and 47% in implementing and maintaining administration procedures (Musty, 2023).

In the African context, the application of advanced office technology in secretarial roles is widespread across organisations, and secretaries are upskilled through training programmes (Ngugi & Mwaura, 2023). ICT-based training and conferences are essential for capacity building and professional effectiveness among secretaries in the Ogun State Public Service in Nigeria (Bette, 2021).

Also, the new Secretarial training programmes, like video conferencing, are confirmed to be very important in Nigeria (Oluwasina, 2025). New technologies have replaced traditional ways of working for secretaries, and adaptation training programmes are considered important for secretaries in African countries (Fasae, 2024). In Tanzania, new ICT training programmes are needed for secretaries. For example, in 2025, there was a strong need for tailor-made ICT training for secretaries at the National Institute for Medical Research (NIMR), with 84% of secretaries requiring such training (Mhando & Casmir, 2025). The most needed training for secretaries in advanced office technologies in Tanzania is advanced digital tools, including artificial intelligence (AI) applications for navigating research databases, while ICT staff emphasised the need for specialised training in ICT governance and asset management (Mhando & Casmir, 2025).

In this context, rapid advances in office technology have significantly transformed professional secretarial work worldwide (Lee, 2020). Today, secretaries are tasked with managing digital documents, utilising advanced scheduling software, and facilitating virtual meetings, in addition to traditional duties such as typing, filing, and other office management (Smith, 2021). This shift remains a challenge for secretaries across countries, underscoring a crucial need for them to enhance their skills, emphasising technical proficiency alongside traditional administrative abilities (Jones & Roberts, 2022). Extensive research conducted in the United States, Europe, and Africa advocates for new training programmes and continuous professional development to address the evolving roles of secretaries (Ngugi & Mwaura, 2023). Despite this extensive documentation, there remained a significant gap in research on adaptation training programmes for professional secretaries in the Tanzanian context, a concern of this study, which sought to fill this knowledge gap.

2.0 Literature Review

2.1 Theoretical Review

This study is guided by Technological Determinism Theory (TDT), propounded by Marshall McLuhan (1964), to assess the adaptation of training programmes for secretaries in Tanzania. This theory asserts that technology primarily drives social and cultural change (McLuhan, 1964). According to the theory, technological advancements shape human behaviour and societal structures, altering how individuals interact and perform their roles. Additionally, the theory assumes that technology develops independently of social influences and directly determines societal evolution, positioning technology as an autonomous force that drives progress and influences social structures, behaviours, roles, skills, and values (McLuhan, 1964).

The Theory of Technological Determinism remains relevant, as it has recently been applied in studies of technology. Chung and Koo (2022) applied the Theory of Technological Determinism to examine how emerging technologies such as AI and automation influence workplace dynamics and job roles, demonstrating that technological advancements drive changes in job functions and organisational structures. Rogers (2023) used the theory to analyse how digital transformation affects business operations, revealing that technological innovations lead to shifts in business processes and employee skill requirements. Kim and Lee (2021) explored the impact of technology on educational practices, demonstrating how technological tools alter teaching methods and learning experiences, consistent with the theory's view of technology-driven change. The theory shows the importance of new training programmes in the secretarial profession in coping with advancements in office technologies in Tanzania.

2.2 Empirical Review

Pre-existing literature indicates that several scholars have contributed to the body of knowledge on training programmes for secretaries to cope with new, advanced technologies in office operations. A study by Brown and Smith (2021) investigated secretaries' technological adaptation and their training needs across various international settings. They found that secretaries in different regions face diverse challenges related to technology adoption, including the need for ongoing training and adaptation (Brown & Smith, 2021). Research conducted by Osei and Bediako (2022) examined the challenges and opportunities faced by secretaries in Africa due to advanced office technology and found that they had limited access to training resources.

The study by Thompson and Harris (2023) found that academic institutions have incorporated modern secretarial programmes into their curricula, including courses on digital literacy, data management, and cybersecurity, reflecting the evolving demands of the workplace. The study by Davis (2024) found that technology is integrated into secretarial training in educational institutions, helping to bridge the gap between theoretical knowledge and practical application. According to the study by Johnson and Smith (2023), many educational institutions partner with businesses and professional organisations to enhance their training programmes. Collabour ations help students gain practical experience and

a better understanding of employers' current needs and expectations (Johnson & Smith, 2023). Brown (2023) study emphasises that Professional organisations offer certification programmes that validate secretaries' skills and knowledge. These certifications help to standardise competencies across the secretarial profession and provide a benchmark for skill assessments. The study by Thompson (2023) confirms that Networking opportunities and professional development events organised by professional organisations are essential for career advancement. It is added that participation in professional networks leads to career opportunities, mentorship, and professional growth (Smith & Thompson, 2023). Generally, extensive research conducted in the United States, Europe, and Africa (Miller, 2019; Lee, 2020; Mbah, 2020; Nguyen & Masuku, 2021; Osei & Bediako, 2022; Ochieng, 2022; Ngugi & Mwaura, 2023) highlights that new training programmes and continuous professional development to address the evolving roles of secretaries are important. This study aims to assess the proposed training programmes for secretaries to keep pace with the evolving roles in the secretarial profession.

3.0 Methodology

This study applied a mixed research approach, with the quantitative approach primarily used and supported by a qualitative approach. The mixed approach was used because it allows the problem to be studied both inductively and deductively, thereby enhancing the validity of the findings (Hay, 2016). The study employed a survey research design, chosen for its ability to facilitate data collection from a large number of respondents within a short time (Singleton & Straits, 2009). The study's target populations included 30 public institutions from eight regions of Tanzania: Arusha, Dar es Salaam, Dodoma, Kilimanjaro, Morogoro, Mtwara, Mwanza, and Tabora. The study sought to gather information from secretarial trainers, students enrolled in secretarial studies, experienced professional secretaries, and Human Resources (HR) professionals from the mentioned public institutions. The study employed a mixed-method sampling approach, utilising distinct procedures to select respondents from different groups. Purposive sampling was used for professional secretaries, HR professionals, and secretarial trainers because these groups are rich in information. Conversely, students pursuing secretarial studies were selected using Convenience sampling, in which students who were readily accessible and available during data collection participated in the focus group discussion. The study used three data collection methods: questionnaires, interviews, and focus group discussions. The reason for adopting these methods was their complementarity, the mitigation of the weaknesses of one method, and the assurance of data validity. The questionnaires were distributed to secretaries, secretarial trainers, and Human Resources (HR) professionals, while interviews were conducted with 30 respondents to obtain nuanced data on changes in office technology and their effects. Quantitative and qualitative data analysis methods were used; quantitative data were analysed using descriptive statistics, including calculating percentages and mean scores. The qualitative data, derived from open-ended responses and interviews, were analysed thematically.

4.0 Findings and Discussion

4.1 Demographic Information

As presented in Table 1, the study focused solely on work experience, as it was deemed the most relevant factor for the study's objectives. Other demographic information, such as age, gender or education level of respondents, was not included because it does not affect the study's purpose.

Table 1: Respondents' Working Experience

Designation	Working Experience	No. of Respondents	Percentage(%)
Secretaries	1-5	19	33.9
	6-10	8	14.3
	11-15	11	19.6
	16-20	4	7.1
	20+	13	23.2
	Missing	1	1.8
	Total	56	100.0
Human Resource officers	1-5	10	33.3
	6-10	9	30.0
	11-15	9	30.0
	16-20	0	0
	20+	2	6.7
	Total	30	100.0
Trainers	1-5	9	34.6
	6-10	6	23.1
	11-15	4	15.4
	16-20	2	7.7
	20+	5	19.2
	Total	26	100.0

Source: Field Data (2025)

Table 1 shows that 65 per cent of respondents had more than 5 years of experience in a particular field. This indicates respondents' views on the secretarial profession, technological changes in daily office practice, and the training programmes needed for secretaries.

4.2 Introduction: Rate of Digital Training Programmes for Secretaries

To explore future trends in digital technology adoption among Professional Secretaries, HRs were asked to respond to the question: "Have you introduced any new training programmes to help secretaries adapt to new office technological changes?" As illustrated in Figure 7, 18 respondents (60%) answered 'Yes', confirming that they have implemented new training programmes, while 12 respondents (40%) answered 'No', highlighting a potential gap in the adoption of digital training initiatives for secretaries.

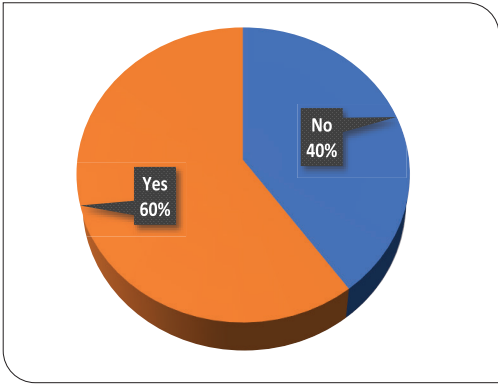


Figure 1: Introduction of New Training Programmes

Source: Field Data (2025)

The ‘No’ responses suggested a reliance on traditional skill sets, potentially leaving secretaries in these organisations at a disadvantage as technology continues to reshape secretarial roles. The findings also highlight the shift from traditional administrative duties to more technology-driven responsibilities. The 60% adoption rate is a promising sign of adaptation, while the 40% gaps signify a risk of skill obsolescence among Professional secretaries.

Consistently, Lee and Martinez (2024) highlighted the inevitability of professional secretaries acquiring new skills by working alongside AI systems and office automation; thus, introducing training programmes on new office technology would be valuable for enabling swift adaptability to the changing workplace. This will likely shift secretarial roles from clerical tasks to the management of automated systems, as Smith and Brown (2023) discuss. The study by Davis (2024) found that technology is integrated into secretarial training in educational institutions, helping to bridge the gap between theoretical knowledge and practical application. This literature confirms that new training programmes have been introduced among secretaries in Tanzania to a reasonable extent.

4.3 Types of Digital Training Programmes Introduced to Meet Skill Needs for Secretaries

Based on the findings, 18 respondents confirmed the implementation of a new training program to help secretaries adapt to new technological changes in their organisations. Several advanced technologies were listed, for respondents to choose if they introduced it for future secretarial endeavour, these includes; Cyber Security awareness and Protection, Data analytics and management, AI and Machine Learning, Internet and electronic mailing systems, Digital calendars and scheduling software, Cloud computing and database management, Communication platforms (Such as; Zoom meeting), Office suite software (Like; Google Workspace, Ms Office, Ms Teams, WPS Office) and Project management and collaboration platform. Respondents were also allowed to add any digital training implemented beyond the listed options. The response to this is shown in Figure 2.

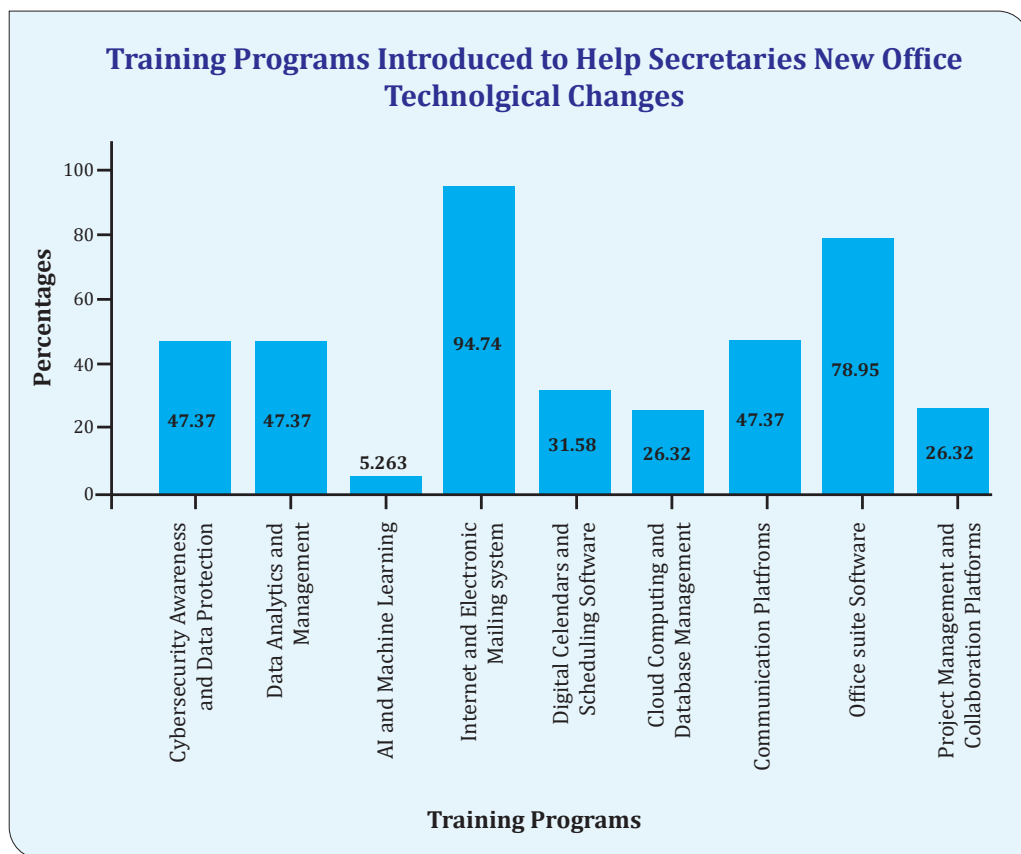


Figure 2: Types of Digital Training Programmes for Advanced Office Technology

Source: Field Data (2025)

The data in Figure 2 shows that several public organisations offer a reasonable number of training programmes, with a response rate of 40% in this study. The accepted as to be the types of training programmes introduced for secretaries to keep pace with advancing office technologies can be explained:

4.3.1 Internet and Electronic Mailing Systems

A significant majority of respondents (94.74%) highlighted the Internet and Electronic Mailing System as the area given priority in Secretarial training to equip secretaries with the skills necessary to adapt to evolving roles and meet future office demands. The high adoption rate highlights the essential role of email management and internet proficiency in modern secretarial responsibilities. The study by Fasae (2024) found that ICT training is an important aspect for secretaries. Also, the study by Thompson and Harris (2023) found that digital literacy and data management were even introduced in the colleges' curricula for secretaries. Ngugi & Mwaura (2023) highlight that new training programmes remain important in the evolving roles of secretaries. In this respect, online training and email systems are introduced and can help secretaries keep pace with current technological advancements in offices.

4.3.2 Office Suite Software

This was supported by 78.95% of all respondents as the key digital training priority for secretaries in public organisations. These results indicate that office suite software is among the major adaptation training programmes introduced to help secretaries cope with advanced office technologies. The findings are consistent with those of Ngugi & Mwaura (2023), which highlight that new training programmes for secretaries are important and have been introduced across different organisations. The study by Miller (2019) pinpointed that software training has increased for secretaries to cope with technological advancement. Similarly, the study by Bette (2021) confirms that general ICT training, including software, has been proposed for secretaries in Nigeria. Hence, the validity of introducing office suite software training in Tanzania remains high.

4.3.3 Cybersecurity awareness and Data Protection

This was accepted by 47.37% of all respondents as one of the new and modern training programmes for secretaries in Tanzania. The findings imply that cybersecurity awareness and data protection training have been introduced at a reasonable pace to keep secretaries up to date with advanced office technologies. The results align with the existing literature; for example, the study by Thompson and Harris (2023) found that academic institutions have incorporated modern secretarial programmes, including cybersecurity, into their curricula to upskill secretaries in advanced office technologies. Focacci & Perez (2022) found that security is key to secretarial training meeting technological demands.

4.3.4 Data analytics and Management

This was accepted by 47.37% of all respondents as the introduced training priority for secretaries in different organisations to keep pace with advanced office technologies. The findings align with existing literature, such as Bediako (2022), which found that, in Africa, due to advanced office technology, data management training has been introduced for secretaries, but access to training resources remains limited in most cases. The study by Musty (2023) found that in Indonesia, database management is a priority training program for secretaries. Also, the study by Focacci & Perez (2022) highlights the importance of database management in the secretarial profession in Sweden and Germany. This pre-existing literature strengthens the validity of this study's findings in the field of data analytics and management.

4.3.5 Communication platforms

In responses from human resource officers, 47.37% identified communication platforms as a training priority for secretaries to keep pace with the growing range of office technologies. The results remain valid given related findings in prior research. For example, Bette's (2021) study indicates that general ICT training, including communication platforms, has been introduced within the Nigerian secretarial profession. Oluwasina (2025) adds that virtual meeting training is not excluded from secretarial training in Nigeria. The study by Upadhyay *et al.* (2024) shows that communication training programmes, such as virtual meetings, are considered important for secretarial professionals in India and are provided to secretaries.

On the other hand, other training programmes for secretaries are being introduced to keep pace with advanced office technologies, but with less priority. In this case, 31.58% of all Respondents noted competency in Digital Calendars and Scheduling software, while Cloud Computing, Data management, and Project management and collaboration platforms were cited by 26.32% of respondents. Notably, only 5.26% of respondents reported introducing an AI and Machine Learning Program, suggesting limited current integration of these advanced technologies into secretarial training frameworks.

Moreover, the study confirmed the need for training programmes by obtaining responses from secretaries. When asked about *“the type of training they wish to undertake to match skills with ongoing office technological changes?”* Professional Secretaries’ responses did not diverge further from the HR’s response in Figure 2 on ‘Digital training programmes introduced to match advanced office technological changes’, where the majority of Professional Secretaries indicated internet and mail systems as a priority training area they wish to undertake to facilitate their integration into the rapidly evolving landscape of modern office technology, as illustrated in Figure 3.

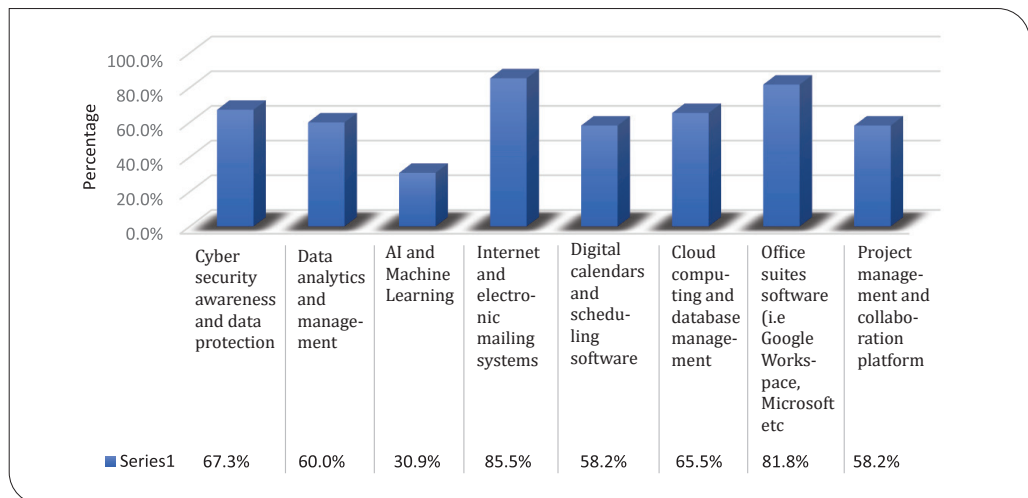


Figure 3: Desired Training Areas for Secretaries to Adapt to Office Technology Changes

Source: Field Data (2025)

Data presented in Figure 3 indicate that the majority of secretaries wish to sharpen their skills in Internet and Electronic Mailing Systems, as evidenced by an 85.5% response rate. Office suite software (MS Office, WPS Office, and Google Workspace) is another area where secretaries wish to enhance their skills, as indicated by an 81.8% response rate. This is closely followed by an interest in cybersecurity awareness and data protection, with a 67.3% response rate. Additionally, Cloud computing and database management had a 65.5% response rate. In comparison, Digital calendars, scheduling software, project management, and collaboration platforms had response rates of 58.2%, 58.2%, 58.2%, and 58.2%, respectively. The least area where secretaries would wish to sharpen their digital competence for future endeavours was AI and Machine Learning, with just 30.9%, below the average response rate. Despite the lower response rate, the emerging recognition of

AI in their professional roles signals the respondents' readiness to transform to future emerging roles. AI-driven tools in administrative functions can enhance efficiency and accuracy in the office. This indicates a forward-looking approach to prompt secretaries to ensure adaptability in an evolving digital landscape. Responding to the interview question on the new training programmes that might be provided to help to cope with advanced office technology, one of the respondents replied,

"I wish to get all possible training available that will help to adapt to the upcoming technological changes...including training programmes like collaboration and communication software, cybersecurity, virtual meetings, AI and machine Learning programmes" (RESPONDENT 10).

These responses indicate respondents' knowledge of a prospective secretary's future and the needs of the modern workforce, as they pinpoint core programmes that will reshape and digitalise contemporary office work. This is supported by Baum and Mohr (2020), who argued that technological changes lead to shifts in work requirements, thereby requiring suitably skilled personnel. In general, there are significant efforts to introduce relevant training programmes for secretaries to help them cope with advanced office technologies. The training mostly covers internet and email systems, office suite software, cybersecurity awareness and data protection, data analytics and management, and communication platforms. These are supported by secretaries to be the relevant training programmes in Tanzania and are prioritised by human resource officers.

5.0 Conclusion

Conclusively, the study achieved its objectives and highlights that the application of advanced office technologies by secretaries has fostered the introduction of training programmes in the secretarial profession in Tanzania to meet the emerging demand of the global technology-driven workplace. The skills needed by secretaries include Office Suite software, cybersecurity awareness, data protection, and collaboration platforms. Training programmes for secretaries include the Internet and Electronic Mailing System and Office Suite Software.

6.0 Recommendations

The study recommends that the Government, through the President's Office, Public Service Management and Good Governance (PO-PSMGG), in collaboration with key stakeholders such as the Tanzania Personal Secretaries Association (TAPSEA), Secretarial Training Institutions, and Employers, should continue to revisit, redefine and implement relevant training programmes in the secretarial profession and ensure alignment with the ongoing technological advancements. Also, different Organisations should provide regular training programmes to enhance the digital skills of professionally trained secretaries. These programmes should cover the latest digital tools and technologies relevant to current secretarial roles, reflecting the current application of advanced office technologies.

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