



## **Extent Of Availability And Maintenance Practice Of Office Technologies In Government Parastatals In Ebonyi State, Nigeria**

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### **ABSTRACT**

The study was carried out to assess the availability and maintenance practice of office technologies in government Parastatals in Ebonyi state. The study adopted descriptive survey design. The population of the study was 86 office managers in government Parastatals in Ebonyi state. The entire population was used for the study; therefore, no sample size was drawn. Three research questions and three hypotheses guided the study. A checklist titled: Availability of modern office equipment (AMOE) and a structured questionnaire “titled Maintenance practices of modern office equipment questionnaire (MPMOE)” was designed and used for data collection. Mean and standard deviation were utilized to answer the research questions and t-test statistics was employed to test the hypotheses at 0.05 level of significance. Results from the data analyzed showed that majority of the modern office technologies were not available in government Parastatals in Ebonyi state, Ebonyi state government Parastatals do not adopt good preventive and corrective maintenance practice for office technologies which result to equipment failure when carrying out office duties. It was concluded that assessment of maintenance practices of office technologies used by office managers in Government Parastatals in Ebonyi state is very important in order to improve the service delivery. Based on the findings, the study recommended among others that: Ebonyi State government should continually invest in the acquisition of the latest office equipment that would enhance the productivity of its staff in Government Parastatals. Government of Ebonyi State should formulate a policy on preventive and corrective maintenance practice of ICT facilities and office equipment in Government Parastatals to prevent damages and complete breakdown ICT facilities and equipment. Management of Government Parastatals should employ qualified computer laboratory attendant and computer technician in Government Parastatals to carry out basic maintenance and repairs

on the office technologies. Maintenance department that is well equipped and funded should be created and domiciled in every government establishment in Ebonyi state.

**Keywords:** Availability, Maintenance Practice, Office Technologies, Government Parastatals

## **1. INTRODUCTION**

Today's modern offices are substantially different from the office environment of 20 years ago. Sweeping changes have occurred at the workplace as a result of new office technology and automation of office equipment. Office operation today has been computerized in order to achieve the efficiency demand and speed required for the maintenance of world globalization. According to Davenport in Mashau & Andrisha (2016) rapid changes have been taking place in all facets of human life, including office technologies, as a result of technological advancement. The modern office has changed dramatically since the 1990s. Offices in today's society are transmitting information via electronic mail (e-mail), electronic calendars, and teleconferencing, as well as other electronic devices. Communication via technology is just as important as oral and written communication in the work environment. Office technologies have continued to play a vital role in transforming the business environment. Offices inevitably adopt newer technologies that get more work done with fewer people, and there's pressure to keep a modern, professional image by staying on top of the latest tech trends. Based on this, office functions in public and private organization have been revolutionized. Now new office technologies which includes Computer, Projector, Facsimile Machine, Teletype, Electronic typewriter, Telex-machine, Word Processor, Internet facilities (www, e-mail, search engine, etc), Teleconferencing, Video Conferencing, Scanner, Printers and Photocopiers are available now to transformed the way organizations create, use disseminate and store information. These new office technologies offers a vastly enhanced means for collecting information in office about citizens, communicating within the state government and between agencies and the public and documenting the business of government.

Margaret and Pac (2019) stated that for an office to run smoothly, facts and accurate information are necessary for quick decision-making, and modern office technologies can help office managers to be focused and also be in contact with their co-workers. It can, therefore, be said that having advanced office technologies can increase office manager's work performance, because such technologies make work flexible. According to Ndlovu (2019), businesses need to be managed effectively so that they have highly productive employees executing goals aligned with the organization's strategic objectives. Office technologies play a part in helping businesses meet these strategic objectives. Modern technologies need to be managed effectively, because during their use, a business's most important information can easily be lost.

Modern office technology refers to the technical devices and tools used by various organizations for everyday tasks, such as managing clients, fulfilling orders, maintaining payroll information, analyzing sales records and conducting communication. Modern office technology consist of all equipment and products used in an office for technical purposes such as adding machines, check-writing machines, calculators, typewriters, and all other office apparatus. According to Usoro (2010), modern office technologies are those machines and equipment used in carrying out office functions. According to Usoro, this includes computers, communication gadgets and word processors. According to encyclopedia.com (2020) includes personal computers (PCs), slide projectors, movie projectors, overhead projectors, television monitors, videocassettes, videodisc players, multimedia systems, Projector, Facsimile Machine, Teletype, Electronic typewriter, Telex-machine, Word Processor, Internet facilities (www, e-mail, search engine, etc), Teleconferencing, Video Conferencing, Scanner, Printers, Photocopiers and the Internet that have had a major impact on the office environment since the start of the twentieth century. The ability to use technology is an essential skill in the ever changing workforce of the twenty-first century. According to Margaret and Pac (2019) office technologies have transformed the world of work. As the work environment has changed, individual workers see how their work connects not only to their particular work place, but to the entire value chain. Nwosu (2017) noted that the major problem of facing office managers in Nigerian public sector is non-availability of new modern office technology to enhance their

job performance. The impacts of this office technologies/equipment are of paramount importance to any organization. Office technologies increase the rate of intra and inter office communication. However, there are some foreseeable problems along with the numerous advantages of its existence. The problems is the non-availability of this equipment in some public organization, where there is one or more, the organization lacks the good maintenance for the equipment to function well which make them to break while using them.

Maintenance practice is defined as work undertaken in order to keep or restore every part of an object in effective condition and efficient working order. Maintenance practice is the progressively overseeing resources so that the organization does not experience downtime from broken equipment or waste money on inefficient maintenance procedures. It is also an activity that can be applied to all systems, both natural and man-made, to make such systems to remain unaltered or unimpaired. Pintelon and Parodi-Herz (2018) noted that majority of scholars often define maintenance practices as a “set of activities required to keep office assets (office equipment) in the desired operating condition or to restore them to normal condition”. Bivona and Montemaggiore, (2015) described maintenance practice as all technical administrative and managerial actions taken during the life cycle of an asset(s) to ensure that they continue to perform their intended functions that have failed, or to keep them running, and/or by restoring them to their required or favourable operating conditions. In the same vein, Ojo, Odediran, Adeyinka and Oparinde (2016) noted that maintenance practices are helps to reduce the frequency of service interruption and many undesirable consequences of such interruptions. Hence, in this paper, maintenance practice is defined as an activity carried out on office equipment to ensure its reliability to perform its intended functions throughout their service life.

According to Audu and Umar (2016) the primary aim of maintenance practices in an organisation are to schedule work efficiently, control costs and ensure regulatory compliance of the equipment/machines. In summary, maintenance is any work that is done regularly to keep a machine or building or piece of equipment in good condition and working order. It is the continuation or preservation of something unchanged or unimpaired. According to Gardon, seigha, & Ogungbemi (2017) the types of maintenance practice includes: preventive (planned) maintenance, corrective maintenance, adaptive maintenance, perfective maintenance, predictive maintenance and periodic maintenance practices. But for the purpose of the study, the study will consider preventive maintenance and corrective maintenance practice.

Preventive maintenance is defined as procedures that reduce the likelihood of equipment failure and extend the life of equipment, for example calibration, routine part replacement, lubrication or cleaning. Preventive maintenance activities are conducted in a systematic manner before equipment failure, based on a schedule set by time, distance or cycles of operation. Preventive maintenance according to WHO (2017) is sometimes referred to as planned maintenance. Preventive maintenance is conducted even when the equipment is performing well, and it includes routine temperature monitoring of the vaccine storage compartment to help identify when repair is necessary. Inspection verifies proper equipment functionality and safe use and can be a stand-alone activity, such as routine temperature monitoring, or conducted as part preventive maintenance to ensure proper functionality. Iwarere and Lawal (2018) noted that preventive maintenance is undertaken where an attempt is made to avoid breakdown by anticipating failure or wear and making a timely examination, replacement or adjustment. Preventive maintenance is usually considered more expensive than the corrective or breakdown maintenance. However, this additional expense incurred assists to minimize breakdown of equipment. Shakir (2017) opined that preventive maintenance is implemented as a systematic identification and elimination pre-failure situations (potential failure), which can cause unstable working conditions. For example, a periodic dust removal to improve heat dissipation from the processor; identification of specific sounds preceding the pre-emergency status of cooling fans; deletion of temporary files; using anti-virus software; software update. Iwarere and Lawal (2018) further indicated some forms of the preventive maintenance are: the regular lubrication and inspection, adjustment is normally practiced on major items of equipment. It is intended to prevent future breakdown of equipment before it actual occurrence. Preventive maintenance is also defined as a planned maintenance actions that intends to prevent breakdowns and failures

of facilities or equipment it is performed on an asset while the asset is still capable of functioning in a satisfactory manner for some time. It is difficult to determine the correct level of preventive maintenance to apply. Often, help can be obtained from the maintenance schedules proposed by equipment manufacturers, but a record of the frequency of unscheduled breakdown and their costs, is needed to institute and refine preventive maintenance programme. Iwarere and Lawal (2018) noted that preventive maintenance should be considered when: the failure rate of the equipment starts to increase rapidly after a period during which it has been low; the cost of preventive maintenance attention should be less than the repair costs; equipment failure is likely to disrupt subsequent production operations or cause customer dissatisfaction and Injury could result from equipment breakdown. Iwarere, (2017) opined that preventive maintenance assists to preserve and enhance equipment reliability. Office equipment needs to be inspected to determine whether further maintenance attention is required. The common costs are supplies and replacement parts; labour and equipment downtime. An increase in preventive maintenance cost will reduce the corrective maintenance cost. The benefits of preventive maintenance are that it prolongs the life of the plant, increase the terminal salvage value of an organization's asset, have a salutary effect on the quality of the goods and services produced and increases the safety of the operations involved (Iwarere, 2017).

Corrective maintenance is a process to restore the physical integrity, safety and/or performance of a device after a failure; corrective maintenance covers all activities undertaken after equipment has broken down. This type of maintenance is typically not anticipated and is urgent in character (WHO, 2017). Corrective maintenance and unscheduled maintenance are regarded as equivalent to the term repair. This is the "default" strategy for Information System maintenance. Many business leaders will wait until they have a problem with a computer system before they will take any action to correct the issue. Corrective maintenance is only performed after a system or component has failed. This behavior is most common, and whether intentional or not, it is a strategy. Just as, when you choose to do nothing, you still have made a choice. This strategy is used in an effort to achieve economic efficiency – in theory, spending is only required when corrective action is required (but, this is not necessarily true in every case). While this method may fit for some systems or components, it is not recommended as an overall strategy for your critical business systems. Most modern office equipment failure can be avoided with routine preventive maintenance. If cold chain equipment is connected to a high quality power supply, there is good ventilation surrounding the equipment, and users routinely clean and defrost the equipment, then the equipment can function for years without the need for specialized technical maintenance or repair. On the other hand, some office equipment components may break through no fault of the user. In this case, specialized repair services will be required for the office equipment to function again.

Government Parastatals are those organizations established by acts of parliament to provide certain services and carry out particular activities Ama and Okafor (2014). Government Parastatals are financed with public funds and managed by boards, set up by government and purposely to carry out certain activities, for the benefit of the general public. Nowadays, maintenance efficiency is recognized as a factor that can affect the all business effectiveness and risk-safety, environmental integrity, energy efficiency, product quality and services rendered to the public and not confined only to asset availability and cost (Pintelon and Parodi-Herz, 2018). Hence, maintenance work is also undertaken to ensure that office facilities are safe to work in, as well as meeting the stated working standards (Taruvunga and Emwanu, 2016). According to Iwarere and Lawal (2018) all office equipment, irrespective of their group needs effective regular maintenance for proper functioning of them. The performance of office technologies depends on the degree of effective maintenance. Unfortunately, however, maintenance is one of the major problems facing the government Parastatals in Ebonyi State with a resultant effect of having their premises littered with broken down office equipment which are allowed to rust away under rainy and sunny conditions and eventually are sold as scraps (Lawal & Adeyemo, 2014). This can be prevented through good maintenance culture. The need for the effective maintenance can be realized by

considering the adverse consequences of lack of effective maintenance system, some of which are: Excessive machine breakdown, disproportionate investment in spare parts and maintenance materials, poor utilization of staff, Low quality of service, abnormal overtime cost, irregular operating time, shortened life span of facilities, loss in production output and frequent machine breakdown. (Iwarere and Lawal, 2018). Therefore, office facilities should be properly managed through regular maintenance to ensure the optimum functioning of such equipment, at minimum cost of repairs and providing a safe environment for all users (Sani 2012).

The near lack of or poor maintenance culture has been recognized as a major problem facing Government Parastatals in Nigeria (Mbamali, 2003). Tijani (2016) noted that the poor maintenance practice of office equipment in Nigeria public service has negatively impact on service delivery of office managers in Nigeria. The authors added it has drawn the country a thousand steps backward. In fact, most office technologies in Nigerian public sector are in poor state owing to various factors such as poor maintenance culture, poor or inadequate funding and neglects over long periods by government and its various agencies (Ogungbemi 2014). Often, office equipment that are designed to last over a period are in some cases, deliberately allowed to decay, malfunction or develop fault because of recklessness on the part of those entrusted with the responsibility of keeping such office equipment functional and available throughout their service life. For example, office equipment in government Parastatals in Ebonyi State would give indication that the Ebonyi state government lacks an agent that would have helped manage, ensure effective and efficient functioning of office equipment (Tijani 2016). It is also common site to see facilities and office equipment belonging to government establishments in Ebonyi State are laying waste for lack of maintenance practices where it is available. It is based on the above aforementioned problems that the researcher is motivated to examine the availability and maintenance practices on office technologies in government Parastatals in Ebonyi State.

### **1. 2 Statement of the Problem**

Offices in today's society are transmitting information via electronic mail (e-mail), electronic calendars, and teleconferencing, as well as other electronic devices. Communication via technology is just as important as oral and written communication in the work environment. Office technologies have continued to play a vital role in transforming the business environment. Offices inevitably adopt newer technologies that get more work done with fewer people, and there's pressure to keep a modern, professional image by staying on top of the latest tech trends. Based on this, office functions in public and private organization have been revolutionized. Now new office technologies which includes Computer, Projector, Facsimile Machine, Teletype, Electronic typewriter, Telex-machine, World Processor, Internet facilities (www, e-mail, search engine, etc), Teleconferencing, Video Conferencing, Scanner, Printers and Photocopiers are available now to transformed the way organizations create, use disseminate and store information. These new office technologies offers a vastly enhanced means for collecting information in office about citizens, communicating within the state government and between agencies and the public and documenting the business of government. The impacts of this office technologies/equipment are of paramount importance to any organization. Office technologies increase the rate of intra and inter office communication. However, there are some foreseeable problems along with the numerous advantages of its existence. The problems is the non-availability of this equipment in some public organization, where there is one or more, the organization lacks the good maintenance for the equipment to function well which make them to break while using them

The management and maintenance practice on office technologies are critical to service delivery of office workers in public and private organization. But, developing State governments like Ebonyi State are faced with enormous challenges of providing modern office technologies in their various ministries and Parastatals, and were one available maintaining good practice on the available one to deliver and sustain basic services to their citizenry is a big problem. In addition to the mammoth modern office technologies deficit, the criticality of sustaining existing technologies itself poses significant challenge in government Parastatals in Ebonyi State. However, modern office equipment/technologies have been seen to enable office workers to work with minimum fatigue, increase efficiency and boost production process which is the main objective of every business organization. It makes office work more easier as less effort is put

into achieve a greater result. In spite of this laudable awareness, the researchers from experience observed that the modern office technologies that is used to enhance office function seems not available or not adequate were available with poor maintenance practice in government Parastatals, this necessitated this researcher to ascertain the extent of availability and maintenance practice on modern office technologies in Government Parastatals in Ebonyi State, Nigeria.

### **1. 3 Purpose of the Study**

The main purpose of the study is to examine the extent of availability and maintenance practice of modern office technologies in government Parastatals in Ebonyi State, Nigeria, specifically the study sought to:

1. determine the modern office technologies equipment available for office managers in government Parastatals in Ebonyi State, Nigeria
2. Examine the preventive maintenance practices adopted for modern office technologies equipment in by government Parastatals in Ebonyi State, Nigeria
3. determine the corrective maintenance practices adopted for modern office technologies equipment in by government Parastatals in Ebonyi State, Nigeria

### **1.4 Research Question**

1. What modern office technologies equipment are available in government Parastatals in Ebonyi State, Nigeria?
2. What is the preventive maintenance practice adopted for modern office technologies equipment in government Parastatals in Ebonyi State, Nigeria?
3. What is the corrective maintenance practice adopted for modern office technologies equipment in Government Parastatals in Ebonyi State, Nigeria?

### **1.5 Hypotheses**

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

1. There is no statistical significant differences on the responses of Male and female office managers on the availability of Modern office technologies in Government Parastatals in Ebonyi state
2. There is no statistical significant differences on the responses of Male and female office managers on the preventive maintenance practice adopted for modern office technologies equipment in government Parastatals in Ebonyi State, Nigeria
3. There is no statistical significant differences on the responses of Male and female office managers on the preventive maintenance practice adopted for modern office technologies equipment in government Parastatals in Ebonyi State, Nigeria

## **2. METHODOLOGY**

The study adopted a survey research design. Survey research design is suitable for this study because it will make use of questionnaire for data collection from the respondents on availability and maintenance practices of new office technologies in Government Parastatals in Ebonyi State. The study was conducted in Ebonyi State. Ebonyi State is a state in South Eastern part of Nigeria. The population for this study is eight five (85) office managers in Government Parastatals in Ebonyi State. The entire population was used for the study; therefore, no sample size was drawn. A checklist titled: Availability of modern office equipment (AMOE) and a structured questionnaire "titled Maintenance practices of modern office equipment questionnaire (MPMOE)" was designed and used for data collection. The questionnaire was structured on 4 – point Rating scale while a checklist consists of 37 items description. The instrument was validated by two experts in Office Technology option in Business Education Department. The questionnaire was made up of two parts, A and B. Part "A" was designed to elicit information on the background of the respondents while part B has three sections. In order to establish the reliability of the instrument, 20 copies of the questionnaire was distributed to office managers (secretaries) and administrative officer outside the studied area. Their responses were correlated using Cronbach Alpha, a reliability co-efficient of 0.65 was established. Eight five (85) copies of the questionnaire were distributed to the respondents with the help of trained research assistants. Mean and standard deviation were used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance.

Any item with a mean rating of 2.50 or above was regarded as accepted while mean rating less than 2.50 was regarded as not accepted. For the hypotheses, any item with t-calculated value greater than critical value was rejected; otherwise the hypothesis of no significant difference was accepted.

### 3. DATA PRESENTATION ANALYSIS

The findings of the study are presented below:

**Research question one:** *What modern office equipment are available for office managers in government Parastatals in Ebonyi State, Nigeria?*

**Table 1: Frequency and Percentages distribution of availability of modern office technologies equipment in government Parastatals in Ebonyi State, Nigeria**

S/N	Items description	Available		Not Available		Remark
		Freq.	%	Freq.	%	
1	Desktop computers	75	88.2%	10	11.7%	A
2	Laptop computers	60	70.5%	25	29.4%	A
3	CDs, floppy disc, flash drives	70	82.3%	15	17.6%	A
4	Printers (Ink Jet and Desk jets)	73	85.8%	12	14.1%	A
5	Photocopiers	65	76.4%	20	23.5%	A
6	Tele-Printer	20	23.5%	65	76.4%	NA
6	Electric calculators	30	35.2%	55	64.7%	NA
7	Duplicating machines	25	29.4%	50	58.8%	NA
8	Accounting machines	16	18.8%	69	81.1%	NA
9	Shredding machines	14	16.4%	71	83.5%	NA
10	Franking machines	13	15.2%	72	84.7%	NA
11	Addressing Machine	9	10.5%	76	89.4%	NA
12	Internet modem	50	58.8%	35	41.1%	A
13	Scanning machines	60	70.5%	25	29.4%	A
14	Spiral binding machine	15	17.6%	70	82.3%	NA
15	Perforating machine	55	64.7%	30	35.2%	A
16	Recording machines	12	14.1%	73	85.8%	NA
17	Mailing machine	10	11.7%	75	88.2%	NA
18	Stamp Affixing machine	2	2.3%	83	97.6%	NA
19	Tele-conferencing devices	30	35.2%	55	64.7%	NA
20	Dictating machines	18	21.1%	67	78.8%	NA
21	Multimedia projectors	15	17.6%	70	82.3%	NA
22	Audio-visual recorders	19	22.3%	66	77.6%	NA
23	Overhead projectors with accessories	25	29.4%	60	70.5%	NA
24	Editing/dubbing machine	0	0%	85	100%	NA
26	Opaque projectors with accessories	0	0%	85	100%	NA
27	Modern Filling equipment	50	58.8%	35	41.1%	A
28	Public addressing system	16	18.8%	69	81.1%	NA
29	Electric typewriters	12	14.1%	73	85.8%	NA
30	Audio projectors	21	24.7%	64	75.2%	NA
31	Stencil Duplicators (Mimeograph)	17	20%	68	80%	NA
32	Punched card machines	2	2.35%	83	97.6%	NA
33	Letter Opening Machine	15	17.6%	70	82.3%	NA
34	Folding Machine	18	21.1%	67	78.8%	NA
35	Envelope Sealing Machine	10	11.7%	75	88.2%	NA
36	Mobile technologies	20	23.5%	65	76.4%	NA
37	Uninterrupted power supply (UPS)	60	70.5%	25	29.4%	A

Note: N=85, A = Available, NA = Not available; Benchmark = 50%

The Table 1 above revealed that 10 items out of 37 were regarded as by the respondents as available, while 27 items are not available. This concluded that modern office technologies equipment's are not available in government Parastatals in Ebonyi state, Nigeria.

**Research question Two:** *What are the preventive maintenance practices adopted for modern office technologies equipment in government Parastatals in Ebonyi State, Nigeria?*

This research question was answered from data obtained from section B of the research instrument on preventive maintenance practices for modern office equipment. Summary of the result is shown in table 2 below:

**Table 2: Mean Responses of Office Managers on the Preventive Maintenance Practices Adopted for Modern Office Equipment in Government Parastatals in Ebonyi State**

S/ N	Preventive Maintenance Practices for Modern Office Equipment	SA	A	D	SD	X	SD	Decision
38	Maintain routine services of equipment and facilities to detect faults	13	16	4	48	1.92	1.20	Disagree
39	Testing damaged machine parts to determine whether major repairs are necessary	13	16	4	48	1.92	1.20	Disagree
40	Monitoring the functionality of equipment	11	12	4	54	1.75	1.14	Disagree
41	Dusting machines before using them	38	19	16	8	3.07	1.03	Agree
42	Covering them when not in use	26	19	14	22	2.60	1.20	Agree
43	Not keeping ink in printer unutilized for a long time	18	13	7	43	2.07	1.14	Disagree
44	Oiling typewriter regularly to enable them function effectively	18	13	7	22	2.07	1.26	Disagree
45	Replacement of machine parts when necessary	13	16	4	48	1.92	1.20	Disagree
46	Re-tightening the machines	31	37	5	8	3.12	0.91	Agree
47	Replacing faulty components	15	16	9	41	2.06	1.20	Disagree
48	Shut down computer properly when not use	21	35	22	3	2.91	0.82	Agree
49	Identification of specific sounds preceding the pre-emergency status of cooling fans	11	12	4	54	1.75	1.14	Disagree
50	Deletion of temporary files in computers	34	21	16	10	2.97	1.06	Agree
51	Using anti-virus software in the computers	31	37	5	8	3.12	0.91	Agree
52	Periodic software update in computer	13	16	4	48	1.92	1.20	Disagree
53	Avoid keeping food and drink on computers	38	19	16	8	3.07	1.03	Agree
54	Periodic dust removal to improve heat dissipation from the processor	26	19	14	22	2.60	1.20	Agree
55	Backup system disk file & folder	13	16	4	48	1.92	1.20	Disagree
<b>Grand Mean</b>								

The analysis in Table 2 reveals that out of eighteen items statement, eight item statements received mean ratings above the cut-off point of 2.50. The mean ratings of these items range from 2.91 to 3.12 while ten items received mean below cut-off point. Therefore, the respondents disagreed in ten items and agreed on eight the items as preventive maintenance practices for modern office equipment in government Parastatals in Ebonyi State, Nigeria.

**Research Question Three:** *What are the corrective maintenance practices adopted for modern office equipment in government Parastatals in Ebonyi State, Nigeria?*

This research question was answered from data obtained from section B of the research instrument on corrective maintenance practices for modern office equipment. Summary of the result is shown in table 3 below:

**Table 3: Means Responses of Office Managers on the Corrective Maintenance Practice adopted for Modern Office Equipment in Government Parastatals in Ebonyi State.**

S/N	Corrective Maintenance Practice for Modern Office Equipment	SA	A	D	SD	X	SD	Decision
56	Repairing computers when spoiled	38	19	18	6	3.09	0.99	Agree
57	Upgrade of equipment due to inadequate operation of the equipment	5	18	4	54	1.67	1.02	Disagree
58	Repair Equipment due to failure	26	32	9	14	2.86	1.05	Agree
59	Restore system to previous state	18	13	9	41	2.09	1.25	Disagree
60	Servicing computers for office duties	26	19	13	23	2.59	1.21	Agree
61	Servicing typewriters for office duties,	15	16	9	41	2.06	1.20	Disagree
62	Installing new versions of the operating system in computer	11	12	4	54	1.75	1.14	Disagree
63	Regular maintenance of computer hard disks	18	3	15	45	1.92	1.22	Disagree
64	Replacement and installation of new office equipment	18	13	7	22	2.07	1.26	Disagree
65	Repairing photocopying machines when they stop functioning,	38	19	18	6	3.09	0.99	Agree
67	Reinstall operating system periodically	18	13	9	41	2.09	1.25	Disagree
68	Configuration and recovery of the computer operating system	18	13	7	22	2.07	1.26	Disagree
<b>Grand Mean</b>								

The analysis in Table 3 reveals that out of twelve items statement, four item statements received mean ratings above the cut-off point of 2.50. The mean ratings of these items range from 2.591 to 3.09 while eight items received mean below cut-off point. Therefore, the respondents disagreed in eight items and agreed on four items as corrective maintenance practices adopted for modern office equipment in Government Parastatals in Ebonyi State, Nigeria

The result of data analysis in Table 3 shows that the mean ratings of the respondents range from 3.22 to 2.59, indicating that the respondents agreed that Ebonyi state government adopt corrective maintenance practice for modern office equipment. The low standard deviation of 0.99 indicates that the respondents have consensus opinion in their responses to the items.

**Hypothesis 1:** There is no statistical significant differences on the responses of Male and female office managers on the availability of Modern office technologies in Government Parastatals in Ebonyi state

**Table 4: T-test on the mean ratings of male and female office managers of Ebonyi state government Parastatals regarding the availability of Modern office technologies in Government Parastatals in Ebonyi state**

Variables	N	X	SD	DF	T.cal.	T-crit.	decision
Male	36	2.63	0.96	79	0.61	2.000	Not Significant
Female	45	2.48	1.19				

The results of t-test statistic indicate that the t-calculated at 0.05 level of significance and 79 degree of freedom is 0.61. Since the t-calculated is less than the t-table value of 2.00, the null hypothesis is therefore not significant. The implication is that no significant differences exists in the mean ratings of male and female office managers on the availability of Modern office technologies in Government Parastatals in Ebonyi state

**Hypothesis 2:** There is no statistical significant differences on the responses of Male and female office managers on the preventive maintenance practice for modern office technologies equipment in government Parastatals in Ebonyi State, Nigeria

**Table 5: T-test on the Mean Ratings of Male and Female Office Managers of Ebonyi state government Parastatals Regarding the Preventive Maintenance Practice for Modern Office technologies Equipment.**

Variables	N	X	SD	DF	T.cal	T.cri	Decision
Male	36	3.00	1.04	79	0.18	2.000	Not significant
Female	45	2.95	1.14				

The results of t-test statistic in Table 5 above indicate that the t-calculated at 0.05 level of significance and 79 degree of freedom is 0.18. Since the t-calculated is less than the t-table value of 2.00, the null hypothesis is therefore not significant. The implication is that no significant differences exists in the mean ratings of male and female office managers regarding the preventive maintenance practice adopted for modern office technologies equipment in Government Parastatals in Ebonyi state

**Hypothesis 6:** There is no statistical significant differences on the responses of Male and female office managers on the corrective maintenance practice for modern office technologies equipment in government Parastatals in Ebonyi State, Nigeria

**Table 5: T-test on the Mean Ratings of Male and Female Office Managers on the Corrective Maintenance Practice for Modern Office Technologies Equipment in Government Parastatals in Ebonyi State**

Variables	N	X	SD	DF	T.cal	T.crit	Decision
Male	36	2.52	1.18	79	1.80	2.000	Not significant
Female	45	3.00	1.16				

The results of t-test statistic in Table 5 above indicate that the t-calculated at 0.05 level of significance and 79 degree of freedom is 1.80. Since the t-calculated is less than the t-table value of 2.00, the null hypothesis is therefore not significant. The implication is that no significant differences exists in the mean ratings of male and female office managers regarding the corrective maintenance practice adopted for modern office technologies equipment in Government Parastatals in Ebonyi state

## 5. DISCUSSIONS

The findings of the study showed that majority of the modern office technologies were regarded to be unavailable as they should have been. This is because office managers indicated that only laptop computers, desktop computers, printers (Ink Jet and Desk jets), photocopiers, CDs, floppy disc, flash drives, scanning machines, internet modem, perforating machine, modern filling equipment, uninterrupted power supply (UPS) are available while items like Tele-Printer, electric calculators, duplicating machines, accounting machines, shredding machines, franking machines, Addressing Machine, Spiral binding machine, recording machines, mailing machine, stamp affixing machine, tele-conferencing devices, dictating machines, multimedia projectors, Audio-visual recorders, overhead projectors with accessories, editing/dubbing machine, opaque projectors with accessories, Public addressing system, Electric typewriters, audio projectors, stencil Duplicators (Mimeograph), punched card machines, letter opening machine, folding machine, envelope sealing machine and mobile technologies were regarded as not available in government Parastatals in Ebonyi State. Hypothesis tested shows also that no significant differences exists in the mean ratings of male and female office managers on the availability of Modern office technologies in Government Parastatals in Ebonyi state. This is because the t-calculated at 0.05 level of significance and 79 degree of freedom is 0.61. Since the t-calculated is less than the t-table value of 2.00, the null hypothesis is therefore not significant. The finding of this study is consistent with the finding of Onyeachu (2009) who observed that the level of computer equipment in Nigeria is very low. The study also supported the view of Nwanewezi and Isifeh (2008) who discovered that some ICT facilities are available in government Parastatals in Nigeria. But the low level of some of these office technologies in Ebonyi state government Parastatals surprises the researchers

because they are very important in discharge of office function as Adagun (2003) expressed that these items are fundamental in this era of information and communication technology.

Findings from research two showed Ebonyi state government Parastatals do not adopt some preventive maintenance practice for office technologies. The study further showed that office managers considered covering them when not in use, not keeping ink in printer unutilized for a long time, shutdown computer properly when not use, deletion of temporary files in computers, using anti-virus software in the computers, and avoid keeping food and drink on computers, while office managers disagreed that Ebonyi state government do not maintain routine services of equipment and facilities to detect faults, testing damaged machine parts to determine whether major repairs are necessary, dusting machines before using them, oiling machine regularly to enable them function effectively, re-tightening the machines, replacing faulty components, identification of specific sounds preceding the pre-emergency status of cooling fans, periodic dust removal to improve heat dissipation from the processor, and Backup system disk file & folder on the available office technologies in Government Parastatals in Ebonyi State. Hypothesis tested showed that no significant differences exists in the mean ratings of male and female office managers regarding the preventive maintenance practice adopted for modern office technologies equipment in Government Parastatals in Ebonyi state. The finding is in agreement with Gordon, Seigha and Akinleyvue (2017) who observed that lack of maintenance culture, particularly in public sector in Nigeria has been the bane for efficient and equitable delivery of public service.

The third findings of the study also revealed that Ebonyi State government Parastatals do not adopt corrective maintenance practice on the modern office equipment. The findings further showed that office managers agreed that: Repairing computers when spoiled, repairing photocopying machines when they stop functioning and Servicing computers for office duties, while upgrade of equipment due to inadequate operation of the equipment, restore system to previous state, servicing typewriters for office duties, installing new versions of the operating system in computer, regular maintenance of computer hard disks, replacement and installation of new office equipment, repairing photocopying machines when they stop functioning, reinstall operating system periodically and configuration and recovery of the computer operating system are not used as a corrective maintenance practice for modern office equipment in Ebonyi State government Parastatals. Hypothesis tested also showed that that no significant differences exists in the mean ratings of male and female office managers regarding the corrective maintenance practice adopted for modern office technologies equipment in Government Parastatals in Ebonyi state. The findings support the view of Mbamali (2003) who noted that lack of or poor maintenance culture has been recognized as a major problem facing Government Parastatals in Nigeria. Tijani (2016) also noted that the poor maintenance practice of office equipment in Nigeria public service has negatively impact on service delivery of office managers in Nigeria. The authors added it has drawn the country a thousand steps backward. In fact, most office technologies in Nigerian public sector are in poor state owing to various factors such as poor maintenance culture, poor or inadequate funding and neglects over long periods by government and its various agencies (Ogungbemi, 2014).

## **6. CONCLUSION**

Nowadays, the importance of maintenance engineering and management within the firm has been resolutely enshrined. Likewise, given the recent interest shown by academics and practitioners on the maintenance of public facilities, the maintenance function has become more important in the public establishment and the role of maintenance has grown into a much more prominent purpose in the state. Modern office technology can make a significant difference in a workplace when properly maintained. It was found that office technologies enhance performance, but only if the office is equipped with relevant and needed technologies. Based on the findings of the study, it is therefore concluded that assessment of maintenance practices of office technologies used by office managers in Government Parastatals in Ebonyi state is very important in order to improve the service delivery. It is imperative that the maintenance of office technologies in Government Parastatals in Ebonyi state be assessed from time to time. The study also shows that employing a professional computer laboratory technician in Government Parastatals in Ebonyi state is important.

## 6. RECOMMENDATIONS

1. Ebonyi State government should continually invest in the acquisition of the latest office equipment that would enhance the productivity of its staff in Government Parastatals.
2. Government of Ebonyi State should formulate a policy on preventive and corrective maintenance practice of ICT facilities and office equipment in Government Parastatals to prevent damages and complete breakdown ICT facilities and equipment.
3. Management of Government Parastatals should employ qualified computer laboratory attendant, computer technician in Government Parastatals to carry out basic maintenance and repairs on the office technologies
4. Maintenance department that is well equipped and funded should be created and domiciled in every government establishment in Ebonyi state
5. Stakeholders in Ebonyi State government Parastatals should regularly organize awareness workshops and seminars geared towards sensitizing public and maintenance practitioners of the place of maintenance in the scheme of things.

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