Challenges in Academic Records Management in Tertiary Institutions in Ghana

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Abstract

The study seeks to examine challenges associated with academic records management in tertiary institutions in Ghana. This study aims to examine internal policies related to academic recordkeeping, records management practices, technology used for keeping student academic records, and the challenges institutions face in managing student records. A stratified sampling technique was used to sample 1990 respondents from public and private universities, polytechnics, and nursing and teacher training colleges. Questionnaires were used to gather data. Both descriptive and inferential statistics were used to analyse the findings of the study. This study found a significant association between the type of institution and policies for managing student academic records. This was attributed to differences in the mandate and focuses of the various categories of tertiary institutions. The adoption of internal policies is critical for controlling irregularities in record keeping in tertiary institutions. There was no significant association between the type of institution and practices to control indecencies in academic record management. This may be attributed to the ability of institutions to adopt the practices they prefer to address record security challenges. There was a significant association between the type of institution and the kind of technologies adopted to manage records keeping systems. In general, public tertiary institutions lack the logistical support required to effectively manage electronic records. Virus infection was a major threat to electronic records keeping in tertiary institutions.

Keywords: Academic records, Academic records management, Academic records systems, Records management technology, Life cycle concept, Continuum model.

Reference to this paper should be made as follows:

INTRODUCTION

Records management has become one of the most difficult tasks associated with educational service delivery. This, according to Shurville, Browne and Whitaker (2008), is due to the poor management of accurate, reliable and trustworthy records so as to fulfill evidential requirements. As noted by the National Archives of Australia (2002), student academic records must endure and remain trustworthy for a long time, sometimes permanently. Many administrative heads of academic institutions complain of a lack of funds and material resources for records keeping. The reality also reveals a gross inadequacy of qualified personnel and facilities, complications introduced by a burgeoning student population and space challenges (Attwood & Gill, 2008).

Consequently, many tertiary institutions in Ghana have become preoccupied with measures to maintain more efficient and credible student academic records. This search has been further complicated by the technological requirements and pace of the current digital age. The need for a record management system that can better address data security challenges and enhance the credibility and sustainability of student academic records has led to the adoption of several institutional records management policies. In some cases, such policies have in turn led to the adoption of innovative processes for managing student academic records. These include paper recordkeeping, electronic recordkeeping, and a hybrid of both paper and electronic record keeping systems. The successful implementation of any educational policy, however, depends on the process for its initiation, a supportive technological environment as well as the human capacity needed to manage such technologies. In other words, any educational policy that does not emanate from a rational process, does not have the requisite technological support or does not have the human capacity to manage the process is likely to fail.

Records management is a necessary part of the work of almost all employees within an educational institution including individuals in their personal lives. The importance of records management is highlighted by the need for evidential proof of activities in account or dispute. Organizations and individuals thus cannot afford to downplay the art of proper records management systems. Every record has a life cycle, as explained in the theoretical foundation section below. This starts with the proper capturing of data, the creation of records, retention of records, and final disposition of records, all of which must be properly managed. In the context of best practices, improperly capturing data can render the entire record unauthentic and unacceptable when relevant questions arise. The adequate management of records in any business environment should thus provide:

- Proof of originality
- Proof of compliance of data capturing and
- Proof of retention or disposal

The following which are known to be among the best practices must also be present:

- Setting policies and standards;
- Assigning responsibilities and authority;
- Providing a range of services relating to the proper management and use of the records;
- Instituting punitive measures for recordkeeping irregularities in the institution in order to deter similar offenses;
- Designing and administering specialized systems for records storage where necessary; and
- Integrating records management into systems and practices across the organization (Torton, 1999).

Managing Records and Other Information Resources

In practice, the distinction between records management and information management is often blurred, especially in smaller organizations where records management may be undertaken by an information
manager. In organizations that support a dedicated records management service, records managers are often expected to maintain information sources that are not records. Information management is sometimes perceived to be concerned only with current information, and older or historic information, in contrast, the province of records management. Records managers are rarely asked to manage externally generated information products (whether published texts or external data) but may have custody of, or some responsibility, for information products generated internally in paper or electronic form.

Records managers may be interested in information products for a number of reasons. First, internally generated information products are created within a business context. The data in a typical corporate database has been collected in the course of business and, as an information tool, the existence of internal publications or a corporate website indicates that organizational activity occurred when they were created (Kennedy & Schauder, 1998).

Secondly, information products are used in the course of business activities. Just as actions are involved in creating and editing the products of business activities, so actions are involved in using the resulting databases. Although consultation of databases or procedural manuals usually leaves no trace, in some cases it may be necessary for a record of each consultation to be maintained. In other cases a record may not be complete, or fully understandable, unless the information sources used in its preparation are identified. Sometimes an information product such as a database is compiled for the purpose of a single activity; in such cases it can be appropriate to retain the product of the activity in close association with the record of activity.

Thirdly, the use of information products may involve their transmission or publication. One common business activity is the sending of information products from one person or organization to another; brochures, for example, are sent to clients, or news cuttings attached to a memo. When an information product is included in a transaction of this kind, it is normally appropriate for the product to be incorporated into the record of the transaction, or for its identity to be documented so that it can be traced when the record is used at a later time.

Finally, the use of websites is of interest to record managers. Websites may be consulted as information sources but can also be used for carrying out business. While web transactions are effected by the transmissions of data from one party to another, the static content of a website can also form part of the evidence surrounding the transaction. Organizations may wish to consider the longer-term retention of their web pages, not only for informational reasons, but as part of a programme for the management of evidence (Casanova in Shepherd & Yeo, 2003).

Electronic Records Management

According to Stewart and Westgate (2008), an “electronic record is a record stored on electronic storage media that can be readily accessed or changed.” An electronic record is often referred to as a machine-readable record, that is, digitized and coded information that, to be understood must be translated by a computer or other type of equipment. Electronic records have certain attributes including the content or the intellectual component of the document. The structure represents a second attribute and consists of the appearance, arrangement or format of the content of the document and the context which contains the background information that helps explain the meaning of the document. Electronic records can be generated or acquired in different formats. Some of the formats include quantitative data, text, images, and sound that originate as an electronic signal. Electronic records may take the form of a magnetic medium where a variety of magnetically coated materials are used by computers to store data including the cassette, floppy disk, hard disk and magnetic tape. There is a need to monitor electronic records to ensure the records are accessible and readable until final disposition. Organizations may need to reformat or migrate the records. It is likely that increased dependence on electronic recordkeeping will mean that organizations will wish to retain data for longer periods of time. Electronic records may therefore require special care including keeping them at the appropriate temperature and humidity, recopying the information periodically, and testing the readability of an annual sample.

Managing records electronically has a number of advantages for organizations and individuals. It helps to reduce paper storage by converting paper documents stored within the business or in an archive
into an electronic form. Obtaining paper from storage or an archive is typically slower than electronic retrieval and so electronic records improve retrieval time. Along with the improved retrieval time comes the ability to perform searches for similar information. This is especially useful when trying to implement major changes or perhaps identify information subject to litigation. Keeping records electronically saves paper, printer and toner costs by reducing the need to print paper documents as single electronic versions can be used over and over. Electronic records enhance staff productivity since less time is spent searching for documents or trying to find the most recent version. Alongside these many benefits, electronic records do pose a number of challenges. Electronic storage media is unstable as it is difficult to establish the precise life span of most products. There is also the challenge presented by technological change. Both hardware and software technologies can become outdated and therefore no longer supported by computer industry. This creates a problem with long term access to records.

In many tertiary institutions in Ghana, administrative heads and their supporting staff find themselves in difficult situations in terms of the computation of final year students’ programmes records for graduation. In some cases the wrong data has been captured and in others the data and ID number have been incorrectly posted. This often results in ad hoc measures including the arbitrary replacement of lost recorded data through further incorrect capturing or blatant omission, all of which could presumably be avoided. Such incidents in records management activities in higher education institutions have undermined the quality of the service delivery of records managers. It has further rendered the credibility of students’ academic achievements inauthentic after graduation, sometimes through no fault of their own.

Students, of course, have their own share of the blame for misconduct in academic institutions including the falsification of data and cheating in examinations all of which makes academic achievement less meaningful. This also undermines the dictates of meritocracy and academic self-efficacy. The conceptualization of these strains of misconduct has resulted in the development of theories such as the social capital (negative/positive) theory and critical realism. This paper is, however, limited in its theoretical foundation to the life cycle and continuum model of records management as well as allied theories such as institutional theory and general deterrent theory.

This study seeks to empirically assess records management challenges confronting tertiary institutions in Ghana. The heads of postsecondary or tertiary institutions are increasingly confronted with an influx of applicants from the African sub-regions whose academic records seem to be questionable at first glance. This trend compounds other records management challenges and adds the urgency with which new systems need to be developed.

**Research Objectives**

This study aims to examine:

1. Internal policies related to student academic record keeping;
2. Records management practices adopted in tertiary institutions;
3. Technology used for keeping student academic records; and
4. Challenges institutions face in managing student records.

**THEORETICAL FRAMEWORK**

This study is guided by the life cycle concept and continuum model in the management of records. Two additional theories, institutional theory and deterrent theory, are also used.

**Life Cycle Theory**

The International Records Management Trust (IRMT) (1994) and International Management Trust (IMT) (1999) indicates that records can only be managed effectively and efficiently if attention is paid to their handling from the time they are created until when they are disposed of or released to the archives. The
life cycle theory is that recorded information has a life similar to that of a biological organism, in that it is born, it lives, and it dies. Schellenberg (1956) confirm the life cycle concept of records and iterate that the idea was developed in North America. These early writers spoke about the life span of records which included their current use and final destiny. Similar concepts have been employed in other disciplines, notably the information cycle models used in information management and technology. In some narrow interpretations these three stages are seen as the equivalent of current, semi-current and non-current (or archival) phase of a record. In others, they are equated to the records management activities of creation, maintenance and use, and disposal (IRMT, 1994; IMT, 1999). Each of the phases has various elements associated with it and functional activities are performed within each element (Penn, et al, 1994).

Pen, et al (1994) however, argues that this division need not be overstressed. This is because the ultimate goal of the life cycle model is not to develop a set of ways in handling all the various problems and conditions of records management, but to establish a sound methodology for evaluating situations so that the most appropriate course of action can be taken in each instance. Shepherd and Yeo (2003) argue convincingly that the two approaches are not incompatible. The objection is not to the life cycle concept itself, but to those manifestations of it that reflect an undeveloped view of records management or try to introduce excessive practical detail. Specific practice will vary, they argue, from one working context to another, but models based on the life cycle help to identify stages and actions within a records management programme, and thus provide a useful framework for planning, implementation and monitoring. Records management and archives administration constitute one field unified through the records life cycle concept.

Figure 1: The life cycle concept

![The life cycle concept](source: (Johson & Kallaus, 2004, 7th Ed.))

The Continuum Model

The records continuum model is defined as the consistent and coherent process of records management throughout the life of records from the development of recordkeeping systems through the creation and preservation of records, to their retention and use as archives (IMT, 1999). The model is largely a critique of the life cycle concept. Among the issues which the continuum seeks to address are suggestions that the life cycle model is biased towards paper records and does not adequately address electronic records management issues. From a more comprehensive premise, the continuum model also divides the life cycle of a record into two phases namely, a records management phase and an archival phase, each consisting of four distinct and separate stages (IRMT, 1994).
Allied Theories

The institutional theory considers the process by which structures including schemas, rules, norms and routines become established as authority guidelines for behaviour. It examines how these elements are created, diffused, adopted and adapted over space and time and how they fall into decline and issue. The foundational belief of this theory is that of stability and order in social life. Consequently, issues related to student academic records should be maintained by the rules and norms establishing them.

The General Deterrent Theory (GDT) posits that individuals could be dissuaded from committing anti-social acts through the application of countermeasures (Schuessler, 2009). This may include appropriate disincentives and sanctions. Using GDT as a guideline, countermeasures can thus be adopted to eliminate any threat or at least mitigate risk. In records management, countermeasures like education and training, back-ups, reprimands and so on can all serve as tools to prevent or mitigate risk.

METHODOLOGY

A descriptive research design was used in this study. The study population was comprised of students, record keepers and lecturers of tertiary institutions in Ghana. A stratified sampling technique was used to sample 1990 respondents from public and private universities, polytechnics, and nursing and teacher training colleges. The universities sampled included the University for Development Studies, University of Cape Coast, Central University College, Valley View University, and Methodist University College. The polytechnics sampled included Accra Polytechnic and Kumasi Polytechnic. Lastly, Koforidua Nursing Training College, Mount Mary College of Education, and Accra College of Education were also sampled.

A total of 1280 students, 221 record keepers and 489 lecturers were randomly sampled from the selected institutions. In terms of institution, 513 respondents were sampled from the public universities, 600 from the private universities, 400 from the polytechnics, and 169 and 308 respondents from nursing training and teacher training colleges, respectively. Data was analyzed with SPSS version 17. Means, standard deviations, chi square and ANOVA were used to describe the data.

RESULTS AND DISCUSSION

Internal Policies Related to Student Academic Record-keeping

Table 1 shows that 62.4% of the record keepers indicated that their institutions have policies for managing academic records, while 19.9% were not certain whether their institutions have such policies. This suggests that majority of the tertiary institutions make a concerted effort towards a regular system for handling academic records. Thus, per the isomorphism principle, instituting internal policies to manage academic records implies the commitment of such institutions to protect the integrity of academic records. This is likely to enhance record keeping in such institutions.

Table 1: Institutions Having Policy for Managing Academic Records

<table>
<thead>
<tr>
<th>Type of institution</th>
<th>Have policy for managing academic records</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
</tr>
<tr>
<td>Public university</td>
<td>27 (96.4)</td>
</tr>
<tr>
<td>Polytechnic</td>
<td>33 (55)</td>
</tr>
<tr>
<td>Nursing training</td>
<td>6 (60)</td>
</tr>
<tr>
<td>Teacher training</td>
<td>23 (100)</td>
</tr>
<tr>
<td>Private university</td>
<td>49 (49)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>138 (62.4)</strong></td>
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$\chi^2 = 45.5$  P-value = 0.001, df = 8
The uncertainty in the minds of some of the record keepers, however, about the presence of policies for managing academic records in their institutions is a denunciation of the effectiveness of their record keeping systems. The implication is that the schemas, rules, norms and routines for records management, as described by Scott (2004), have not been well established in such institutions. Comparative analyses among the institutions show that teacher training colleges and public universities were more committed to ensuring credible academic records keeping than private universities, polytechnics and nursing training colleges.

One-quarter (24.9%) of the record keepers noted that perpetrators of impropriety in academic record keeping in their institutions are suspended, whilst 19.9% indicated that such persons are transferred to other departments, and 16.7% indicated that they are dismissed. However, 15.4% of the record keepers indicated that no action is taken against perpetrators of impropriety in academic record keeping. This is likely to affect the effectiveness of record management systems in such institutions since there are no deterrence mechanisms. According to the GDT, impropriety in academic record keeping is more likely to increase in institutions that do not have the political will and commitment to punish perpetrators of such acts. Schuessler (2009) adds that an increase in indecencies in academic record keeping is a major dent on the credibility and integrity of the academic records and image of such institutions.

Anova results showing a p-value of 0.01 (df = 8; F statistic = 10.5; F critical = 5.1) imply that there was a significance difference in the incidences of academic irregularities among the institutions which have internal policies for regulating academic records, institutions which do not have policies, and those who are uncertain of having such policies. This suggests that the adoption of an internal policy is critical for controlling irregularities in academic records keeping in tertiary institutions.

Records Management Practices in Tertiary Institutions

Records management practices adopted by the institutions included planning the information needs of the schools, enforcing policies and practices regarding records organisation, and coordinating internal and external access to records. Irrespective of the institutions having well formulated internal policies to regulate academic record keeping, all have adopted certain practices to safeguard the integrity of their academic records. Such practices are likely to check the incidence of academic records irregularities in tertiary institutions.

A chi-square test of independence of 11.7 (df = 12) with an asymptotic significance of 0.52 implies that there was no significant association between the type of institution and the practices to control indecencies in academic records management. The implication of this is that tertiary institutions adopt practices deemed convenient and effective for curbing irregularities in academic records management. The results here may be attributed to freedom of institutions to adopt the practices best fit for addressing their record security challenges.

Technology Used for Keeping Student Academic Records in Tertiary Institutions

From the study, 91.6% of the respondents indicated that their institutions use electronic systems to manage student academic records, 2% indicated that their institutions used manual or paper-based systems, and 6.4% admitted that their institutions used both manual and electronic systems to manage academic records. This reflects the assertion of InterPARES (2002) that due to the flexibility, increased understanding in the use of ICT, and enhanced data security measures, more institutions are switching from paper-based record keeping to electronic-based record management systems.

The reasons given for the adoption of electronic systems in managing student academic records were to keep abreast of current technological issues in records management, enhance data security, address data security challenges, limit accessibility rights to academic records, and improve tracking systems. Others motivations included to reduce space needed for paper-based records, avoid data loss through manual record keeping systems, eliminate the disappearance of record files, and to move away
from the fragility of paper-based records keeping systems. This suggests that the majority of tertiary institutions have confidence in the ability of electronic-based record keeping systems to address records keeping challenges.

The reasons given for the adoption of paper-based records keeping systems in some of the tertiary institutions included the following: paper-based record keeping is a tradition in the institution, fear of cyber attack and Internet hackers on such sensitive records, fear of viral attack on academic records, lack of storage capacity for such records, and not having database applications to run electronic record keeping systems. A number of institutions were thus more concerned about the challenges associated with electronic-based record keeping systems than the benefits they were likely to experience.

Some of the reasons for adopting both electronic and paper-based technologies for student academic records keeping were to produce complementary backups, generate backups to authenticate student academic records, have backups in times of technological or power failure, and an inability to convert all paper-based records to electronic form. These results suggest that some institutions are still in the process of transiting from paper-based records keeping systems to electronic systems. At the same time, some institutions still doubt the effectiveness of a completely electronic-based system for managing student academic records. This explains why a number of public institutions have adopted both approaches.

A chi-square test of independence of 0.001 (df = 7, $\chi^2 = 75.78$) with the acceptable margin of error of 0.05 implies that there was a significant association between typology of technology used to manage student academic records and the effectiveness of eroding irregularities in academic record management. Thus some of the approaches were more effective than others in addressing data security challenges surrounding student academic records keeping.

**Challenges Institutions Face in Managing Student Academic Records**

This study found that the challenges faced by institutions included: poor knowledge among record keepers on electronic records management (mean = 2.7, stdv. = 0.69), inadequate record keeping equipment (mean = 2.4, stdv. = 0.79), interferences from supervisors (mean = 2.2, stdv. = 0.76), and low morale on the part of record keepers due to poor remuneration (mean = 2.6, stdv. = 0.91). Other challenges were the frequent crashing of hard drives leading to the loss of records (mean = 2.6, stdv. = 0.87), weak technological support for efficient record keeping (mean = 2.3, stdv. = 0.65), and frequent freezing of computers making it difficult to retrieve information (mean = 2.5, stdv. = 0.85).

Respondents from the public universities and teacher training colleges agreed that there was poor knowledge in computerized records management systems among record keeping staff. Respondents from the polytechnics strongly agreed with this conclusion, while respondents from nursing training colleges and private universities disagreed. Soni (2004) reports that insufficient capacity among record keepers increases insecurity in electronic records keeping.

Lack of adequate equipment to effectively manage electronic records in public tertiary institutions is a major indictment on the commitment of administration towards records keeping. This is because adequate equipment and human capacity form the bases for effective record keeping (InterPARES, 2002). Low morale on the part of record keepers due to poor remuneration provides breeding grounds for bribery and falsification of academic records.

All of the respondents from the various institutions strongly agreed that system viruses are leading to loss of records (public universities – mean = 1.5, stdv. = 0.44; polytechnics – mean = 1.7, stdv. = 0.72; nursing training colleges – mean = 1.8, stdv. = 0.47; teacher training colleges – mean = 1.7, stdv. = 0.51; and private universities – mean = 1.6, stdv. = 0.63). This is in line with the assertion of InterPARES (2002) that electronic systems bear the seeds for their own destruction. It explains why some institutions have chosen to combine both electronic and manual records keeping systems.

A chi square test of independence of 0.091 (df = 24, $\chi^2 = 23.08$) implies that there was no significant association between challenges in academic records management and the various categories of tertiary institutions. Challenges in academic records keeping are thus general among tertiary institutions.
CONCLUSION/RECOMMENDATIONS

The study recommends that electronic record keepers must stay up-to-date on current database applications, software and data security issues so as to safeguard the sanctity of records. Institutions should likewise secure database applications and record keeping software for their record keepers. It is important that institutions also procure antivirus software and a constant Internet supply (for updates) to protect student academic records against viruses.

Motivation and incentive packages as well as proper checks and balances should be instituted by the administration of institutions for records keeping staff to insulate them against attempts at bribery and the falsification of records. This also means that people who are employed as records managers should be of high moral value in order to eschew any possible misconduct in their operations. Sometimes in order to ensure the right process for screening job applicants for specific roles, it may be an ideal to hire the service of competent recruitment agencies.

All institutions should have internal policies for regulating records keeping systems. These policies should make it compulsory to generate a limited number of duplicates of sensitive documents in different formats to be kept under strict security. This will help to reduce the rate of data loss and delays in retrieving records during power outages and hard drive crashes. Record keeping staff should be retrained and have all of the challenges affecting their work made evident to them to guard against possible misconduct. Policies regarding punishment for deliberate misconduct in records management should be implemented and publicized.

REFERENCES


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