

## **Extent of Adoption of Electronic Records Protection Practices in Polytechnics in Edo and Delta States**

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The study was designed to determine the extent to which secretaries adopt electronic records protection practices in polytechnics in Edo and Delta States. One research question was raised and two null hypotheses were tested at 0.05 level of significance. The study adopted the descriptive survey design. A total population of 188 secretaries in polytechnics in Edo and Delta States were used for the study without sampling. A structured and validated questionnaire was used to collect data for the study. Mean and standard deviation were used to answer the research question and determine the homogeneity of respondents' responses. The hypotheses were tested using t-test at 0.05 level of significance. The findings of the study revealed that electronic records protection practices were adopted in managing records in polytechnics in Edo and Delta States to a low extent. The findings also revealed that secretaries do not differ significantly in their mean ratings on the extent to which electronic records protection practices are adopted in managing records in polytechnics in Edo and Delta State as a result of gender and their years of working experience. The study concluded that secretaries in polytechnics in Edo and Delta States lack the professional capacity to adopt electronic records protection practices for managing digital records. It was recommended among others that professional workshops and seminars should be organised for secretaries to enable them learn how to adopt electronic records protection practices for effective job performance in the polytechnics.

**Keywords:** Electronic, records, management, protection, Secretaries

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### **Introduction**

Electronic records management is a subset of Information and Communication Technology (ICT), which entails sophisticated electronic approach of managing official records in organisations. Duranti (2010) defined electronic records management system as the management of electronic and non-electronic records using computer hardware and software. According to Ngoako (2011), electronic records management includes 'the creation, use,

maintenance, protection and disposal of electronically created records for the purposes of providing evidence of business activities. Organisations are fast moving toward electronic records management due to advancements in paperless office procedures. In order to prevent unauthorised access, alteration, theft, or physical damage to electronic records, electronic record protection practices are needed to place limitations on user access to computer systems and to have control over the physical storage of electronic records.

Electronic records protection involves the use of computer application and tools to ensure security of digital records. An example of record protection application is Microsoft Access (MS Access). MS Access provides security features that prevent unauthorised users from trying to gain access to confidential database information and loss of data in case of a system crash. Examples of record protection practices include use of password on documents, token, smart card, biometric (fingerprint/face) encryption and so on. Lawrence (2010) asserted that MS Access is among the record management applications being used mainly in offices, banks and companies where various categories of staff work. Electronic records protection practices include firewalls, passwords, encryption, security copies and access rights for each user category are some of the tools used for securing electronic records integrity, accuracy and trustworthiness (Okwudili & Anigbogu, 2010).

Electronic records protection is the application of paperless management principles supported by specialised information technology systems used to safeguard business and personal information of an organisation. Tilton and Rigby (2014) stated that protection of electronic records require planning, budgeting, organising and other managerial activities evolved in order to achieve adequate safety and security of official information. In the same view, Effy (2012) added that an electronic records protection system is primarily a software-based methodology, used by an organisation to manage all its records, regardless of format over the entire records life cycle. In supporting the need for the use of electronic records protection practices, Odeyemi, Issa and Saka (2011) asserted that they serve as a form of disaster management when there are cases of security threat to stored records.

The importance of electronic records management practices in polytechnics demands secretaries of organisations to stay in touch with electronic records protection practices. Security of official information is becoming a serious threat in many polytechnics in Nigeria as a result of traditional paper filing system of record management practices adopted by secretaries. The adoption of electronic records management practices could be influenced by the gender and year of experience of secretaries. However, this assertion needs to be supported by empirical evidence. More so, the extent of adoption of electronic records protection practices by secretaries in polytechnics in Edo and Delta States is not clearly known. In a bid to fill this gap in knowledge, the researchers sought to determine the extent to which secretaries in polytechnics in Edo and Delta States adopt electronic records protection practices in managing records.

### **Purpose of the Study**

Specifically, the study sought to determine the extent to which secretaries in polytechnics in Edo and Delta States adopt electronic records protection practices in managing records

### **Research Question**

In the rating of secretaries, to what extent do secretaries in polytechnics in Edo and Delta States adopt electronic records protection practices in managing records?

### **Hypotheses**

The following hypotheses were tested at 0.05 level of significance:

1. Male and female secretaries do not differ significantly in their mean ratings on the extent electronic records protection practices are adopted in managing records in polytechnics in Edo and Delta States
2. Secretaries do not differ significantly in their mean ratings on the extent electronic records protection practices are adopted in managing records in polytechnics in Edo and Delta States as a result of their years of working experience (1 – 10 years, 11 years & above)

## Method

This study adopted a descriptive survey design. It was carried out in Edo and Delta States which are part of the south-south geo-political zone in Nigeria. The entire population of 188 secretaries in polytechnics in Edo and Delta States was studied without sampling. A structured questionnaire titled “Adoption of Electronic Records Protection Practices Questionnaire (AERPPQ)” was used for data collection. The questionnaire contained eight items and structured on a 5-point rating scale of Very High Extent (VHE), High Extent (HE), Moderate Extent (FE), Low Extent (LE) and Very Low Extent (VLE). The questionnaire was validated by two of the experts were from Business Education Unit in Department of Technology and Vocational Education, Nnamdi Azikiwe University Awka, and other one was from Measurement and Evaluation Unit in Department of Educational Foundations, Nnamdi Azikiwe University Awka. A pilot test was conducted to establish the reliability of the questionnaire by administering it to 20 secretaries from polytechnics in Bayelsa State which were not part of the study and Cronbach Alpha was used to measure the internal consistency which yielded an overall reliability coefficient of 0.88. Copies of the questionnaire were distributed personally to the secretaries involved in the study with the help of three research assistants drawn from the polytechnics in the area of the study. Mean and standard deviation were used to analyse data relative to the research question as well as determine the homogeneity of the respondents’ rating. The t-test statistical tool was used to test the null hypotheses at 0.05 level of significance A hypothesis was accepted where the p-value is equal to or greater than the alpha level of 0.05 ( $p > 0.05$ ), at a degree of freedom; otherwise, the null hypothesis was rejected. The analysis was carried out using SPSS version 23.0.

## Results

### Research Question 1

To what extent do secretaries in polytechnics in Edo and Delta States adopt electronic records protection practices in managing records?

Analysis of data relating to this research question is presented in Table 1

**Table 1**

**Respondents’ mean rating and standard deviation on the extent of adoption of record protection practices in managing records**

S/N	Items	Mean	S.D.	Remark
1	Using database management application to create records for safety	1.56	0.25	Low Extent
2	Using password to protect records from unauthorized access	2.40	0.27	Low Extent
3	Using token for data security and authentication of access	2.15	0.43	Low Extent

4	Application of biometric like fingerprint/face to gain access to records	1.52	0.34	Low Extent
5	Using of fire walls to protect damage to records	1.74	0.35	Low Extent
6	Using antivirus and antispyware to protect records from corruption and contamination	2.48	0.41	Low Extent
7	Using encryption to control access to office records	2.42	0.50	Low Extent
8	Using electronic administrative privilege to prevent access to restricted records	2.39	0.59	Low Extent
<b>Cluster Mean</b>		<b>2.08</b>	<b>0.42</b>	Low Extent

Data in Table 1 present the result on secretaries' rating on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States. From the result, all the items listed had mean ratings ranging from 1.52 – 2.48 are regarded as low extent. The cluster mean of 2.08 implies that secretaries in polytechnics in Edo and Delta States adopt electronic records protection practices to low extent in managing records. The range of standard deviation (0.25 – 0.59) revealed that the respondents were not far apart in their ratings.

### Hypothesis 1

Male and female secretaries do not differ significantly in their mean ratings on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States

This null hypothesis was tested at 0.05 alpha level using t-test statistics. The results of the computation are presented in Table 2

**Table 2**

**Summary of t-test analysis of male and female secretaries mean ratings on the extent of adoption of electronic records protection practices in managing records**

**N=136 (Male 32; female 104)**

S/N	Item Statement	X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	df	t-cal	Sig.
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### Remarks

1	Using database management application to create records for safety	1.98	.36	2.56	.27	134	0.95	.16	NS
2	Using password to protect records from unauthorized access	2.43	.37	1.92	.78	134	1.02	.49	NS
3	Using token for data								

	security and authentication of access	1.86	.45	2.29	.61	134	2.09	.00	S
4	Application of biometric like fingerprint/face to gain access to records	2.39	.18	1.71	.23	134	-2.26	.01	S
5	Using of fire walls to protect damage to records	2.87	.67	2.59	.45	134	-1.28	.32	NS
6	Using antivirus and antispyware to protect records from corruption and contamination	2.85	.93	3.01	1.04	134	.72	.09	NS
7	Using encryption to control access to office records	1.20	.26	1.84	.55	134	3.05	.00	S
8	Using electronic administrative privilege to prevent access to restricted records	2.43	.48	2.81	.59	134	1.85	.76	NS

Data in Table 2 present the summary of mean ratings of secretaries on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States based on their gender. The data revealed that three items with p-values ranging from of .00, .00 to .01 are less than the significant value of 0.05 at 134 degree of freedom. This indicates that there is significant difference in the mean ratings of secretaries on the extent of adoption of electronic records protection practices in managing records in polytechnics based on their gender. Therefore, the hypothesis of no significant difference in the mean ratings of secretaries on items 3, 4 and 7 were rejected. The data revealed that the hypothesis of no significant difference for items 1, 2, 5, 6 and 8 were accepted since the Sig values of these items, ranging from .09 to .76 are greater than 0.05. Therefore, the null hypothesis of no significant difference in the mean ratings of secretaries based on their gender on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States was accepted.

### **Hypothesis 2**

Secretaries do not differ significantly in their mean ratings on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States as a result of years of working experience.

This null hypothesis was tested at 0.05 alpha level using t-test statistics. The results of the computation are presented in Table 3.

### **Table 3**

**Summary of t-test analysis of secretaries mean ratings on the extent of adoption of electronic records protection practices in managing records in polytechnics based on years of working experience** N=136 (1-10 years = 59); (11 & above = 77)

S/N	Item Statement	X <sub>1</sub>	SD <sub>1</sub>	X <sub>2</sub>	SD <sub>2</sub>	df	t-cal	Sig.	Rmrks
1	Using database management application to create records for safety	2.88	.39	3.12	.60	134	-4.03	.02	S
2	Using password to protect records from unauthorized access	2.25	.51	3.31	.39	134	1.65	.09	NS
3	Using token for data security and authentication of access	1.93	.49	2.07	.27	134	.90	.25	NS
4	Application of biometric like fingerprint/face to gain access to records	1.76	.82	1.45	.69	134	3.26	.01	S
5	Using of fire walls to protect damage to records	2.29	.27	1.97	.45	134	1.29	.40	NS
6	Using antivirus and antispyware to protect records from corruption and contamination	2.08	.52	2.75	.73	134	-.67	.08	NS
7	Using encryption to control access to office records	2.32	.61	2.70	.49	134	4.12	.00	S
8	Using electronic administrative privilege to prevent access to restricted records	3.03	.25	3.12	.54	134	1.66	.43	NS

Data in Table 3 present the summary of mean ratings of secretaries on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States based their years of working experience. The data revealed that three items with

p-values of .00, .01 and .02 are less than the significant value of 0.05 at 134 degree of freedom. This indicates that there is significant difference in the mean ratings of secretaries on the extent of adoption of electronic records protection practices in managing records in polytechnics based on their years of working experience.

Therefore, the hypothesis of no significant difference in the mean ratings of secretaries on items 1, 4 and 7 were rejected. On the other hand, the data revealed that, the hypothesis of no significant difference for items 2, 3, 5, 6 and 8 were accepted since the Sig values of these items, ranging from .08 to .43 are greater than 0.05. Therefore, the null hypothesis of no significant difference in the mean ratings of secretaries based on their years of working experience on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States was accepted.

### **Discussion of Findings**

Findings of the study disclosed secretaries' ratings on the extent electronic records protection practices were adopted in managing records in polytechnics in Edo and Delta States. From the analysis, it was found that the adoption of electronic records protection practices were rated low as it relates to using database management application to create records for safety, using password to protect records from unauthorised access, using token for data security and authentication of access and application of biometrics like fingerprint and face to gain access to records. Other aspects of electronic records protection practices that were rated low are the using of firewalls to protect damage to records, using antivirus and antispyware to protect records from corruption and contamination, using encryption to control access to office records and using electronic administrative privilege to gain access to restricted records. This finding is in agreement with the study of Njeru (2018) who concluded that most electronic software programmes designed for use in the developing nations like Nigeria are ill-prepared because of the expertise required to modify and fix the system (the complexity of most electronic gadgets programming are beyond the capabilities of most workers). This finding tallies with the study of Adu (2014) who reported that most tertiary institutions experience persistent power failure and have ill-equipped manpower to adopt electronic records protection practices in managing official records.

In addition, the study revealed that secretaries did not differ significantly in their mean ratings on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States as a result of their gender and years of working experience. Based on these results, the two null hypotheses were not rejected. The finding tallies with Azih (2013) who reported that the office performance of many secretaries in tertiary institutions falls short of expectation in the use of electronic records protection practices in managing records. The non-significant difference in the mean ratings of secretaries on the extent of adoption of electronic records protection practices in managing records in polytechnics in Edo and Delta States as a result of their gender and years of working experience is in agreement with the assertion of Abdulfatah (2016) who stated that most secretaries have little or no skill in electronic records protection practices. This implies that secretaries in polytechnics in Edo and Delta States need to undergo specialised training and professional development programme in the area of records protection practices.

### **Conclusion**

The research revealed that electronic records protection practices were adopted in managing records in polytechnics in Edo and Delta State to a low extent. Based on the findings, the study concluded that secretaries in polytechnics in Edo and Delta States lack the professional

capacity to adopt electronic records protection practices for managing digital records.

### **Recommendations**

The researchers suggested the follows:

1. Professional workshops and seminars should be organised for secretaries to enable them learn how to adopt electronic records protection practices for effective job performance in the polytechnics.
2. Records software packages and security measures should be built in and thoroughly emphasised in the curriculum of office technology and management. This will help equip the students adequately for electronic records management functions upon graduation from their various secretarial training institutions.
3. Functional computers and electronic records protection facilities should be readily available for use by secretaries in polytechnics in Delta States.



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