

**The contribution of information acquisition and management capacity to  
administrators' decision-making effectiveness in tertiary institutions in South-  
Western Nigeria**

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## **Abstract**

This study investigated through empirical methods the extent to which information acquisition and information management capacity of administrators in tertiary institutions in South-Western Nigeria contributed to their decision-making effectiveness. It adopted the ex post facto survey research design, using the random sampling technique to select 1,357 out of the 1,799 administrators in tertiary institutions in Ekiti, Lagos and Oyo states of the region. The One-Way Analysis of Variance and Multiple Regression Analysis were used to determine the composite impact of information acquisition and information management on administrators' decision-making effectiveness, while the Stepwise Multiple Regression was used to determine the relative contribution of each of information acquisition and information management to administrators' decision-making effectiveness. The 0.05 level of significance was chosen for the acceptance or rejection of the research hypotheses. The findings revealed that information acquisition and information management capacities whether taken separately or jointly make significant contributions to the decision-making effectiveness of administrators in tertiary institutions in the region (0.291 and 0.494 respectively for relative contribution, and 0.478 for composite contribution,  $p < 0.05$ ). Hence, the study recommended modernization of information systems in these institutions with a view of improving information acquisition and information management capacities of the administrators.

## **Introduction**

Decision-making is the backbone of administrative functions. This is because decisions direct actions (Marvin, cited in Igwe, 1995). Good and effective decisions can only be made when right information is made available at the right time to the right recipient. Johnson, Newell and Vergin (1972) stated that information for decision-making is dynamic; therefore, it needs to be constantly up-dated. Decision-making,

itself, is a dynamic process (Harrison, 1995; Daft, 1983). Managers need continuous flow of information in order to make appropriate decisions. Decision-making efficiency of managers can therefore be greatly enhanced by the quality of information they are able to utilise in decision-making. To supply the appropriate information to the right person at the right time, Clare and Stuteley (1995), Hodge, Anthony and Gales (1996) all advocated that information is a resource that needs to be managed just like any other resource in the organisation. Oyebade (1999) quoted McBride who stated that the problem confronting most organisations is the collection and storage of information.

Educational institutions are not only facing complex managerial problems, they are also structurally complex. Nwankwo (1985) stated that modern educational systems, like other modern social and economic systems, have become increasingly complex themselves. The complexities of educational systems and their institutions particularly in Nigeria, and other developing countries, tend to be characterized by such phenomena as: student population explosion, diversities in the dimensions of programmes and procedures, inadequacy of funds and other material resources even in the face of inflation, and conflicting models and policies adopted for implementation. At the core of the above bewildering list of complex variables is the problem of paucity of information as well as poor capacity for information management.

The demand for appropriate, adequate and timely information for management decisions in Nigerian educational institutions appears challenging, because the educational system is expanding at an unprecedented rate. As the system and its institutions expand, so do the problems of their planning, organisation, administration, monitoring and control. Correspondingly, there is the need for increased information acquisition and information management capacity among educational administrators, planners and policy makers (Nwankwo, 1985).

Education is one of the key industries in which government invests her scarce resources. Educational institutions, therefore, are expected to justify the resources that government invests in them for the educational development of the society and the nation. The already scarce resources need to be judiciously utilised. The educational planners, administrators and policy makers need more than ever before accurate, up-to-date and timely information to make appropriate decisions. Right decisions give

direction for a right course of action. Daft (1983) stated that when an organisation is designed to provide correct information to managers, decision processes work extremely well and tasks will be accomplished. However, when information is poorly designed, problem-solving and decision processes will be ineffective and managers may not understand why.

Nwankwo (1985) further stated that most education management problems in Nigeria might be traced back to lack or poor management of information. A good management information system is, therefore, needed in all the educational institutions to handle more efficiently such administrative matters as providing government reports, justification and accountability, handling of increasing enrolment, students records and timely release of results (Longe & Agabi, 1990). Educational institutions today need to pay more attention to management of their data and information for efficiency and effectiveness. Information reduces uncertainties and facilitates decision-making (Tsui & Schreisheim, cited in Opeke, 1984). Information is one of the resources which a manager controls apart from human resources, materials, money and machines (McLeod, Jr., 1995; Clare & Stuteley, 1995).

Educational institutions possess huge amounts of data and information. Examples of such data and information available in educational institutions are: correspondences, accounting documents, personnel files, payroll, minutes of meetings, students registration and examination records, inventory of facilities, budgetary information, list of courses offered, time-tables for lectures, and so forth. Accurate and timely availability and use of the information on these would reduce the common problems of management in institutions.

In the institutions of higher learning in Nigeria, the administrators seem to be overwhelmed with the rise of managerial/administrative workload due to rapid growth and expansion of the institutions. Igwe (1995) studied information management and decision-making in National Board for Technical Education (NBTE), Kaduna, and found out that NBTE was growing in complexity, with increasing number of personnel and programmes, and that the information management of NBTE was ineffective and inadequate due to lack of funds, modern facilities and information experts to manage information effectively. Igwe concluded that the poor/ineffective information

management negatively affected decision-making, and that decisions were sometimes arbitrarily taken due to lack of appropriate or timely information. In some cases, decisions that were made were sometimes changed when more accurate information was received, and that workers often flooded the offices to confirm decisions made or communicated.

Ojebola and Fabunmi (1997) established that there was a significant relationship between female administrators information acquisition capacity and administrative efficiency. Recommendations were made that funds should be made available to improve information acquisition capacity of administrators through training and where necessary, there should be provision of computers and qualified personnel to handle the management of the information system of each department or section.

Moreover, Opatola (1998) found out that information management capacity of the administrators in the Oyo State Ministry of Education, Ibadan, Nigeria, was low even though there was high level of information. The study concluded that there was need to improve information processing using modern techniques and technologies. Communication was also an aspect that was emphasized that needed to be improved in order to increase the information management capacity of the administrators.

Opeke (1984) quoting from Federal Ministry of Education (FME) 1981, made reference to Adelaja that some of the forecasts and projections on education in the country have fallen short of what actually persisted in the system. This was attributed mainly to lack of basic data and the inability of top management to discern the role of technological progress prevailing at the time. Management is (indeed) stifled in its decision-making without information (Opeke, 1984). Hence, the urgency for Nigeria to solve the problems arising from inadequate storage, flow and use of information. Nwankwo (1985) had observed that most of the persistent problems that bedevil Nigerian educational institutions arise from either lack of information or poor capacity for information management. This study, therefore, is aimed at addressing the issue of information management, specifically, in tertiary institutions. This would be a contribution to improved efficiency and effectiveness in administration in tertiary institutions in the country.

Most of the prior studies on information management have been carried out in business organisations and some in Research and Development settings. A few that have been carried out in education have been done either in Federal or State Ministries of Education or other educational organisations (such as National Board for Technical Education – NBTE) and not tertiary institutions. The studies that have been carried out in such educational organisations generally agree that there is the need to improve information management and also make use of modern facilities in order to provide appropriate information for decision-making. For example, Igwe (1995), Opeke (1984) and Adelaja (cited in Opeke 1984) all attributed problems in decision-making to lack of appropriate information.

Erwat and Fabunmi (2006) investigated the extent to which information acquisition and management capacity correlated with administrators' decision-making effectiveness in tertiary institutions in Southwestern Nigeria. The results of their study revealed significant relationship between information acquisition and administrators' decision making effectiveness, and also between information management capacity and administrators decision making effectiveness.

### **Statement of the Problem**

There has been a lot of concern for Nigeria, and especially educational organizational in the country, to solve problems arising from inadequate storage, flow and use of information. The inadequate access to, or possession of, relevant information has negative impact on the effectiveness of administrators' decision-making process. Educational institutions experience administrative problems which are information related such as:

- inability to find information needed to take a decision or respond to inquiry,
- improperly registered students in school registers and records
- inaccurate demographic figures resulting in either lack of places/spaces for students or wastage of spaces/places available.

The reviewed literature dealt with the role of information technologies in decision making, analysis of administrators' information management capacity, and the extent to which information acquisition and information management capacity correlated with administrators' decision making effectiveness. None dealt with the contribution of information acquisition and information management capacity to administrators' decision

making effectiveness. Hence, this study investigated the extent to which information acquisition and information management capacity contributed to administrators' decision-making effectiveness in tertiary institutions in South-Western Nigeria.

### **Research Hypotheses**

H<sub>01</sub>: Information acquisition and information management capacity do not make any significant composite contribution to administrators' decision-making effectiveness in tertiary institutions in South-Western Nigeria.

H<sub>02</sub>: Information acquisition and information management capacity do not make any significant relative contribution to administrators' decision-making effectiveness in tertiary institutions in South-Western Nigeria.

### **Research Design and methodology**

The research design used for this study was a survey research design. This design enables only a sample population to be studied after which generalizations can be made for the whole population. The purposive sampling technique was used to select three out of the six states in South-Western Nigeria. There were altogether 1,799 administrators in the 14 tertiary institutions in the 3 selected states, that is, Ekiti, Lagos and Oyo states of Nigeria. Out of this targeted population, 1,357 (or 75%) were sampled using simple random method, and 1,159 responded.

The main instrument used to collect data for this study was a Likert-Type Questionnaire designated "Information Management and Utilization Questionnaire (IMUQ). There were four sections; namely section A, B, C, and D. Section A sought for personal data. Section B elicited information on information acquisition variable. There were 33 questions on this section. Section C of the questionnaire gathered data on information management capacity. Lastly, section D was devoted to data on decision-making effectiveness variable. The questionnaire contained 90 items. The Likert-type rating scale was used for Section B, C, and D. The face-validity and content-validity of the instrument, were verified by information experts in the University of Ibadan. The instrument was subjected to a test-retest method to establish its reliability. It had a reliability coefficient of 0.64. Copies of the questionnaire were administered to the 1,799 participants by the researchers. Analysis of Variance, Multiple Regression Analysis and Stepwise Multiple Regression Analysis were used to find out the extent to which

information acquisition and information management capacity determined decision-making effectiveness of administrators in tertiary institutions in South-Western Nigeria. The significance level of 0.05 was used to test the hypotheses.

### Report of Findings

**H<sub>01</sub>: Information acquisition and information management capacity do not make any significant composite contribution to administrators' decision-making effectiveness in tertiary institutions in South-Western Nigeria.**

**Table 1a. Summary of Multiple Regression Analysis for Composite Contribution of Information Acquisition and Information Management Capacity to Decision-making Effectiveness**

Statistics	Values
Multiple R	0.692
R Square	0.478
Adjusted R Square	0.478
F Value	530.324
Standard Error	6.436

**Table 1b. Analysis of Variance of the Regression of Information Acquisition, Information Management on Decision-making Effectiveness**

	Sum Of Squares	Df	Mean Square	F	p	Remark
Regression	43936.664	2	21968.332	530.324	0.000	S*
Residual	47886.545	1156	41.424			Reject H <sub>0</sub>
Total	91823.210	1158				

\* Significant at  $p < 0.05$

From Table 1a, it could be seen that the variables jointly contributed 0.478 (47.8%) to decision-making effectiveness. This implies that 47.8% of decision-making effectiveness could be accounted for jointly by the two variables. Moreover, Table 1a also indicates positive and significant multiple relationships among the independent variables (information acquisition and information management capacity) and decision-making effectiveness ( $R = 0.692$ ;  $P < 0.05$ ). The analysis of variance in Table 1b showed

that the variables were jointly significant at 0.05 level of significance ( $F = 530.324$ ;  $p = 0.000$ ). In other words, the result establishes the fact that both variables jointly exercise significant influence on the subjects' decision-making effectiveness at ( $P < 0.05$ ). The null hypothesis is, therefore, rejected.

**H<sub>02</sub>: Information acquisition and information management capacity do not make any significant relative contribution to administrators' decision-making effectiveness in tertiary institutions in South-Western Nigeria.**

**Table 2: Results of Stepwise Multiple Regression Analysis for Relative Contributions of Information Acquisition and Information Management Capacity to Decision-making Effectiveness**

Variable	Parameter Estimates	Std. Error	T	Beta	P	Remark
Constant	27.502	2.122	12.958			
Information Acquisition	0.293	0.025	11.695	0.291	0.000	S*
Information Management	0.576	0.029	19.830	0.494	0.000	S* Reject H <sub>0</sub>

\* Significant at  $p < 0.05$

Table 2 shows the relative contribution of the independent variables on decision-making effectiveness. Information acquisition contributed 0.291 (29.1%), while information management contributed 0.494 (49.4%). They are both significant at 0.05 level of significance. The null hypothesis is, therefore, rejected.

## Discussion

Earlier researches by various authors establish the fact that information acquisition and information management have positive significant correlation with decision-making of managers/administrators. Examples of such researchers are Erwat and Fabunmi (2006), Larson et. Al. (1998), Winquist and Larson (1998), Dennis (1996), Ganzach and Schul (1995) and O'Reilly III (1980).

This study investigated the extent to which information acquisition and management actually contribute to good decision-making. Information acquisition

contributed 0.291 (29.1%), information management contributed 0.494% (49.4%) and when taken together, they jointly contributed 0.478 (47.8%). All these figures were significant at 0.05 level of significance. These findings imply that information management determine or influence significantly decision-making of managers/administrators.

These findings corroborate with those by other researchers such as Hammer, cited in Aiyepku (1978), Gauzach and Schul (1995), Larson et.al (1998) and Winqvist and Larson (1998). Hammer, cited in Aiyepku (1978) found out that for final decisions, as more information was provided to decision-makers, accuracy of performance increased from 46% to 80% and judgment of confidence increased from 52% to 68%". Horowitz et. Al (1995) and Dennis (1996) found out that poor processing ability resulted in inefficiency and poor decision-making. O'Reilly (1980) stated that there has to be a match between information processing requirements of a task and information capacity of the unit or organization. Hutchinson and Reynolds (1990) went further to advocate that what is needed in this technological age are "hybrid managers". These are managers that have varied skills and abilities such as communication skills, information management skills and computer literacy skills. This will enable them to cope with the volume of information handling and interpretation required these days.

It is evident that information acquisition and information management are two important variables that determine efficiency and effectiveness of managers'/administrators' decision-making in organizations. Decision-making is the backbone of managerial/administrative functions because according to Marvin cited in Igwe (1995) decisions direct actions.

## **Conclusion and Recommendations**

The study established that information acquisition and information management capacity made significant relative and composite contributions to decision-making effectiveness of administrators in tertiary institutions in South-Western Nigeria. These findings imply that these independent variables (information acquisition and information

management capacity) determined or influenced the decision-making effectiveness of administrators. Consequently, educational organisations/institutions should pay attention to these information variables in order to have more efficient and effective decision-making and administration. Educational organizations/institutions should install functioning telephone system and modern information technologies to improve their communication system. They should also modernize their information storage and processing by computerizing the MIS. Educational organisations/institutions should also allocate more funds in their budgets for improvement of their MIS from time to time.

### **Implications for teacher education**

The university administrators under focus comprise two categories, namely, teachers and non-teachers. Both categories are products of the university system, hence the need to provide adequate computer and information technology education for both staff and students in the universities, as students will eventually become employees who need computer and information technology skills. Incorporation of computer and information technology education to the university curriculum is essential, particularly as most third world universities are yet to emphasize this form of education.

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