

WORD PROCESSING SKILLS, MICROGRAPHIC SKILLS AND TELECOMMUNICATION SKILLS USED BY SECRETARIES IN SELECTED BUSINESS ORGANIZATIONS IN EDO STATE

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Abstract

The study examined word processing, micrographic, and telecommunication skills used by Secretaries in selected modern business organizations in Edo State. Three specific objectives with three research questions and three null hypotheses guided the study. The study utilized the cross-sectional survey research design. The study population comprised one hundred thirty-four female secretaries and one hundred and twenty male secretaries drawn from 316 selected modern business organizations in Edo State. An instrument was designed to elicit information from the respondents. Data obtained from the study were analyzed using

mean, standard deviation, t-test, and analysis of variance (ANOVA). Mean and standard deviation were used to answer all the research questions. T-test was used to test hypotheses 1 and 2, while ANOVA was used to test hypothesis 3. All the hypotheses were tested at a 0.05 level of significance. Results showed that all secretaries in selected modern business organizations in Edo State used all the word processing, micrographic, and telecommunication skills, respectively. Based on the findings, it was recommended that government and all relevant agencies training secretaries and business educators should make it compulsory for them to be trained and retrained in the latest office information processing technologies.

Keywords: Technology, Modern Business Organization, and Secretaries.

Introduction

Technology has been defined from various viewpoints. Raymond (2006) defined technology as a general term used for the processes by which human beings fashion tools and machines to improve their control and understanding of the material environment. Atuenyi (2010) opined that technology is the specific engineering and management knowledge that makes the conception, design, development, production and distribution of goods and services possible. Atuenyi further described technology as how humans modify nature to meet their needs and wants. Ezemonyi (2010) observed that technology is a problem-solving process that aims to improve the quality of human life, human needs, and resources.

Eglash (2002) described information technology as a broad range of activities and equipment encompassing all the tools, applications, and information available and accessible through computers. In its concurrent form, he remarked that information technology includes various information delivery systems, such as computer and internet service, in one integrated environment.

Technological innovations are rapidly pervading modern enterprises locally and internationally and have practically affected every aspect of office work. As a result, skills requirements in many occupations are changing. However, these new technologies have facilitated

new business procedures from the traditional office of yester years to the electronic office, resulting in variously described as a virtual office, paperless office, electronic office, automated office, and simply office of the future (Atakpa 2015). The modern business office is rapidly changing due to office automation, which has brought about new methods of carrying out functions performed by people in business organizations. These new trends have placed greater responsibilities on business educators, secretarial students, and institutions training secretaries.

Ikelegbe (2007) asserted that information technology encompasses all the different means, methods, and tools humans have used throughout history to help manage information, conduct business, communicate with others, and better understand the world. This description is elastic. It incorporates virtually every kind of device used in gathering and disseminating information.

Etonyeaku (2009) observed that secretaries in the organizations of yester years were dealing with paper, worked with manual machines, relied on postal services for external communications, and kept office records in the cabinets. Today's secretaries are exposed to office technology, including the Internet, which makes work easier and knowledge more accessible (Edwin 2008). However, the secretarial profession is not gender biased, as male and female secretaries are employed in modern business organizations. The secretary's competency can impact the prospects and successes of any business organization. Nwaogugwu (2002) remarked that introducing sophisticated telecommunication equipment, word processors, and office technology machines coupled with new management techniques office technology resources have changed old work habits, resulting in complete job redesignation and acquisition of new skills.

Familiarization with this equipment, no matter the complexities inherent, depends on mastering the various skills used in the electronic office. Since the business environment has greatly increased with innovations in modern business organizations, secretaries need to be trained and highly skilled in office information technology to enable them to be employable and retain job positions in the automated office.

Conceptual Framework

The advent of technological innovations worldwide has triggered business orientation, thus making the older transaction methods outdated. The digital telephone and other electronically powered machines have reduced the long person-hour labour of office business to a mere pressing of buttons to attain effective and efficient output. Word process skills, micrographic, and communication skills are some areas that h

Concept of Secretary

The word secretary originated from the Latin word 'secretarin,' a person entrusted with secrets and employed in an office to acquire, prepare, preserve, and transmit information (Spencer and Pruss 2002). Harrison (2005) posited that a secretary has sound general knowledge and passed a prescribed training program in secretarial studies. The secretary possesses demonstrable personal and business attributes, including employable skills in shorthand, keyboarding, and document processing, and has been employed in an organization or is, in practice, providing information and communication support services needed by clients. Harrison noted that a secretary has sufficient knowledge and skills in office machine procedures and can work with equipment, make decisions, UDJCSE

give instructions to subordinates, and represent the executives in business sessions. The researcher described the secretary as an indispensable instrument in any organization who possesses a good educational background and a mastery of office skills:

Concept of Skills

Etonyeaku (2009) defined skill as the capacity of a person to accomplish a task with desired precision and certainty. It involves practical knowledge in combination with cleverness, expertise, dexterity, and the ability to perform a function that could be acquired or learned in school. Balogun (2002) posited that skill is a set of identified behaviours, knowledge, competencies, and abilities that directly and positively impact the success of secretaries in an organization. Skills that are consistently demonstrated make secretaries effective on the job and lead to success.

The Concept of Office Information System

Office Information Systems (OIS), also known as Office Automation Systems (OAS), is a new technology. It can be regarded as a course of study. Doswell (Atakpa, 2015) described office information systems as a conglomerate of the separate office information processing technologies, including word processing, data processing, micrographics, reprographics, and telecommunications. It can also be referred to as the electronic methods by which information is gathered, processed, reproduced, communicated, stored and protected or retrieved. Harvey (2000) postulated that since the primary business of the modern office is to collect, record, sort, analyze, store, and distribute information, OIS integrates all available hardware, software procedures, and human resources so that office information is not only processed accurately, speedily and comprehensively but also made available as, when, where and in the manner or form required. This includes how office information is processed and the resources applied to capture, process, deliver, and store information.

Word Processing Skills

Word processing skill is one of the most important components of an office information system. Agumuo (2005) described word processing as using automated equipment to produce such components of letters, reports, and other text materials.

He posited that word processing involves using automated hardware to manipulate words, sentences, and paragraphs. He further noted that one of the features of word processors is that as the words are typed, they are displayed simultaneously in the visual display unit (VDU). This enables the secretary to effect corrections such as deleting or inserting words, sentences, and paragraphs before printing the document.

Ohaegbulem (2006) observed that today's secretaries are employees who have taken additional dimensions. The fixed image of a secretary of the past with a manually operated machine is beginning to fade, and the image of the new secretary with word processing skills is emerging. Nwosu (2003) noted that word-processing skills benefit secretaries in several ways. It frees secretaries to do more creative work within the organization and makes the secretaries' jobs more satisfying.

Micrographic Skills

Chukwumezie (2002) described micrographic skills as modern ways of recording information in electronic data devices such as microfilm and computer disks. Peter (2010) referred to micrography as reducing and recording documents and computer-generated output on microfilms. Chukwuemezie, therefore, remarked that secretaries should recognize and appreciate the importance of this electronic filing method since finding information held on paper, disk, or films is necessary for secretarial function in the electronic office. For secretaries to be efficient and effective in business, they require micrographic skills.

Telecommunication Skills

Hornby (2001) defined skills as the technology of sending signals and messages over distances by radio, telephone, television, satellite, etc. Nwaogwugwu (2002) asserted that introducing sophisticated communication equipment, computers and word processors, information technology resources, internet resources, office technology resources coupled with new management techniques have changed old work habits, resulting in complete job re-designation and the acquisition of new skills.

The secretary's competency impacts the prospects and successes of any modern business organization. According to Olaitan, Abaribe and Eze (2010), competence refers to the successful performance of a task through knowledge, skills, attitude, and judgment. This means that a secretary will not only have the theoretical knowledge of the work but should be able to carry out the duties practically, efficiently, and effectively towards achieving the organization's objectives. Barret (2007) pointed out that any secretary lacking telecommunication skills will find it difficult to communicate effectively in an electronic office.

Statement of the Problem

In a society with rapid technological changes, it is important to keep up-to-date with the skills employers of labour want to achieve maximum productivity. Since technology is meaningless unless used effectively and efficiently, secretaries need to know how to use these new technologies and cope with the challenges they bring.

However, effective use of word processing micro graphic Given these obvious problems, it has become necessary to empirically determine the various office information skills in secretarial job tasks often used by secretaries in selected modern business organizations in Edo State.

Purpose of Study

The study's main purpose is to determine the word processing, micrographic, and telecommunication skills used by secretaries in selected modern business organizations in the Edo State of Nigeria. Specifically, the study sought to:

1. Determine the word processing skills used by secretaries in selected modern business organizations in Edo State.

2. Determine the micrographic skills used by secretaries in selected modern business organizations in Edo State.
3. Find out the telecommunication skills secretaries use in selected modern business organizations in Edo State.

Scope of the Study

There are various skills used by secretaries in the automated office. However, the study was delimited to word processing skills, micrographic skills, and telecommunication skills used by secretaries in selected modern business organizations in the Edo State of Nigerian. Modern business organizations are aspects of businesses that employ secretaries with both office information system skills.

Research Questions

This research sought to provide answers to the following questions:

1. What word processing skills are used by secretaries in selected modern business organizations in Edo State?
2. What micrographic skills are used by secretaries in selected modern business organizations in Edo State?
3. What telecommunication skills are used by secretaries in selected modern business organizations in Edo State?

Hypotheses

The following hypotheses were tested at a 0.05 level of significance.

1. There is no significant difference between the mean ratings of male and female secretaries on the word processing skills used by secretaries in selected modern business organizations in Edo State.
2. There is no significant difference in the mean ratings between urban and rural secretaries on the micrographic skills used by secretaries in selected modern business organizations in Edo State.
3. There is no significant difference in the mean ratings of secretaries on the telecommunication skills used in selected modern business organizations in Edo State.

Methodology

The researcher adopted a cross-sectional research design to investigate the word processing, micrographic, and telecommunication skills used by secretaries. The cross-sectional research designs were considered most appropriate for the study because they sought responses from a cross-section of secretaries of one hundred and thirty-four females and one hundred and twenty males selected from 316 modern business organizations in Edo State regarding their office information skills usage. The researcher designed a structured questionnaire containing 50 items based on a four-point rating scale of frequency of usage of each of the three skills. The usage ratings were:

Always used-	AL	4 points
Sometimes Used-	ST	3 points
Rarely Used-	RA	2 points
Never Used -	NE	1 point.

Two business educators from the University of Benin, Edo State, validated the questionnaire. The instrument's internal consistency was computed using the Cronbach Alpha Coefficient measure of internal consistency. Subsequently, a value of 0.75 was obtained as the reliability index. The researcher and two assistants administered the questionnaires personally and collected them the same day. Data collected for the study were analyzed using mean score, standard deviation, t-test, and analysis of variance (ANOVA).

Mean score and standard deviation were used to answer the research questions, while t-test and analysis of variance (ANOVA) were used in testing the hypotheses. T-test was used in testing hypotheses 1 and 2. Analysis of variance (ANOVA) was used in testing hypothesis 3. The boundary limit of 2.50 was used for research questions. Any skill with a mean score of 2.50 and above was considered used, and a skill with a mean score of 2.50 was considered not used by the secretaries. The hypotheses were tested based on a 0.05 level of significance.

Research Question 1

What word processing skills are used by secretaries in selected modern business organizations in Edo State? Data answering the above research questions are contained in Table 1.

Table 1: Mean Ratings on Word Processing Skills used by Secretaries in selected Modern Business Organizations in Edo State. N=254

Items	Word Processing Skills to	X	SD	Decision
1	Print out corrected copies	3.645	0.562	Used
2	Move the Cursor around active elements	3.566	0.642	Used
3	Merge two or more documents	3.649	0.575	Used
4	Paginate sheets	3.598	0.619	Used
5	Adjust margins and Enter texts	3.578	0.554	Used
6	Proof-read and check spelling	3.598	0.579	Used
7	Set up headers and footers	3.610	0.549	Used
8	Transfer and format document	3.539	0.606	Used
9	Master word processing documents/software	3.543	0.579	Used
10	Store documents in a suitable storage media	3.578	0.653	Used
Grand Mean	Word Processing Skill	3.548	0.278	Used

Table 1 shows that items 1-10 are the word processing skills used by secretaries in selected modern business organizations in Edo State. This is because each item attained a mean score of 2.50 and a grand mean score of 3.548; the standard deviations indicate that the responses cluster narrowly around the mean.

Research Question 2

What micrographic skills are used by secretaries in selected modern business organizations in Edo State? Data answering the above research questions are contained in table 2.

Table 2: Mean Ratings on Micrographic Skills used by Secretaries in selected Modern Business Organizations in Edo State. N= 254.

Items	Word Processing Skills to	X	SD	Decision
11	Operate microfilm equipment	3.358	0.706	Used
12	Apply electronic referencing	3.437	0.750	Used
13	Retrieve documents from disks	3.437	0.750	Used
14	Reduce the size of documents	3.291	0.750	Used
15	Operate microfilm equipment	3.610	0.669	Used
16	Print copies on paper	3.421	0.628	Used
17	Digitize microfilm images	3.279	0.628	Used
18	Identify a printer that uses a cartridge	3.488	0.669	Used
19	Display micro image on a screen	2.563	0.557	Used
20	Store documents using floppy diskette and optical disks	3.602	0.605	Used
Grand Mean	Micrographic skill	3.479	0.338	Used

Table 2 shows that items 11-20 are the micrographic skills used by secretaries in selected Modern Business Organizations in Edo state, having a grand mean score of 3.479. Specifically, each of the items obtained a mean score above 2.50. However, the standard deviations show how the responses cluster narrowly around the mean.

Research Question 3

What telecommunication skills are used by secretaries in selected modern business organizations in Edo State? Data analyzing the above research questions are contained in table 3.

Table 3: Mean Ratings on Telecommunication Skills used by Secretaries in selected Modern Business Organizations in Edo State. N= 254

Items	Word Processing Skills to	X	SD	Decision
21	Send and receive correspondence	3.500	0.588	Used
22	Read the text displayed on the screen	3.440	0.696	Used
23	Transmit printed text materials	3.374	0.742	Used
24	Understand telephone concept	3.354	0.622	Used
25	Operate the digital signal	3.515	0.607	Used
26	Operate telephone processing systems such as answering machines	3.582	0.664	Used
27	Make and receive telephone calls	3.157	0.764	Used
28	Differentiate telephone tones	3.519	0.720	Used
29	Understand voice processing networks	3.353	0.79	Used
30	Identify digital filtering of signal	3.559	0.655	Used
Grand Mean	Telecommunications Skills	3.472	0.335	Used

Table 3 shows that items 21 – 30 are the telecommunication skills used by secretaries in selected Modern Business Organizations in Edo State, having a grand mean score of 3.472. Specifically, each of the items obtained a mean score above 2.50. However, the standard deviations indicate that the responses cluster narrowly around the mean.

Hypothesis 1

There is no significant difference between the mean ratings of Male and Female Secretaries on the word processing skills used by secretaries in selected modern business organizations in Edo State. Data testing the above hypothesis are summarized and presented in table 4.

Table 4: Summary of t-test analysis between the mean ratings of Male and Female Secretaries on the word processing skills used by secretaries in selected modern business organizations in Edo state.

Items	Telecommunication Skills to	Gender	N	X	SD	t-cal	df	t-crit	Remark
1.	Print out corrected copies	Male	120	3.533	0.607	3.606	252	1.960	Rejected
		Female	134	3.746	0.500				
2	Move the Cursor round active elements	Male	100	3.391	0.725	4.252	252	1.960	Rejected
		Female	134	3.723	0.511				
3	Merge two or more documents	Male	120	3.701	0.534	1.522	252	1.960	Rejected
		Female	134	3.475	0.70				
4	Paginate sheets	Male	120	3.433	0.485	4.147	252	1.960	Rejected
		Female	134	3.766	0.485	3.485			
5	Adjust margins and enter texts	Male	120	3.483	0.621	2.633	252	1.960	Rejected
		Female	134						
6	Proof-read and check spelling	Male	120	3.566	0.618	0.826	252	1.960	Rejected
		Female	134	3.626	0.543				
7	Set up headers and footers	Male	120	3.550	0.605	1.659	252	1.960	Rejected
		Female	134	3.664	0.489				
8	Transfer and format document	Male	120	3.316	0.673	5.89	252	1.960	Rejected
		Female	134	3.378	0.457				
9	Master word processing documents/software	Male	120	3.425	0.694	1.650	252	1.960	Accepted
		Female	134	3.559	0.609				
10	Store documents in a suitable storage media	Male	120	3.441	0.753	3.223	252	1.960	Rejected
		Female	134	701	0.520				
Grand Mean	Word Processing Skill	Male	120	3.427	0.292	7.149	252	1.960	Rejected
		Female	124	3.656	0.214				

Table 4 shows the calculated t-value for items 1-10. Only 3 out of the 10 items have their t-calculated values less than the t-critical. However, since the t-calculated value for the rest 7 items was higher than the t-critical value, the null hypothesis was rejected. This implies a significant difference between the mean ratings of male and female secretaries on the word processing skills used by secretaries in selected modern business organizations in Edo State.

Hypothesis 2

There is no significant difference in the mean ratings of secretaries in rural and urban areas on the micrographic skills used by secretaries in selected modern business organizations in Edo State. Data testing the above hypothesis are summarized and presented in table 5.

Table 5: Mean Ratings of t-test Analysis between the Mean Ratings of Rural and Urban Secretaries on the Micrographic Skills used by Secretaries in selected Modern Business Organizations in Edo State.

Items	Telecommunication Skills to	Gender	N	X	SD	t-cal	df	t-crit	Remark
11.	Operate microfilm equipment	Urban	128	3.148	0.784	4.989	252	1.960	Rejected
		Rural	126	3.571	0.543				
12	Apply electronic referencing	Urban	128	3.390	0.690	4.562	252	1.960	Rejected
		Rural	126	3.738	0.508				
13	Retrieve documents from disks	Urban	128	3.278	0.857	8.522	252	1.960	Rejected
		Rural	126	3.603	0.580				
14	Reduce the size of documents	Urban	128	3.179	0.827	2.413	252	1.960	Rejected
		Rural	126	3.404	0.647				
15	Operate microfilm equipment	Urban	128	3.382	0.677	6.606	252	1.960	Rejected
		Rural	126	3.841	0.388				
16	Print copies on paper	Urban	128	3.398	0.601	0.583	252	1.960	Accepted
		Rural	126	3.444	0.559				
17	Digitize microfilm images	Urban	128	3.210	0.647	1.824	252	1.960	Rejected
		Rural	126	3.349	0.555				
18	Identify printers that use cartridge	Urban	128	3.328	0.764	3.949	252	1.960	Rejected
		Rural	126	3.650	0.51				
19	Display micro images on a screen.	Urban	128	3.554	0.599	0.239	252	1.960	Rejected
		Rural	126	3.571	0.512				
20	Store documents using floppy	Urban	128	3.539	0.638	1.685	252	1.960	Rejected
		Rural	126	3.666	0.565				
Grand Mean	Decision Micrographic Skills								

Table 5 shows each of the obtained t-values for items 11-20. Only 2 out of the 10 items have their t-calculated value less than the t-critical value. However, since the t-calculated value for the rest items was higher than the t-critical value, the null hypothesis was rejected. This implies a significant difference between the mean ratings of urban and rural secretaries on the micrographic skills used by secretaries in selected modern business organizations in Edo State.

Hypothesis 3

There is no significant difference in the mean ratings of secretaries in the telecommunication skills used by secretaries in selected modern business organizations in Edo State based on educational qualifications.

Table 6: Summary of ANOVA of the Mean Ratings of Secretaries in the Telecommunication Skills used by Secretaries in selected Modern Business Organizations in Edo State based on Qualification.

Source of Variance	Sum of Square	df	Mean of Square	t-cal	f-crit	Remark
Send and receive correspondence.						
Between groups	1.312	3	0.437	1.269	2.60	Rejected
Within groups	86.188	250	0.345			
Total	87.500	253				
Read text displayed on the screen.						
Between groups	5.951	3	1.984	4.297	2.60	Accepted
Within groups	115.407	250	0.462			
Total	121.358	253				
Transmit printed text materials.						
Between groups	4.332	3	1.444	3.806	2.60	Accepted
Within groups	94.849	250	0.379			
Total	99.181	253				
Understand telephone concept						

Between groups	2.544	3	0.848	2.333	260	Rejected
Within groups	90.803	250	0.364			
Total	93.437	253				
Operate the digital signal processing.						
Between groups	2.544	3	0.848	2.333	2.60	Rejected
Within groups	90.893	250	0.364			
Total	93.437	253				
Operate telephone systems such as answering machines.						
Between groups	1.154	3	0.385	0.869	2.60	Rejected
Within groups	110.610	250	0.412			
Total	111.764	253				
Telephone calls						
Between groups	14.994	3	4.998	9.416	2.60	Accepted
Within groups	132.706	250	0.531			
Total	147.701	253				
Differentiate telephone tones						
Between groups	1.535	3	0.512	0.985	2.60	Rejected
Within groups	104.259	250	0.519			
Total	108.614	253				
Understand voice processing networks.						
Between groups	4.116	3	1.372	2.787	2.60	Accepted
Within groups	123.065	250	0.492			
Total	127.181	253				
Identify digital filtering of sample.						
Between groups	3.852	3	1.284	3.431	2.60	Rejected
Within groups	93.565	250	0.374			
Total	97.417	253				
Decision	Telecommunication					Rejected
Skills						

Table 6 shows the f-calculated values for each telecommunication skill used by secretaries of different qualifications with a degree of freedom (df) 3 and 250, respectively, at a 0.05 significance level. Since the f-calculated values of 4 and 10 telecommunication skills used by secretaries are less than the t-critical, it could then be concluded that there is no significant difference in the mean ratings among secretaries with different qualifications regarding their telecommunication skills usage. Therefore, the hypothesis of no significant difference in the mean ratings of secretaries on the telecommunication skills used by secretaries in selected modern business organizations in Edo State based on educational qualifications is rejected.

Discussion

The findings of this study were arranged and discussed based on the research questions and hypotheses that guided the study. The discussion uses word processing, micrographics, and telecommunication skills.

Word processing skills used by secretaries in selected modern business organizations in Edo State.

The result in Table 1 showed that secretaries in selected modern business organizations in Edo State used all the word processing skills. Unsurprisingly, the secretaries used all the word

processing skills in carrying out their duties in modern business organizations. This is because, in an electronic office, such skills were required by secretaries for the successful execution of their official job tasks. It could be noted that modern private business organizations in Edo State now use automated office equipment to discharge their normal office tasks.

Micrographic skills used by secretaries in rural and urban areas in selected modern business organizations in Edo State

Results in table 2 showed that secretaries in selected modern business organizations in Edo State used all the micrographic skills studied. That secretaries used all the micrographic skills in performing their duties in selected modern business organizations in Edo State was not surprising. This is because such skills are required in an electronic office to successfully perform most secretaries' duties. These findings confirm the views of Njie (2010), who reported that the secretaries used the micrographic skills she studied. Only 2 out of the 10 items studied had their t-calculated value for micrographic skills less than the t-critical value. The null hypothesis was therefore rejected. These findings were at variance with the views of Ikelegbe (2007), who argued that the business environment has little or no influence on the individual as regards the use of micrographic skills.

Telecommunication Skills used by Secretaries in selected Modern Business Organizations in Edo State

Results in table 3 showed that secretaries in selected modern business organizations in Edo State used all the telecommunication skills studied. Furthermore, the results in table 3 showed that the t-calculated value of '4' out of 10 telecommunication skills studied was less than the f-critical value. It could then be concluded that there was no significant difference in the ratings among secretaries with different qualifications in selected modern business organizations in Edo State regarding telecommunication skills usage. These findings agreed with Eglash (2002), who reported that the educational qualifications of secretaries do not correlate with telecommunication skills usage. As a result, it is reasonable to conclude that significant differences did not exist in the use of telecommunications by graduate and non-graduate secretaries.

Conclusion

Based on the findings of the study, the following conclusions were made:

1. Secretaries in selected modern business organizations in Edo State need all the word processing, micrographic, and telecommunication skills to discharge their secretarial job tasks. Secretaries without relevant knowledge of word processing, micrographic, and telecommunication skills are not easily employable in modern business organizations and often find it difficult to retain job positions.

Recommendations

1. The Association of Business Educators of Nigeria (ABEN), in conjunction with the National Association of Secretarial Staff of Nigeria (NAPSON), should organize seminars, workshops, and conferences at frequent intervals for secretaries, business educators, and

other office workers to acquaint them with the latest development in office information processing technologies

2. The government and all relevant agencies responsible for training secretaries and business educators should make it compulsory for business students and secretaries to be trained and retrained in modern office gadgets to enable them to perform creditably well in the electronic office.

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