APPLICATION OF ARTIFICIAL INTELLIGENCE TOOLS TO SECRETARIAL FUNCTIONS IN CONTEMPORARY OFFICES

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Abstract
The advent of Artificial Intelligence brought tremendous transformation to modern office in today's digital world. The study investigated application of artificial intelligence to secretarial functions in contemporary Offices. Descriptive survey design was used for the study. Two research questions guided the study. The population of the study comprised 94 secretaries/office professionals in two public polytechnics in Osun State. A census survey was employed for the study. A structured questionnaire with 25 items was used to collect data from the respondents. The instrument was validated by two experts in the Department of Business and Entrepreneurship Education, Kwara State University, Malete, Kwara State. Mean and standard deviation were used to analyze the data collected in order to answer the research questions. The findings of the study revealed that artificial intelligence tools were utilized to a great extent for document and information management by office professionals in contemporary offices and it was concluded that application of artificial intelligence tools to secretarial functions has potential prospects thereby enhancing the role of office professionals in contemporary office. The application of artificial intelligence tools also encounters significant constraints that hinder the effective use of artificial intelligence-driven initiatives in contemporary office. It was recommended among others that management of organizations should organize training for office professionals on artificial intelligence tools for effective use in offices while adequate artificial intelligence tools should be provided with enabling environment that will enhance acquisition of artificial intelligence skills for effective job performance in contemporary world of work and business.

Keywords: *Artificial intelligence, Tools, Secretarial Functions & Office professionals*

Introduction

The role of a secretary has significantly evolved over the years from simply handling clerical work to an integral part of organizational management. As technology advances secretaries are adapting to new tools that assist to streamline administrative tasks. Traditionally, secretaries have been the backbone of office operations, handling different tasks such as appointment scheduling, document management and communication facilitation among others. However, in today's digital world, secretarial roles have expanded. Secretaries are now expected to multi task across various domains, assist in strategic planning and perform leadership roles in organizations.

This expansion in role is driven by technological advancements that have automated routine tasks, leaving secretaries with more time to focus on higher responsibilities. As digital tools become more advanced, secretaries are evolving into dynamic administrative professionals, mastering not only the basics but also performing tasks that involve complex data management and business coordination in business world (Antonenko & Abramowitz, 2023).

Artificial intelligence has been introduced to secretarial profession as part of the multiple ways to accomplish development in digital office. Artificial intelligence is also a booming technological domain capable of altering every aspect of our social interactions. Discovering and developing the use of artificial intelligence tools in secretarial profession explores the new possibilities of innovation in modern office. Artificial intelligence is not just transforming industries but is also enhancing the traditional secretarial role thereby bringing efficiency, precision and new capabilities to the administrative world. Artificial Intelligence refers to simulation of human cognitive processes by machines and software to perform tasks such as decision-making, speech recognition, visual perception, and language translation (Russell &

Norvig, 2020). Nilsson (2021) defines Artificial intelligence as a set of technologies that enable machines to perceive their environment, process information and act to achieve a specific goal. Artificial intelligence is also a technology that enables computers and machines to stimulate human learning, comprehend, solve problems and make decision (Falaah, 2024). Ferrell (2017) asserts that artificial intelligence is a set of technologies that enable computers to perform a variety of advanced functions which could be performed by human beings. It is the ability of computer or computer-controlled robots to perform tasks commonly associated with intelligent beings. It enables computer to perform tasks which normally require human intelligence.

These tasks, once exclusive to humans, are now being handled by intelligent systems capable of learning from data and improving their functionality over time. Artificial intelligence is rapidly becoming a backbone of office management. It automates routine tasks in secretarial practice such as appointment scheduling; email management, document review and data management. Artificial intelligence also enhances efficiency and accuracy, tracks compliance, monitors risks, better communication, improved governance, better-informed decisions and elevated strategic role. The ability of artificial intelligence tools to perform repetitive tasks with speed and accuracy is changing the way administrative work is handled. Artificial Intelligence technologies like machine learning, language processing, ChatGPT, virtual assistants, automated scheduling software, document management system and robotic process automation are enabling secretaries to delegate mundane tasks to intelligent systems. These intelligent systems are capable of performing tasks that typically require human cognition, such as speech recognition, decision-making and visual perception (Kaplan & Haenlein, 2020).

The integration of AI into secretarial roles has brought tremendous benefits, enhancing both productivity and accuracy. These includes: efficiency improvements- AI automates time consuming tasks such as managing emails, scheduling meetings and organizing data. With AI scheduling systems, office professionals no longer manually coordinate calendars or send multiple follow-up emails. AI can process large amounts of data with consistent accuracy and reduces errors in various tasks. AI tools can also analyze datasets quickly and efficiently thereby providing secretaries with actionable insights. It also enables office professionals to make informed decisions based on data. Artificial intelligence tools can also help office professionals identify potential issues and proffer proactive solutions. Office professionals now use AI tools to manage multiple communication channels in order to maintain effective communication with various stakeholders while minimizing bottlenecks. AI tools offer enhanced security protocols that help protect data from breaches. It also ensures that sensitive documents remain secure during digital transfers. Office professionals can also use AI tools to monitor and identify potential security threat before they escalate into larger issues. This capability not only protects the organization's assets but also enhances the role of office professionals as a trusted guardian of documents and information (Asakure, 2020).

The integration of AI into secretarial functions is not without its challenges. One major concern is the fear that AI will eventually replace office professionals. However, the reality is that AI is intended to be a supportive tool rather than a replacement. Some of the other challenges include: Digital skill gaps, lack of technical competence, resistance to change, data privacy and security risks, ethical and reliability issues, complex regulatory adaptation, infrastructural limitations, high implementation and maintenance costs among others.

Secretarial practice encompasses the totality of administrative, clerical, communicative, and managerial support functions carried out by secretaries/office professionals in organizations. It involves a series of coordinated activities that facilitate the smooth functioning of an office environment. These include correspondence management, document preparation, record keeping, data processing, customer service, meeting coordination and file management (Adebayo, 2018).

Secretarial functions have evolved tremendously over time. Traditionally, secretarial work was typified by tasks such as shorthand transcription, manual typing, filing and ledger maintenance. Secretaries were mostly seen as an assistant to executives with limited influence over decision-making processes (Oni, 2019). However, in today's digital era, secretaries are no longer confined to traditional tasks but are expected to be proficient in the use of digital tools and office automation software. According to Ojukwu (2021), modern secretaries are strategic partners in business operations, often managing sensitive

information, coordinating schedules, liaising with clients and using technology to support office productivity.

Secretarial practice has transitioned from a clerical support function to a technologically integrated, strategic and multifaceted profession. The integration of AI and ICT into secretarial roles has elevated the expectations and demands placed on modern secretaries. The future of secretarial practice appears promising anchored in digital competence, AI augmentation and continuous professional development.

AI is often categorized into two types: narrow AI, which is designed to perform specific tasks (for instance, voice assistants or automated scheduling tools), and general AI, which seeks to replicate broad human intelligence across multiple domains (Arsule & Pawar, 2024). In the context of secretarial practice, the AI tools used are predominantly narrow AI solutions such as chatbots, voice transcription software, automated scheduling programs, and machine learning algorithms for email sorting, information and documents management.

Some of the Artificial Intelligence tools relevant to secretarial functions:

Virtual Personal Assistants (VPAs): Tools like Cortana, Siri, and Google Assistant can assist secretaries in setting reminders, searching information, managing appointments, and automating routine communications. **Speech Recognition Software:** Applications such as Dragon Naturally Speaking converts spoken words into text, which enhances speed and efficiency in documentation, especially during meetings and interviews. **Chatbot:** This AI-powered system interacts with clients or staff through pre-programme dialogue, providing information, booking appointments, or handling customer inquiries. **Natural Language Processing (NLP):** AI systems like Grammarly or Microsoft Editor use NLP to improve document writing, summarize long texts, and generate responses to emails. **Robotic Process Automation (RPA):** RPA tools automate repetitive tasks such as invoice processing, data entry and email sorting. **Smart Scheduling Tools:** Platforms like x.ai and Clara, use AI algorithms to identify optimal meeting times across different schedules and time zones, reducing the burden often associated with manual scheduling. **Document Analysis Tools:** Tools like Luminance and Kira are capable of analyzing large volumes of documents for key insights, contract clauses, and summarization, which is useful in managing legal or financial documents (Kong, 2020).

Benjamin (2023) observes that integration of AI tools into office functions can reduce administrative costs by over 30% and increase productivity by over 40% thereby utilization of these tools will not only enhance speed and efficiency of secretarial tasks but also reduce human errors and increase data security. However, the successful application of AI to secretarial functions depends on proper implementation, staff training, ethical guidelines and data protection protocols (Malik, 2024).

Statement of the Problem

The advent of Artificial Intelligence (AI) brought tremendous benefits as well as challenges to secretarial profession in today's technology-driven world. It was observed that most of the functions being performed by office professionals are now being carried out by AI tools thereby reducing the responsibilities of office professionals in the technology- savvy world of business. This gives rise to the question whether AI would replace office professionals?

However, despite the advent of AI tools, there is still a growing concern over the inefficiency, time-wastage, high error rates and task overload experienced by office professionals due to persistent reliance on manual method and resistance to change. Many office professionals still depend on traditional method of performing tasks such as data processing, record management, meeting coordination and appointment schedule which are cumbersome and susceptible to delays and errors. It also appears that organizations do not prepare to provide the necessary facilities and resources for meaningful deployment of artificial intelligence tools for office professionals. Failure to integrate artificial intelligence tools to office routines, may affect not only office professionals but organization activities and economy. Therefore, the concern of this study is to investigate application of AI tools to secretarial functions in contemporary offices.

Research Questions

1. To what extent do office professionals use Artificial Intelligence tools for document management in contemporary offices?
2. To what extent do office professionals use Artificial Intelligence tools for information management in contemporary offices?

Methods

Descriptive survey research design was adopted because the study sought the opinions of respondents on application of artificial intelligence tools to secretarial functions for contemporary offices. The study was conducted in the two public polytechnics in Osun State: Osun State Polytechnic, Iree and Federal Polytechnic, Ede, Osun State, Nigeria. The population comprised 94 secretaries/office professionals of the two polytechnics. Osun State Polytechnic, Iree had 33 while Federal Polytechnic, Ede had 61. A census survey was employed for the study. Two research questions guided the study. The instrument used for data collection was a 25-item structured questionnaire titled: Application of Artificial Intelligence Tools to Secretarial Functions Questionnaire (AAITSFQ) generated from the research questions and reviewed related literature. The questionnaire was divided into two sections. Section A sought the demographic data of the respondents while section B consisted of questions designed to extract information needed on the research questions. The questionnaire was face-and-content validated by two experts in Business and Entrepreneurship Education, Kwara State University, Malete, Kwara State.

The instrument was designed to elicit the ratings of respondents on a 4-point modified Likert-rating scale of: Very Great Extent (VGE) - 4 points, Great Extent (GE) -3 points, Small Extent(SE) -2 points and Very Small Extent (VSE) -1 point.

A total of 94 copies of the questionnaire were distributed by the researchers out of which 82 were returned representing 87% return rate. Mean and standard deviation were used to analyse the data collected. The decision rule for the research question was that any item with a mean score of 2.50 and above was regarded as great extent (GE) while below 2.50 was regarded as small extent (SE).

Results

Research Question 1: To what extent do office professionals use Artificial Intelligence tools for document management in contemporary offices?

Table 1: Mean and Standard Deviation of Responses on usage of Artificial Intelligence Tools for Document Management

S/N	Items	$\overline{X}$	SD	Remark
1.	AI helps to draft documents.	3.21	0.81	Great Extent
2.	AI helps to write reports. .	3.24	0.83	Great Extent
3.	AI reviews existing documents to ensure they meet professional standards.	3.12	0.76	Great Extent
4.	AI automates documents entry.	3.32	0.87	Great Extent
5.	AI sort files.	2.99	0.72	Great Extent
6.	AI handles repetitive document formatting tasks.	2.96	0.71	Great Extent
7.	AI automates tedious tasks.	3.45	0.92	Great Extent
8.	AI automates the preparation and submission of statutory and regulatory documents.	3.31	0.85	Great Extent
9.	AI minimizes errors in documents.	3.38	0.88	Great Extent
10.	AI checks grammar and spelling in documents.	3.41	0.89	Great Extent
Grand Mean		**2.93**	**0.74**	**Great Extent**

Source: Field Survey, 2025

Data in table 1 analysis reveals that all the 10 items listed were rated great extent. The standard deviation ranges from 0.71 to 0.92 which suggests that respondents were close to one another in their mean

responses. The Grand mean was 2.93, which indicates that office professionals utilize AI tools to a great extent for document management in contemporary offices.

Research Question 2: To what extent do office professionals use Artificial Intelligence tools for information management in contemporary offices?

Table 2: Mean and Standard Deviation of Responses on usage of Artificial Intelligence Tools for Information Management

S/N	Items	$\overline{X}$	SD	Remark
11.	AI extracts key information from various documents	3.08	0.79	Great Extent
12.	AI filters, prioritizes and draft responses to emails	3.42	0.91	Great Extent
13.	AI provides multiple support to break down communication barriers	2.98	0.77	Great Extent
14.	AI summarizes long emails and ensures key points are not missed.	3.22	0.87	Great Extent
15.	AI helps to make presentation.	3.12	0.83	Great Extent
16.	AI creates and sends notice and agenda of meetings.	3.18	0.85	Great Extent
17.	AI generate minutes of meetings.	3.23	0.89	Great Extent
18.	AI schedule meetings and send reminders.	3.15	0.84	Great Extent
19.	AI helps to manage calendars.	3.28	0.90	Great Extent
20.	AI schedule appointments.	3.21	0.86	Great Extent
21	AI identify trends and provides valuable information for strategic planning.	2.94	0.74	Great Extent
22.	AI disseminates information quickly and easily.	3.25	0.89	Great Extent
23.	AI tracks and monitors information.	2.86	0.69	Great Extent
24.	AI retrieves critical information easily and quickly.	2.98	0.76	Great Extent
25.	AI stores data for future use.	3.05	0.78	Great Extent
Grand Mean		**3.44**	**0.83**	**Great Extent**

Source: Field Survey, 2025

Result in table 2 reveals that all the 15 items listed were rated great extent. The standard deviation ranges from 0.69 to 0.91 which suggests that respondents were close to one another in their mean responses. The Grand mean was 3.44, which indicates that office professionals utilize AI tools to a great extent for information management in contemporary office.

Discussion of Findings

The study examined application of artificial intelligence tools to secretarial functions in contemporary office. Findings on Research Question one revealed that office professionals utilized artificial intelligence tools to a great extent for document management in contemporary offices. This is in agreement with the finding of Antonenko and Abramowitz (2023) that the role of office professionals has been expanded by artificial intelligence tools and thus secretaries are evolving into dynamic administrative professionals, mastering not only the basics but also performing tasks that involve complex data management and business coordination with artificial intelligence tools. The finding also corroborates the view of Russell and Norvig (2020) that AI is not just transforming industries but also enhancing the traditional secretarial role thereby bringing efficiency, precision and new capabilities to the administrative world.

Analysis on research Question 2 revealed that office professionals utilized artificial intelligence tools to a great extent for information management in contemporary offices. The finding is in line with the views expressed by Oni (2019) that secretaries are no longer confined to traditional tasks in today's digital era but are expected to be proficient in the use of AI tools and office automation software in managing information. In addition, the finding also corroborates the view of Ojukwu (2021) who stated that modern secretaries are strategic partners in business operations, often managing sensitive information,

coordinating schedules, liaising with clients, and using technology to support office productivity. Generally, effective utilization of the identified various artificial intelligence tools will enhance performance of office professionals in contemporary offices.

Conclusion

The study concluded that artificial intelligence tools are essential in today's technology-savvy world of work and business. It was also discovered that application of artificial intelligence tools to secretarial functions enhances the role of office professionals as a trusted guardian of documents and information in contemporary world of work and business. Artificial intelligence also has the potential to assist office professionals develop essential digital skills for effective performance in contemporary office. However, application of artificial intelligence tools for secretarial functions also presents a range of constraints which may hinder the effective utilization of artificial intelligence tools in the technology-driven world of business. These challenges include lack of facilities, resistance to change, lack of training, over-reliance on manual method and fear of redundancy by office professionals among others. Unless these challenges are identified and addressed, the use of artificial intelligence tools for secretarial functions may be under-utilized or not achieved by office professionals. Therefore, the future of secretarial practice appears promising anchored in digital competence, AI augmentation and continuous professional development.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Management of organizations should organize training programme for office professionals on utilization of artificial intelligence tools, this will enable them cope with the advent of artificial intelligence tools in contemporary world of work and business.
2. Management of organizations should provide adequate artificial intelligence tools with enabling environment that will enhance acquisition of artificial intelligence skills for effective job performance among office professionals in technology-driven world.

References

Adebayo, K. A. (2018). *Secretarial skills and administrative efficiency in tertiary institutions*. Ilorin: Grace Publishers.

Antonenko, P. & Abramowitz, B., 2023. In-service teachers' misconceptions of artificial intelligence in science education. *Journal of Research on Technology in Education, [e-journal]* 5(1), 64-78.

Arsule, M. B., & Pawar, V. B. (2024). Maximizing productivity: how to use AI tools for office work and creative tasks. International *Journal of Advanced Research in Science, Communication and Technology,* 11(1), 71-88.

Asakura, K. R. (2020). Artificial intelligence and social work in education: Lessons learned from a simulation project using natural language processing. *Journal of Teaching in Social Work, [e-journal]* 40(5), 501-518.

Benjamin, F. M. (2023). *The future of administrative support in AI-enabled organizations*. *African Journal of Management Innovation,* 6(1), 45–61.

Falaah, S. S. (2024). Secretary and artificial intelligence: transforming administrative roles. Accessed on 4th September, 2025 at https://cptcorporate.com

Ferrell, C. L. (2017). *The ethics of artificial intelligence*. Cambridge University Press.

Kaplan, A., and Haenlein, M. (2020). The challenges and opportunities of artificial intelligence. *Journal of Business Horizons,* 63(1), 37-50.

Kong, F., 2020. Application of artificial intelligence in modern art teaching. *International Journal of Emerging Technologies in Learning,* [e-journal] 15(13), 238-251.

Malik, P. K. (2024). The role of artificial intelligence in education: opportunities and challenges. *International Journal of Scientific Research in Engineering and Management,* 11(1), 71-88.

Nilsson, N. J. (2021). *Understanding artificial intelligence*. Stanford: Stanford Publishers.

Ojukwu, D. C. (2021). *Strategic importance of secretarial staff in contemporary institutions*. *Journal of Educational Management and Policy*, 13(2), 101–117.

Oni, S. A. (2019). *The changing landscape of clerical work in Nigerian institutions*. Ibadan: University Press.

Russell, S., & Norvig, P. (2020). *Artificial intelligence: A modern approach* (4th ed.) Pearson Publishers.