

MANAGERIAL ISSUES IN INNOVATIVE DEVELOPMENT OF EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) IN NIGERIA

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Abstract

The paper looked at managerial issues in innovative development of Educational Management Information System in Nigeria. The purpose of the study was to examine managerial issues that affect the efficient management and utilization of Educational Management Information System (EMIS) in the educational system of Nigeria. Concepts such as information, Information System, Management Information System (MIS) and Educational Management Information System (EMIS) were theoretically defined. Issues such as the existence of Educational Management Information System (EMIS), objectives of Educational Management Information System as well as Managerial Issues in Education Management Information System (EMIS) were discussed. The study concluded that full entrenchment of Educational Management Information System (EMIS) into the educational system of Nigeria, will greatly improve the educational economy and thus place Nigeria in the forefront of countries with high standard of educational attainment. It was recommended that there should be adequate and regular supervision of staff who are entrusted with the job of controlling the data bank of educational system for an improved education in Nigeria, there should be proper planning by stakeholders to ensure for adequate and equitable distribution of human and material resources to education among others.

Keywords: *Information, Information System, Management Information System (MIS) and Educational Management Information System (EMIS).*

Introduction

The Nigeria system of education requires a rigorous change in the educational system and this change and development is dependent on the managerial activities of school managers at all levels of educational institutions beginning from the primary level to the tertiary level. Due to the dynamic roles school managers play in school, educational management information system (EMIS) began to come to bare to assist management of an organization or enterprise in capturing, processing, storage and retrieval of relevant, up-to-date and demand driven data and information for management functions including follow up on the daily activities of the entity for overall development of the educational system. To achieve this innovation idea, the

necessity for the introduction of computers or with the development of a computer supported working environment became necessary. Since most function and activities of an organization in the 21st century are carried out or assisted with the increasing use and application of computers either local or wide area network with several layers of staff in any enterprise, there is increasing need to capture, process and retrieve data/information to the different layers of management to allow them carry out decisions and other related management functions. For instance, in the educational system, there are managers, policy makers, teachers and students, these certainly demand the exchange and sharing of vital information amongst the many players in either the execution of duties, policy direction and further to furnish data and information to guide in decision making. Also to yield valuable statistics on student enrolment, course schedules, admissions, examinations, recruitment, promotions and provision of exam results. This call for effective implementation and utilization of Educational Management Information System. (EMIS) for the collaborative environment and the creation of either a local, virtual information/electronic network to facilitate the creation of joint database, platforms and hubs of data/information that could easily feed and serve all the people involved in the field of education and for equitable distribution of resources.

THE EXISTENCE OF EDUCATIONAL MANAGEMENT INFORMATION SYSTEM (EMIS)

Historically, the existence of an Educational Management Information System (EMIS) in developing countries like Nigeria started between 1970 and 1980 due to the demanding nature of educational system and several challenges educational managers began to face in various developing countries. Following these challenges, a high demand of a structured and advanced system of educational data management was sought for, to enable stakeholders in education take decisions that will affect positively the educational system in the affected countries.

Particularly in Nigeria, the historical development of Educational Management Information System (EMIS) according to Salako (2012) can be treated within three phase of existence from 1980s it started up till now.

Phase one (1)

The first phase of Educational Management Information System (EMIS) in Nigeria, came as result of the civil service reform which was necessitated by the need to use valid and accurate data for data decision making. This phase transformed into the law establishing Department of Planning, Research and Statistic (DPRS) within Government Ministries and Public Agencies with the idea of developing structures that will help coordinate planning, research and development as well as data collection, storage, analysis and distribution. The creation of the National Education Data Bank (NEDB) and the country's first Educational Management Information System are by-product of this first phase which drew its funding mainly from United Nations Educational, Scientific, and Cultural Organization (UNESCO). The main objective of Educational Management Information System (EMIS) at that time was

to strengthen the educational statistical system to produce more relevant, reliable and timely data at all levels of the educational system

Phase Two (11)

The second phase of the development of Educational Management Information System (EMIS) is characterized by the intervention of Donor Agencies and International Development Partners. Between 1988 and 1993, National Education Database (NEDB) in conjunction with the United Nation Educational, Scientific and Cultural Organization (UNESCO) undertook three schools census nationwide. Data collected were entered into spreadsheets and stored on a simple database at National Education Database (NEDB). However, following the completion of the UNESCO project, no donor funding was available to support the collection and analysis of data until three years later when the World Bank came in to support further work on Educational Management Information System (EMIS).

Phase Three (111)

The phase three of the development process of Education Management Information System (EMIS) attempts to correct past mistakes through series of interconnected activities such as multi-stakeholders meetings, policy analysis and reviews, needs assessment, surveys, advocacy, capacity building and system strengthening. The effects of the developmental process have brought about the development of the Nigerian Educational Management Information System (NEMIS) Policy by collaborative efforts of the Federal and State Ministries of Education and their Parastatals, International Development Partners as well as Civil Society Organizations (Shoebri, 2006).

The Educational Management Information System (EMIS)

The entire process involved in the Educational Management Information System (EMIS) entails the collection of information (data) for analysis which result in equitable distribution of resources for educational development in Nigeria. Information according to Whitten, Bentley and Dittman (2004) is an arrangement of people, data, process and information technology that interact to collect, process, store and provide as output the information needed to support an organization. Also in the words of Wako (2003), information is an additional knowledge for users such as, policy formulators, decisions makers, planners and researchers, need not only to learn about the different functions under their responsibility but also to take rational actions and correct problems when it comes to decision making about educational development. It is a tool they use for further enhancement of the planning process. Hence, information according to Wako is an increased awareness of the work we do which helps one give feedback for an improved job performance Information can be categorized into Qualitative and Quantitative information. Qualitative Information describes the current education situation in terms of non tangible factors like the quality of instruction in Classrooms, and appropriate learning experience by pupils

while Quantitative Information describes the current education situation in terms of “purpose, pupils, teachers, administrative and other personnel, physical accommodation, material and equipment available as well as the end product in terms of school leavers, repeaters, graduates and research (Fredrickson in Rizavi 1995).

The role of information in educational planning through the effective utilization of Education Management Information System (EMIS) can be considered as the foundation of the whole process of policy formulation by Educational planners in Nigeria. The provision of accurate, reliable and timely information can act as an input to effective educational planning and management in a number of ways. This examples, demonstrate that the provision of correct information about the current status of an educational system in a country or a part of country might influence many decisions which result will be actually in line with the type of information gotten. If the relevant information required in a decision-making process or an organization planning is not available at the appropriate time, then there is a good chance of poor organization planning, inappropriate decision-making, poor priority of needs, and defective programming or scheduling of activities (Adebayo, 2007). This invariably will affect the type of result that will be produced as output. An information system according to Beeta (2005) is a system consisting of all the network of all communication channels used within an organization for the attainment of organization objectives.

An information system according to Rizavi (1995) is an arrangement of groups, data processes and technology that act together to accumulate, process, store and provide information output needed to enhance and speed up the process of decision making. An information system also, is any organized combination of people, hardware, software, communication networks, and data resources that collects, transforms, and disseminates information in an organization (O'Brien 2002). Management Information System (MIS) according to Laudon and Laudon (2003) is the study of information system focusing on their use in business and management. But in recent time the management information system has passed the bar of business and management to all sectors of the economy due to its important nature as it serves as a way for collection and analysis of relevant data required for decision making leading to organizational growth. Obi (2003) suggested that Management Information System (MIS) is indispensable in the area of decision-making as it can monitor by itself the instability in a system, verify a course of action and take action to keep the system in control, Available record suggested that programmed decisions are relevant as they provide support by supplying information to the evaluation and the choice and implementation process of decision making. Adebayo (2007) added that the existence of Management Information System (MIS) is required to improve and enhance decision making on the issues affecting human and material resources in the organization. In addition, Baskerville and Myers (2002) define Management Information System (MIS) as the development, use and application of information system by individuals, organizations and society.

Educational Management Information System (EMIS) according to Haiyan and John (2003), is an institutional service unit producing, managing, and disseminating educational data and information, usually within a nation's Ministry or Department of Education. The outputting and marketing educational data and statistic in a timely and reliable fashion. These specific tasks serve the needs of educational management, resource allocation, and policy formulation, such as planning and budgeting, policy research and analysis, monitoring and evaluation, allocating supplies, domestic and global communication and collaboration. It is also a set of formalized and integrated operational processes, procedures, and cooperative agreement by which data and information about schools and schooling, such as facilities, teachers, students, learning activities, and evaluative output, are regularly shared, integrated, analyzed, and disseminated for educational decision use at each level of the educational hierarchy. Wako (2003) added that Educational Management Information System (EMIS) is a system for organizing information base in a systematic way for the management of education development. He further stated that. It is important to realize that statistic is part of the EMIS system. Hence, statistics of formal, non-formal, early childhood, higher education, teacher training institutions and technical and vocational institutions are all under the responsibility of EMIS. Hence, the collection, processing, analyzing and reporting of statistics in these areas remains the responsibility of EMIS center of the ministry of education. In the event that each department and sections of the ministry collects and compiles its own statistics, EMIS can obtain final product from each department or section for publication and use for educational development. The Educational Management Information System (EMIS) of Nigeria was specifically designed to collect information of enrolment levels, retention rates, facilities, qualified teachers, facilities and other information from the census form with the purpose of providing support to state level planning and to generate reports. The output of these efforts had a direct impact on the planning process and in identifying the anomalies in the education system (UNESCO, 2002).

The objectives of Educational management information System(EMIS)

The objectives of Educational Management Information System (EMIS) in Nigeria according to Shooebridge (2006) include:

1. Supporting the achievement of goals of education as articulated in the National Policy on Education (NPE).
2. Providing a basis for monitoring the effectiveness and efficiency of the educational system at all levels of education.
3. Developing and reporting on key indicators to monitor the achievement of educational standards and annual targets, and
4. Providing a basis for Federal Ministry of Education (FME) to report on the status of education in Nigeria using national and international benchmarks and comparative global reporting analysis.

Management Issues in Educational Management Information System(EMIS)

There are several managerial issues managers of Educational Management Information System (EMIS) deal with ,in the bid to provide quality service to the educational sector at all level of education. These issues are school Supervision, Examinations, Planning, Accounts and information Technology resources.

- a. **School supervision:** For EMIS to be effective, staff have to be regularly guided and supervised on the job to enable them become committed and improve on their job performance. This is because supervision encompasses professional guidance from a senior staff to a junior staff. All knowledgeable staff must always do the job of supervision to enable for timely result required for educational consumption.
- b. **Examinations:** All educational level are usually engaged in examinations. For instance, First School Leaving Certificate examination, Junior Secondary School Examination, Senior Secondary School Examination, Unified Tertiary Matriculation Examination, etc. These are all examination that effective management and a large pool of data are required. Hence, effective management of EMIS will go a long way to facilitate accurate data and timely dissemination of information .
- c. **Planning:** Without planning, the educational sector cannot achieve the objectives of the levels of education as stipulated by the national policy on education. This can be through wrong planning due to inaccurate data presented for use by the strategic planning unit, there will be shortage in the allocation of education finance as well as human resources. Hence, planning is required for the successful managing of educational system. Through EMIS correct and accurate data can be gotten for appropriate planning.
- e. **Account:** one of the major challenges facing the educational sector is appropriate accounting system. A proper presentation of the accounts of the education sector will go a long way to improving the education sector. When allocation is given to the ministry of education, the Educational Management Information System (EMIS) can be used to monitor the expenditure of various levels of education following the data that will be presented to the education board.
- e. **Management of Information Technology Resources:**For proper management of the education through EMIS, its resources require effective management, in term of regular maintenance, collation and analysis of information for proper decision making as it affects education in Nigeria.

Conclusion

The Educational Management Information System (EMIS) is an innovative phenomenon that has begun to take it roots in Nigeria. Its full entrenchment into the educational system will greatly improve the educational economy and thus place Nigeria in the forefront of countries with high standard of educational attainment. But for this to be achieved, managerial issues that concomitantly affect the smooth managing of education must be taken into cognizance. When this is done Nigeria will began to erase its name from the plague of fallen standard of education usually

associated with the country.

Recommendation

The following recommendations were made from the study:

1. There should be adequate and regular supervision of staff who entrusted with the job of controlling the data bank of educational system for an improved standard of education in Nigeria.
2. There should be proper planning by stakeholders to ensure adequate and equitable distribution of human and material resources.
3. Account system should be improved to help the school operate in transparency and accountability void of data mutilation and inflation
4. When resource are provided for managing the management of information on education, it should be properly utilized for the improvement of the system

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