



AN ASSESSMENT OF THE IMPACT OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) ON THE ADMINISTRATION OF PUBLIC RECORDS: A CASE STUDY OF THE BOLGATANGA MUNICIPAL ASSEMBLY IN THE UPPER EAST REGION OF GHANA-WEST AFRICA

Ruth Yinimi¹ --- Emmanuel Akanpaadgi^{2†}

^{1,2}The Department of Secretaryship and Management Studies; Bolgatanga Polytechnic, - Ghana, West Africa

ABSTRACT

The study assessed the impact of Information Communication Technology (ICT) on the administration of public records in public institutions with the Bolgatanga Municipal Assembly as a case study. The researchers adopted both quantitative and qualitative research approaches. The data was gathered using a self-administered questionnaire as all the respondents are literates. The purposive sampling technique was used to select a sample size of forty-eight (48) staff of the Assembly. Simple descriptive statistics such as frequency tables and charts were employed in presenting the results after using Microsoft Excel to analyse the data. The research revealed that the type of ICT facilities being used by staff of the Assembly included computers, internet, telephones and fax machines. Majority of the respondents mentioned that staff usage of ICT facilities depended on whether they are ICT literates or not. Other factors mentioned were the availability of certain ICT facilities and knowledge of their existence as a trigger to their usage. Finally, the results confirmed that indeed the use of ICT facilities had a positive impact on the administration of public records in the Bolgatanga Municipal Assembly. The benefits derived by the Assembly included; increased productivity, security of public records, personal development and easy communication among staff of the Assembly and between the Assembly and other organisations or individuals.

Keywords: Record, Information, Technology, Automation, Administration.

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1. INTRODUCTION

In their foreword to the publication *Information and Good Governance*, Fust and Graf (2002) argued that proper administration of public records is fundamental to every government in the

quest to provide public services, accountability and the protection of the rights of citizens. One can imagine a country without records of birth and citizenship, property ownership, health, social grants, etc. Without proper records administration, government will not be able to address issues such as poverty, crime, social grants, AIDS, land rights and even the provision of basic services such as water, sanitation and electricity. Therefore, an Assembly or government department can only act and make decisions if it has adequate information at its fingertips.

The Ghanaian public sector has been undergoing rapid changes as a result of technological innovation, increased awareness and demands from service users. The deployment of ICT in the public sector have been seen in terms of its potential to increase clientele base, reduce transaction costs, improve the quality and timeliness of response, facilitate self-service and service customization.

In view of this, the study seeks to assess the impact of Information Communication Technology (ICT) on the administration of public records in the Bolgatanga Municipal Assembly.

1.1. Research Objectives

The main objective of the study was to assess the impact of Information Communication Technology (ICT) on the administration of public records in public organizations with the Bolgatanga Municipal Assembly as a case study.

The specific objectives of the study are to:

- i. Identify the various types of ICT facilities being used by the Bolgatanga Municipal Assembly in the administration of public records.
- ii. Examine the factors that influence the usage of ICT facilities in the Bolgatanga Municipal Assembly in the administration of public records.
- iii. Assess the benefits of the use of ICT in the administration of public records in the Bolgatanga Municipal Assembly
- iv. Identify the challenges faced by the Bolgatanga Municipal Assembly in the administration of public records.
- v. Find solutions to the challenges facing records management in the Bolgatanga Municipal Assembly.

1.2. Contribution of the Study

The study is one of few investigations on the impact of ICT on the administration of public records in the Bolgatanga Municipal Assembly which serves as a source of reference to other researchers.

2. LITERATURE REVIEW

2.1. Record

According to [Agere et al. \(1999\)](#), “a record is any medium in on which information is recorded. Medium includes paper, magnetic tape and disc of important publications such as gazettes, regulations, policies and procedures.

2.2. Records Management

In every organisation, department and institution, there is the need to keep records of its transactions. Records of any organisation contain information about the functions, policies decisions, procedures, operations and many other activities of that organisation. To manage this information pre-supposes that the records must be kept properly.

According to the Public Records and Archives Administration Department ([PRAAD, 2003](#)), “records management is an administration system by which an organisation seeks to control, distribute, use, file, retrieve, store and dispose of those records which are created or received by that organisation in the course of its operation”. The life cycle of records was developed in the United States in the 1950s in order to help the government manage the large quantity of records it creates. The life cycle concept is based on the idea that information has a life similar to that of a biological one. There is the creation stage; active maintenance and use stage; and the growth stage and the disposition stage ([PRAAD, 2003](#)). [Makhura \(2003\)](#) stated that the main purpose of records management is to manage and to control the flow of records with the necessary information within a particular organisation. Records management is a way of looking at how records are created, used, maintained and ultimately disposed off. The objectives in managing public records are to make the records meet the purpose for which they were created as cheaply and effectively as possible, and to make a proper disposition of them after they served those purposes.

2.3. ICT Concepts

According to [Khalifa \(2000\)](#), “Information Technology (IT) is the automation of processes, controls, and information production using computers, telecommunications, software and auxiliary equipment such as automated teller machine and debit cards”. It is a term that generally covers the harnessing of electronic technology for the information needs of a business at all levels. [Laudon and Laudon \(2001\)](#) stated that “Communication Technology deals with the physical devices and software that link various computer hardware components and transfer data from one physical location to another”. Information Communication Technology products used in the public sector are; computers, fax machines, hard drives, electronic data interchange, etc.

2.4. ICT usage in the Public Sector

In Ghana, developments in Information Technology (IT) are radically changing the way business is done. According to Owusu (1997), innovations in information processing, telecommunications, and related technologies known collectively as Information Communication Technology (ICT); are often credited with helping fuel strong growth in many economies. It is apparent then that technological innovation affects not just banking and financial services, but also the direction of an economy and its capacity for continued growth.

3. RESEARCH METHODOLOGY

3.1. Research Approach

There are two main research approaches to conducting research namely quantitative and qualitative approach (Yates, 2004). Qualitative and quantitative methods as two paradigms are not simply different ways of doing the same thing; instead, they have different strengths and logics and are often best used to address different questions and purposes (Burns, 2000). Both qualitative and quantitative approaches are aimed at creating a better understanding of how individuals, groups and institutions act and have an influence on each other.

According to Yin (1994), the best approach to use for a study depends on the purpose of the study and the accompanying research questions. The quantitative approach tends to describe concepts, gather evidence and interpret results of research in measurable and quantifiable terms from a sample within a population (Cohen and Morrison, 2004).

The study adopted the mixed research approach. The study adopted this approach based on its effectiveness in helping to understand the underlying factors of the study, as well as its suitability for addressing the research objectives.

3.2. Research Strategy

Zikmund (2002) describes research strategy as a master plan specifying the methods and procedures for collecting and analyzing the needed information. A research strategy provides a framework for the collection and analysis of data.

Various authors such as Cohen and Morrison (2004), stated that there are a number of different types of research strategies. These include exploratory, survey, descriptive, and causal among others. The survey research strategy has been adopted for the study because the study uses the case study research approach.

3.3. Population

Yates (2004) defines a target population as a collection of elements or objects from which information is to be gathered to solve the research problem. Creswell (2003) noted that the population of any research study is the universe of such group of people or objects which a

researcher is interested. The population of the study is staff at the Bolgatanga Municipal Assembly in the Upper East Region.

3.4. Sampling technique

Sampling is drawing a sample from the population and using the sample to generalise for the entire population (Burns, 2000). According to Babbie and Mouton (2001), sampling is the process of selecting a representative subset for observation from a population to determine the characteristics of the random variable under study. Several sampling designs, that is, methods of drawing the sample are available. Sampling designs can be divided into probability sampling and non probability sampling design. Probability sampling occurs when elements or sampling units are selected by chance. All elements do not necessarily have the same chance of being selected but the probability of selection of each element can be specified (Yates, 2004). Non-probability sampling, however, relies on the personal judgment of the researcher to select the sample. Non probability sampling methods include convenience sampling, quota sampling, snowball sampling and purposive sampling (Yates, 2004).

3.5. Sample Size

There was no sample taken, the entire administrative staff comprising of Forty-eight (48) were all interviewed.

3.6 Sources of Data

There are two main sources of data; primary and secondary.

3.6.1. Primary Data

Primary data collection is the data gathered specifically for the research project at hand (Zikmund, 2002). Primary data does not exist prior to the research and is collected by researchers to address a specific research problem.

3.6.2. Secondary Data

Secondary data collection is data gathered and recorded prior to the current research (Zikmund, 2000). The collection of secondary data was done through a literature survey. The literature survey was based on relevant textbooks, journals, reports and articles from the newspapers, magazines, and websites.

3.7. The Research Instruments

The research instruments used in this study were self-administered questionnaires and personal interviews.

3.7.1 Self-Administered Questionnaire

The researchers employed self-administered questionnaires which consisted of open and closed-ended questions. A questionnaire is a carefully designed instrument for collecting data in accordance with the specifications of the research questions. The advantages of self-administered questionnaires are that they tend to be inexpensive, efficient, quick and flexible. Feedback is obtained immediately and there is no waiting period (Burns, 2000).

3.7.2. Personal interviews

The researchers also personally interviewed the staff of the Assembly as a means of validating the information provided in the self-administered questionnaires.

4. DATA PRESENTATION AND ANALYSIS

This part of the research presents the results of the findings obtained from respondents during the field survey and the discussions resulting from the findings. The data was processed and analyzed with Statistical Package for Social Sciences (SPSS) and Microsoft Office Excel and the results of the analysis presented using frequency tables, percentage distributions, and charts.

The discussions were based on responses from forty-eight (48) respondents. The results present the background characteristics of respondents, various types of ICT based products used by the Bolgatanga Municipal Assembly in the administration of public records, factors that influence the use of ICT products by the Assembly in the administration of public records and challenges faced by the Assembly in the administration of public records.

4.1. Gender of Respondents

The gender of the respondents was determined and the results presented in Table 4.1 below. The gender distribution in the data collected revealed that 55% were females and 45% were male respondents. This suggests that the study was dominated by female respondents as shown in Table 4.1 below.

Table-4.1. Gender of respondents

Sex	Frequency	Percentage (%)
Male	22	45
Female	26	55
Total	48	100

Field Survey (2014)

4.2. Age of Respondents

The data gathered on the age groups of respondents is presented in Table 4.2 below. The ages of the respondents ranged from 18 to 55 years and above. It was observed that majority 33% of the respondents are within the age range of 26-35years followed by 27% in the age range of 36-45years. Twenty-five percent (25%) of the respondents were between 18-25 years and 15% of the

respondents fell within the age range of 46-55 years. The results imply that most of the staff interviewed and who use ICT fell in the category of the youth. This is not surprising because most of the youth are more users of technology than the elderly in society.

Table-4.2. Ages of respondents

Age group	Frequency	Percentage (%)
18-25	12	25
26-35	16	33
36-45	13	27
46-55	7	15
Total	48	100

Field Survey (2014)

4.3. Educational Background of Respondents

Educationally, the results indicated that 54% were degree holders followed by 21% with Diploma certificates, 18% of the respondents were WASSCE/O'Level graduates and only 7% had HND. Table 4.3 presents the data on the educational background of the respondents. The fact that most of the staff are degree holders imply that they could adopt technology in the administration of public records if they are given the needed training.

Table-4.3. Educational background of respondents

Item	Frequency	Percentage (%)
WASSCE/O'Level	9	18
Diploma	10	21
HND	3	7
Degree	26	54
Total	48	100

Field Survey (2014)

4.4. Departments of Staff

Another variable that was examined by the study was the professional status of staff at the Bolgatanga Municipal Assembly. The presumption was that professionally qualified and competent administrative staff would be better positioned to deliver effectively, making use of the Information and Communication products to enhance productivity. The results showed that various categories of staff were interviewed for the study. These included: administrative staff in (HR Dept) 29%, Finance Department (21%), Works and Engineering Department (17%) and Auxiliary Units (33%) took part in the survey.

Table-4.4. Departments of staff

Item	Frequency	Percentage (%)
Finance Department	10	21
HR department	14	29
Works and Engineering	8	17
Auxiliary Unit	16	33
Total	48	100

Field Survey (2014)

4.5. Number of Years Staff Worked with the Assembly

From Table 4.5 below, it can be realized that majority of the staff constituting 50% have been working with the Assembly for between 1-5 years, 19% of the respondents have been staff of the Assembly for a period of 4-6 years, 21% of the Staff have been working with the Assembly for 7-9 years and 10% of the respondents had been with the Assembly for 10 and more years. The data indicates that majority of the staff have been with the Assembly for a longer period hence could provide relevant data on the topic under study.

Table-4.5. Number of years staff worked with the Assembly

Years	Frequency	Percentage (%)
1-3 years	24	50
4-6 years	9	19
7-9 years	10	21
10 and above	5	10
Total	48	100

Field Survey (2014)

4.6. ICT facilities Used by Respondents

The researchers also gathered data on the ICT products being used by the staff interviewed and the results are displayed in Figure 4.6 below. The percentage distribution indicates that an overwhelming 80% of the Staff said they used computers for the administration of their records, 9% of respondents made use of internet facilities, 6% of the staff interviewed said they used the office telephone and only 4% of the respondent said they used fax machines.

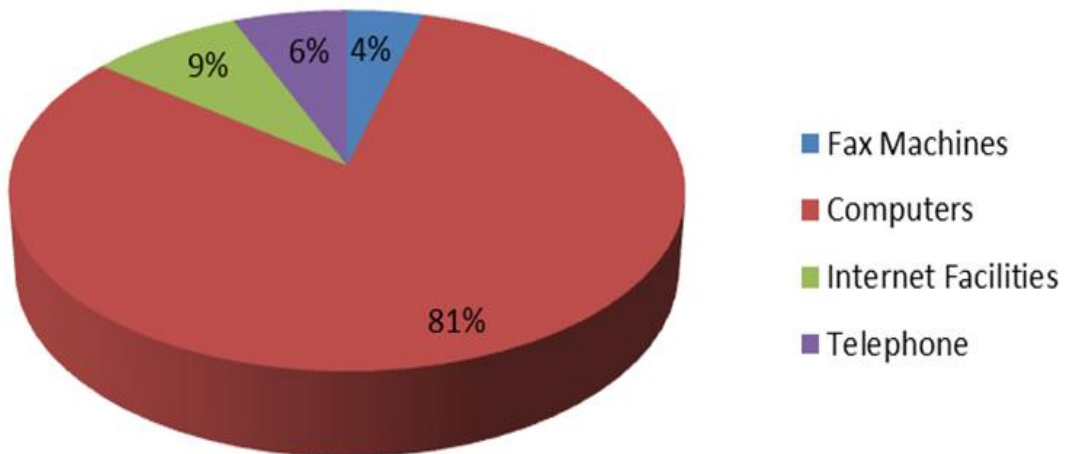


Figure-4.6. ICT facilities used by respondents

Field Survey (2014)

4.7. Factors that influenced the usage of ICT facilities

The study examined the factors that influence the use of ICT based products by the staff of the Bolgatanga Municipal Assembly in the administration of public records. The results in Figure

4.7 below revealed that a number of variables determined the use of ICT based products in the administration of public records as given by the respondents. The results indicated that majority of the respondents representing 41% mentioned that staff usage of ICT based products is influenced by whether they are ICT literates or not. Thirty-four percent (34%) of the respondents think the availability of ICT based products could influence its usage and 25% of the respondents mentioned the knowledge of the existence of ICT products as a trigger to the use of them.

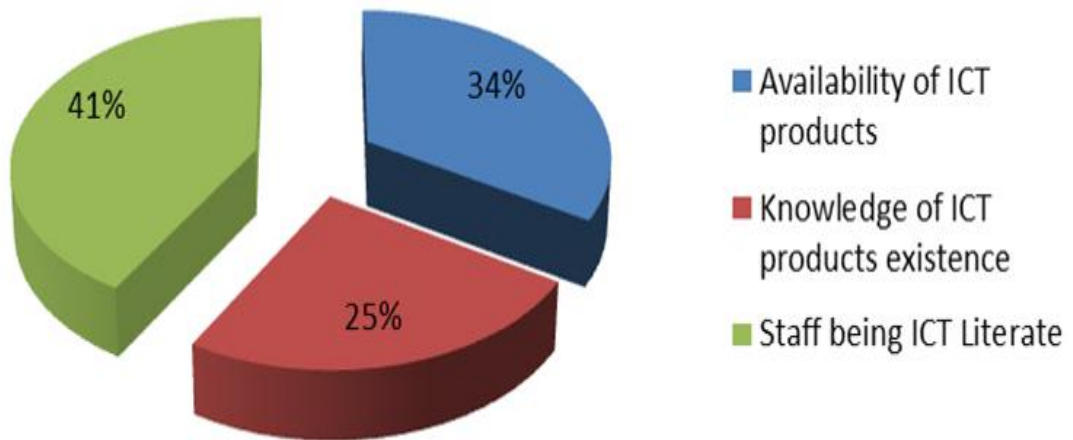


Figure-4.7. Factors that influenced the usage of ICT facilities

Field Survey (2014)

4.8. Benefits from the use of ICT facilities

The study also sought the views of the respondents on the benefits that the Bolgatanga Municipal Assembly stands to gain from the use of ICT based products. The results in Figure 4.8 below showed that there are a number of benefits the Assembly derived from the use of ICT based products. Specifically, 37% of the respondents being the majority said that the use of ICT based products increased productivity in the Assembly, 30% of the staff said it improves proper records keeping in the Assembly, 20% of the respondents believed that the use of ICT based products ensured the security of public records and for that matter data, 13% of the staff interviewed said it encourages self-development and 7% of the respondents said it facilitated easy communication among staff. The results imply that all the staff interviewed alluded to the importance of the use of ICT based products in the administration of public records.

Many studies have shown that, the use of information and communication technologies by institutions has much positive impacts on productivity and clients' satisfaction (Abor, 2004).

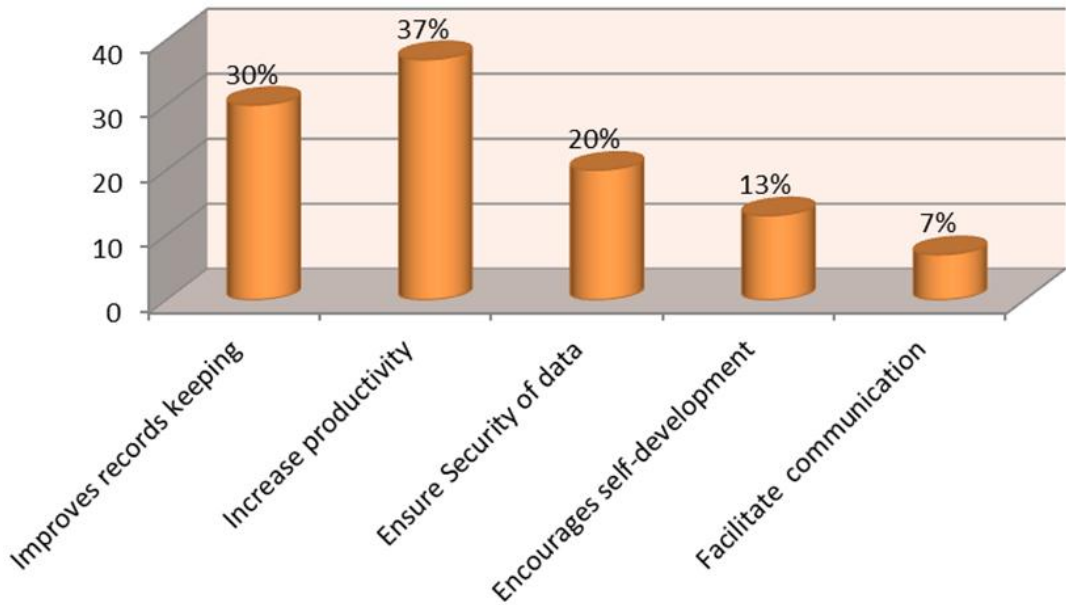


Figure-4.8. Benefits from the use of ICT facilities

Field Survey (2014)

4.9. Challenges faced by the Assembly in the Administration of Public Records

One of the objectives of the study was to examine the challenges that the Assembly faces in the administration of public records in spite of the use of ICT products. Figure 4 gives a pictorial presentation of the challenges that the Assembly faces in the administration of public records in spite of the use of ICT products. Inadequacy of ICT based products and poor internet networks constituting 44% and 15% respectively were two major factors given by the respondents. Others are the lack of technical know-how (19%), inadequate competent personnel (12%), improper handling of ICT based products (6%) and lack of periodic training (4%).

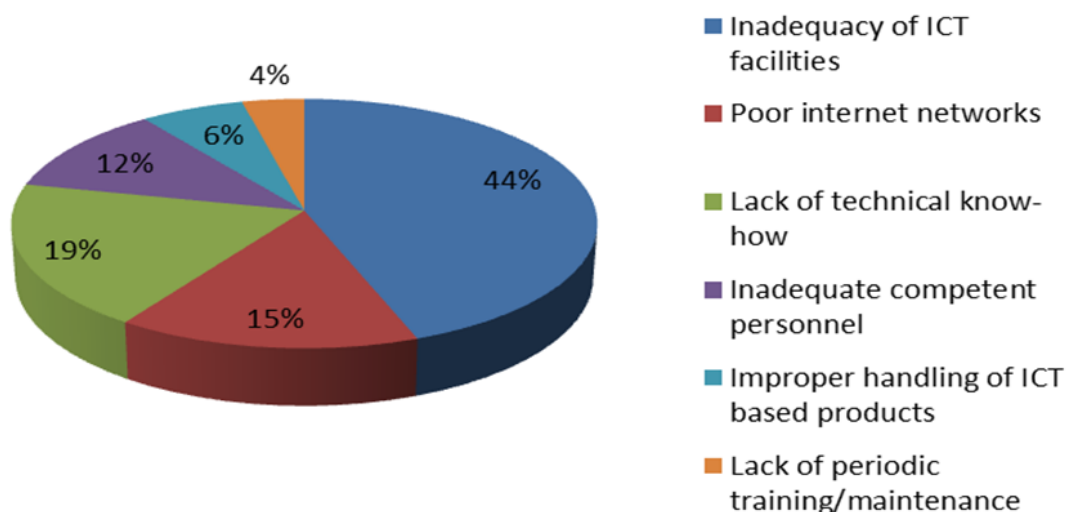


Figure-4.9. Challenges faced by the Assembly in the administration of public records

Field Survey (2014)

4.10. Solutions to the Challenges Faced by the Assembly in the Administration of Public Records

The final objective of the study was to examine possible solutions to addressing challenges faced by the Assembly in the administration of public records. The results as captured in Figure 5 below indicated that majority of the respondents representing 35% said the periodic training of staff in ICT could help address the lack of literacy of most staff in the use of ICT based products for the effective administration of public records in the Assembly. The rest of the possible solutions given by the respondents include; provision of adequate ICT Based products (31%), proper maintenance of ICT products (20%) and effective data management systems (14%).

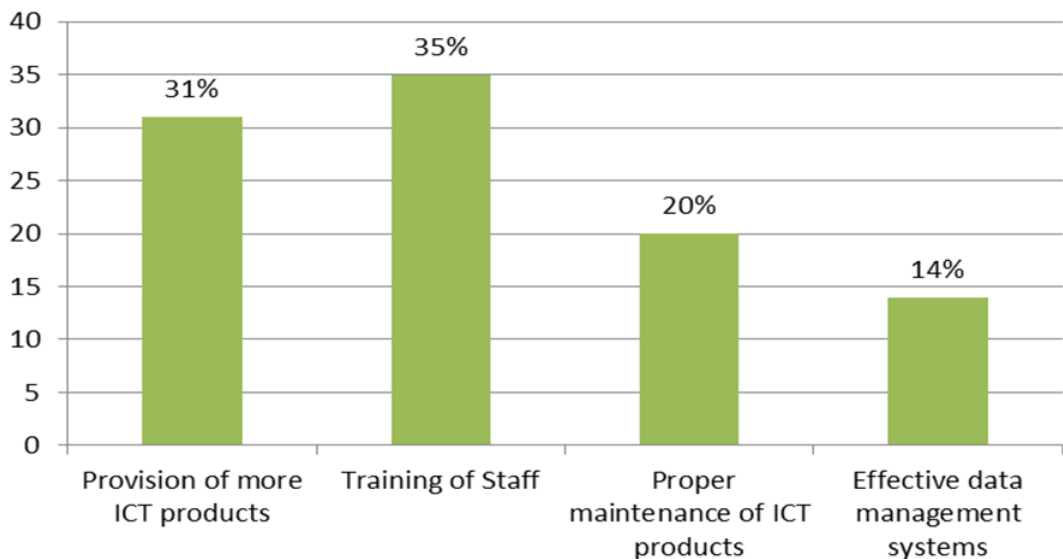


Figure-4.10. Solutions to the challenges faced by the Assembly in the administration of Public Records Field Survey (2014)

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This study assessed the impact of Information and Communication Technology (ICT) in the administration of public records in public organizations with the Bolgatanga Municipal Assembly as a case study.

The researchers used both the quantitative and qualitative approaches for the study using self-administered questionnaires to gather the field data. The researchers adopted the purposive sampling technique for the study which used a sample size of Forty-Eight respondents. The field data was analysed statistically with the aid of Microsoft Excel. Descriptive statistics which involves simple percentage, graphical charts and tables were tactically used in the data presentation and discussion of results.

The findings showed that the type of ICT based products used by staff of the Assembly are Computers, Internet, Telephones and Fax Machines.

Majority of the respondents mentioned that staff usage of ICT based products is influenced by whether they are ICT literates or not. Other factors mentioned included the availability of ICT based products and knowledge of the existence of ICT products as a trigger to their use.

The results showed that there are a number of benefits the Assembly derived from the use of ICT Based products; namely, increased productivity, security of public records, self-development and easy communication among staff.

The study found that the challenges the Assembly faces in the administration of public records in spite of the use of ICT products are inadequacy of ICT based products, poor internet networks, lack of technical know-how, inadequate competent personnel; improper handling of ICT based products and lack of periodic training.

The results indicated that majority of the respondents said the periodic training of staff in ICT could help address the lack of literacy of most staff in the use of ICT based products for the effective administration of public records in the Assembly. The rest of the possible solutions given by the respondents include; provision of adequate ICT Based products, proper maintenance of ICT products and effective data management systems.

5.2. Conclusion

The results suggest that improving the service quality through ICT experience will improve the overall administration of public records in the Bolgatanga Municipal Assembly. What emerged from the study is that the Assembly derives a lot of benefits from the use of ICT facilities namely; increase productivity, ensure the security of public records, encourages self-development and facilitate easy communication among staff. However, the Assembly faces challenges such as; inadequacy of ICT facilities, poor internet networks, lack of technical know-how, inadequate competent personnel; improper handling of ICT equipment and lack of periodic training in the administration of public records.

5.3. Recommendations

Based on the study conducted, the researchers made the following recommendations:

- i. The periodic training of all staff in ICT to appreciate the relevance of the use of ICT in proper administration of public records in the Assembly. When the staff are trained occasionally, it will enhance their skills in the use of ICT products thereby promoting effective administration of the public records in the Assembly.
- ii. The provision of adequate ICT facilities for use to ensure that records are properly documented. Currently, some of the departments and units lack modern ICT facilities thereby hampering effective administration of the records of the Assembly. It is therefore hoped that when all departments and units are provided with modern ICT facilities, the Assembly would benefit immensely.

- iii. The total reliance or dependence on government funds to procure ICT facilities is becoming a challenge for public institutions in Ghana, there is therefore the need for support from benevolent NGOs and the private sector to help provide the needed ICT facilities for the Assembly.
- iv. There is the need for the Assembly to adopt a more digital system information management where all offices are networked for easy data retrieval and cross checking. The days of manual documentation of public records are over hence the management of the Assembly has to promote and drive home the urgency for all staff to use ICT in their daily work in the Assembly.
- v. Staff of the Assembly should be given some support to upgrade their knowledge in records management for efficiency and effectiveness in the administrations of public records. The Assembly could grant scholarships to staff to periodically embark on training in current ICT courses so as to enhance their delivery level.

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APPENDIX 1

RESEARCH INSTRUMENT

Dear Sir/Madam,

This questionnaire is being used to collect data on the topic: Assessing the impact of Information Communication Technology (ICT) on the administration of public records in public organizations: A case study of the Bolgatanga Municipal Assembly. Information received would be used only for academic purposes and treated with confidentiality.

Section A: Demographic Characteristics

1. Age : 18-25 26-35 36-45 46-55 56 and above
2. Sex: Male Female
3. Education: BECE WASSCE Diploma Degree others (please specify).....
4. What is your position in the Assembly?.....
5. How long have you been a staff of the Assembly? 1 – 3 years 4 – 6 years 7-9 years 10 and above years

Section B: ICT Usage in the Administration of Public Records

6. Which of the following ICT based products are used by the Bolgatanga Municipal Assembly in the administration of public records? Fax machine Computers Modems Internet facilities Telephone Video Conferencing Others (Please Specify)
7. Which of the factors that influence the use of ICT based products by the Bolgatanga Municipal Assembly in the administration of public records?
Increase productivity Motivation of employee Security of data Encourages self-development & self-confidence Easy evaluation of employees' performance Improvement of communication with the Assembly Helps organizational development Others (Please specify).....
8. How has the introduction of ICT benefited the Assembly?
.....
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9. What are the challenges faced by the Bolgatanga Municipal Assembly in the administration of public record in spite of the introduction of ICT?

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10. What are the possible solutions to addressing these challenges faced by the Assembly in the administration of public records?

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Thank you for your time

APPENDIX II

ACKNOWLEDGEMENTS

We wish to express our profound gratitude to the staff and management of the Bolgatanga Municipal Assembly who assisted us by responding promptly to our questionnaires despite their tight schedules.

We also wish to thank our respective families and friends for every support given to us while we were carrying out the study.

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