



## Overcoming The Challenges Associated with Effective Records Management Practices in Nigerian Construction Industry

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### ABSTRACT

The need for proper record management is very fundamental in an organisation because, absence of adequate management of records can hamper the effectiveness and efficiency of organisation's operations. The study sought to identify challenges associated with effective records management practices (RMP) in the Nigerian Construction Industry and to suggest solutions by which these challenges can be overcome in the industry. A quantitative research approach was adopted for the study employing a cross-sectional survey of 50 construction organisations. Questionnaires were self-administered to the targeted respondents in the selected samples and 43 responses were retrieved and found valid for analysis, representing a response rate of 86%. Percentile and mean internal score (MIS) were employed in the analysis. The study revealed that construction organisations manage their records in more of paper-based format than electronic-based format. The findings indicated that lack of trained staff, high cost of finance, inadequate storage facilities, poor maintenance culture and irregular power supply are the most top challenges associated with records management practices in Nigerian construction industry. The finding suggested the creation of awareness of value for proper documentation, adequate training for staff, provision of adequate facilities, regular inspections for quality checks and adequate clean-up of inactive records as proffered solutions of overcoming the identified challenges for effective records management practices. The study finally recommended the need to provide adequate training for staff on effective records management practices by organizing courses and workshops to cover the capacity of professional management of both paper and digital or electronic records.

**Keywords:** Records, Management, Construction organisations, Nigeria.

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#### 24<sup>th</sup> iSTEAMS GoingGlobal Multidisciplinary Conference Proceedings Reference Format

Ilori, J.O., Olagoke, H.A. & Enoko, O.S. (2020): Overcoming The Challenges Associated With Effective Records Management Practices In Nigerian Construction Industry. Proceedings of the 24th iSTEAMS GoingGlobal Multidisciplinary Conference Proceedings. The University of Ghana/Council for Scientific & Industrial Research Ghana – Virtually Stationed in June, 2020. Pp 243-252 [www.isteam.net/ghana2020](http://www.isteam.net/ghana2020)

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### 1. INTRODUCTION

Enormous amount of information is frequently generated during construction projects which requires to be properly gathered, handled and preserved in such a way that its integrity and genuineness in form of records are maintained. Hence, such information gathered on projects and kept for record purposes can serve as historical memory and reference material at any point in time, even after the projects might have been carried out. Also, records on construction projects need to be accurate, current and easily retrievable.



Levy (2002) stated that adequate documentation during construction project assist to maintain adequate records of history of the construction process. According to Akor and Udensi (2013), records are documents or information generated, recorded and preserved in either written form, recorded film or through electronic process. Further to this, they asserted that records are vital assets of any organisation which have its value go beyond the immediate environment.

Danso (2015) mentioned that the need for adequate record management practices (RMP) is very fundamental in an organisation because, absence of this practice can hinder the effectiveness and efficiency of organisation's operations. When records are not accurately managed and preserved, it takes ample time in sorting and locating desired information from large volumes of records. Records that are misplaced or lost, worthwhile information for decision making can be made difficult to provide concise and up-to-date records of both past and present operations which has raised alarming challenge of ineffective record keeping (Bakare, Abioye and Issa, 2016).

Records are the lifeblood of knowledge driven in construction organisations and it is highly considered as transactional evidences, proof of conducts and historical memory of its conduct. However, due to today's highly complex and competitive business environment and, unforeseen exigencies that often arise on construction projects, the manner in which records are being managed has posed a major challenge on construction. Records in organisations are in both paper and electronic formats with the bulk of the records in paper format for storage of information (Webster *et al.*, 1991; Keakopa, 2006; Ahmad *et al.*, 2017). The alarming rate of records misplacement and loss from which vital information are retrieved coupled with inappropriate records management has resulted into poor operational performance of most construction organisations which lead to deviation from the original plan, disputes, variations and often claims. Moreover, previous studies on records management abound both within and outside Nigeria (Dawha and Biu, 1993; Webster, Hare and McLeod, 1999; Nycyk, 2008; Kalusopa and Ngulube, 2012; Akor and Udensi, 2013; Danso, 2015; Bakare *et al.*, 2016), but there is a dearth of studies on what constitute challenges associated with effective records management practices particularly in the context of Nigerian construction industry.

Thus, the absence of studies on what constitute challenges impeding effective records management practices and proffered solutions to overcome these challenges therefore drives the need to identify the challenges to the effective records management practices (RMP) in Nigerian construction industry and also suggest solutions to overcome these challenges. This study will educate construction practitioners on the challenges of RMP needed to overcome to enhance effective implementation of RMP in the industry, which will in turn improve performance of construction organisations at both organisational and project levels. Thus, the aim of this study is to identify the challenges associated with effective records management practices (RMP) in the Nigerian Construction Industry and to suggest solutions by which these challenges can be overcome in the industry.

## 2. CHALLENGES OF RECORDS MANAGEMENT PRACTICES IN ORGANISATIONS

Current practices in most organisations particularly construction organisations which are project-oriented encounter numerous problems due to poor or inadequate records management system that result in poor operational performance which consequentially lead to major issues such as variations, claims and disputes in construction projects. Adequate and proper records management practices (RMP) will enhance smooth completion of construction projects with minimal negative effects if not total elimination of such and other issues. Records management system in an organisation involves both paperwork and electronic means. In organisations where paperwork is not properly handled, adequate flow of records is hampered and muddled.



Thus, retrieval of needed records and information becomes difficult which may lead to frequent duplication of paperwork and this could be very costly and reduce the level of efficiency of such organisations (Djorka and Conneen, 1984). In terms of electronic-based documentation system, Rezgui (2001) asserted that problem encountered in the implementation of IT-enabled records management systems in the construction industry is due to high costs involved. Zarebidaki, Nikakhtar and Wong (2012) supported this assertion by stating that the system is costly to implement in terms of high cost of suitable documentation management system (DMS) software and difficulty in handling them. Bjork (2006) also stated that the problem of user training aspects associated with electronic DMS could be severe in the construction industry. Senaratne and Mayuran (2015) identified the following as major problems associated with record management; less interest in filling form, difficult to implement documented procedures at site level, lack of trained staff and high initial cost to develop effective records management system.

Okwilagwe and Njoku (2002) agreed that implementation of RMS particularly in Africa is inhibited by lack of infrastructure, unqualified personnel to handle required equipment and absence of management information system-based policy. Similarly, Mnjama (1993) observed that among the problems of records management in Africa are lack of resources, poor management, and inappropriate staff and training. These problems are also peculiar to Construction firms in Nigeria as a subset of African states. Records management system in Nigeria is plagued by several inhibiting factors including; inadequate skilled and experienced management personnel, lack of sufficient funds and the low priorities pedestal given to records management system, archaic record-keeping methods and poor data storage facilities (Afolabi, 2004; Egwuyenga, 2009).

Ajewole (2001) observed that problem of records management is often caused by interface and interactions of those handling the records and information which arises from inadequate knowledge of the life-cycles of records and apathy in implementing effective record and information management system. Furthermore, Akor and Udensi (2013) posited that ineffectiveness in record management practices, incompetent personnel, inadequate infrastructural facilities and constant power failure are major problems of records management system. Bakare *et al.*, (2016) identified major inhibiting factors affecting proper records management system to include lack of equipment and materials, erratic power supply, inadequate finance, and poor maintenance culture, inadequate storage facilities and lack of management plan.

### 3. METHODS OF IMPROVING RECORDS MANAGEMENT PRACTICES

Proper record management system can save time, reduces cost and enhance overall productivity of any organisation activities. Senaratne and Mayuran (2015) opined that problems of records management practices can be improved by creating awareness of the value of proper documentation, training and educating staff in IT based systems and motivating staff by giving awards to best document manager. Other refining methods as suggested by the author include; creating documentation and coordination roles within project team, implementing a system for adequate feedback, adopting good practices and relevant regulations and, allocating reasonable cost and time for the system. Webster *et al.*, (1999) observed that management of information and training of staff are areas for improvement within organisations. According to Backblom, Bjork and Ruotula (2003), awareness of the documentation value can be enhanced through improvements in the efficiency of a construction process. Akor and Udensi (2013) stated that RMP can be improved by providing staff in charge with adequate training to undertake full responsibilities of the record keeping and that records manager should participate in the risk management programme to ensure all records management related risks are brought to the attention of management and are all included in strategic and budget plans of the organisations.



Li and Love (2000) clamoured the need for adequate training of staff with limited experience in procedure writing and reports and advised to see record keeping as a reflection of the way things are done and not a burden. Adequate provision of facilities required by staff for proper documentation should be made a priority (Matheu, 2005). Bakare *et al.*, (2016) identified the following as methods of improving RMS; formulation of coherent records management policy, discarding of old and archaic storage facilities and adequate budgetary provision and finance. Scott and Assadi (1999) opined that improving problems of RMS requires proper guidelines and inspections of records, adequate training and education for staff and by employing dedicated staff for record keeping. Backblom *et al.*, (2003) asserted that any improvement in the quality of records documentation will lead to corresponding improvements in the construction process.

#### 4. RESEARCH METHODOLOGY

This study sought to identify the challenges associated with effective records management practices (RMP) in the Nigerian Construction Industry and to suggest solutions by which these challenges can be overcome in the industry. A quantitative research approach that involved a cross-sectional survey method was adopted for the study. The data used for this study were collected via well-structured questionnaires which were self-administered to targeted construction professionals in selected construction organisations. The questionnaire was divided into two main sections. In section A of the questionnaire, the respondent was asked to fill in the space provided with the appropriate respondent's general information. While, in section B of the questionnaire, the respondent was asked to rate the variables for challenges associated with effective records management practices (RMP) in Nigerian Construction Industry. A five-point Likert scale with value 5 = extreme challenge to 1= not at all a challenge was used in obtaining the respondent's opinions in the questionnaire. Also, variables suggested as solutions were provided for rating by the respondents and it was also on a five-point Likert scale with value 5 = most effective to 1= not effective at all.

Convenience and purposive sampling technique were adopted because top construction organisations with large volumes of projects entailing compilation of enormous information were selected for the study, and the questionnaire was administered to project managers and quantity surveyors only in the selected organisations because of the fact that they are more involved in records management system of any construction organisations. The respondents are believed to have the requisite knowledge to respond appropriately to questions contained in the questionnaire most especially in Nigeria context.

Fifty top construction organisations were selected and handed the questionnaires. Forty-three questionnaires were later retrieved and found valid for analysis, representing a response rate of 86%, which is found satisfactory. Analysis of the collected data was done using Percentile and mean internal score (MIS). Data processing was done with the aid of Statistical Package for Social Sciences (SPSS 25) software. Cronbach's alpha test was used in testing the reliability and viability of the research. Cronbach's  $\alpha$  value for scale of measures of the research instruments are 0.84 and 0.72 for challenges factors and suggested solutions for effective RMP. Since the degree of reliability of the instrument is more perfect as the value tends towards 1.0 (Moser and Kalton, 1999), it can then be concluded that the instruments used for this research are significantly reliable.

## 5. FINDINGS AND DISCUSSIONS

The data collected and analysed are presented in the following sub-sections.

### 5.1 Background Information of the Respondents

**Table 1: Background Information of the Respondents**

Categories	Classification	Frequency	Percentage
Profession	Project Managers	18	41.9
	Quantity Surveyors	25	58.1
	<b>Total</b>	<b>43</b>	<b>100.0</b>
Academic Qualification	B.Sc/B.Tech	9	20.9
	M.Sc/M.Tech	28	65.1
	HND	4	9.3
	PGD	2	4.7
	<b>Total</b>	<b>43</b>	<b>100.0</b>
Year of Experience	1-5 years	-	-
	6-10 years	-	-
	11-15 years	12	27.9
	16-20 years	19	44.2
	Above 20 years	12	27.9
	<b>Total</b>	<b>43</b>	<b>100.0</b>

Results in Table 1 show the background information of the respondents. The result reveals that the respondents consisted of project managers who accounted for 18(41.9%) and quantity surveyors 25(58.1%). In terms of academic qualification, majority of the respondents hold M. Sc/M. Tech representing 65.1%. Other are B. Sc/B. Tech with 20.9%, HND accounting for 9.3% and 4.7% hold PGD degree. The respondents are quite experienced with at least 11 years of work experience in the construction industry. This depicts that the respondents are experienced and information provided by them can be relied upon.

### 5.2 Category of Records Format in Construction Organisations

Table 2 reveals the result on the category of record formats adopt in construction organisation. The result indicated that all the organisations employed a combination of both records format. None of the organisation use one record format in isolation rather the two format together. However, paper-based format is found to be commonly use than electronic-based format with response rates of 72.09% while few respondents use electronic-based more than paper-based format which represented 27.91%. The fact that most records are in paper-based format implies that most information and records kept in most construction organisations are still yet to be digitally created.



**Table 2: Category of Records Format in Construction Firms**

Items	Yes (%)	No (%)
Fully Paper-based format	0 (0%)	43 (100.0%)
Fully Electronic-based format	0 (0%)	43 (100.0%)
Paper-based more than Electronic-based format	31 (72.09%)	12 (27.91)
Electronic-based more than Paper-based format	12 (27.91%)	31 (72.09%)

The finding showed that paper-based format is more prevalent in construction firms than electronic-based format. The finding correlates with the studies of Webster *et al.*, (1991) and Ahmad *et al.*, (2017) that paper is the most commonly used format in most organisations. This implies that records in construction firms are not electronically created and managed. This is not expected considering the clamour for ICT application to all facets of human endeavour. Paper-based format entails that multiple copies of records are created, which may lead to unnecessary large volume of records and this can create difficulty in locating papers, bulky files, wrong filing, and having offices cluttered with papers and files. Keakopa (2006) stated that records in organisations are in both paper and electronic formats with the bulk of the records in paper format for storage of information.

### 5.3 Challenges Associated with Effective Records Management Practices in Construction Organisations

Analysis of result on challenges frequently associated with records management practices in construction organisations is as contained in Table 3. The result indicated that lack of trained staff is the most prevalent challenge associated with the effective implementation of records management practices in construction organisations with MIS of 4.12. Next, high cost of finance and inadequate storage facilities were ranked second and third as major challenges associated with the effective implementing the practice with MIS of 4.10 and 4.06 respectively. Poor maintenance culture (MIS=3.88) and irregular power supply (MIS=3.72) were also considered as challenges in records management practices. Unfavorable climatic conditions recorded low responses in the selected construction organisations with the lowest MIS of 2.26.

**Table 3: Challenges Associated with Effective Records Management Practices**

Items	Mean Item Score (MIS)	Rank
Lack of trained staff	4.12	1
High cost of finance	4.10	2
Inadequate storage facilities	4.06	3
Poor maintenance culture	3.88	4
Irregular power supply	3.72	5
Unfavorable climatic conditions	2.26	6

The findings revealed that a number of challenges were encountered in the effective management of records in the studied construction firms. The major challenges include lack of trained staff, high cost of finance and inadequate storage facilities. Other challenges included poor maintenance culture and irregular power supply. Most of these findings were in line with the studies of Bakare *et al.*, (2016) and Senaratne and Mayuran (2017).

The implication of these findings is that construction firms selected encounter numerous problems due to poor records management system that may result into poor operational performance.

### 5.3 Effective Ways of Overcoming the Challenges Associated with Effective Records Management Practices in Construction Organisations

Table 4 depicts the result on the effective ways of overcoming the identified challenges associated with effective records management practices in construction organisations. The result indicated that the need to create awareness of value of proper documentation and adequate training for staff are most effective way of overcoming the challenges impeding effective records management practices in construction organisations with MIS of 4.33 and 4.32 respectively. This is followed by the provision of adequate facilities which was ranked third with MIS of 4.08. Allocation of time and cost for the system (MIS=2.98) and closure of files at the end of each year and start new files (MIS=2.88) were rated at low ebb.

**Table 4: Effective Ways of Overcoming the Challenges Associated with Effective Records Management Practices**

Items	Mean Item Score (MIS)	Rank
Awareness of value for proper documentation	4.33	1
Adequate training for staff	4.32	2
Provision of adequate facilities	4.08	3
Regular inspections for quality checks	3.86	4
Adequate clean-up of inactive records	3.86	4
Allocation of time and cost for the system	2.98	6
Closure of files at the end of each year and start new files	2.88	7

It was showed from the findings that respondents suggested that creating an awareness of the value of the documentation and organizing adequate training for staff as most effective methods for improving records management in construction firms. In addition, suggestions related to provision of adequate facilities, regular inspections for quality checks and adequate clean-up of inactive records were also considered important.

Most of these findings were supported by Webster *et al.*, (1999) and, Senaratne and Mayuran (2015). Backblom *et al.*, (2003) asserted that any improvement in the quality of records documentation will lead to corresponding improvements in the construction process. It is therefore imperative that proper attention be paid to all these measures to achieve successful records management practices.



## 6. CONCLUSION AND RECOMMENDATIONS

This research sought to identify the challenges associated with effective records management practices (RMP) in the Nigerian Construction Industry and to suggest solutions by which these challenges can be overcome in the industry. The research findings show that records are largely in paper-based format more than electronic-based format. From the results of the study, construction organisations encountered myriads of challenges in managing their records which include lack of trained staff, high cost of finance, inadequate storage facilities, poor maintenance culture and irregular power supply.

In a bid for effective and improved records management practices in construction organisations, the finding suggests creation of awareness of value for proper documentation, adequate training for staff, provision of adequate facilities, regular inspections for quality checks and adequate clean-up of inactive records to achieve better and improved records management. The study therefore, recommends the need for engagement of professionally qualified secretarial staff for records management in order to ensure proper filling of record that will enable quick record retrieval. Also, various organisations should provide adequate training for staff on effective records management practices by organizing courses and workshops to cover the capacity of professional management of both paper and digital or electronic records.

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