Examination of Challenges and Issues of Staff Record Management among Federal Polytechnics in the North-East

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Abstract:- Record Management System (RMS) is a significant domain for keeping, analyzing, controlling, coordinating, and searching records effectively. To address issues affecting RMS, various models and frameworks have been developed to solve specific problems. The models have several redundant investigation processes, concepts, activities, and task-schedules which made RMS domain not user-friendly and dynamic among end users. Therefore, there is lack of viable and dependable framework to facilitate the management, sharing, and reusing RMS task and activities. The aim of this research is to investigate difficulties and challenges of staff record management and to develop a standard Staff Record Management System Model (SRMSM) using PHP, Java Script, Angular Json, MySQL, HTML and Bootstrap. The primary data was collected using questionnaires and average coded with frequency observation was used for data analysis and discussion. The investigation found that there is persistent challenges and issues in staff record management among the polytechnics. This has seriously hampered effective record management system. However, the proposed software model for addressing such issues and challenges is being developed.

I.   INTRODUCTION

Accessing staff record is sometimes very difficult because records are being scattered or misplaced. Usually, it takes longer time for one to locate records due to data redundancy. Similarly, much energy is wasted in searching staff records. Also, due to poor record management, it is very difficult to forecast budgets for future development and to process promotion exercises. Staff Record Management System (SRMS) is a significant domain for keeping, analyzing, controlling, coordinating, sharing, and searching records effectively for immediate and future use. Record management is very vital for sustainability of any organization (Walia, and Gill 2014, Gabbita*et al*., 2002). Individual staff possesses different information for unique identification at any point in time. This information needs to be put together for proper record management, planning, monitoring and evaluation so that it can be accessed easily, effectively and efficiently. Information and Communication Technology (ICT) is capable of handling electronic records and other digital images effectively (Mnjama and Wamukoya 2007). To address challenges and issues of SRMS, various proposed software models have been

documented. Some of the models focused on specific scenarios while others focused on generic scenarios. However, none of the existing models is viable and dependable for managing staff records issues. To achieve effective staff's record management, there is need to develop viable and dependable software. Therefore, this research is aimed to investigate difficulties and challenges of staff record management and to develop a standard Staff Record Management System Model (SRMSM) using PHP, Java Script, Angular Json, MySQL, HTML and Bootstrap. The proposed model will responsible for sorting records, budget forecasts, and promotion exercises. This paper is organized as follows to include literature review, methodology, results analysis and discussion, and concluding remarks with suggestion for future work.

II.   LITERATURE REVIEW

Walia and Gill (2014) conducted a study which aimed at producing a framework for Web Based Students' Record Management System (SRMS) using PHP. The study used XAMPP methodology to develop the SRMS software. The result of the study revealed that the students could obtain their desired information whenever needed without any difficulties. This result was supported by (Gabbita*et al*., Petrovic, M. and Van Bruwaene, 2004 and Burgio *et al*., 1990). Gabbita *et al.,* (2002) revealed that managing the workflow for processing service orders among a variety of organizations within a telecommunications company was very effective. Similarly, the result obtained by (Petrovic, M. and Van Bruwaene, 2004) discovered that a user-friendly system had been developed by which the resource data relevant to a selected event can be viewed graphically on a computer screen in the form of a table or a Gantt-like chart. This result is equally supported by Burgio*et al*. (1990), who determines staff management system for maintaining improvements in continence with elderly nursing home residents. The research found that staff training and management process with self-monitoring and evaluation of performance will allow geriatric assistants to develop and perform maintenance in a geriatric nursing home. This finding was recently substantiated (Carr *et al*., 2013).

In a research conducted by Miller and Sim (2004), qualitative study was carried to determine the implementation of Electronic Medical Record (EMRs) by physician. Ninety interviewers were interviewed between mid-2000 and the end of 2002 with EMR managers and

physician among thirty organizations that had implemented an EMR. The research found that quality improvement depends heavily on physicians' use of the EMR—and not paper—for most of their daily tasks. This research finding is consistent with the results of other published works (Fields, *et al.*, 1992, Mayaud, 1998, Evans, 1999, Lavin and Nathan, 1998). In another study by Mayaud (1998) which investigates prescription management system found that there is an effective access of comprehensive drug information. Also, it shows that new multi-drug packages and dispensing could be achieved through remote data retrieval architecture as well as email between physician-to-pharmacy and physician-to-physician. Similarly, Evans (1999) studied electronic medical record system and noted that the system could analyze, update, evaluate and electronically explain patient records effectively. Likewise, Lavin and Nathan (1998) examines method for managing patient medical records and the study establishes that the system could be responsible for scheduling appointments, entering, examining, diagnosing, updating, evaluation and displaying patient data simultaneously to physician.

Walia and Gill (2014) developed an effective SRMS software but has the disadvantage that it is limited only to universities and colleges. This indicates that there is a need to develop similar software for polytechnics and other higher institution of learning. The study conducted by Gabbita *et al.* (2002) has no adopted methodology and it covered only telecommunication companies. One of the shortcomings of Petrovic and Van (2004), their study did not address adopted methodology and is restricted to resource management system. Similarly, a study conducted by Burgio *et al.*, (1990), centered on nursing home and there is no specific methodology.

The result of Miller and Sim (2004), shows the acceptability EMRs but the number of users interviewed were inadequate to generalize the results. Mayaud (1998) developed an effective system for accessing comprehensive drug information without stating the methodology adopted and the study is limited to prescription of management system. One of the major drawbacks of Fields *et al.* (1992), Lavin and Nathan (1998) and Evans (1999), their methodology were not clearly stated and limited to management of patient medical records only. Therefore, more researches need to be carried out in other fields of human endeavor.

The literatures reviewed thus far pointed out that most of the recent and past studies on record management centered on Students' Record Management System (SRMS), and patient medical record management. Therefore, this research will focus on the investigation of challenges and problems of Staff Record Management System (SRMS) from selected polytechnics in the North-East and to develop a standard software model for addressing such constraints.

III. METHODOLOGY

This research intends to identify and solve a problem relating to staff record management. The adopted epistemology is the interpretivist and constructionist approach where the researcher is allowed to get into the organizations and not only understand the problems but have adequate and in-depth nature and extent of such problems (Moon & Blackman, 2014). Case study research has been considered appropriate for this research. This give an in-depth understanding of the institutions record management problems and addressing them. Questionnaire was distributed to the targeted staff (management staff as well as the senior and intermediate carder of the registry staff). This has helped to describe and understand the phenomenon studied by capturing and communicating participants' experiences in their own words via observation and interviews (Yimaz, 2013).

To effectively develop the proposed model data were documented accordingly from each institutions for both general and specific problems related to record management. The proposed model takes care of the problems identified as well as additional support features for data management such as automatic savings and tracking activity of any user. XAMPP, Java Scripts, Angular, Bootstrap and jQuery will be used to develop the proposed software. XAMPP stands for Cross-Platform (X), Apache (A), MySQL (M), PHP (P) and Perl (P) (Walia and Gill 2014). The integration of these scripting languages will make the model more secure from hackers, and dynamic for users' accessibility. This research has focused on five polytechnics in the North-East, Federal Polytechnic Bali, Federal Polytechnic Mubi, Federal Polytechnic Bauchi, Federal Polytechnic Damaturu and Ramat Polytechnic Maiduguri. Data was collected through focused group (Management and Registry Staff). The approach of data collection and analysis is based on grounded theory, qualitative methods of data collection and analysis (Dagona, 2014). Two hundred and fifty (250) questionnaires were distributed and an average of 242 staff were responded from each polytechnics. Moreover, an in-depth literature review was carried out through journals, textbooks and internet. Microsoft excel application package was used to analyze the collected data using average coded and frequency observation. This has helped in obtaining viable and dependable solutions for the problems/challenges of record management.

IV. RESULT ANALYSIS AND DISCUSSION

4.1 Analysis

The scales used to carry out the research were represented as follows: SA (Strongly Agree), A (Agree), D (Disagree) and SD (Strongly Disagree). About two hundred and fifty (250) questions were distributed among five polytechnics in the North-East and average of two hundred and forty three (242) was responded.

The scales used in obtaining responses were coded as follows: SA = 4, A = 3, D = 2 and SD = 1. Average coded response scale from 2.50 and above indicates significant result while response scale less than 2.50 indicates insignificant result. The information in Tables 1-5 indicate average coded responses obtained from the five polytechnics.

Table 1: Average coded response for Federal Polytechnic Bali (Challenges and Problems of Staff Records)

S/N	Challenges and Problems	SA	A	D	SD	Total Coded	Total Frequency Observed	Total Average Coded
1	File may be redundant due to staff transfer, death and otherwise.	800	120	10	0	930	245	3.80
2	Using manual operation records misplacement is common.	752	165	6	0	923	246	3.75
3	Is difficult to search records/files manually	900	45	2	0	947	241	3.93
4	Is difficult to filter records/files manually	960	21	4	0	985	249	3.96
5	Manual records/files management is time consuming	844	60	12	0	916	237	3.86
6	With manual operation future focus is difficult	580	294	10	0	884	248	3.56
7	Organizing records/files is very difficult	680	177	4	0	861	231	3.73
8	Records storage management is very difficult	492	363	0	0	855	244	3.50
9	There is waste of energy in managing records	440	402	6	0	848	247	3.43
10	Records mutilation can be easily done on manual records keeping	880	102	0	0	982	254	3.87
11	Staff documentation is very difficult	624	270	4	0	898	248	3.62
12	Manual files/records management is too expensive	360	450	4	0	814	242	3.36

Table 2: Average coded response for Federal Polytechnic Mubi (Challenges and Problems of Staff Records)

S/N	Challenges and Problems	SA	A	D	SD	Total Coded	Total Frequency Observed	Total Average Coded
1	File may be redundant due to staff transfer, death and otherwise.	804	120	6	0	930	244	3.81
2	Using manual operation records misplacement is common.	740	180	4	0	924	247	3.74
3	Is difficult to search records/files manually	924	45	0	0	969	246	3.94
4	Is difficult to filter records/files manually	556	6	2	0	564	142	3.97
5	Manual records/files management is time consuming	920	36	2	0	958	243	3.94
6	With manual operation future focus is difficult	584	270	2	0	856	237	3.61
7	Organizing records/files is very difficult	800	117	4	0	921	241	3.82
8	Records storage management is very difficult	560	315	2	0	877	246	3.57
9	There is waste of energy in managing records	480	372	6	0	858	247	3.47
10	Records mutilation can be easily done on manual records keeping	964	21	0	0	985	248	3.97
11	Staff documentation is very difficult	640	225	6	0	871	238	3.66
12	Manual files/records management is too expensive	444	396	4	0	844	245	3.44

Table 3: Average coded response for Ramat Polytechnic Maiduguri (Challenges and Problems of Staff Records)

S/N	Challenges and Problems	SA	A	D	SD	Total Coded	Total Frequency Observed	Total Average Coded
1	File may be redundant due to staff transfer, death and otherwise.	804	84	12	0	900	235	3.83
2	Using manual operation records misplacement is common.	700	195	8	0	903	244	3.70
3	Is difficult to search records/files manually	908	60	2	0	970	248	3.91
4	Is difficult to filter records/files manually	932	27	4	0	963	244	3.95
5	Manual records/files management is time consuming	848	63	6	0	917	236	3.89
6	With manual operation future focus is difficult	572	270	10	0	852	238	3.58
7	Organizing records/files is very difficult	900	57	2	0	959	245	3.91
8	Records storage management is very difficult	536	339	2	0	877	248	3.54
9	There is waste of energy in managing records	452	390	2	0	844	244	3.46
10	Records mutilation can be easily done on manual records keeping	944	33	2	0	979	248	3.95
11	Staff documentation is very difficult	600	285	4	0	889	247	3.60
12	Manual files/records management is too expensive	388	438	2	0	828	244	3.39

Table 4: Average coded response for Federal Polytechnic Damaturu (Challenges and Problems of Staff Records)

S/N	Challenges and Problems	SA	A	D	SD	Total Coded	Total Frequency Observed	Total Average Coded
1	File may be redundant due to staff transfer, death and otherwise.	760	120	20	0	900	240	3.75
2	Using manual operation records misplacement is common.	784	135	10	0	929	246	3.78
3	Is difficult to search records/files manually	884	60	0	0	944	241	3.92
4	Is difficult to filter records/files manually	900	45	6	0	951	243	3.91
5	Manual records/files management is time consuming	824	90	12	0	926	242	3.83
6	With manual operation future focus is difficult	760	150	10	0	920	245	3.76
7	Organizing records/files is very difficult	804	132	2	0	938	246	3.81
8	Records storage management is very difficult	516	357	0	0	873	248	3.52
9	There is waste of energy in managing records	460	390	2	0	852	246	3.46
10	Records mutilation can be easily done on manual records keeping	932	42	2	0	976	248	3.94
11	Staff documentation is very difficult	680	222	2	0	904	245	3.69
12	Manual files/records management is too expensive	396	444	2	0	842	248	3.40

Table 5: Average coded response for Federal Polytechnic Bauchi (Challenges and Problems of Staff Records)

Challenges and Problems	SA	A	D	SD	Total Coded	Total Frequency Observed	Total Average Coded
File may be redundant due to staff transfer, death and otherwise.	812	102	18	0	932	246	3.79
Using manual operation records misplacement is common.	700	195	10	0	905	245	3.69
Is difficult to search records/files manually	900	54	2	0	956	244	3.92
Is difficult to filter records/files manually	600	294	2	0	896	249	3.60
Manual records/files management is time consuming	804	108	8	0	920	241	3.82
With manual operation future focus is difficult	620	270	0	0	890	245	3.63
Organizing records/files is very difficult	648	240	0	0	888	242	3.67
Records storage management is very difficult	480	375	2	0	857	246	3.48
There is waste of energy in managing records	400	438	2	0	840	247	3.40
Records mutilation can be easily done on manual records keeping	948	30	0	0	978	247	3.96
Staff documentation is very difficult	640	243	4	0	887	243	3.65
Manual files/records management is too expensive	508	357	2	0	867	247	3.51

4.2 Discussion

From the analysis of Tables 1 to 5, it was shown that the average coded for the challenges and problems of staff records management is highly significant. From Table 1 showed that the major challenges and problems of managing staff records is filtering records/files manually with a significant value of 3.97. In Table 2, filtering records/files manually correspond with Table 1 and it further illustrated that records mutilation is the main challenge with significant value of 3.97. Moreover, the findings from Table 3 revealed that records filtering and mutilation have significant values of 3.95. Also, the analysis in Table 4 exposed that filtering records/files manually and records mutilation challenges have significant values of 3.92 and 3.94 respectively. Likewise, Table 5 showed that manual search and mutilation of records is very challenging with significant values of 3.92 and 3.96 respectively.

From the above analyses, it was found that the polytechnics in the North-East are seriously affected with issues of staff records management. As a result of this problem, the polytechnics are unable to manage their records effectively and cannot carry out future forecast. This findings correspond with Utulu (2001), who pointed out that manual record management adversely affect planning and provision of structures and facilities, adequate funding, proper formulation and review of policies. Similarly, Egwunyenga (2009) discovered that lack of record manual and filing guidelines led to loss of vital information. Equally, Egunleti (2000) found that there is difficulty in record retrieval and lack of appreciation by management and staff for the need of effective record control.

V. CONCLUSION

This research has investigated the challenges and issues affecting staff records management system from five selected polytechnics in the North-East. The investigation found that there is records redundancy, mutilation and misplacement. Also, it is very difficult to search, filter, organize, document and store records effectively. Furthermore, there is waste of energy, high cost of operation, time consumption and lack of future forecast in managing the records. This has seriously hampered effective record management system. However, the development of a proposed software model for addressing such constraints is on-going and will be evaluated in the next publication.

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