

**INVESTIGATING THE STATUS OF INFORMATION AND COMMUNICATION  
TECHNOLOGY INTEGRATION IN RECORDS MANAGEMENT IN TERTIARY  
INSTITUTIONS: THE CASE OF WA TECHNICAL UNIVERSITY**

**Rockson Kwasi Afriyie<sup>1</sup>**

**Imoru Justina Yangapuori<sup>2</sup>**

**Ismail Salifu Hindu<sup>2</sup>**

<sup>1</sup>Department of Information and Communication Technology, School of Applied Science and Technology, Hilla Limann Technical University, Post Office Box 553, Wa, Upper West Region, Ghana

<sup>2</sup>Department of Secretariaship and Management Studies, Business School, Hilla Limann Technical University, Post Office Box 553, Wa, Upper West Region, Ghana  
Corresponding Author: e.afriyie@yahoo.com

---

**ABSTRACT:** *This paper investigated the level of ICT integration in records management at Hilla Limann Technical University and the challenges confronting the records managers. The study used a survey design employing a questionnaire and interview to collect the data. Purposive sampling technique was used to select 40 respondents out of 50 records managers. The study found a high ICT integration with 87.5% of the respondents deploying ICT in processing, sending, storing, retrieving, receiving and recovering records. It was established that the institution does not have records management policy and records backup policy and therefore records managers cannot dispose non-vital records. The study identified operational challenges such as virus infection; lack of dedicated backup storage facilities, poor and unreliable internet services, information loss, and lack of ICT equipment replacement policy. The study recommends that University Management should put in place records management policy, records backup policy and ICT equipment replacement policy. The records management policy should spell out a records retention period and disposal methods. There should be up-to-date antivirus applications on all computers and records managers should regularly update the antivirus installed on their machines. Finally, Management should provide reliable internet service to employees to facilitate their work.*

**KEYWORDS:** ICT integration, records management policy, records backup, internet service, records manager

---

## **INTRODUCTION**

Information and Communication Technology (ICT) is pervasive in many educational institutions. This integration of ICT in the educational system has significantly changed how institutions operate, especially, in records management. The adoption helps to enhance, coordinate and control the operations of the institutions. It enhances the use of records management systems. According to Geetanjali, ICT supports service delivery in a convenient and cost-effective manner (Geetanjali,

2011). Effective service delivery is about cost-effectiveness, ease and timely access to the services and guarantees efficient and better service delivery. Effective integration and utilisation of ICT support record management and strategies of many educational institutions (Henderson & Venkatraman, 1999). Advantageously, ICT integration reduces information search and transaction cost leading to efficient operations and effective administration of institutions. It speeds up data processing, information sharing and distribution, thereby increasing productivity and improving institutional general performance (Sheppard & Hooton, 2006; Alam et al., 2007).

### **Contextual Setting**

Hilla Limann Technical University was established in September 1999 and enrolled in, the first batch of students in 2003 to pursue HND programmes in Agricultural Engineering and Secretaryship and Management Studies. Currently, the University has four (4) schools, and about 13 departments running both tertiary and non-tertiary programmes with a student population of about 1,269 and staff strength of about 80 faculty members and 20 administrative staff.

To ensure the effective and efficient functioning of the institution, the Polytechnic formulated ICT Policy and Plan that seeks to guide and consolidate the process of fully exploring the benefits of ICT in the institution (Wa Polytechnic ICT Policy and Plan, 2008). The institution, like many tertiary institutions, has integrated Information and Communication Technology (ICT) in its routine work such as students' enrolment, creating and managing records, internet provision and students' assessment. This adoption of ICT by the institution was to minimise the prior huge paperwork, delays in document processing and to enhance effective records management. However, huge paper-based document abounds and records management seems to be predominantly paper-based. Most of the offices are still handling bulky files and papers. Students complain of delays in document processing and the institution is reported of receiving threats of legal actions from some past students over the delay of certificates, casting aspersion on how records are managed in this ICT integrated workplace.

This study, therefore, examines the level of ICT integration in records management of the institution. It also assesses the competencies and skills of staff on the usage of available ICT tools. Further, the study identifies the operational challenges and make recommendations.

### **Records**

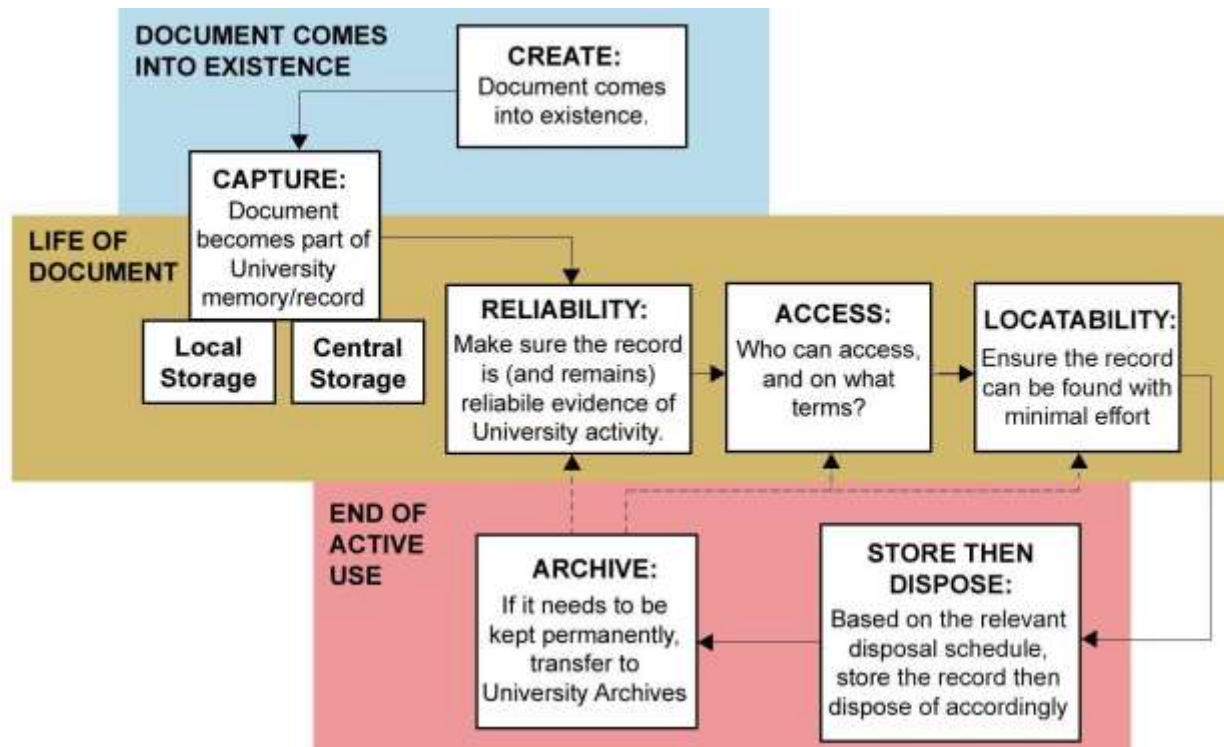
A record is a compiled, written, or electronically generated fact kept to preserve its content. It is a document that provides tangible evidence of information or past happenings (University of Adelaide, 2020). Cox (2001), opines that records are human memory extensions generated with the objective to provide permanent evidence of activities that can support a decision-making. Records are any information created, received, and maintained as evidence and information by an person, in pursuance of legal obligations or in the transaction of business (UG record policy, 2014). Many different kinds of records are produced. Examples are academic records, health records, legal records, parliamentary records, business records and elections records. The focus of this study is on academic records.

An academic record is any data relating to students both in paper and electronic formats that provides evidence of information about the events that happened (Nwaomah, 2015). Examples of records are email, letter, lab book, diagram, photograph, set of lecture handouts, and payment receipt.

Electronic records refer to any machine-generated and machine-readable information (Coetzer, 2012; University of Ghana record policy, 2014). They may be an integration of text, graphics, images, video, audio, e-mail, internet content, documents, spreadsheets, databases, etc., that are generated, maintained, modified or transmitted in digital form by a computer or related system.

### **Life-Cycle of Records**

Every record has a useful life to live and those with enduring historical value are maintained in archives (Pari & Tamar, 2020). A properly managed record is the one whose life cycle is seriously handled (Azameti & Adjei, 2013; International Management Trust (IMT), 1999). The record life cycle concept was developed in the USA in 1934 to enable records managers to exercise control over records to make their use, maintenance and disposition easy (Ken vision, 2007; Schellenberg, 1956). A records life cycle helps to identify the status of records within a records management policy and programme and provide a framework for planning, implementation and monitoring. It also integrates records management and archives administration (Shepherd and Yeo, 2003). A record life-cycle is in phases as shown in Figure 1, starting when created or received, the usage, maintenance and finally disposal. According to Porter-Roth (2006), the main phases of a record life cycle are capturing, managing, storing, delivery and disposition. The creation or receipt of a record constitutes the first phase. The second phase, maintenance and use, is the most useful life for which a record exists for easy and accurate accessibility and retrieval. The last phase is the disposition, where the records are destroyed or kept for archival reasons. A record disposition is essential because it helps an organisation to avoid operating costs.



**Figure 1: A detailed records lifecycle. Adapted from Adelaide University, 2020)**

### Records Management in Educational Context

Records management is the efficient and systematic control of recorded information (International Organisation for Standardization (ISO) 15489, 2001; Newton, 1986). It is the adherence to some standards to control records. Records management is a herculean task in the educational setting. Poor records management in educational systems create administrative, developmental and supervisory challenges in schools (Amanchukwu & Ololube, 2015). Consequently, tertiary institutions are rolling out measures to manage academic records with efficiency and effectiveness and to safeguard the academic records to enhance their credibility and sustainability (Azameti & Adjei, 2013). Both paper-based systems and digital records management systems are used to manage school records. According to Azameti and Adjei (2013), the reasons for using the electronic systems are flexibility, keeping abreast of current technological issues in records management, enhance data security, limit accessibility rights to academic records, and improve tracking systems. They opined that paper-based record keeping is motivated by fear of cyber and viral attacks on sensitive academic records, lack of storage capacity and lack of database applications to manage electronic records. The adoption of both electronic and paper-based is to produce complementary backups, generate backups to authenticate records, have backups in times of equipment failure and an inability to convert all paper-based records to electronic form. In South Africa, the Council on Higher Education (2000), reports that higher education information systems are inadequate hence the need for universities' information and records to be managed systematically to enhance the effectiveness and efficiency of the universities in carrying out their mandate. Alwi, Husain and Jannatul (2016), categorised the importance of proper management of

academic records in the educational setting into three as: academic records application, educational development and solving issues. The application category involves in determining policy, metrics reviewing, information assessment, instructional design, and spelling capabilities instrumentation. Academic records form integral component in university educational development. They are reliable data for analysing the quality of education service delivery (Baghdarnia, & Arash, 2014), and play critical role in granting accreditation to an institution (Franco, 2015). Similarly, academic records are used as evidence in seeking solutions to educational such as issues of teachers' performance, recovery of students' information and prevention of any destruction to same (Carzoo, Young, Pommering, & Cuff, 2015), appraisal on school dropout and students' poor academic performance (Alwi, Husain & Jannatul, 2016; Badr, Algobail, Almutairi, & Almutery, 2016)

### **Records Management Policy in Some Tertiary Institutions**

Many tertiary institutions have policies and procedures to guide the management of student academic records. The University of Sheffield has a records management policy that regulates records of the university. According to the university, records are authoritative evidence of business and therefore should possess the characteristics of authenticity, reliability, integrity and usability (University of Sheffield, 2020). The policy ensures that records are maintained during their lifecycle with appropriate security. The University of Adelaide has records management policy which articulates the roles and responsibilities of every staff member in handling records. The policy states that, the staff awareness of when and why creating records is the foremost step in good records management. Records serve as proofs of actions, accountability, legal requirements, institutional memory and ensure transparency (University of Adelaide, 2020). The University of Ghana has records management policy which provides a framework and assigns responsibilities for ensuring that full and accurate records of the business activities of the University are created. This ensures records are managed and maintained for as long as they are required to support business functions and accountabilities until their disposal in accordance with the authorised retention schedules (University of Ghana record policy, 2014).

The record management policy framework of University of Education, Winneba (UEW) identifies records creation and capture, records survey/audit, records analysis/retention schedule, disposal of records, records protection and security and provision of appropriate training for relevant staff as the key records management practices in the University (University of Education Winneba, Records Management Policy Framework, 2000).

While some institutions have specific policies and procedures for managing academic records, others do not have such standards. Coetzer (2012) reports that the University of Zululand has no specific policy for records management.

Attempts to ascertain the record management policy and strategies in Hilla Limann Technical University revealed that there is no such a policy. Interviews with some management staff revealed that there is no institutional policy on records management. This was confirmed by sighting some documents which have outlived their usefulness yet they were packed in some offices unattended.

### **The need for Proper Academic Records Management**

Records are valuable assets of institutions and should be harnessed through proper records management (Alwi, Husain, & Jannatul, 2016; Mutula and Wamukoya, 2009). Proper record management provides better use of physical and server space, save staff time, improved control of valuable information resources, compliance with standards and reduction in operational costs (UEW Records Management Policy Framework, 2000). Effective records management programme ensures records availability, utilisation, privacy, integrity, confidentiality and maintenance. Well-managed records provide evidence of compliance with legislature and ensure organisation accountability, prevents duplication of effort, easier retrieval, better utilisation of space, and less frequent loss of documents (Blake, 2014; Palmer, 2000; Sanderson and Ward, 2003; Zawiyah and Robert, 2000).

Proper records management in public institutions is also a legal requirement. Ghana has a legislature on information acquisition and usage as stated in the Right to Information Law (RIL), Act 989. The law requires every public institution to generate, process, maintain and preserve accurate and authentic information related to the running of the institution (Parliament of Ghana, 2019). Well managed records mitigate risk through compliance with legislation, minimises information loss and provides evidence of transactions (Ngoepe, 2014).

A good records management provides the following benefits: completeness, cost effectiveness, flexibility, quality, relevance, timeliness, retention and disposition of records, variability, and maintenance (Ibara, 2010 as cited in Amanchukwu & Ololube, 2015). Further, properly managed records provide the following proofs: originality, compliance of data capturing and retention or disposal. Proper records management is essential for effective school administration as it facilitates valuable information retrieval useful for daily operation and decision making.

### **ICT integration in Records Management**

Information and Communication Technology (ICT) is pervasive and its significance in the work environment cannot be overemphasised. ICT can be defined as a collection of computerised technologies used in service delivery. It includes the utilisation of computing resources such as hardware and software to deliver service. Specifically, ICT as a collective term is used to create, generate, analyse, process, distribute, receive, retrieve, store and share information. According to Ngenge (2003), ICT is the use of a collection of specific tools, such as email applications, word processors, databases and management systems. ICT deployment in the work place aids productivity (Sheppard and Hooton, 2006; Alam et al., 2007), and therefore many tertiary institutions manage academic records using ICTs. This is motivated by the flexibility, increased understanding in the use of ICT, and enhanced data security, limit accessibility rights to academic records, and improve tracking systems (Azameti & Adjei, 2013). A study on the availability of ICT tools for managing students' academic records in Tanzanian reported that diverse ICT tools are available and are employed in students' records processing (Mandari, 2018). Majority (9/10) of the schools have printers and computers with Microsoft office applications. Amidst the persuasiveness of digital data, integrating computing systems into the records management of an institution is a best practice parameter.

### **Challenges in Records Management**

Mutula and Wamukoya (2009), reports the challenges in records management as lack of institutional plans for managing electronic records, inadequate knowledge about the role of records management in ensuring efficiency and accountability, inadequate stewardship and coordination in handling records, lack of legislation, policies and procedures to guide the management of records, lack of requisite competencies in records and archives management, insufficient budgets allocation for records management, poor security and confidentiality controls, lack of records retention and disposal policies, and absence of migration strategies for electronic records.

A study by Azameti and Adjei (2013), identifies the following challenges faced by institutions: poor knowledge in computerized records management systems; inadequate record keeping equipment; interferences from supervisors and low morale on the part of record keepers due to poor remuneration, the frequent crashing of hard drives leading to the loss of records; weak technological support for efficient record keeping; frequent freezing of computers making it difficult to retrieve information; system viruses leading to loss of records.

According to Attwood and Grill (2008), the challenges of records management are inadequate qualified personnel, increasing student population and inadequate storage space. Some administrative staff of academic institutions carp funds and facilities inadequacy for records keeping. Lawal (2007), attributes the challenges associated with organisation's records management to inadequate funding, lack of facilities, and infrastructure. Brendan (2012) observed that the major challenges associated with records management are weak legislative and organisational infrastructures (ICT tools).

Studies by (Mutula and Wamukoya, 2009; Iwhiwhu, 2005; Egwunyenga, 2009) indicate that African records keepers lack the basic skills and competences for handling records and archives. Inadequate skills in information technology made many traditional librarians, records managers, and archivists very conservative and have phobia for computers. Further, generation gaps between the new and old professionals make analogue information managers to perceive computers as a threat to their status as experts (Ezeani, 2010). This implies that younger employees may easily cope with the requirements of digital age. Kemoni reports that many countries in Eastern and Southern Africa lack the capacity in electronic records management (Kemoni, 2009). Identifiable areas of deficiencies and challenges in managing electronic records include lack of policy and legislation, standardization, authenticity, capacity building, physical infrastructure and lack of awareness among recordkeeping professionals and government authorities on electronic records management issues.

### **RESEARCH METHODOLOGY**

A survey research design was employed to obtain data from the respondents. A structured questionnaire of 25 items was developed for collecting the data. The population for the study comprised of the administrative staff, Heads of Departments and units and examination officers, who generate and manage records in the institution. A purposive random sampling technique was

used to select 40 staff members from a population of 51 for the collection of primary data using questionnaire and interview.

## DATA ANALYSIS AND DISCUSSION

Table 1 presents the demographic characteristics of respondents: gender, age, and years as employees of the institution.

**Table 1: Demographic Characteristics of Respondents**

Variable	Attribute	Frequency	Percent
Gender	Male	27	67.5
	Female	13	32.5
Age	20-30 years	13	32.5
	31-40 years	19	47.5
	41-50 years	6	15.0
	>50 years	2	5.0
Years Working with the Polytechnic	5-10 years	11	27.5
	11-15 years	14	35.0
	16-20 years	8	20.0
	>20 years	3	7.5
	No Response	4	10.0

**Source: Field Survey, 2017**

The majority of the respondents (67.5%) were males while female respondents represent 32.5%. This gender distribution recorded is reflecting the composition of the institution, where there are more males than females. It is also a reflection of the general composition of the tertiary institution structure in Ghana, which has more male employees than females. On age, respondents from 31 to 40 years constitute the majority (47.5%). Similarly, 20 to 30 years recorded 32.5%. Per the age brackets, the composite figure of respondents age group between 20 and 40 years, constituting 80%, means that majority of the respondents do not perceive computers as a threat to their status. The relatively young age of respondents corroborates (Ezeani, 2010), and should be able to cope easily with the requirements of the digital age and therefore can competently integrate ICT to their records management responsibilities. Further, Table 1 reveals that 36 (90%) of the respondents have worked with the institution for quite a long time. This qualifies them to be in a better position to give the true reflection of the records management activities and associated challenges in the institution. It also means that the random selection procedure employed yielded a good result by selecting the right candidates for the study.

Examining the knowledge and skills of the respondents vis-a-vis the utilisation of ICT tools as pertain in the institution, the result is presented in Table 2. This was to identify the available tools and their utilisation.



**Table 2: Type of ICT equipment used**

Variable	Description	Frequency	Percent
Computer	Yes	34	92.5
	No	6	15.0
Fax Machine	Yes	0	0.0
	No	37	85.0
	No Response	3	7.5
Photocopier	Yes	7	17.5
	No	31	77.5
	No Response	2	5.0
Printer	Yes	37	92.5
	No	3	7.5
Telephone	Yes	32	80.0
	No	8	20.0
External Drive	Yes	11	27.5
	No	29	72.5
CD ROM	Yes	27	67.5
	No	13	32.5
Pen Drive	Yes	35	87.5
	No	5	12.5

**Source: Field Survey, 2017**

Results in Table 2 indicate that respondents have knowledge and skills to utilise ICT tools such as computers (92.5%), fax machines (17.5%), photocopiers (17.5%), printers (85%), telephones/mobile phones (80%), external drives (27.5%), CD ROM (67.5%) and Pen drive (87.5%). The high percentage of computers (92.5%) and printers (85%) availability and usage corroborates (Mandari, 2018) findings that the majority (9/10) of the schools have printers and computers. Respondents indicated that some of the equipment such as pen drives and mobile phones are utilised at a personal level. Due to the inadequacy of these facilities, some staff members have to purchase their own devices and use them for administrative work, teaching, learning or research. This supports the assertion of Lawal (2007), that organisation's records management is challenged by inadequate funding, lack of facilities, and infrastructure. This was indicated by the usage of storage devices. The external drive recorded the least usage relative to the pen drive. This finding is ascribed to the cost factor of external drive which is relatively higher and probably beyond the affordability of respondents. The pen drive adoption is high as a result of low cost. However, this is a source of threat to records and information as they are more vulnerable to viral infection. Further, personal level usage of these key devices implies that there is no policy regarding the acquisition and usage of personal ICT equipment in the institution.

Further, respondents' knowledge and skills in applying software applications and some critical infrastructure were examined and the results presented in Table 3.

**Table 3: ICT Program /Tools**

ICT Application/Tool	Description	Frequency	Percent
Word Application	Yes	38	95.0
	No	2	5.0
Excel Application	Yes	34	85
	No	1	2.5
	No Response	1	2.5
Internet	Yes	31	77.5
	No	7	17.5
	No Response	2	5.0
Intranet	Yes	25	62.5
	No	15	37.5
Database management Program	Yes	32	80.0
	No	8	20.0
PowerPoint	Yes	34	85.0
	No	7	15.0

**Source: Field Survey, 2017**

The results indicate that respondents used applications such as Microsoft word Program (95%), Microsoft Excel program (85%), Internet (77.5%), intranet (62.5%), Database management program (80%) and Microsoft PowerPoint program (85%). This finding is consistent with reports (Mandari, 2018; Tarafdar and Vaidya, 2006) on the basic knowledge of staff concerning critical ICT programs such as Microsoft Office applications.

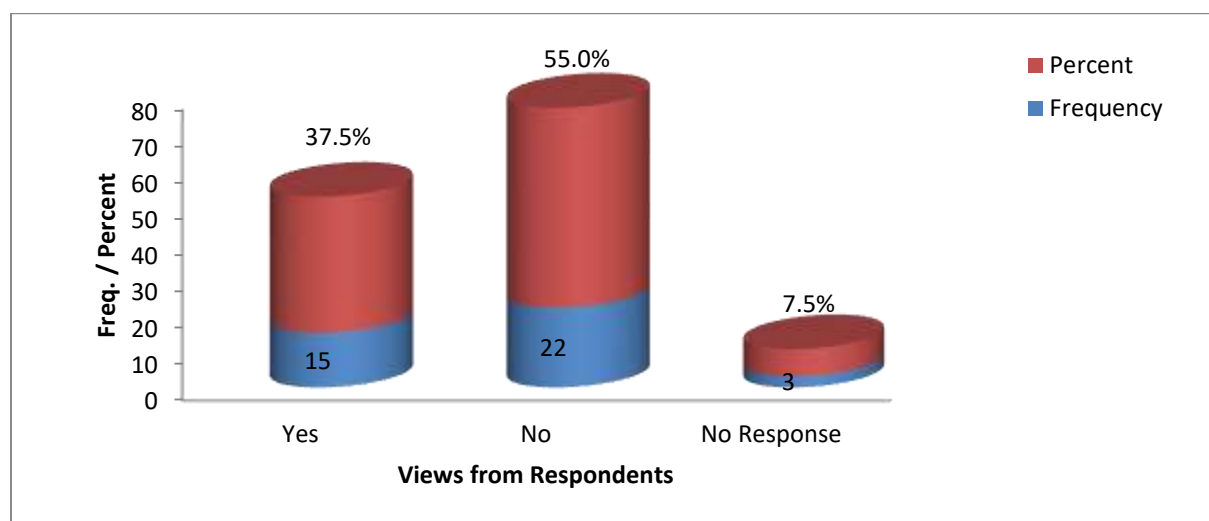
**Table 4: Respondents ever lost Information/Records on their Computers**

Description	Frequency	Percent
Yes	16	40
No	22	55
No Response	2	5
<b>Total</b>	<b>40</b>	<b>100</b>

**Source: Field Survey, 2017**

Table 4 presents results on whether or not respondents have ever lost records on their computers. The results revealed that 55% of the respondents have never lost records while 40% of respondents indicated that they have ever lost records. This gives credence to the claim of (Azameti and Adjei, 2013), that frequent viral attack and damage of ICT equipment results in the loss of records. It

further confirms the students' and staff's claims and complaints about missing of their records and documents. This disclosure is very instructive and brings to the fore what the institution is losing in the blind eye of Management. These losses can be prevented if the institution institutes a policy on backing up records and information to make it obligatory for every employee to back up records. Further, establishing a records centre is significant (University of Ghana record policy, 2014). In situations where the hard copies of the lost information are available, they have to recreate the information according to the respondents. Records seekers on their own would have to contact the originator of the information for another copy, hence, the confirmation of claims by the students that processing of information takes much time; there is difficulty in obtaining requested information and unduly delay in processing documents in the institution. The study also sought to assess how secure electronic records are in the institution. Based on whether respondents accept other peoples' storage devices such as pen drives into their computers. This was important in finding out the possible causes of viral infections or breakdowns of computers. The results are presented in Figure 1.

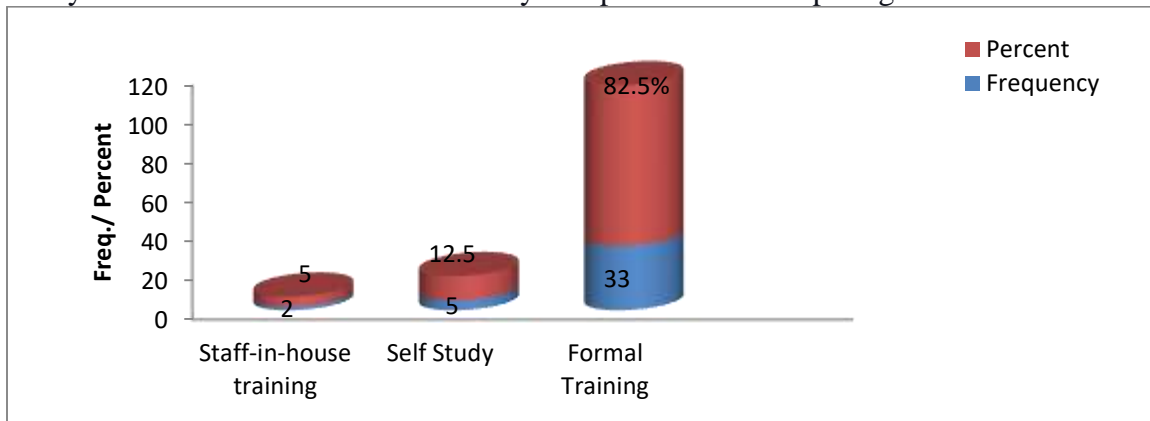


**Figure 1: Respondents accept other people's storage devices into their computers**

Source: Field Survey, 2017

The results indicate that 55% of respondents do not accept other peoples' storage devices such as pen drives into their computers. A high percentage (37.5%) indicated that they accept pen drives of colleagues into their computers. This practice is attributed to a lack of essential ICT facilities and infrastructure (Lawal, 2007). Some of the offices do not have functional printers and they have to depend on other offices with functional printers to produce hardcopies as the institution adopts hybrid academic records management. Respondents however, indicated that any pen drive used on their PCs is scanned before opening it. Further checks indicated that some of the antiviruses were outdated, therefore not protective enough. For those who do not accept pen drives, always refuse to insert such devices from others. The insight in this finding is that there are attempts made by others to insert external devices such as pen drives into their machines. This practice if not check

has the potential to infect computers as they can yield to the persuasions of co-workers to use their office devices. An intranet could be established where the employers can print their work using their office computers without physical movement from one office to another. Some of the respondents indicated that they fear virus infection that may corrupt the records on their computers. Others also were of the view that malicious software can breakdown the Desktops as well as their personal laptop computers in the future. The data revealed that the respondents are aware of the potential risks involved in using ICT tools. This awareness is positive because the respondents will always be alert and cautious of what they accept into their computing devices.



**Figure 2: How respondents acquired ICT skills (Source: Field Survey, 2017)**

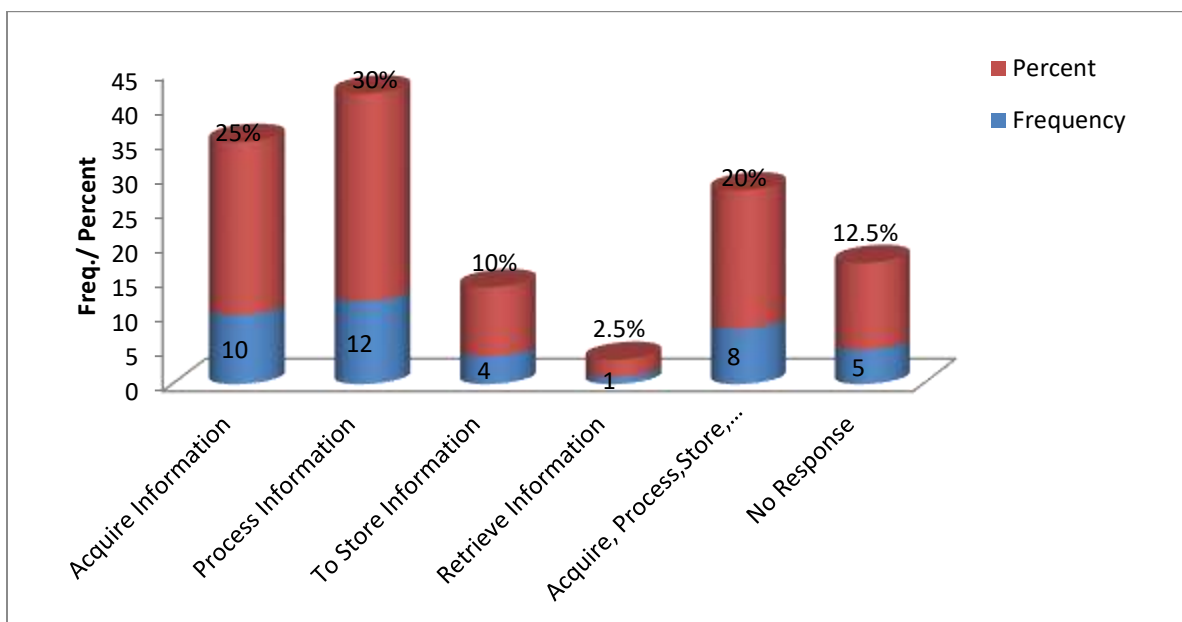
From Figure 2, 82.5% of respondents indicate that they acquired the ICT skills in records management through formal training, 12.5% acquired their ICT skills through personal or self-study while only 5% acquired it through staff-in house training. It was also established that the ICT Directory has been organising ICT training for staff.

Results in Figure 3 indicate that 10% of the respondents have excellent skills in ICT, 65% ranked their skills as very good, 17% had good skills, 3% ranked theirs as fair while 5% failed to respond to this question.



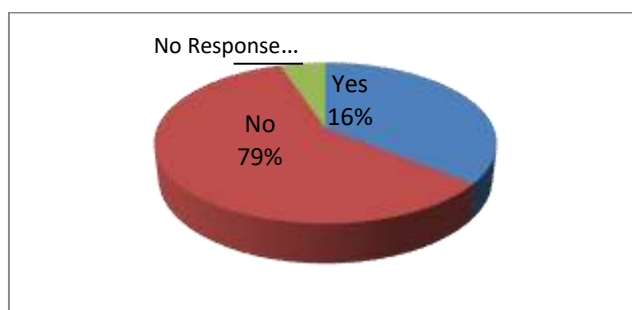
**Figure 3: Rating of ICT Skills by Respondents (Source: Field Survey, 2017)**

The results indicate that, the majority (95%) of the respondents have the requisite skills in using ICT to manage records. This is in contrast with (Mutula & Wamukoya, 2009; Iwhiwhu, 2005; Egwunyenga, 2009), assertion that African records keepers have inadequate skills in information technology making many librarians, records managers, and archivists very conservative and scare of computers. The findings of this study are corroborating the pervasiveness of ICTs in the daily life of the respondents. Further, the majority of respondents are young and therefore accounting for their ability to acquire the requisite ICT skills.



**Figure 4: The Use of ICT Resources/ Equipment (Source: Field Survey, 2017)**

Respondents indicated that they use ICT in information acquisition (25%), process information (30%), store information (10), retrieve information while in total, the majority (87.5%) of the respondents deploy ICT in their work as academic records managers. Consequently, the institution has integrated ICT in records management as they find numerous uses of ICTs in their work. However, 12.5% of the respondents failed to indicate how they use ICT to support their work. This could account for the adoption of hybrid records management.

**Figure 5: Respondents are satisfied with existing ICT facilities in the Polytechnic**

Source: Field Survey, 2017

Figure 5 reports on the satisfaction of respondents concerning the existing ICT facilities in the institution. The majority (79%) are not satisfied. Some expressed dissatisfaction on the nature of existing facilities and how they impact negatively on records management. For instance, some documents demand that their hardcopies are produced using colour printer, but due to the absence of this equipment in their offices, they have to resort to commercial service providers outside the campus and at their own cost increasing records management expenses. This practice does not guarantee the confidentiality of those documents. Supporting the findings of (Brendan, 2012; Lawal, 2007) that inadequate funding, weak ICT infrastructure, and poor security and confidentiality controls of records. Another source of dissatisfaction was the poor internet connectivity and accessibility. Without these facilities, it is impossible to do effective academic and administrative work. Only 16% are satisfied with prevailing ICT facilities.

**Table 5: Respondents have back-up facilities in their Offices**

Description	Frequency	Percent
Yes	21	52.5
No	19	47.5
<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Survey, 2017

Additionally, it was imperative to know whether respondents have back-up facilities for their records. In response, 52.5% of respondents indicated that they have back-up facilities in their

offices. Further interactions with them indicate that many of them are using their facilities such as pen drives and external drives. This development is not good enough because any fracas or unsatisfactory development involving them may trigger deny of service (DoS) through refusal to release the said information. They also complain about the inadequacy of some backing up facilities. Respondents without back-up facilities in their departments and units constituted 47.5 %. This means that no backups for their records. This accounted for the high rate of information loss in Table 4 (40%) of respondents ever lost records. It also confirms assertion by Azameti and Adjei (2013), of loss of records in schools. Consequently, an indication of poor records management (Blake, 2014; Palmer, 2000; Sanderson and Ward, 2003; Zawiyah and Robert, 2000).

**Table 6: Regularity in Backing up Records**

Description	Frequency	Percent
Daily	9	22.5
Weekly	10	25.0
Monthly	2	5.0
Not at all	19	47.5
<b>Total</b>	<b>40</b>	<b>100</b>

**Source: Field Survey, 2017**

On the regularity of backing up records, 25% of the respondents indicated that they back-up their records weekly, 22.5% back-up their records daily and 5% back-up their files monthly. The implication is that 52.5% of the respondents are aware of the need to back up records, have knowledge and skills to back up information and actually back-up their records at least once a month. This is very encouraging as the managers of the records realise the importance of backing up their records.

The benefits from integrating ICT to records management include: quick data processing, storage and management of data, recovery of lost records, makes work easier and faster and ensure accuracy, and ease of information accessing and sharing.

The operational challenges that they face in using ICT to manage records corroborated (Azameti & Adjei, 2013; Brendan, 2012; Lawal, 2007; Kemoni, 2009) identifiable challenges such as:

virus infection, frequent blackout, managing database, retrieval of lost information from database, poor internet access, unreliable internet services, inability to use data analysis software, absence of external drives for backups, data corruption, outmoded equipment, inadequate orientation on newly acquired equipment, and lack of equipment replacement policy.

The respondents suggested solutions to these operational challenges in ICT integrated records management are: provision of a functional stand-by generator, installation of up-to-date antivirus and frequent scanning of computers to remove malware, regular update of antivirus, instituting a records backup policy, installation of power bank (UPS), training and retraining of staff in records management, internet accessibility, provision of modern ICT equipment and information encryption and archiving and ICT equipment replacement policy.

---

## CONCLUSION/RECOMMENDATION

The study found that ICT is highly integrated into records management and the majority of the staff members can competently use the ICT facilities. The integration helps the respondents in processing, storage, retrieval, updating and backing up academic records. The study revealed that 40% of respondents ever lost information or records in their custody. Again, there is no policy on records management and backing up records. Further, the availability of backup facilities is a major challenge in records management in the institution. A high percentage (47.5%) of the respondents do not have back up for their records. Viral threat and infection is another challenge facing the record keepers. Further, the majority (79%) of the respondents are not satisfied with the ICT infrastructure in the institution and this impacts negatively on records management and the overall operation of the university.

The study recommends to the management of the university the adoption of formal records management policy and records backup policy. Management should provide a reliable internet service. All the records keepers should install antivirus on their machines and update them regularly. The government through the Ministry of Education should support the university by providing state-of-the-art ICT infrastructure to facilitate the operation of the university. Future work will focus on the competence of records keepers in the context of prevention and recovery planning of records.

## REFERENCES

- Alwi, M. Y., Husain, H., & Jannatul Iza, A. K. (2016). Explaining the Importance: Proper Academic Records Management. <https://www.researchgate.net/publication/311106470>.
- Attwood, R. & Gill, J. (2008). Student numbers are at risk as UK demographics shift', Times Higher Education, <http://www.timeshighereducation.co.uk/story.asp?storycode=406>
- Azameti, M. S. K. & Adjei, E. (2013). Challenges in Academic Records Management in Tertiary Institutions in Ghana. *International Journal of Scientific Research in Education*, Vol. 6(3), 287-296
- Badr, G., Algobail, A., Almutairi, H., & Almutery, M. (2016). Predicting Students' Performance in University Courses: A Case Study and Tool in KSU Mathematics Department. *Procedia Computer Science*, 82, 80-89.
- Baghdarnia, M., & Arash, M. (2014). Educational Services Quality Analysis. *Stud*, 4(1), pp.1-5.
- Brendan, E. A. (2012). The challenge of managing electronic records in developing countries: Implications for records managers in sub Saharan Africa", *Records Management Journal*, 22 (3), pp.198 - 211
- Carzoo, S. A., Young, J. A., Pommering, T. L., & Cuff, S. C. (2015). An Evaluation of Secondary School Educators' Knowledge of Academic Concussion Management Before and After a Didactic Presentation. *Athletic Training and Sports Health Care*, 7(4), 144-149.
- Coetzer, P. X. (2012). The status of records management at the University of Zululand. Msc.



- Thesis, In Information Science, University of Zululand.
- Cox, R. J. (2001). *Managing records as evidence information*. London Westport.
- Egwunyenga, E. J. (2009). "Records keeping in universities: associated problems and management options in South West geographical zone of Nigeria", *International Journal of Education and Science*, Vol. 1 No. 2, pp. 109-13
- Ezeani, C. (2010). "Information and communication technology: an overview", in Madu, E.C. and Ezeani, C.N. (Eds), *Modern Library and Information Science for Professionals in Africa*, Text Kinks, Ibadan, pp. 7-29.
- Franco, G. R. L. (2015). Design and implementation of a web-based faculty information system. In TENCON 2015- 2015 IEEE Region 10 Conference (pp. 1-5). IEEE.
- Geetanjali, U. (2011). ICT application in service delivery: A case of inland Revenue Department, Nepal. North south University, Bangladesh.
- Henderson, J. C. & Venkatraman, N. (1999). Strategic Alignment: leveraging Information Technology for Transforming Organisations. *IBM System Journal*, 38(2-3): 472-84.
- International Management Trust. (1999). *Managing Archives: Managing Public sector Records Management Handbook*. London: Aldershort.
- International Organization for Standardization (ISO), (2001). ISO 15489-1 Information and documentation-records management-part 1 general. ISO, Geneva.
- Iwhiwhu, E, B. (2005). Management of Records in Nigerian Universities: Problems and Prospects. *The Journal of Electronic Library*, 23(3): 345-355.
- Johnson, M., & Kallaus, N. (2004). *Records Management* (7th edition). South-west Publishing.
- Kemoni, H. N. (2009). Reprints & Permissions Management of electronic records: Review of empirical studies from the Eastern, Southern Africa Regional Branch of the International Council on Archives (ESARBICA) region. *Records Management Journal*. 19 (3), 190-203. <https://www.emerald.com/insight/content/doi/10.1108/09565690910999184>
- Ken vision. (2007). *Records management: The-records-life-cycle*. Kenvision Techniks Ltd.
- Konstantinos, M. (2015). *Records Management and Electronic Records Management Opportunities and Limitations. A case study in Greek companies*. Msc. thesis, Linnaeus University, Sweden.
- Lawal, G. (2007). Corruption and development in Africa: challenges for political and economic change. *Humanities and Social Science Journal*, 2(1), 1-7.
- Mandari, K. V. (2018). Availability of Information and Communication Technology (ICT)Tools Used for Managing Students' Academic Records in Tanzania: The Case of Secondary Schools in Arusha City Council. *International Journal of Science and Research*, 7 (12), 607-613.
- Mukred, M., Yusof, Z. M., Mokhtar, U, A., & Fauzi, F. (2019). A Framework for Electronic Records Management System Adoption in the Higher Professional Education: Individual, Technological and Environmental Factors. F. Saeed et al. (Eds.): *IRICT 2018, AISC 843*, pp. 840–849, 2019. [https://doi.org/10.1007/978-3-319-99007-1\\_78](https://doi.org/10.1007/978-3-319-99007-1_78)
- Mutula, S. & Wamukoya, J. (2009). Public sector information management in east and southern Africa: implications for FOI, democracy and integrity in government. *International Journal of Information Management*. 29:333–341.
- Newton, C. (1986). Information and malformation. Records management in information systems Information '85: Using Knowledge to Shape the Future, Proceedings of

- Conference organized by Joint Consultative Committee of ASLIB, Bournemouth, 16-19 September, Library Association Publishing, London, pp. 75-86.
- Ngoepe, M. (2014). The role of records management as a tool to identify risks in the public sector in South Africa. *SA Journal of Information Management*, 16(1).
- Nwaomah, A. E. (2015). Political Factors' influence on Students' records Management Effectiveness in The Nigerian University System. *European Journal of Research and Reflection in Management Sciences* Vol, 3(2).
- Pari, S. & Tamar, C. (2020). *Records Lifecycle: Ohio State University. University Libraries and Archives. 2700 Kenny Road, Columbus, OH 43210.* <https://library.osu.edu/osu-records-management/lifecycle>
- Parliament of Ghana. (2019). Right to information law. The nine hundred and eighty-ninth act of the Parliament of the Republic of Ghana.
- Porter-Roth, B. (2006). *Applying Electronic Records Management in the Document Management Environment: Xerox DocuShare Business Unit 3400 Hillview Avenue Palo Alto, California 94304 USA (800) 735-774*
- Schellenberg. (1956) in Elizabeth Shepherd and Geoffrey Yeo (2003). *Managing Records. Handbook of principles and practices.* London Facet Publishing
- Shepherd, E. and Yeo, G. (2003) *Managing Records: A Handbook of Principles and Practice.* Facet Publishing, London.
- Torton, A. (Ed) (1999). *Managing business Archives.* Butterworth: Heinemann Publishing.
- University of Adelaide. (2020). *Records and Archives Management Handbook: The University Library.* <https://www.adelaide.edu.au/library/library-services/records-services/records-and-archives-management-handbook/life-cycle-of-records>
- University of Ghana. (2014). *University of Ghana Records Management and Archives Policies.* 52(3)
- University of Sheffield. (2020). *Records Management Policy: Scope of the Policy.* University. Secretary's Office. <https://www.sheffield.ac.uk/uso/info-gov/records2/policy>
- Visscher, A. J., Wild, P., & Fung, A. C. (2001). *Information Technology in Educational. Management: Synthesis of Experience, Research and Future Perspectives on Computer-assisted School Information Systems.* The Netherlands: Kluwer Academic Publishers.
- Zawiyah, M. Y. & Robert, W. C, (2000). *The Records Life Cycle: an inadequate concept for technology-generated records.*