Management Information System and Senior Staff Job Performance in Polytechnics, Kwara State, Nigeria

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Abstract

This study sought to find the relationship between the use of Management Information System and senior staff job performance in Polytechnics in Kwara State, Nigeria. Three hundred and twenty respondents were selected using random sampling technique from the two Polytechnics in Kwara State. The sample was made up of 200 academic staff and 120 senior non-academic staff from the institutions. Researcher-designed instruments, tagged: "Management Information System Questionnaire" (MISQ) and "Job Performance Appraisal Questionnaire" (JPAQ) were used to elicit information from the respondents. The data collected were analysed using frequency counts and percentage to answer the research questions raised, while Pearson product-moment correlation co-efficient was used to test the hypotheses formulated at 0.05 level of significance. The findings revealed that Senior Staff in the Polytechnics in Kwara State made effective use of both traditional and electronic-based management information system. There was significant relationship between the use of MIS and Senior Staff Job Performance in the institutions. On this note, it was recommended, among others, that the Federal Government through the National Board for Technical Education (NBTE) in Nigeria should establish MIS units for the Polytechnics as done in the Nigerian Universities; Government should encourage modern Information Technology (IT) in Technical and Vocational Education Curriculum so that teachers of the discipline can be well groomed with the techniques and strategies of using MIS in polytechnics administration. Needed MIS facilities should be provided while the available ones should be adequately maintained for staff use.

Keywords: Management Information System, Senior Staff, Job Performance, Polytechnics

1. Introduction

The need for effective information in complex organizations like the polytechnic cannot be over emphasized. In fact, information constitutes not only a very vital resource and apparently one of the most strategic operational instruments for operations, efficiency and effectiveness in the organization. More than ever before in Nigeria, effective communication is indispensable and eminent to the educational institutional managers as a result of the increasing complexities in the management of their institutions. In addition to the goals of tertiary educational institutions in sections 59, 79 and 80 of the Federal Republic of Nigeria National Policy on Education (FRN, 2004), Technology Education in Polytechnics is designed to:

i.   provide full time course of institution and training in engineering, other technologies, applied science, businesses and management leading to the production of trained manpower;

ii.   provide the technical knowledge and skills necessary for agricultural, industrial, commercial and economic development of Nigeria;

iii.   give training and impact the necessary skills for production of technicians, technologies and other skilled personnel who shall be enterprising and self reliant;

iv.   train people who can apply scientific knowledge to solve environmental knowledge problems for the convenience of man; and

v.   give exposure on professional studies in the technologies.

The aims and objectives of Vocational and Polytechnic Education in Nigeria can be pursued and successfully achieved if an efficient and effective MIS is put in place in the various institutions. In this regard, it becomes necessary to investigate the existing relationships between Management Information System and staff job performance, especially in Polytechnics where scientific and technological skills are basically acquired. Hence, this study was set to address this, using Polytechnics in Kwara State of Nigeria as a case study.

2. Literature Review

Information between people and within and outside an organization to achieve organizational goals cannot be over-emphasized. But Oguta (1999) observed that the concept of information in an organization is more complex and difficult than its fragment uses. As further elucidated by Oguta (1999), information is made up of facts giving knowledge relating to a specific event or situation which may stand as basis for job performance and decision-making. Equally, Alabi (1999) stressed that information has to do with knowledge acquired and result when data are organized or analyzed in some meaningful ways or convenient form understood by the recipient for easy job performance and decision-making. In any organization such as Polytechnics, effective job performance and decision-making cannot be achieved if a well planned and well organized system of information is not put in place (Fashiku, 2008).

In the perception of Allison (1996), in management, effective communication flow and utilization are vital to the survival of any organization. Therefore, effective communication channel must be ensured if organizational members are to achieve the desired interdependence towards goal attainment. On this note, effective communication becomes an integral and indispensable aspect of information management. Relevant information increases knowledge, reduces uncertainty and satisfies intended purpose (Fashiku, 2008). As recently observed by Saad (2000), good information to be relevant for a purpose, sufficiently accurate, complete and arising from a reliable source, communicated to the right person in time and which is detailed enough for user's comprehension is crucial in staff job performance. Dan-Isa (2001) stated that in any organization, the administration should evaluate any information received on its quality for improved performance. In the same vain, Bruch Stator and Grudints (1983) elucidated that good information should be accurate, quantitative, verifiable, accessible, precise free from bias, timely clear, appropriate and comprehensive. All these are supposed to be addressed in Management Information System.

One of the central processes of an organization and vital components of planning is Management Information System (MIS). MIS, in the view of Fashiku (2008), is a formal method of making available to management, accurate and timely information necessary to facilitate the decision-making process and enable the organization's planning, control and operational functions to be carried out efficiently and effectively. This provides information about the past, present and future of an organization for a comparatively short period of time. According to Kelly (1999), MIS is a combination of human and electronic based resource that results in the collection, storage, communication and use of data for the purpose of different management of operations and for business planning. Information system can be viewed as a means of processing data, that is, the routine facts and figures of the organization in to information, which is then used for decision-making. Quite a number of investigators have conducted researches on the relevance of Information Technology (IT) to organizational management. For instance, Lucey (1991) observed that both in United Kingdom and United State of America, using advanced computerized system have had relatively little success in proving managerial effectiveness. This was as a result of unnecessary reliance on electronic based management information system.

Alabi (1998) investigated the utilization of MIS for effective decision-making in the Nigerian Universities. The study revealed that MIS was used significantly for administrative decision-making in the institutions. Also, Allison (1996) worked on how Executive Information System (EIS) had been utilized in UK organizations. The investigation revealed that with EIS, information was accessed quickly and that underlying data was more up-to-date in comparison with the previous system. In fact, effective communication in Colleges of Education in Nigeria was found by Fashiku (2007) to reduce frustration and generated favourable conditions which created effectiveness of workers in the institutions. It is quite obvious that certain labour management crisis could occur as a result of lack of adequate communication or misconception on the part of workers and management.

In tertiary institutions like Polytechnics in Kwara State, Management Information System should be able to store and process data related to students' academic record management such as admission registration, issuance of matriculation numbers, examination record processing and storage, inventory of institutions property or staff office accommodation, lecture rooms/halls, lecture hours and sitting facilities. All these should be seen as raw data to be processed for useful information which could enhance efficiency and effectiveness of staff job performance in the institutions

3. Methodology

The study was a corelational type focusing attention on existing situation in the institutions under study. The two existing Polytechnics in Kwara State were used for the study. These were Kwara

State Polytechnics, Ilorin and Federal Polytechnic, Offa. Three hundred and twenty respondents were randomly drawn from the two institutions. These comprised of 200 academic and 120 non-academic senior staff of the institutions. Two sets of questionnaire tagged, "Management Information System Questionnaire" (MISQ) and "Job Performance Appraisal Questionnaire" (JPAQ) were designed and used by the researchers to collect relevant data. The instruments were validated and tested for reliability, using test re-test method, which yielded reliability co-efficients of 0.75 and 0.88 for MISQ and JPAQ respectively. The instruments were personally administered by the researchers with the aid of two research assistants.

Data collected were analyzed using frequency counts and percentage to answer the research questions raised, while Pearson product-moment correlation co-efficient was used to test the hypotheses generated at 0.05 level of significance.

4. Results and Discussion

4.1 Research Question 1: What MIS equipment are available in Polytechnics in Kwara State?

To answer this research question, data collected from the 320 respondents on the available MIS equipment in Kwara State Polytechnics were analyzed using frequency counts and percentage scores. The results showed that computer, telephone, telex, fax mail, e-mail and internet services were the electronic based MIS mostly available in the institutions (Federal and State). However, responses showed that network of computer, intercom and close circuit TV were inadequately available in the institutions. Furthermore postal services, administrative files, bulletins, and brochures were stated to be the available traditionally based MIS equipment used in the Federal and State institutions (see Table 1).

4.2 Research Question 2: Which MIS equipment are used for administrative effectiveness in Polytechnics in Kwara State?

Frequency counts and percentage were used to analyze data collected to answer the research question. The results show that in the institutions (Federal and State Polytechnics in Kwara State) that computer, telephone, e-mail and internet services were frequently used in performing administrative functions. Furthermore, administrative files, postal services, publications, bulletin and brochures were the most frequently used non-electronic (print) MIS equipments for administrative functions in the institutions as revealed in the staff responses (see Table 2).

4.3 Research Hypothesis 1: There is no significant relationship between the use of MIS and Academic Staff Job Performance in Polytechnics in Kwara State.

This hypothesis was tested at 0.05 significance level, using Pearson product-moment correlational analysis. The results show that the calculated r-value (0.47) is greater than the critical table value (0.19) at 0.05 level of significance and for 199 degrees of freedom. The null hypothesis, which stated that there is no significant relationship between the use of MIS and Academic Staff Job Performance in the Polytechnics is hereby rejected. The finding corroborates Saad's (2000) and Fashiku's (2008) on the relationships that existed between the use of MIS and Academic Staff Job Performance in Kwara State Colleges of Education and Nigerian Colleges of Education respectively. By implication, academic staff in Polytechnics in Kwara State obtained timely and accurate information regarding their placement and job performance in good time (see Table 3).

4.4 Research Hypothesis 2: There is no significant relationship between the use of MIS and Non-Academic Staff Job Performance in Polytechnics in Kwara State.

Data collected were analyzed, using Pearson product-moment correlational analysis to test the hypothesis at 0.05 significance level. The results show that the calculated r-value (0.28) is greater than the critical r-value (0.19) at 0.05 level of significance and for 119 degrees of freedom. The null hypothesis is therefore rejected. That is, there was positive, though weak out significant relationship between MIS use and non-academic senior staff job performance in Polytechnics in Kwara State. This indicates that non-academic senior staff of Polytechnics like the academic staff contemporaries utilized the available information in their institutions in carrying out their jobs. Allison (1996), in consonance with the finding, agreed to the fact that MIS especially, electronic based greatly assisted executive officers in their organizational tasks in the United Kingdom (UK) (see Table 4).

5. Conclusions and Recommendations

Management Information System in Polytechnics in Kwara State (Federal and State) was found to be both traditional and electronic, and were being utilized by the academic and non-academic senior staff of the institutions in their job performance. But the academic staff were found to utilize the facilities more than their non-academic counterparts for their job performance.

Based on the results of this investigation, Federal Government, through the National Board for Technical Education (NBTE) in Nigeria should establish information units for Polytechnics as done in

the Nigerian Universities. It is desirable that Federal Government should encourage modern Information Technology (IT) in Technical and Vocational Education curriculum so that operators of the disciplines would be well groomed with the techniques and strategies of MIS use in Polytechnics administration. As a matter of policy, the institutions should encourage and enforce academic, non-academic staff and students of Polytechnics to be computer literate. On yearly basis, government should give essential financial grants to the institutions to run their MIS Units if created.

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Table 1
Analysis of Available MIS Equipment in the Polytechnics

S/No	MIS Type	Federal		State		Total	
		No.	%	No.	%	No.	%
A	**Electronic**						
01	Computer	160	100	160	100	320	100
02	Network of Computer	20	12.5	24	15	35	10.9
03	Telephone	160	100	160	100	320	100
04	Intercom	5	3.1	12	7.5	17	5.3
05	Telex	160	100	120	100	280	87.5
06	Fax machine	160	100	100	62.5	260	81.3
07	E-mail	160	100	160	100	320	100
08	Com. Statistic	-	-	3	1.8	3	0.9
09	Close Circuit TV	-	-	-	-	-	-
10	Internet	160	100	160	100	320	100
B	**Print**						
11	Admin files	160	100	160	100	320	100
12	Postal Services	160	100	160	100	320	100
13	Handbooks	160	100	160	100	320	100
14	Bulletins	160	100	160	100	320	100
15	Brochures	160	100	160	100	320	100

Table 2
Analysis of MIS Equipment Used in Kwara State Polytechnics

S/No	MIS Equipment	Federal						State				NU
		FU		SU		NU		FU		SU		
		No.	%	No.	%	No.	%	No.	%	No.	%	No. %
A	**Electronic**											
01	Computer	160	100					120	100			
02	Network of Computer	20	12.5			140	87.5	24	20			96 80
03	Telephone	160	100					120	100			
04	Intercom	5	3.1			155	96.9	12	10			108 90
05	Telex	160	100					120	100			
06	Fax machine	160	100					120	100			
07	E-mail	160	100					120	100			
08	Com. Statistic	-	-	160	100			3	2.5			117 97.5
09	Close Circuit TV	-	-	160	100							120 100
10	Internet	160	100					120	100			
B	**Print**											
11	Admin files	160	100					120	100			
12	Postal Services	160	100					120	100			
13	Publications	160	100					120	100			
14	Bulletins	160	100					120	100			
15	Brochures	160	100					120	100			

KEY:
FU   =   Frequency Used
SU   =   Seldomly Used
NU   =   Not Used

Table 3

Relationship between Management Information System (MIS) and Academic Staff Job Performance (ASJP) in Polytechnics in Kwara State

Variables	Cases	Mean	SD	DF	Cal r-value	Crit. r-value	Decision
MIS	200	160.22	8.0				H_0
				199	0.47	0.19	Rejected
ASJP	200	24.26	4.23				

Table 4

Relationship between Use of Management Information System (MIS) and Non-Academic Senior Staff Job Performance (NASSJP) in Polytechnics in Kwara State

Variables	Cases	Mean	SD	DF	Cal r-value	Crit. r-value	Decision
MIS	120	157.99	1169				H_0
				119	0.28	0.19	Rejected
NASSJP	120	82.71	3.88				