



To Investigate the Usage of Information and Communication Technologies (ICTS) in School Records Management for Improved Service Delivery. A Case Study of Kaunda Square Secondary School

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ABSTRACT

This paper focuses on the usage of Information and Communication Technologies (ICTs) in school records management for improved service delivery at Kaunda Square Secondary School. The study employed a descriptive survey to find out the extent to which ICTs are used to manage school records, to determine the benefits of ICTs in managing school records and to establish the challenges encountered in application of ICTs to manage school records. 50 participants were selected to respond to a researcher-made questionnaire and data collected were analysed using frequency counts and percentages.

The result showed that the ICTs are used to manage school records and the majority 25 (50%) said always, 21 (42%) said very often, 3 (6%) said sometimes and 1 (2%) said rarely. The stud established the benefits of ICTs in managing school records and the majority 22 (44%) said ICTs make it easy to store documents and retrieve when they are required, 13 (26%) said ICTs aids in production of documents faster and neater, 5 (10%) said ICTs promote accuracy of information and 10 (20%) said ICT devices loss of important information is reduced. The study discovered the challenges encountered in application of ICTs to manage school records and the majority 19 (38%) said inadequate facilities such as furnished office and accessories. The paper therefore, recommended that schools must be funded so that they can buy enough computers that the school staff must use to manage pupils' records and the state school should also improve the training of teachers and computer instructors on the use of computer and other ICT facilities through seminar, workshops and in-service training.

Keywords: Information and Communication Technologies, Records management and Questionnaire

1. Introduction

Generally, Information and Communication Technologies (ICTs) have become a critical success factor needed for accomplishment of set goals and tasks in every organisation and human endeavours. Different scholars such as Enakrire & Ocholla (2017) have over flogged the understanding of ICTs, to mean a multifarious technological tools and resources, used for varied operations in organisations. The multifarious technological tools and resources are both old and new tools used to acquire process, store, edit, retrieve, transfer and disseminate information and knowledge of various formats.

The said technological tools and resources consists of telephony, cable, satellite, television, radio, computer-mediated conferencing, video conferencing; digital technologies, information networks, Internet, World Wide Web, intranets and extranets and software applications, among many others (Enakrire & Ocholla, 2017). These diverse ICT tools mentioned have had much impact on work performance of individuals in organisational growth. Therefore, the importance of ICTs globally cannot be overemphasised, as it has become so common in every human sphere. The reason behind this was based on its continuous use in activities/operations carried out within and outside organisations, in attainment of set goals.

The field of records management has over the past two decades undergone great advancements and this is mainly due to the emergence of modern information communication technology (Azad, 2008). The adoption of ICT in organisations has improved on the performance of tasks (Wamukoya 2006). Tusubira and Mulira (2005) argue that at the organizational level, it is widely accepted (though not fully appreciated) that the integration of ICT in organizational functions is necessary for increased efficiency, cost-effectiveness and competitiveness.

ICT has transformed the way in which organizations store and manage information (Iwhiwhu, 2009). Organizations today have adopted the use of ICT in order to cope with the ever increasing information generated within the organization (Lyman, 2004). In light of the above notion Kaunda Square Secondary School decided to incorporate ICT in the management of pupils' records in order to solve the problems of ineffectiveness in processing of results brought about by loss of marks, miscalculation of marks (Chifwepa, 2013).

The practice of records management has undergone significant changes in recent times. It has transited from a paper-based assignment concerned with the storage of an organization's diverse documents, to a profession occupied with the management of specified internal records in a multitude of media (Shuling, 2007). The introduction of computers into records management which widely developed in the 1550s, has offered speed, precision diversity,

flexibility and a rich and comprehensive documentation of process. This has been quickly embraced around the world as a critical information management and communication tool.

Further, the use of ICTs in records management has also brought about space savings since most documents can be filed electronically which has reduced risk in event of loss (). A study carried out by (Pember, 2006) on managing records in Tanzania revealed that personnel who use ICTs to create records were assisted by the computer in managing records which enhanced storage, retrieval, access, use, enhanced security, enhanced preservation, enhanced communication and report generation. The usefulness of ICTs in records management, notwithstanding, they have also introduced certain challenges such as change in software and hardware due to the rapid changes in technology, media deterioration and manipulation since they could be written, rewritten, cut and pasted, send to the other end or deleted querying the authenticity of records.

Nevertheless, these shortcomings do not in any way depreciate the significant role ICTs has played in records management in an era when physical documentation has become grossly insufficient. Thus, no meaningful records management process can ignore the impact of information and communication technology in effective records management since it is clear that information creation, storage and retrieval has gone from pictorial representations on the walls of caves and artefacts, to the invention of writing and computers (Paul, 2007).

According Mulauzi, Wamundila and Hamooya (2013) records management provide the ultimate proof or evidence of the activities being undertaken. Without records, activities become susceptible to frauds, forgeries, money laundering, tax evasion, negligence and deception...which can impair the whole system. Records allow for validation of documents including payments; form part of the cultural heritage of a nation and facilitate informed decision making.

1.1.1 Kaunda Square Secondary School

Kaunda Square Secondary School is a public secondary school that is located in Lusaka district. The institution is classified as an urban education institution, this institution is public owned. The school was founded in 2016 to provide quality education in Zambia (MoE, 2022). Kaunda Square Secondary School is committed to helping every student thrive. The school has highly-qualified faculty that strives to help challenging students intellectually while supporting their physical, social, and emotional well-being.

At Kaunda Square Secondary School, pupils' records can be organised into three broad categories. The first category refers to records documenting the contractual relationship between students and the Institution (Paul, 2007). This includes records documenting admission and enrolment, payment of tuition fees, academic and non-academic disciplinary proceedings. The next category consists of records "documenting the student as a learner such as records documenting programmes undertaken, academic progress and performance, awards (Toyo, 2017). The last category is records documenting the student as an individual and consumer of services provided by the institution. In this category are records documenting use of accommodation services, counselling services, library and IT support services, careers and employment services (Ngulube, 2007). These records are important because they serve as major information tools that protect pupils' rights, such as the right to ownership of a certificate with the right class, documented through academic cumulative records performance.

Pupils' records, whether in paper or electronic format, are important resources for schools and should be harnessed through effective records management practices (Yeo, 2003). The smooth running of any learning institution depends on effective and efficient records management. Unfortunately, many years of neglect had done great damage to records management in the educational sector. (Kemoni & Ngulube, 2007) believes that personnel who maintain registry system with filing cabinets containing paper evidence of school business are inadequate and, in fact, ignorant of their responsibilities.

Effect of ICT in school records management cannot be denied. Typing of letters, schemes of work and document filing could be time consuming as it is tedious. Nwosu (2003) noted that ICT assists the school principal to meet the task of school management in the area of record keeping. In view of the human factor involved, information or data which are written manually would often invariably results in errors, arrears of work thus giving room to misleading variables of decision-making as well as making information retrieval difficult. But with the use of ICT, speed, accuracy, quick information retrieval and decision making can take place. Adegun (2002) argued that the introduction of ICT in schools enhances the daily school routine; input and output facilities which facilitates interrogation of files, alterations, displays and retrieval of information which are not possible with manual system can be done.

Nwagwu (1995) pointed out that school records management can enhance managerial duty performance in the areas of planning for resource acquisition and utilization, pupils and staff personnel services, financial management and school community relations. The researcher argued that government regulations on what to do, who do it, when to do it, where, and how to do it are vital to school management and that these are contained in such documents as education law and the National Policy on Education which are to be kept in schools.

1.2. Theoretical Framework

A theoretical framework offers several benefits to research study. This is because it provides the structure upon which a researcher may define his/her work philosophically, epistemologically, methodology and analytically (Grant & Osanloo, 2014). A theoretical framework for this study was anchored on the Technology Acceptance Model (TAM) theory which provided a guideline on the usefulness of interactive tablets in primary schools.

TAM is an information systems theory that models how users come to accept and use technology (Venkatesh, 2000). The model suggests that when users are presented with new technology, several factors influence their decision about how and when they will use it. These factors are perceived usefulness of the system, perceived ease of use of the system, intention to use, and usage behaviour.

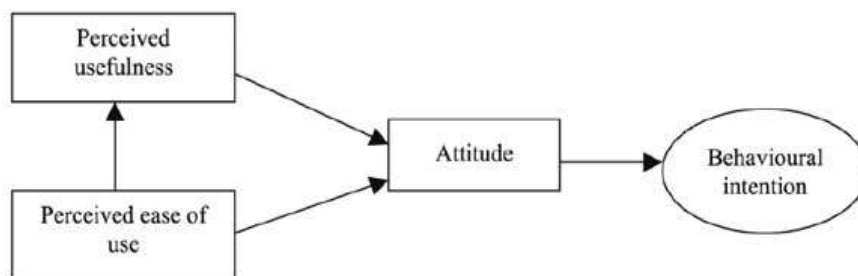


Figure 1. Technology Acceptance Model 2 (TAM 2)

Source: (Venkatesh & Davis, 2000, p. 188)

The technology acceptance model (TAM) is used in this study for its predictive ability in studies involving health workers. The causal relationships between perceived usefulness (PU), perceived ease of use (PEOU), attitude towards usage (ATU), and behavioural intention to use (BIU) technology are specified in the TAM to reflect the new environment of Health Information Systems. PU is defined as the degree to which an individual believes that using Information and Communication Technologies (ICTs) in school records management for would enhance his or her performance in the service delivery, whereas PEOU refers to the degree to which an individual believes that using the system would be free of cognitive effort. TAM suggests that actual usage of the system is determined by the users' behavioural intention to use (BIU) the system, which is determined by users' attitude towards using the system and their perceived usefulness and ease of use of the system.

2. Material and method

A research design is an overall plan for collecting and analysing data including specification for enhancing the internal and external validity of the study. It involves a plan of activity which guides a researcher in collecting, analysing, and interpreting data). The research design that was employed in this study was descriptive one. A descriptive research design is a type of research design that aims to obtain information to systematically describe a phenomenon, situation, or population.

A study population is an aggregate or totality of all subjects, objects or members that conform to a designated set of specification (Polit and Hungler, 1995). The study population involved members of staff from Kaunda Square Secondary School. The researcher establish that the institution has 60 teachers (MoH, 2021)

The sample size is a smaller group or a subset of a group of interest that is studied in research (Macnee & McCabe, 2008). To select the number of participate in the study; the researcher established the total number of teachers to be 60. Therefore, the following formula by Cochran, (1963) was used to come up with the sample size for residents. The sample size was selected using sample random sampling techniques

The formula:
$$n = \frac{N}{1 + N(e)^2}$$

Whereas: N= Target population

n=Total sample size

e = Desired margin error

Respondents' sample size for residents

N=60 desired margin error (0.12)

$n = 60/1+60 (0.12)^2 = 55$ participants

3.4 Data Collection Tools

The study used questionnaires to collect data from the respondents. The semi-structured questionnaires were answered by teachers.

The data was checked for uniformity, ambiguity, consistency and accuracy. The statistical methods was used in this research consisted of descriptive statistics of frequency count, percentage, and pie charts. In addition, Statistical Package for Social Sciences Software (SPSS), version 20 was used in the analysis of collected data. SPSS as software was used because it had provisions for data entry screen design and it was also user friendly.

A letter of introduction and request for support was submitted to the school manager. This was done in recognition of their authority and gain their support and cooperation during the study. The researcher introduced herself and the purpose of the study was explained to the respondents. In addition, verbal

permission was sought from each participant who was selected in the sample and confidentiality was assured that no names are indicated on the questionnaires.

The study is quantitative employing a descriptive research design. The study site was done at Kaunda Square Secondary School with a total sample size of 55 participants. The sample size was selected using sample random sampling techniques. The data collection tool is the questionnaire. The instruments were pre-tested in the pilot study. Data was analysed using Statistical Package for Social Sciences (SPSS version 20).

3. Results and Discussion

Demographic Characteristics of the Respondents

The study was aimed at investigating the usage of Information and Communication Technologies (ICTs) in school records management for improved service delivery. The study revealed that 32 (57%) were female teachers compared to male teachers who were 25 (44%). This shows that the majority of the respondents were female teachers. The study discovered that 10 (20%) were certificate holders, 26 (52%) were diploma holders, 14 (28%) were degree holders, and 2 (4%) had Master's degrees

The teachers were asked to state their working experience in years. According to the findings of the study, workers had different working experiences, with the majority 18 (36%) having 9 years and above of working experience. The next big share had 6-8 years of working experience forming 16 (32%). The other one had 3-5 years of work experience forming 11 (22%) and 1-2 years was forming 5 (10%)

5.2 The extent to which ICTs are used to manage school records

Respondents were asked how is the usage of ICTs for school records management at Kaunda Square Secondary School and study revealed that 25 (50%) said always, 21 (42%) said very often, 3 (6%) said sometimes and 1 (2%) said rarely. Respondents were asked the contribution of ICT in the management of pupils' academic records in the following areas and the study established that 12 (24%) said management of pupils' personal records, 21 (42%) and 16 (32%) said registration of pupils. Respondents were asked if these ICTs are effective in school records management for improving service delivery and the study discovered that 7 (14%) said No and 43 (86%) said Yes. According to Hamel (2018), the use of ICTs in records management allows almost instantaneous access to information. Faster data access time can increase the productivity of decision makers such as managers, analysts, accountants and other workers who use data on a regular basis.

These findings are similar with the results obtained from a research carried out by Pemberton (1991) and Ngoepe (2008) who assert that better service delivery always begins with better records management practices. This is because government departments can only take appropriate action and make correct decisions if they have sufficient information at their fingertips. Hence, proper records management supports efficiency and effectiveness in service delivery in a variety of ways. These could include, among others, documentation of policies and procedure that inform service delivery such as; the type of services provided; who are to be responsible for carrying out the work; and what costs involved.

Kemoni, Ngulube and Stilwell (2007) have also affirmed that proper records management is significant to schools realisation and achievement of their goals such as the rule of law, accountability, management of state resources, and protection of entitlements of its citizens as well as enhancing foreign relations. Nandain (2006:4) expands on Kemoni, Ngulube and Stilwell's (2007:5) argument and observes that "effective information and re-cords management provides the foundation for accountability, protection of human rights and increases citizens' awareness to their rights". Thus it is imperative for government to continue improving their records management programmes in order to achieve greater service delivery, bearing in mind that the customers' socio-political and economical needs are diverse. The underlining point therefore is that proper records management facilitates planning, informed decision making, supports continuity, consistency and effectiveness of public service delivery. According to Ngoepe (2004) for schools to function effectively they have the responsibility of ensuring that they creates and have access to complete and credible information to allow for effective and appropriate decision making on behalf of the pupils.

5.3 Benefits of ICTs in managing school records

Respondents were asked the benefits of ICTs in managing school records and the study established that 22 (44%) said ICTs make it easy to store documents and retrieve when they are required, 13 (26%) said ICTs aids in production of documents faster and neater, 5 (10%) said ICTs promote accuracy of information and 10 (20%) said ICT devices loss of important information is reduced. This finding is in consonant with that of Nwosu (2003) who noted that ICT assists the school principal to meet the task of school management in the area of record keeping. In view of the human factor involved, information or data which are written manually would often invariably results in errors, arrears of work thus giving room to misleading variables of decision-making as well as making information retrieval difficult. But with the use of ICT, speed, accuracy, quick information retrieval and decision making can take place.

Respondents were asked if they do you agree or disagree that the benefits of ICTs in managing school records has improved service delivery and the study discovered that 26 (46%) they agreed, 17 (34%) they strongly agreed, 8 (16%) they disagreed and 2 (4%) they strongly disagreed. This finding supports the opinion of Nwagwu (1995) who pointed out that school record can enhance managerial duty performance in the areas of planning for resource acquisition and utilization, students and staff personnel services, financial management and school community relations.

Chaurasia (2003) feels that ICT offers a number of benefits: It allows greater accessibility, wider teach instant communication and dissemination of information, record keeping and sharing of information. These aspects have the power to change the way public administrative is conducted and the

association between the organization and citizens. The new possibilities offered by providing ICTs to public management present a powerful tool to fight corruption.

Ralph and Reynolds (2008) support this by stating that ICTs provide new capabilities for organisations to handle large amounts of information that they would not do previously. They argue that large amounts of business records can be stored in computer systems instead of depending on handwritten scripts or recording information manually. Information is also easy to handle as one does not require plenty of physical space such as records centers to store it. With electronic storage devices, information can be retrieved at any time by multiple users at the same time. For example, a manager of a company can send an email which can be read within that same period by all the people concerned. This has led to efficiency and an increased output, which has made many companies more profitable.

5.4 Challenges encountered in application of ICTs to manage school records

Respondents were asked the challenges they encountered in the application of ICTs to manage school records and the study revealed that 10 (20%) said lack of expertise on the use of ICT devices, 19 (38%) said inadequate facilities such as furnished office and accessories, 14 (28%) said inadequate funds to provide ICT devices and 7 (14%) said ignorance on the advantages of ICT devices. In a similar study done Onifade (2003) reported that financial allocation to schools was at a low level; this suggests that principals could not readily purchase ICT equipment for effective record keeping in public schools. Ajabor (2001) contended that the usage of computer has been handicapped by no supply of electricity to many schools. Another constraint to effective utilization of ICT equipment as perceived by Stevenson (2005) are lack of interest and awareness of the benefits of using ICT for record keeping. They opined that ignorance about the importance of and need for ICTs can make even those rich enough to acquire them, become apathetic to ICTs.

These findings are similar with the results obtained from a research carried out by Kemoni (2007) public sector records management programmes in Africa are plagued by various problems, due to the inability of registries to play their roles effectively. This study also found that there were existing problems that hindered the RMU from providing information and records management services effectively. Records management personnel identified factors contributing to the current records management situation in the Department of Corporate Services as including; small mall budget for records management 10 (20.9%), shortage of skilled personnel 12 (100%).

These results were likened to the findings of the research done by Kemoni (2007) who further posits that the absence of a records management policy has the ability to obstruct the role of public service providers. Thus the lack of a records management procedures manual would have implications such as records management personnel not having the necessary guidelines for managing records during the continuum of activities that would make the management of records throughout their life-cycle easier.

In a similar study done by Mulauzi (2012) is that many records managers is to know whether existing or planned Technology systems are technically capable of supporting records management requirements and protecting the information base on which organization depends on such as; quality, comprehensive, accurate, adequate, complete and meaningful, authentic, unique, authority, an altered and compliance of a record.

5.5 Summary of the chapter

This chapter has discussed the major findings of the study. The next chapter will conclude and provide recommendations to the study. This chapter will also give suggestions for further research.

Conclusion and Recommendation

In conclusion, it is possible to point out that ICTs have played a great and core role in records management. This can be evidenced in the secure, quick retrieval and update of records, accuracy in dissemination of records, records capture and tracking of records through the use of databases and other measures. The first objective was to find out the extent to which ICTs are used to manage school records and the majority 25 (50%) said always, 21 (42%) said very often, 3 (6%) said sometimes and 1 (2%) said rarely. Respondents were asked the contribution of ICT in the management of pupils' academic records in the following areas and the study established that 12 (24%) said management of pupils' personal records, 21 (42%) and 16 (32%) said registration of pupils. The study discovered that ICTs were effective in school records management for improving service delivery and the majority 43 (86%) said yes.

The second objective was to determine the benefits of ICTs in managing school records and the study established that the majority 22 (44%) said ICTs make it easy to store documents and retrieve when they are required, 13 (26%) said ICTs aids in production of documents faster and neater, 5 (10%) said ICTs promote accuracy of information and 10 (20%) said ICT devices loss of important information is reduced.

The third objective was to establish the challenges encountered in application of ICTs to manage school records and the study discovered that 10 (20%) said lack of expertise on the use of ICT devices, the majority 19 (38%) said inadequate facilities such as furnished office and accessories, 14 (28%) said inadequate funds to provide ICT devices and 7 (14%) said ignorance on the advantages of ICT devices.

6.2 Recommendations

Basing on the findings and challenges faced by Kaunda Square Secondary in the use of ICT in records management; the researcher recommends that the following strategies be adopted if role of ICT is to be realized in records management.

The school must be funded so that they can buy enough computers that the school staff must use to manage pupils' records.

The state school should also improve the training of teachers and computer instructors on the use of computer and other ICT facilities through seminar, workshops and in-service training.

The school manager should develop interest in the use of ICT facilities for effective school record keeping.

Since technology is changing rapidly from time to time; on job training programs should be schedule for the records staff to enable them deal with the current problems that relate to technology and records management.

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