

ADEQUACY OF INFRASTRUCTURAL FACILITIES REQUIRED FOR THE IMPLEMENTATION OF NIGERIA EDUCATION MANAGEMENT INFORMATION SYSTEM POLICY IN ANAMBRA STATE.

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Abstract

This paper assessed the adequacy of infrastructural facilities required for the implementation of Nigeria Education Management Information System (NEMIS) policy in Anambra state. The study was guided by two research questions. A descriptive survey research design was adopted for the study. Two observation checklists titled “NEMIS Infrastructures at the Local Government Nodes” (NILGN) and “NEMIS Infrastructures at the State Node (NISN) were used. All the 21 NEMIS nodes at the local government level and 1 node at the state level were used for the study. Data were analyzed using frequency and percentage. Findings indicated that of the nine NEMIS infrastructural facilities expected to be available at the state and local government nodes according to FME (2009), only 5 (55.6%) were available at the state level while none was available at the local government level. Among the recommendations made was that there is need for the state government to partner with various non-governmental and international development partners to be able to meet the challenges of funding and provision of adequate infrastructural facilities for proper implementation of NEMIS policy.

Introduction

Education is universally recognized as an instrument for social, political, scientific and technological development. In Nigeria, education is regarded as an instrument for the promotion of national development as well as effecting desirable social change (Federal Republic of Nigeria, 2009). This is the reason why no society can afford to toy with the education of its citizens as this could result in a snail speed development (Azikiwe, 2010).

Considering the invaluable roles and contribution of education to meaningful individual, social and national development, its proper management and administration using an effective and efficient management information system should be a national concern. High standards of education in Nigeria call for effective management and administration of the education

system by collecting, examining and rapid dissemination of information needed for educational planning and decision making. Education Management Information System (EMIS) does this by providing necessary data and information and by fostering an environment in which the demand for this information drives its use.

EMIS is an organized group of information and documentation services that collects, stores, processes, analyzes and disseminates information for educational planning and management (Bernbaum and Moses, 2011). The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015) stipulated that during the education management process, EMIS should inform the different actors and partners on the state of the sector, its internal and external efficacy among others. An EMIS is therefore critical in facilitating institutional arrangements and strategic planning to ensure access, equity, quality, rational sourcing and allocation of scarce resources (Federal Ministry of Education, 2007).

Over the years, EMIS in Nigeria could not perform optimally; data were either not available or unreliable and could therefore not inform the basis for planning and decision making (FME, 2007). The data management situation appeared disorganized as operators in the system had different sets of data for such indications as enrolment, number of teachers and lots more.

Different agencies and international development partners collected and used different and discordant sets of data on similar indicators. The result was that decision making was not evidence based and similarly no reasonable planning could be done. Moreover, the nation suffered embarrassments because it could not transmit data on critical indicators to such world bodies as the UNESCO Institute of Statistics. (FME, 2007 pp.v).

Acknowledging this, Rufai, (2010) noted that the nation has consistently suffered embarrassments internationally and from within due to failure to provide information on education sector. Rufai attributed the situation to a number of factors among which are inadequate funding, weak capacity, poor infrastructure, skewed incentives among others. All these problems appeared to have complicated the data management situation in Nigeria and perhaps led to confusion and huge gaps in availability of data or the reliability of available data that is required for educational planning and decision making.

This dearth of empirical data generated through a functional and carefully designed system apparently necessitated efforts to put in place the

Nigeria Education Management Information System (NEMIS) Policy in December 2007. NEMIS is a database to support the effective management of the education system at the federal, state and local government levels to improve the performance of the education system as a whole and of students in particular (FME, 2007). The policy which decentralized the EMIS process is meant to enhance efficiency in the collection, management and dissemination of education information in Nigeria. It is to provide the basis for monitoring the effectiveness and efficiency of the educational system at all levels. The approval of the NEMIS Policy was followed by the approval of NEMIS policy implementation guidelines in 2009 which are intended to provide direction to the management of education information at different levels of the education system by specifying the roles of different stakeholders and requirement for NEMIS right from schools to the federal level.

In decentralizing NEMIS which the policy promotes, all the states are required to set up, staff and equip education management information system for their respective states in line with the guidelines. One of the stipulations of the guideline is that states should make adequate provision of NEMIS infrastructural requirements. Infrastructure forms basic physical and organizational structures needed for the smooth operation of a society and organization or enterprise, or the services and facilities required for an economy to function effectively. It can be generally defined as the set of interconnected structural elements that provide framework supporting an entire structure of development. It is an important term for judging a country or region's development (Shahi, 2012).

The following basic infrastructural requirements are recommended for each NEMIS node at the state and local government levels depending on their data needs according to FME, (2009):

State Level

- One mid-range server with up-gradable capacity
- Minimum ten (10) computers for statisticians, analysts, programmers and data inputting.
- Three laptops (3) for database managers
- Three printers (3) to include a network printer
- Photocopier (2 different sizes)
- Scanners (2 different sizes)
- Internet connectivity with V-Sat facility
- 24 hour UPS back-up power facility
- Strong back-up capability for database to be archived at external location

Local Government Level

- One mini server with up-gradable capacity

Minimum six (6) computers for data inputting
One (1) laptop for database manager/analyst
Two (2) printers to include desk jet printer
Photocopier
Scanner
Internet connectivity with V-Sat facility
24 hour UPS back-up power facility

Strong back-up capability for database to be archived at external location

It is believed that when these infrastructural facilities are adequately provided, data for educational planning and decision making will always be made available. Based on this, the study assessed the adequacy of NEMIS infrastructural facilities required for the implementation of NEMIS policy in Anambra State.

The following two research questions guided the study:

1. Are NEMIS infrastructures at the local government nodes Adequate?
2. Are NEMIS infrastructures at the state node adequate?

Method

The study adopted a descriptive survey design. This design, according to Fraenkel, Wallen and Hyun (2012) seeks to collect and analyse data from sample of a population in order to determine the current status of that population with respect of one or more variables. The design was deemed suitable for this study which collected data in order to determine the adequacy of NEMIS infrastructural facilities required for the implementation of NEMIS policy.

The population was 22 consisting of 1 NEMIS node at the state ministry of education and 21 NEMIS nodes at the 21 local government areas of the state. These figures were based on records from the Department of Planning, Research and Statistics, Anambra State Ministry of Education, Awka (2017). The whole population was used as the study sample.

The researchers made use of two observation checklists titled: "NEMIS Infrastructures at the Local Government Nodes" (NILGN) and "NEMIS Infrastructures at the State Node (NISN). Both checklists consisted of nine (9) items each meant to tap information on the availability of NEMIS infrastructures at the 21 local government nodes and at the state node.

The checklists were completed through a direct observation conducted by the researchers at the state and local government NEMIS nodes located at

the state Ministry of Education and at the 21 Local Government Area Headquarters in the state.

Frequency and percentage were used to answer the research questions. A percentage score of 100% indicated “adequate” infrastructure while less than 100% indicated “not adequate” infrastructure. This was based on the infrastructural specifications for each node at the state and local government level by FME (2009).

Results

Table 1. Percentages on adequacy of NEMIS infrastructures at the local government nodes

Infrastructures to be provided at each local government node according to FME (2009)	Number expected at the 21 LGEA	Number available	% available	Decision
1. Mid-range server with upgradable capacity	21	0	0%	NA*
2. Computers for statisticians, analysts, programmers and data inputting.	126	8	6.35%	NA
3. Laptop for database manager/analyst	21	0	0%	NA
4. Printers to include a network printer	42	13	30.95%	NA
5. Photocopier	21	1	4.74%	NA
6. Scanner	21	0	0%	NA
7. Internet connectivity with V-Sat facility	21	0	0%	NA
8. 24 hour UPS back-up power facility	21	0	0%	NA
9. Strong back-up capability for database to be archived at external location	21	0	0%	NA

Key- *NA- Not Adequate

The result presented in table 1 shows that the infrastructural facilities available at the local government nodes are not adequate in relation to the specification by FME (2009). The analysis revealed that 1 mid-range server which is expected to be available at each of the 21 local government node in the state was not available in any of them. Out of the 126 computers expected

to be available, only 8 (6.35%) were available. A total of 42 printers were expected to be available, just 13 (30.95%) were available, 21 photocopiers were expected to be available at the local government nodes, just 1 (4.74%) was available. Laptops, scanners, internet connectivity with V-sat facility, UPS, strong backup facility were not available in any of the 21 local government nodes.

Table 2. Percentages on adequacy of NEMIS infrastructures at the state node

Infrastructures to be provided at each local government node according to FME (2009)	Number expected	Number Available	% available	Decision
1. Mid-range server with upgradable capacity	1	1	100%	A*
2. Computers for statisticians, analysts, programmers and data inputting.	10	10	100%	A
3. laptop for database manager/analyst	3	3	100%	A
4. Printers to include a network printer	3	2	66.67%	NA*
5. Photocopier	1	1	100%	A
6. Scanner	2	1	50%	NA
7. Internet connectivity with V-Sat facility	1	1	100%	A
8. 24 hour UPS back-up power facility	1	0	0%	NA
9. Strong back-up capability for database to be archived at external location	1	0	0%	NA

Key- *A-Adequate, *NA-Not adequate

The analysis of data from the state node displayed in table 2 shows that infrastructural facilities such as mid-range server with upgradable capacity, computers, laptops, photocopiers and internet connectivity were available in line with the specifications by FME (2009). On the other hand, other facilities

were not available. These include such facilities like printers and scanners which had percentage availability of 66.6% and 50%; 24 hour UPS backup and strong back-up capacity for database which were not available at all in the state node.

Of the nine NEMIS infrastructural facilities expected to be available according to FME (2009), only 5 (55.6%) were available at the state level while none was 100% available at the local government level. It was therefore decided that NEMIS infrastructural facilities were not adequate in Anambra State.

Discussion

The findings of this study shows that of the nine NEMIS infrastructural facilities expected to be available according to FME (2009), only 5 (55.6%) were available at the state level while none was available at the local government level . It was therefore deduced that NEMIS infrastructural facilities were not adequate in Anambra State. The reason for this could be as a result of the low level of funding of the NEMIS policy implementation process by the state government. It could also be because there is dearth of dedicated NEMIS nodes as observed by the researchers at the local government level. The supposed NEMIS data nodes at all the local government headquarters are embedded within other offices and departments. This may also have contributed to the inadequacy of NEMIS infrastructural facilities in the state.

The finding of this study is in line with the findings of Adebola (2007), who found out that the infrastructural facilities for the successful execution of the Universal Basic Education (UBE) programme are provided but not adequate. This finding is supported by Ugwuanyi (2013), who found in his study that none of the available physical education equipment and supplies in the schools was adequate.

In addition, Shehu (1996) reported that there was lack of equipment for instructional physical education in secondary schools in Nigeria. Also Humbert and Chad (1998) noted that there was lack of appropriate equipment for physical education classes in schools which constituted a problem. These findings are not surprising to the researchers because it appears that both the state and federal government in Nigeria are not doing enough in terms of funding of education and educational policies. Some government officials in most cases divert money meant for the procurement of educational facilities and supplies to other areas of needs.

Conclusion

The study concludes that the infrastructural facilities required at the state and local government NEMIS nodes for the implementation of NEMIS policy are not adequate in Anambra state. Proper funding, supervision and monitoring by the state government are therefore essential.

Recommendations

1. There is need for the state government to include NEMIS implementation cost in the annual budgets of concerned departments, ministries and agencies for them to be able to meet the cost implications of providing NEMIS facilities.
2. There is also need for the state government to partner with various non-governmental and international development partners to be able to meet the challenges of funding and provision of adequate infrastructural facilities for proper implementation of this policy.
3. The state government also should set up an effective monitoring mechanism to monitor the NEMIS policy implementation process. When the implementation process is not funded and monitored, achieving effective implementation is only but a mirage.
4. There is need for the state government to isolate the NEMIS nodes at the local levels from other departments for increased efficiency.

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