

## ASSESSMENT OF PRINCIPALS' USE OF MANAGEMENT INFORMATION SYSTEM IN PLANNING PROCESS IN SECONDARY SCHOOLS IN DELTA STATE

<sup>1</sup>Nwaozor, Henry Osedebe & <sup>2</sup>Obi, Emenike (Prof.)

<sup>1&2</sup> Department of Educational Management and Policy, Nnamdi Azikiwe University,  
Awka, Anambra State, Nigeria

### ABSTRACT

*This study is carried out to assess principals' use of management information system (MIS) in planning process in secondary schools in Delta State, Nigeria. Two research questions guided the study and two null hypotheses were tested at 0.05 level of significance. The descriptive survey design was adopted for the study. A total of 467 copies of the questionnaire were administered to the respondents comprising of the entire population of public secondary school principals as there were no sampling of the principals and 398 copies (that is 221 male principals and 177 female principals) were properly completed and successfully retrieved, indicating 85% return was used for the data analysis. A research developed questionnaire titled Assessment of Principals' Use of Management Information System in Planning Process Questionnaire (APUMISPPQ) was used for the data collection. The instruments were validated by three experts, two in the Department of Educational Management and Policy and one in the Department of Educational Foundations, all in the Faculty of Education, Nnamdi Azikiwe University. The instruments were subjected to test of internal consistency using Cronbach alpha which yielded overall coefficient of 0.87. The researcher together with six research assistants collected the data for the study using direct administration method. Mean and Standard deviation scores were used to answer the research questions, while t-test was used to test the hypotheses. The findings of the study revealed among others that the extent of principals' use of management information system in planning process was to a low extent. It was also reported that there is no significant difference in the mean ratings of male and female principals on the extent they use MIS in planning process. Based on the findings, it was recommended among others that the Government through the State Ministry of Education should organize seminars and workshop for principals with the aim of equipping them with relevant MIS facilities and educating them on the benefits of using management information system in making research for current/relevant information before engaging on planning process in order to be more effective in planning.*

Keywords: Principal, Management Information System, Planning Process, Secondary Schools, Curriculum, Budget.

### INTRODUCTION

Education as the bedrock of every economy can vigorously achieve enhanced, productive and increased efficiency when adequate planning process are put in place and well managed with

updated information through the use of management information system. Management Information System (MIS) can best be described as that aspect of management that researches on current documents and updated information through the use of automated computer-based network to evaluate existing policies for adequate planning process.

In this regard, management information system has been defined by different scholars in varying ways. For instance, Asemi, Safari and Zavareh (2011) defined management information system as one of the major computer based information systems which its purpose is to meet the general information need of all the managers in the firm or in some organizational subunit of the firm. According to Nowduri and Al-Dossary (2012) management information system is a computer based information system that provides for management oriented reporting based on transaction processing and business operations of the organization. In the words of Heidarkhani, Khomami, Jahanbazi and Alipoor (2013) management information system is a kind of organizational information computer systems that take internal information from operating processing system and summaries them to meaningful and useful forms as management reports to use in performing management duties. In the same vein, Nakpodia (2010) defined management information system as a computer based information system that deals with the system of people, data records and activities that process the data and information in an organization which includes the organization manual and automated process. In this research, management information system (MIS) is defined as a computer based information system that is assessable through the use of internet facilities for information updates and circulation of knowledge.

Management information system is needed for effective planning in school by school principals. To buttress this, Omobude and Igbudu, (2012) noted that every role player in school system needs to participate at one level or the other. One of the key players in school is the principal, who is an administrator that implements the school curriculum and organizer of the school activities along with the teachers. Therefore, the use of management information system in planning is a continuous process that requires researching on current information to be effective. It involves a continuous collection of data, analysis of the possible alternative and the selection of the best alternative by using management information system judiciously in search of current information and updates for effective planning outcome. Thus, it becomes imperative to state that principals' planning functions become easier with the proper application of use of management information system and this has prompted increasing recognition of indispensable responsibility of the principal in planning process. Hence, principal's effectiveness in function performance depends on useful, current and relevant information availability him.

In view of the above analysis, the areas of principals' planning process that requires the use of management information system that this study centered on are; Curriculum planning and Budget planning. The justification for these two major areas is as a result of their relevance in fostering the attainment of educational goals. The principal as the administrative head of secondary school is responsible for supervision of curriculum development and improvement, therefore constant revision and improvement of the Curriculum is essential for improvement of learning according to the changing needs of the society. To facilitate upward review of

curriculum planning to meet up with academic changes and improvement from time to time, it is required that the school principals plan with current and updated information by exploring management information system for new and improved ideas before undertaking planning process. Olibie (2013) posited that the principals should engage in reading professional journals, peer mentoring, and participating in professional conferences and seminars to help them achieve excellence in school planning for curriculum and learning management. Some of the areas of curriculum that need adequate information which can be accessed through management information system for proper planning are scheme of work, lesson plan, updating learning resources, preparing school time table for all subjects, test, and exams, researching on library/laboratory materials and co-curricular activities.

The level of participation in Budget planning requires the use of management information system to access available options that gives a competitive advantage of choosing appropriate methods of budget planning to minimize financial wastages. School principals need information relating to finance and financial management through the use of management information, this is to enable them develop a continuous knowledge on budget planning and implementation in considering the available finance to accommodate every programme and activities of all the departments within the period specified. According to Manafa (2019) ineffective planning causes poor teaching and hazy preparation of budget. Al-Mamary, Shamsuddin, and Aziati (2014) pointed out that management information system is one of the most important tools in any organization, which aims to provide reliable, complete, accessible, and understandable information in a timely manner to the users of the system. In the assertion of Wagithunu, Muthee and Thiguri (2014) it is essential in school that stakeholders participate in decision making regarding financial management such as monitoring and evaluation, credit control and auditing of financial records. In this regard, the principal as an administrator and head of the school who is in charge of financial matters will effectively carry out budget planning in various departmental needs, preparing supplementary budget, capital projects, analyzing expected revenue, sourcing of funds and implementation when the right information is accessed through the use of management information system.

Consequently, the status of secondary school principal is not gender discriminating, a principal can either be a male or female. The Principal as the Chief administrator of the school should direct the actions and activities of the staff and students with a view to achieving the objectives of the school through proper planning with the use of management information system experiences in researching for information that can aid efficiency and effectiveness in his functions. Achimugu (2016) defined principal as the administrative and instructional leader of the school that is charged with the responsibility of running the affairs of the school in order to achieve the goals of the school. This therefore implies that, to be able to plan adequately and educate teachers to teach the various courses/subjects as slated in the curriculum, the school principals need to be competent in the use of management information system for research and planning purposes. This is because nobody can effectively impact to others what he/she is not competent at. Current and adequate information is therefore needed by the school principals to be able to plan effectively at every stage of planning process.

Secondary education is therefore crucial in both personal and national development, and to ensure equitable access and improvement in the quality and efficiency in secondary education, it is required that the principals who are charged with the responsibility of utilizing human and material resources in schools be effective and efficient in the use of management information system in planning process for all administrative processes to achieve the desired results. In view of the above background, it becomes very clear to state that, the extent of principals' use of management information system in planning process will determine the positive actualization of their functions, hence the purpose of this study, to ascertain the extent of principals' use of management information system in planning process in secondary schools in Delta State.

### **Statement of problems**

One of the major issues resulting to inadequate planning in Secondary Schools is inability of principals to effectively utilize management information system to research on current and useful information needed to improve on planning process. In spite of the profound benefits derived from use of management information system, it has become obvious to identify that there are some management information system facilities like computers, internet facilities, scanners, printers, projectors, information, current documents and many more that are lacking in various curricula for researching and implementing adequate planning process in public secondary schools in Nigeria. These equipments that are lacking in public secondary schools is seriously affecting every process of passing knowledge to the students because the principals and teachers that needed to be equipped with adequate and current information through the use of management information system struggles to compile information from obsolete documents and textbooks to teach the students, and as such results to passing insufficient knowledge to the students. This issue of inadequate use of management information system by public secondary schools principals has become a major challenge in this era of technology advancement where information and knowledge is been circulated through management information system, and yet public secondary schools are handicapped in availability of information due to lack of MIS facilities.

From the researcher's observation, these equipments have become depleted and abandoned in some secondary schools in Delta State that seem to have them due to lack of maintenance and usage by inexperienced principals who do not see the need to seek or research for adequate and current information before engaging on planning, nor guide the teachers on its usage. This is an indication to state that public secondary school principals particularly in Delta State seem not to be adequately making use of management information system in researching for current and relevant data before engaging on educational planning. This appears to be evident in poor principals' usage of management information system, with evidence that a number of inhibitors to use of management information system by secondary school principals are; lack of training, lack of time, lack of technical support, lack of confidence and lack of skills. These situations have led to poor academic planning and use of obsolete information among secondary school principals, leading to poor academic achievement. To this end, the researcher sought to carry out a study to assess the extent of principals' use of management information system in planning process in secondary schools in Delta State.

### **Purpose of the Study**

The main purpose of this study is to assess the principals' use of management information system in planning process in secondary schools in Delta State. Specifically, the study was carried out to ascertain extent of:

1. Principals' use of management information system in curriculum planning
2. Principals' use of management information system in budget planning.

### **Research Questions**

The following research questions guided the study:

1. To what extent do male and female secondary school principals use management information system in curriculum planning in secondary schools in Delta State?
2. To what extent do male and female secondary school principals use management information system in budget planning in secondary schools in Delta State?

### **Research Hypotheses**

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean responses of male and female principals on the extent they use management information system in curriculum planning process in secondary schools in Delta State.
2. There is no significant difference in the mean responses of male and female principals on the extent they use management information system in budget planning process in secondary schools in Delta State

### **Method**

Descriptive survey research design was adopted for this study. This design is appropriate since the study is aims at collecting data from the respondents in order to assess the extent to which the principals use management information system in planning process in secondary schools in Delta State. The study was conducted in Delta State, Nigeria. The choice of Delta State as the area of study is because there is no known study to the researcher done on assessment of principals' use of management information in planning process in Delta State.

The population comprised entire 467 public secondary school principals in Delta State, according to data collected from Post Primary Education Board, Asaba Statistic unit, (June, 2021). There are 467 public secondary schools principals in Delta State, made up of male and female principals in all the government owned secondary schools in Delta State. The secondary school principals were used for the study because they are the chief administrators of secondary schools. The rationale for using the entire population is because the population is not too large. In other words, there was no sampling of the principals.

The structured questionnaire titled "Assessment of Principals' Use of Management Information System in Planning Process Questionnaire (APUMISPPQ)" was used to elicit data for this study by the researcher. The questionnaire has two parts, part A and part B. Part A; contains the background information of the respondents which encompasses such data as, Name of school

and Gender. Part B; contains two clusters, with a total of 20 items, having 10 items on each cluster. Cluster 1 contains items on assessment of principals' use of management information system in curriculum planning process and Cluster 2 contains items on assessment of principals' use of management information system in budget planning process. APUMISPPQ was built on a 4-point rating scale, and the structured rating type questionnaire is designed as follows: Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). The face validation of the instrument was determined by three experts from Faculty of education, Nnamdi Azikiwe University, Awka, Nigeria. Their suggestions were used to draft the final edition of the instrument.

The instrument was trial-tested in order to determine the reliability of the instrument. Twenty copies were produced and administered to twenty (20) public secondary school principals in Edo State, comprising 10 males and 10 females' principals, which was outside the area of study. The instruments were administered once and the data were collected and analyzed using Cronbach Alpha which yielded 0.83 and 0.92 for each of the clusters and the overall coefficient of the entire instrument was 0.87.

The researcher together with the help of six research assistants administered the copies of the questionnaire on the principals. Direct approach method was employed in collecting the data. The distribution and collection of the copies of the questionnaire lasted for four weeks. A total of 467 copies of the questionnaire were administered to the respondents and 398 copies (that is 221 male principals and 177 female principals) were properly completed and successfully retrieved, indicating 85% percent return. The loss did not affect the analysis and the findings of this study. At the end of the exercise, copies of the questionnaire that were properly completed and retrieved were used for data analysis.

Mean and Standard Deviation were used in answering the research questions. The range of the scores for the four (4) point using real limit shown below:

Response	Rating Scale	Real Limit of number
Very High Extent (VHE)	4	3.50 – 4.00
High Extent (HE)	3	2.50 – 3.49
Low Extent (LE)	2	1.50 – 2.49
Very Low Extent (VLE)	1	0.50 – 1.49

**Decision Rule:** Any item with a real limit that is 2.50 and above was regarded as “High Extent”, while any item with a real limit that is below 2.50 was regarded as “Low Extent”

The null hypotheses were tested using t - test at 0.05 level of significance. The standard deviation scores were used to examine variation in the mean ratings of respondents. The decision rule with respect to hypothesis was to reject the null hypothesis where the calculated t-value is greater than or equal to the table value; the null hypothesis was rejected and the difference was taken to be statistically significant, but if otherwise, the null hypotheses was not rejected and the difference was taken to be statistically not significant.

## RESULT

**Research Question 1:** To what extent do male and female secondary school principals use management information system in curriculum planning process?

*Table 1: Mean Ratings and Standard Deviation Scores of Male and Female Principals on the Extent They use Management Information System in Curriculum Planning Process.*

S/N	ITEMS	Male Principals (N=221)			Female Principals (177)		
		Mean	Sd	Decision	Mean	Sd	Decision
1.	Researching on information to guide teachers in preparing lessons notes	2.34	1.09	Low Extent	2.37	1.09	Low Extent
2.	Searching on information to guide teachers in preparing scheme of work	2.38	1.07	Low Extent	2.40	1.10	Low Extent
3.	Searching for learning resources	2.37	1.20	Low Extent	2.53	1.09	High Extent
4.	Researching for information to enhance proper drafting of school time table for various subjects	2.48	1.06	Low Extent	2.20	1.07	Low Extent
5.	Searching for current books and facilities needed in school library	2.13	1.13	Low Extent	2.37	1.09	Low Extent
6.	Searching for current books and facilities needed in school laboratories	2.13	1.06	Low Extent	2.40	1.11	Low Extent
7.	Researching information needed to conduct test for the students	2.48	1.04	Low Extent	2.56	1.08	High Extent
8.	Obtaining information to draw up co-curricular activities for the students	2.44	1.15	Low Extent	2.37	1.13	Low Extent
9.	Updating knowledge in measuring students progress report	2.34	1.19	Low Extent	2.21	1.12	Low Extent
10.	Researching information needed to conduct exams for the students	2.13	1.14	Low Extent	2.37	1.09	Low Extent
<b>Mean of Means</b>		<b>2.34</b>	<b>1.11</b>	<b>Low Extent</b>	<b>2.37</b>	<b>1.09</b>	<b>Low Extent</b>

As shown in Table 1, the overall standard deviation scores of 1.11 and 1.09 for male and female principals respectively indicated closer disparity in their responses and this means that there is no much variation between the male and female principals' responses. The mean of means scores of 2.34 and 2.37 for male and female principals respectively fall within the decision rule of 1.50-2.49. Thus, principals' use of management information system in curriculum planning process was to a low extent.

**Research Question 2:** To what extent do male and female secondary school principals use management information system in budget planning process?

**Table 2:** Mean Ratings and Standard Deviation Scores of Male and Female Principals on the Extent They use Management Information System in Budget Planning Process.

S/N	ITEMS	Male Principals (N=221)			Female Principals (177)		
		Mean	Sd	Decision	Mean	Sd	Decision
11.	Making assessment to include various departmental needs in the school budget.	2.45	1.03	Low Extent	2.33	1.13	Low Extent
12.	Researching on information needed before preparing a supplementary budget when the need arises	2.37	1.04	Low Extent	2.36	1.07	Low Extent
13.	Researching on the most needed capital project(s) to be included in the school budget.	2.48	1.02	Low Extent	2.23	1.10	Low Extent
14.	Researching on methods of analyzing expected revenue before preparation of budget	2.32	1.10	Low Extent	2.38	1.09	Low Extent
15.	Updating knowledge before setting up budget monitoring team in the school	2.41	1.05	Low Extent	2.30	1.06	Low Extent
16.	Researching on the better method of sourcing funds for budget implementation	2.12	1.13	Low Extent	2.38	1.09	Low Extent
17.	Researching on information needed before involving experts like the school bursar or accountant in the preparation of school budget	2.39	1.06	Low Extent	2.44	1.12	Low Extent
18.	Updating information before preparing the school financial statement	2.40	1.08	Low Extent	2.26	1.11	Low Extent
19.	Updating knowledge for auditing of various financial records in the school	2.25	1.07	Low Extent	2.33	1.09	Low Extent
20.	Researching on information that may be needed for keeping accurate records for financial transactions of the school	2.45	1.02	Low Extent	2.48	1.11	Low Extent
<b>Mean of Means</b>		<b>2.33</b>	<b>0.95</b>	<b>Low Extent</b>	<b>2.20</b>	<b>0.98</b>	<b>Low Extent</b>

Result on Table 2 showed that the pooled standard deviation scores which stood at 0.95 and 0.98 indicated that the male and female principals were clustered. The mean of means scores of 2.33 and 2.20 for male and female principals fall within the decision rule of 1.50-2.49. Thus, principals' use of management information system in budget planning process was to a low extent.

**H<sub>01</sub>:** There is no significant difference in the mean ratings of male and female principals on the extent they use of management information system in curriculum planning process in Delta State

**Table 3:** The t–test of Significant Difference between the Mean Ratings of Male and Female Principals on the Extent They use of Management Information System in Curriculum Planning Process

Variables	N	$\bar{X}$	SD	t-cal.	t-crit	df	A	Remark
Male Principals	221	23.41	11.10	0.27	1.96	396	0.05	<b>Not Significance</b>
Female Principals	117	23.70	10.91					

Table 3 revealed that the t-calculated value of 0.27 is less than t-critical value of 1.96 at 0.05 level of significance and 396 degree of freedom. Thus, the null hypothesis is not significant. Therefore, there is no significant difference in the mean ratings of male and female principals on the extent they use of management information system in curriculum planning process.

**H<sub>02</sub>:** There is no significant difference in the mean ratings of male and female principals on the extent they use of management information system in budget planning process in

**Table 4:** The t–test of Significant Difference between the Mean Ratings of Male and Female Principals on the Extent They use of Management Information System in Budget Planning Process

Variables	N	$\bar{X}$	SD	t-cal.	t-crit	df	$\alpha$	Remark
Male Principals	221	23.32	9.54	1.33	1.96	396	0.05	<b>Not Significance</b>
Female Principals	117	22.01	9.83					

Table 4 revealed that the t-calculated value of 1.33 is less than t-critical value of 1.96 at 0.05 level of significance and 396 degree of freedom. Thus, the null hypothesis is not significant. Therefore, there is no significant difference in the mean ratings of male and female principals on the extent they use of management information system in budget planning process.

## DISCUSSION

The finding of the study revealed that principals' use of management information system in curriculum planning process was to a low extent. This implies that the secondary school principals in Delta State to a low extent make use management information system in curriculum planning process. This is in agreement with the finding of Olibie (2013) which indicated that there is insufficient curriculum planning among the principals and poor ability to use statistical data to make inferences for curriculum improvement.

It was also found out that there is no significant difference in the mean ratings of male and female principals on the extent of principals' use of management information system in curriculum planning process. The possible explanation of this finding is that principals have

challenges in availability of management information system facilities and in its usage due to lack of training and poor understanding of curriculum innovations. This corroborate with the finding of Odhiambo (2017) that ICT facilities especially computers were fairly accessible to principals and their deputies but were not adequate for Heads of Departments in most schools to enable frequent use. This also affirmed the finding of Manafa (2019) who reported that ineffective planning causes poor teaching and hazy preparation of budget and added that inadequate fund to procure materials needed for planning and principals' not involving the concerned staff in planning are also causes of poor planning and recommend that government should provide periodic in-service training on planning for principals.

It was also found out that principals' use of management information system in budget planning process was to a low extent. This is an indication that the secondary school principals in Delta State do not adequately make use of management information system in researching for relevant information to enhance their budget planning process. The reason for this to be that the principals lack the knowledge it takes to understand the technological aspect involved in the use of management information system to research on financial information due to lack of training and commitment to it. This finding is supported by Boma (2018) whose postulation affirmed that the principal as the chief accounting officer of the school has the responsibility of ensuring that adequate financial information is collected, processed, interpreted and reported and that adequate financial monitoring is effected during the implementation of policies. Thus, this is achievable through use of MIS for research on relevant information relating to finance and management for improved budget planning.

The findings also revealed that there is no significant difference in the mean ratings of male and female principals on the extent of principals' use of management information system in budget planning process. This finding is due to the fact that most principals face similar challenges in the use of technologies (computers) in computation of figures. This supported the finding of Nwafukwa and Aja (2015) who revealed that secondary school principals require budgetary skills for financial management for the implementation of programme and recommended among others that government should organize workshops and seminars for secondary school principals to update their knowledge more on financial skill management.

## **CONCLUSIONS**

Based on the findings of the study, it was concluded that secondary school principals do not adequately use management information system in researching for current and relevant information needed for planning process. The extent of principals' use of management information system in curriculum planning and budget planning was to a low extent. Therefore, the implication of this is on the general evaluation on principals' usage of management information system in planning process was to a low extent.

### **RECOMMENDATIONS**

Based on the findings, it was recommended among others that:

1. The Government through the State Ministry of Education should organize seminars and workshop for principals with the aim of equipping them with relevant MIS facilities and educating them on the benefits of using management information system in making research for current/relevant information before engaging on planning process in order to be effective in planning.
2. The State Ministry of Education should formulate operational policy guidelines for principals to adequately make use of management information system in schools for research on education matters, and also to boost their knowledge with recent information that would guide them on planning process.

### **REFERENCES**

- Achimugu, L. (2016). Principals' instructional leadership qualities that enhance effective teaching and learning of chemistry in secondary school from perspectives of students and teachers. *International Journal of Science and Research*, 5(7), 661-666.
- Al-Mamary, Y. H., Shamsuddin, A., and Aziati, N. (2014). The meaning of management information systems and its role in telecommunication companies in yemen. *American Journal of Software Engineering*, 2(2), 22-25.
- Asemi, A., Safari, A., and Zavareh, A.A. (2011). The role of management information system (mis) and decision support system (dss) for manager's decision making process. *International Journal of Business and Management*, 6(7), 164-173.
- Boma, P. B. (2018). Financial Management and Practices for Principals on Quality Service Delivery in Secondary Schools in Rivers State. *International Journal of Innovative Finance and Economics Research*, 6(2):62-69
- Federal Republic of Nigeria (2014). National Policy on Education, 4<sup>th</sup> Edition. ISBN-978-054-216-7
- Heidarkhani, A., & khomami, A.A, & Jahanbazi, Q.,and Alipoor, H. (2013). The Role of Management Information Systems ( MIS ) in Decision-Making and Problems of its Implementation. *Universal Journal of Management and Social Sciences*, (3)3, 78- 89
- Manafa, I.F (2019) Assessment of planning practices of principals for effective school administration in secondary schools in Anambra State, Nigeria. *Global Journal of Education, Humanities and Management Sciences*, Vol. 1, No. 1.
- Nakpodia, E. D. (2010). An information system in Nigerian education: A study of data storage. *International Journal of Library and Information Science*, 2(6), 102-107.

- Nowduri, S., and Al-Dossary, S. (2012). Management information systems and its support to sustainable small and medium enterprises. *International Journal of Business and Management*, 7(19), 125-131.
- Nwafukwa , P. O., and Aja, S. N (2015). Financial management skills required of principals for the implementation of the universal basic education programme in junior secondary schools in ebonyi state of nigeria. *International Journal of Education, Learning and Development* 3(5), 31-37.
- Odhiambo, F.O. (2017). Influence of use of education management information system (EMIS) on management of secondary school in Nairobi City Country, Kenya. DOI:<http://erepository.uonbi.ac.ke/handle/11295/101896>
- Olibie, E. I. (2013). Curriculum planning in secondary schools: principals' practices and challenges in an era of knowledge and learning management. *International Journal of Academic Research in Progressive Education and Development*, Vol. 2, No. 1.
- Omobude, M. and Igbudu, U. (2012). Teachers participation in decision making process in secondary schools in Ekiti State, Nigeria. *International Journal of Education and Administration and policy Studies*, 3(6), 78-84.
- Wagithunu, M., Muthee, J. and Thinguri, R. (2014). A crit-ical analysis of school principals' competence in financial management in Kenya: Accountability in educational planning and management. *Journal of Education and Practice*, 5(25), 103-107.