

Relationship between Information and Communication Technology (ICT) Literacy and Competencies and Public Universities Professional Secretaries' Job Performance

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Abstract

Universities professional secretaries' job performance is crucial in ensuring the executives can carry out their academic and administrative functions effectively. Therefore, this study aims to determine the relationship between ICT literacy and competencies and job performance of professional secretaries in public universities in Southwest, Nigeria. Data collected from 609 professional secretaries are analyzed using descriptive statistics and correlation analysis. The findings of the study revealed a significant positive relationship between ICT literacy with ICT competencies and job performance. In conclusion, this study verifies the link between ICT literacy and job performance of universities professional secretaries. Hence, this study recommends professional secretaries to raise their ICT literacy to a more noticeable competent level that would contribute significantly to their job performance in public universities.

Keywords:

ICT Literacy, ICT Competence, Job Performance, Universities

INTRODUCTION

The success of any business establishment in achieving its mandate lies on the shoulders of its entire workforce, including the professional secretaries that are majorly responsible for information processing and management. The professional secretary is a supporting staff of any business organization. In the case of educational institutions like universities, professional secretaries play crucial and notable roles in assisting the executives in carrying out their academic and administrative functions. Consequently, professional secretaries' effective job in universities is essential. It should be accorded the required attention and priority to ensure sound system administration and overall good academic performance of its products which is always the ultimate goal in any educational setting. In this direction, Campbell and Wiernik (2015) defined performance as what people do and their actions that contribute to organizational goals. Job performance has always been the challenge facing every employee, especially the professional secretaries operating in this ever-changing technologically-based office environment. Therefore, employee performance is a paramount factor within work and organizational psychology. In the light of this, the present office situations coupled with the

crucial roles of professional secretaries brought about the need to highlight the relevance of professional secretaries' job performance in every organization in this technological era. Wilson et al. (2018) opined that performance is the power to produce the desired result. Employees and managers who demonstrate performance in the workplace help produce high-quality results. However, in offices these days, it is obviously demonstrated that professional secretaries work towards excellence, performance, and efficiency.

In line with the current office demands, professional secretary's ability to perform effectively in this circumstance lies in their ICT knowledge, skills, and technical know-how in these persistent technological changes and upon which the bulk of their daily office jobs rotate. In this regard, considering the researcher's experience in his immediate office environment and various findings from previous related research studies by Ismail and Abidin (2010) indicated that professional secretaries' ICT skills, knowledge, and competencies are inadequate and thereby disallowing them to meet the expectations of their employers leave much to be desired. It is a worrisome trend that poses a serious challenge not only to the professional secretaries in public universities but also to all stakeholders in the secretarial profession. Supporting this, Nwaokwa and Okoli (2012) opined that the leading cause of poor job performance among secretaries is their inadequate skill in information and communication technology such as Desktop Publishing, PowerPoint to produce electronic slides, and proficiency in accessing the internet. Therefore, it is imperative nowadays to note that if any educational institution wishes to achieve its corporate goals, its workforce, most especially the professional secretaries who happen to be at the center of the organization's information processing activities, must be ICT compliant. They must be versatile and competent in handling ICT processes, packages, office facilities, and equipment.

A cursory look at professional secretaries' daily office functions in institutions of higher learning indicates that they involve student administration, staff and resources administration, communication, and general administration. Hence, professional secretaries are regarded as general-purpose staff who should be able to function perfectly well in any of the aforementioned office duties relating to different ICT application packages. They are expected to use Microsoft Office Word, Excel, Database, Desktop publishing, Webpage, and Internet facilities while discharging their day-to-day office tasks competently.

Despite the persistent increase in technological pervasion in all areas of life in business offices, the level of professional secretaries' ICT literacy and competencies capable of promoting their job performance effectively appears to be in doubt. Researchers have shown that professional secretaries are inefficient in using ICT-based office functions due to non-literacy and competencies in ICT. Such a situation causes an adverse effect on their effective job delivery, and this has reached an alarming rate that professional secretaries demand in-service training to improve ICT literacy and competency. This phenomenon is of considerable concern to the researcher; if not checked, public perception about professional secretaries in public universities will drag further. Also, the Government bureaucracy that does not encourage competition among public workers, including professional secretaries, has further limited the professional secretaries' enthusiasm to acquire literacy and competency skills in ICT.

Therefore, this paper sets out to find out (i) the ICT literacy skills and knowledge possessed by professional secretaries in ICT-based office functions; (ii) the extent to which professional secretaries are competent in ICT-based office functions; and (iii) the influence of ICT literacy and competencies on professional secretaries' job performance in public

universities, Southwest, Nigeria.

LITERATURE REVIEW

Job performance is a multidimensional concept that has received a lot of attention from prior researchers. It is the behaviour performed by employee that lead to organizational goal attainment (Van Scotter and Motowidlo, 1996). Job performance determines how well an employee can accomplish a job through a designated work process (Hogan & Holland, 2003).

Job performance is affected by several factors including individual and task characteristics as well as working environment (Fogaça et al., 2018). In other words, employees ability to complete a given task is dependant on the degree of knowledge and competencies that the employees have (Owenvbiugie & Ojeaga, 2022). However, knowledge *per se* without employee motivation and positive work culture would not be sufficient to drive a desired job performance from the perspectives of the employers. Therefore, in this study, adequate ICT literacy and competencies is expected to lead better job performance but it does not mean other factors are less important.

UNESCO (2008) report showed that ICT literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expression and communicate with one another in the context of specific life situation. Ozoemelen (2010) study showed that there is a low level of skillfulness in the use of ICT among students of Nigerian universities. Also, Lee (1997) in Danner and Pesu (2013) found that a great number of students in teacher preparation programs were not equipped with basic computer operational skills. Similarly, Amahi and Ogben (2014) study showed that the competency in ICT allows employees to perform their functions well for increased productivity/job performance.

Although ICT literacy and competencies are postulated to improve job performance, the researcher of this study also felt that some other factors such as inadequate or lack of motivation or satisfaction on the part of the employee professional secretaries rather than knowledge inadequacies could also be hidden barriers responsible for their inadequate ICT competencies. The fact that ICT efficacy is a pre-requisite to ICT literacy could also be a contributing factor. It is having persistent ICT training, re-training and/or further education on latest in technology that could raise the professional secretaries' literacy level to possessing a more deepened knowledge in the ICT field–competency level.

Employers usually demand that every employee in any office must be computer literate. Therefore, since emphasis is always placed on being 'ICT literate' and not 'ICT competent'. Professional secretaries could as well think that having narrowly defined ICT knowledge and skills to cope with the assigned office tasks is enough and thus, relent in their efforts in having ICT competencies that can stand persistent aggressive technological advancement of different office situation in ICT areas. Therefore, it could be the believe of the professional secretaries that as long as they possessed the ICT skills and ability to use the available digital tools responsibly and effectively in discharging their day-to-day assigned techno-based functions, advancement in ICT to a competent level is a secondary step or assignment that could be attended to when the situation arises. Hence, they confined themselves and concentrated all their efforts only on the areas that could make them discharge their immediate ICT assigned

duties rather than aspiring to have deepened knowledge, high level of efficacy/skills in ICT that could aid ‘knowledge transfer’ to others. Forgetting that ICT competency is capable of taking them to a more recognizable, tangible and enviable position than their hitherto secretarial posts.

METHODOLOGY

Research design

This study adopted a survey research design. It involved the collection of requisite data through structured questionnaires, which only aimed at eliciting information on the level of ICT literacy and competencies as well as job performance of professional secretaries serving in public universities in Southwest, Nigeria.

Population

There are six states in the Southwest Nigeria: Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo States. Table 1 shows the distribution of federal and state public universities in Southwest. The population of this study consisted of all six hundred and nine (609) professional secretaries in the employment of public universities and their corresponding number of six hundred and nine (609) immediate supervising officers (bosses). Each state hosts at least a university with a number of professional secretaries, as displayed in Table 1.

Table 1. Distribution of federal and state public universities in Southwest Nigeria

SIN	State	Federal Universities		State Universities		Total	Proportion (%)
		Prof. Secretaries	Secretary's Boss	Prof. Secretaries	Secretary's Boss		
1	Ekiti	62	62	-	-	124	10.18
2	Lagos	69	69	65	65	268	22.00
3	Ogun	63	63	87	87	300	24.63
4	On do	23	23	57	57	160	13.14
5	Osun	52	52	46	46	196	16.09
6	Oyo	-	-	85	85	170	13.96
	Total	269	269	340	340	1218	100

Source: Establishments Division of each of the universities in Southwest Nigeria

Sample and sampling techniques

The study employed Proportional Sampling Technique (TEST). This implies that a total of one thousand two hundred and eighteen (1,218), representing 100 percent of the respondents, were sampled for this study. Accordingly, six hundred and nine (609) professional secretaries and their corresponding six hundred and nine (609) immediate supervising officers in public universities in Southwest Nigeria were used. The proportion of representation from both the federal and state universities in the study areas is shown in Table 1. This procedure was done because of the relatively small number of professional secretaries in the service of the institutions.

Instruments

ICT Literacy Scale, ICT Competency Scale, and Job Performance Scale were used in the research instrument. The instrument was submitted to experts for both content and face validity, respectively. Some questions were modified and reworked based on the expert suggestions.

Data analysis

Data collected for the study were analyzed using descriptive statistics (mean, standard deviation). Pearson product moment correlation analysis was used to test the hypothesis formulated at 0.05 significance level.

FINDINGS

Table 2 shows scores for ICT literacy skills possessed by professional secretaries in Public universities in Southwest Nigeria. For ICT manipulative literacy mean (18.736); median (19.0000); variance (13.072);, standard deviation (3.616); minimum score (6.00); maximum score (24.00); range (18.00); interquartile range (6.00); skewness (-.499) and kurtosis (-.170) were indicated. By this indication, with the mean being lower than median, the distribution is negatively skewed. More of the secretaries have higher levels of ICT manipulative literacy. For ICT integration and evaluation mean (18.329); median (19.0000); variance (15.534); standard deviation (3.941); minimum score (7.00); maximum score (24.00); range (17.00); interquartile range (5.00); skewness (-.581) and kurtosis (-.165) were indicated. By this indication, with the mean being lower than the median, the distribution is negatively skewed. More of the secretaries have high levels of ICT integration and evaluation. For electronic communication, Mean (5.864); median (6.000); variance (2.616), standard deviation (1.617); minimum score (2.00), maximum score (8.00); range (6.00); interquartile range (2.00), skewness (-.575) and kurtosis (-.2.88) were revealed. By this indication, with the mean being lower than the median, the distribution is negatively skewed. More of the secretaries have higher levels of ICT electronic communication.

However, following the descriptive analysis presented on the table on the dominant element of ICT literacy possessed by professional secretaries in public universities in southwest, Nigeria, among the three identified ICT literacy elements, ICT manipulative literacy emerged as the highest , ICT literacy dominant element having the mean score of 18.74 with standard deviation of 3.62 closely followed by ICT integration and evaluation elements with mean score and standard deviation of 18.33 and 3.94 respectively while the least ICT dominant element in the study area was electronic communication which has a mean score of 5.86 with lowest standard deviation of 1.62. This implies that ICT manipulative literacy and ICT integration and evaluation tend to be the most prominent ICT literacy skills possessed by respondents in the study area.

Table 2. ICT literacy skill and knowledge possessed by professional secretaries in public universities southwest Nigeria

Elements of ICT Literacy			ICT manipulative literacy	ICT Integration and evaluation	Electronic Communication
Mean		Statistics	18.7357	18.3294	5.8639
		Std. Error	.16057	.17504	.07183
95% confidence Interval for Mean	Lower Bound	Statistics	18.4202	17.9855	5.7228
	Upper Bound	Statistics	19.0512	18.6733	6.0050
5% Trimmed Mean		Statistics	18.8941	18.5311	5.9504
Median		Statistics	19.0000	19.0000	6.0000
Variance		Statistics	13.072	15.534	2.216
Std. Deviation		Statistics	3.61556	3.94127	1.61735
Minimum		Statistics	6.00	7.00	2.00
Maximum		Statistics	24.00	24.00	8.00
Range		Statistics	18.00	17.00	6.00
Interquartile Range		Statistics	6.00	5.00	2.00
Skewness		Statistics	-.499	-.581	-.575
		Std. Error	.108	.108	.108
Kurtosis		Statistics	-.170	-.165	-.288
		Std. Error	.217	.217	.217

The results in Table 3 showed scores for ICT competencies possessed by professional secretaries in public universities, South-West, Nigeria. For manipulative competencies mean (27.531); median (28.000); variance (30,700); standard deviation (5.541); minimum score (36.00), range (25.00); interquartile range (8.00); skewness (-.688) and kurtosis (-.060) were indicated. By this indication, with the mean being lower than the median, the distribution is negatively skewed. More of the secretaries have higher levels of manipulative competencies. For social networking competencies mean (20.696); mean (21.000); variance (23.904); standard deviation (4.889), minimum score (7.00); maximum score (28.00); range (21.00); interquartile range (6.00); skewness (-.653) and kurtosis (-.245) were indicated. By this indication, with the mean being lower than the median, the distribution is negatively skewed. More of the secretaries have higher levels of social networking competencies. For e-communication competencies mean (14.7850; median (15.000); variance (11.157); standard deviation (3.340); minimum score (5.00); maximum score (2.00); range (15.00); interquartile range (4.00); skewness (-.677) and kurtosis (-.047) were revealed. By this indication, with the mean being lower than the median the distribution is negatively skewed. More of the secretaries have higher levels of e-communication competencies. For database management competencies mean (26.823); median (28.000); variance (64.506); standard deviation (8.032); minimum score (10.00); maximum score (40.00); range (30.00); interquartile range (12.00); skewness (-.421) and kurtosis (-.831) were revealed. By this indication, with the mean being lower than the median, the distribution is negatively skewed. More of secretaries have higher levels of Database management competencies. Among the elements of ICT competencies, the study identified manipulative and database management competencies were discovered to be the dominant elements of ICT competencies possessed in the study location having the mean of 27.03 and 26.82 with standard deviation of 8.03 and 5.54 respectively.

Table 3. Descriptive statistics of ICT competencies possessed by professional secretaries in public universities in Southwest Nigeria

ICT Competencies		Manipulative Competencies	Social Networking Competencies	E-Communication competencies	Database Management Competencies
Mean	Statistics	27.5306	20.6963	14.7850	26.8225
	Std. Error	.24607	.21713	.14835	.35669
95% confidence interval for Mean	Lower Bound	27.0471	20.2697	14.4936	26.1217
	Upper Bound	28.0140	21.1228	15.0765	27.5233
5% Trimmed Mean	Statistics	27.7919	20.9190	14.9204	27.0001
Median	Statistics	28.0000	21.0000	15.0000	28.0000
Variance	Statistics	30.700	23.904	11.157	64.506
Std. Deviation	Statistics	5.54077	4.88913	3.34025	8.03156
Minimum	Statistics	11.00	7.00	5.00	10.00
Maximum	Statistics	36.00	28.00	20.00	40.00
Range	Statistics	25.00	21.00	15.00	30.00
Inter-quartile Range	Statistics	8.00	6.00	4.00	12.00
Skewness	Statistics	-.688	-.653	-.677	-.412
	Std. Error	.108	.108	.108	.108
Kurtosis	Statistics	-.060	-.245	-.047	-.831
	Std. Error	.217	.217	.217	.217

The last test is to test the relationship between ICT literacy and competencies on professional secretaries’ job performance in public universities in Southwest Nigeria by using correlation analysis. The findings are summarized in Table 5.

Table 5. Relationship among ICT literacy, ICT competencies and job performance of professional secretaries in public universities in Southwest Nigeria

	ICT Literacy	ICT Competencies	Job Performance
ICT Literacy	1	-.779**	.116**
ICT Competencies	.779**	1	.031
Job Performance	.116**	.031	1

** Correlation is significant at the 0.01 level (2-tailed)

The results show the degree of relationship among ICT literacy, ICT competencies and job performance of professional secretaries in public universities in Southwest Nigeria. The study discovered a significant positive relationship between ICT literacy and ICT competencies ($r = .779$; $p < .05$); ICT literacy and job performance ($r = .116$; $p < .05$) while no significant relationship exists between ICT competencies and job performance ($r = .031$; $p < .05$) as indicated by the respondents in the study. The hypothesis which stated that there is no significant relationship among ICT literacy and job performance of professional secretaries in public Universities in Southwest, Nigeria was rejected.

DISCUSSION

The results indicate the dominant element of ICT literacy possessed by professional secretaries in public universities in Southwest, Nigeria, among the three identified ICT literacy elements is ICT manipulative literacy and followed by ICT integration and evaluation. This finding corroborates Adams (2001) in Kilcoyne (2003) research study which revealed that employers were seeking for secretaries with computer software application skills, especially Microsoft Word, PowerPoint, Microsoft Access and Excel, stressing that they should also be able to use e-mail to receive and disseminate information, use the internet and manage database. Supporting this findings, Hurley (1986) in Thomas (2006) showed that the secretaries who are proficient in manipulation of different computer devices (usage) could easily and effectively perform a variety of tasks and this permits secretaries to expand their roles in modern offices. The author further stressed that secretaries with adequate knowledge of Excel found it convenient to assist in planning budgets and other related office tasks involving complex calculations and financial transactions. One can therefore conclude that the respondents of this study were conversant with ICT routine office functions and possessed the needed ICT literacy to discharge them as the office demands with the exception of electronic communication elements of ICT literacy which they appeared deficient and needed to be improved upon.

For manipulative competencies mean, more of the secretaries have higher levels of manipulative competencies. For social networking competencies, more of the secretaries have higher levels of social networking competencies. For e-communication competencies, more of the secretaries have higher levels of e-communication competencies. For database management, more of secretaries have higher levels of database management competencies. Among the elements of ICT competencies, the study identified manipulative and database management competencies to be the dominant elements of ICT competencies possessed in the study location having the mean of 27.03 and 26.82 with standard deviation of 8.03 and 5.54 respectively. This finding aligns with Thomas (2006) who reported that professional secretaries had to invest considerable time and efforts in training on electronic office equipment to keep their skills and gain the required ICT competencies in order to cope with the aggressive persistent technological changes in today's office environments. Also, Sholagbade's (2012) finding indicated that professional secretaries are often among the first employees in an organization to adopt and use new technology. They become 'mission critical' until the remainder, especially (colleagues and subordinates) of the company's workforce is trained. Hence the need for professional secretaries to be versatile in the usage of ICT gadgets and have deepened ICT knowledge that will optimize utilization and knowledge transfer. One can deduce from this findings that professional secretaries in public universities in Southwest Nigeria possessed majorly the manipulative and database management competency elements among the identified competencies with the exception of electronic communications and social networking elements of ICT which they appeared deficient and needed to be improved upon.

In a different vein, this study indicated that no significant relationship existed between ICT competencies and job performance of professional secretaries in public universities in Southwest, Nigeria which contradicts the findings of Ala-Mutka (2011) stating that having deepened ICT knowledge (competencies) implies possessing tremendous potential to promote trade and economic growth, to spread knowledge and integrate people for mass employment. However, some other factors such as inadequate or lack of motivation or satisfaction on the part of the employee (professional secretaries) rather than knowledge inadequacies could also be hidden barriers responsible for the non-contribution of their ICT competencies to their job performance. The fact that ICT efficacy is a pre-requisite to ICT competency could also be a contributing factor. It is having persistent ICT training/re-training on the situational technology based-office demands and/or further education on latest in technology that could raise the

professional secretaries' literacy level to possessing a more deepened knowledge in the ICT field- that is competency level commensurate with the ever-changing office environment or school activities. Supporting this finding, Elena (2000) study showed that employee development means to develop the abilities of an individual employee (in the context of this study) – professional secretaries and organization as a whole; hence, employ development consists of individual employee in an organization which in turn bring about overall growth of employee of the organization and by extension, making the organization to be more flourished through increased job output or performance.

Furthermore, Ismail and Abidin (2010) study corroborates this finding when the researcher reported that there are individuals who have high level of competence but exhibit low performance because of not utilizing the competence. Therefore, the job performance is not at par with their competency level. Higher performance may also be achieved through discipline and share hard work. Also, Ozoemelem's (2010) finding which showed that there is a low level of skillfulness in the use of ICT among students of Nigerian universities aligns with this study. Similarly, Lee (1997) in Danner and Pessu (2013) found that a great number of students in teacher preparation programs were not equipped with basic computer operational skills. One can therefore deduce from these findings that attention needs to be focused on competence, talent and job performance but more detailed attention on efforts to develop talent and competence because in real life, talent and competence are more useful that performance recorded.

CONCLUSION AND RECOMMENDATIONS

This study has provided meaningful insight and direction into the relationship between ICT literacy, ICT competencies and professional secretaries' job performance in public universities in Southwest Nigeria. The study established that more of the secretaries have higher levels of ICT manipulative literacy which contributed significantly to their job performance but their ICT literacy in e-communication and networking was insufficient.

Based on the findings of this study, this study recommends that there should not only be adequate availability of ICT modern facilities, but constant analysis of level of literacy and competencies of secretaries categories of employees becomes inevitable so as to gauge potential effect such competencies in ICT could generate as a guide to raising job performance of professional secretaries in Nigerian universities. Moreover, the Association of Professional Secretaries and Management of Universities alike should always advise Professional Secretaries to work towards high level of literacy, and competence in ICT in order to ensure overall job performance in their day-day secretarial/ICT related office functions. Additionally, there is a need to advise serving professional secretaries to consistently and persistently up-date their ICT knowledge in ICT-based office skills and competencies needed to carry out the ever changing tasks.

For future research agenda, analyzing the influence of ICT literacy and competency on job performance would verify the relationship between these variables. In this regard, a probability sampling technique and inferential analysis such as regression analysis and structural equation modelling are essential to confirm this research findings. For education field, future researchers could develop a national competencies module that covers pre-service and in-service professional secretaries job requirements.

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