

Impact of Management Information System in Service Delivery (A Case Study of Yobe State University, Damaturu)

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Abstract- *Data is transformed into information by management information systems, which then convey that information to managers at different organizational levels in a suitable format. Effective decision-making or planning can be facilitated by the information. Services performance makes up a large amount of a business's investment and output. To enhance the provision of these services, Management Information Systems (MIS) are utilized, which accounts for a substantial part of the organization's expenditure. The aim of this study is to generate business value. This system also furnishes organizations with the necessary information to manage themselves in an efficient and effective manner. The study concluded that management information systems have a big impact on how academic institutions provide services.*

Keywords: *Management, Information System, Service Delivery, Organization.*

I. INTRODUCTION

MIS is essentially the act of gathering, processing, storing, retrieving, and sharing pertinent data for business planning and effective management operations in any firm. Therefore, the ability to make successful decisions is seen as the core of the administrative process and is heavily reliant on the functions that make up the process as well as the information that is available (Nath & Badgujar, 2019). MIS has received continual interest ever since the concept of MIS was proposed. Barry (2015) argues that information is a general term since it has been defined as the lifeblood of any business, whether it be a public or private company, a local business, a multinational corporation, a manufacturing, merchandise, or franchise business, a retail store, a chain store, or a service-oriented organization.

II. REVIEW OF RELATED STUDIES

Management is the planning, organizing, directing, and managing of corporate operations. According to Henri (2018), management is "the process of allocating an organization's inputs, including human and economic resources, by planning, organizing, directing, and controlling for the purpose of producing goods or services desired by customers so that organizational objectives are accomplished." This definition is consistent with our own. According to (Metadata, 2017) a Management Information System (MIS) is a "machine-user interface that provides information to support the operation of management analysis and decision-making functions in any organization." To improve decision-making, the Management Information System (MIS) uses a mix of human processes, computer hardware and software, and planning and analytical models. Organizations employ management information systems to run their businesses (Manish Kumar, 2016). It offers significant information technology advancements that make it simple for a company to accomplish its strategic goals. It facilitates database retrieval applications, venture management, resource and personnel management, and decision assistance. Management information systems are used in corporate organizations to support operations, competitive strategies, and business procedures that affect the performance of the workforce inside that organization. MIS is essential to a company since without it, no human could exist. A company's investment in MIS supports its core competencies, maintains financial and human resource records, controls and monitors a variety of activities that affect the organization's growth and development, and provides a solid foundation for strategic decision-making (Bober, 2020)

"Daily, weekly, and monthly transaction summaries are the main focus of a Management Information System (MIS), which is helpful in tracking and managing operations at the operation level. Access to timely information regarding the organization's long-term resource commitments is essential for those in positions of authority. Computers are designed to monitor such data and identify situations and occurrences that require administrative attention in order to meet this need. The machine can read and analyze files or data by using pre-established rules for analysis and evaluation. This enables managers to keep a thorough grasp of the business's past success while making plans for future initiatives. Beef (2013) states that the Management Information System (MIS) is a component of secretarial work that entails managing pertinent organizational records and issues appropriately and providing managers with access to them via automated technology for both current and future decision-making. This description makes it abundantly evident that MIS is an essential component of office support systems that form the basis for organizational decision-making and action. According to Calldelli and Parmigiani (2016), MIS is used to solve business problems and analyze other information systems used in the organization's operational activities. In academic circles, the term typically refers to a set of information management techniques that support or automate human decision-making processes, including Decision Support Systems, Expert Systems, and Executive Information Systems.

III. MATERIALS AND METHODOLOGIES

a. Population of the Study

Population refers to all of the people, things, or occasions that the researcher is interested in studying. According to the researcher's sampling criteria, it is an extensive group of components that have a common characteristic. Sixty respondents who have a solid grasp of how management information systems impact service delivery make up the study's population.

b. Sample Size Determination

The study's population comprises thirty-five males and twenty-five females, for a total of 60 responders.

c. Method of Data Collection

The purpose of gathering data is to extract relevant information related to the phenomenon and the specific issue being studied from both primary and secondary sources. While textbooks, journals, papers, and internet resources are examples of secondary sources of data, the questionnaire serves as the primary instrument for gathering data for this study.

d. Method of Data Analysis

In this research analysis, the information gathered from the questionnaire answers was sorted into categories, arranged in tables, and assessed using proportionate values. Additionally, to decide whether to accept or reject the hypotheses put out in this study, the chi-squared method was employed. While a hypothesis test will be Spearman's rank order correlation given as;

$$r = 1 - \frac{6 \sum d^2}{(n^3 - n)}$$

Where $\sum d$ = sum of the squared differences in the ranking of the N = number of subjects being ranked.

IV. RESULTS AND DISCUSSION

The sample size was composed of sixty (60) respondents who received the questionnaires. The researcher was able to retrieve all sixty (60) questionnaires, resulting in a 100% return rate. A total of sixty (60) questionnaires were created and distributed to Yobe State University respondents, and all sixty (60) were accurately filled out and returned. This section will display the collected data in the form of tables, which will assist in comprehending and evaluating the respondents' perspectives on the topics mentioned in the questionnaires. This will enable the researcher to develop a viewpoint based on the analyzed data. Pertinent questions from section B of the questionnaires will be accumulated and evaluated to facilitate decision-making, either in approving or rejecting the relevant hypotheses of the study. Table 1 shows the respondent gender

Table 1: Respondent Gender

Gender	Number Distributed	Percentage
Male	38	63.3%
Female	22	36.7%
Total	60	100

From Table 1 above, more than half of the total number of respondents, 60.0% were male and 40.0% were female. Specifically, 38 individuals represented the male group while 22 individuals represented the female group, which simply means male participated more on the survey than female. Table 2 shows the Respondent Age.

Table 2: Respondent Age

Age	Number Distributed	Percentage
15-20yrs	25	41.7%
21-30yrs	32	58.3%
41-50yrs	0	0.0%
Above 50yrs	0	0.0%
Total	60	100%

Table 2 indicates that out of a total of 60 respondents, 25 individuals fell within the 15-20 age group, accounting for 41.7% of the respondents. Meanwhile, 32 respondents, representing 58.3% of the total, were aged 21-30 years old.

Table 3 shows Respondents' Educational Qualifications.

Table 3: Respondent Educational Qualification

Educational qualification	Number Distributed	Percentage
B.Sc	60	100%
PGD/M.Sc	0	0.0%
Ph.D	0	0.0%
Others	0	0.0%
Total	60	100.0%

Table 3 shows that all the respondents, representing 100% of the total, had a B. Sc Educational qualification.

Table 4: Respondents' Marital Status

Marital Status	Number Distributed	Percentage
Single	53	88.3%
Married	7	11.7%
Divorced	0	0.0%
Widowed	0	0.0%
Total	60	100.0%

Table 4 reveals that most of the respondents, specifically 53 individuals, were single, which represents 88.3% of the total number of respondents. In contrast, only a small number of respondents, 7 individuals, were married, accounting for 11.7% of the total.

Table 5: Impact Of Management Information System in Service Delivery in Yobe State University

Response	SA	A	D	SD
Lack of sufficient Internet facilities around the University limits users' satisfaction	38(63.3%)	19(31.7%)	1(1.7%)	2(3.3%)
I can register for courses online using the school portal	48(80.0%)	12(20.0%)	0(0.0%)	0(0.0%)
The information on the school portal is usually relevant	43(71.2%)	15(25.0%)	2(3.3%)	0(0.0%)
The portal is very slow and needs to be upgraded	14(23.3%)	18(30.0%)	13(21.7%)	15(25.0%)

The school portal loads pages and images quickly	21(35.0%)	31(51.7%)	5(8.3%)	3(5.0%)
The result processing software is readily available	0(0.0%)	0(0.0%)	12(20.0%)	48(80.0%)
The school ensures that there is a quick information flow across all the faculties through the school portal	7(11.7%)	9(15.0%)	21(35.0%)	17(28.3%)
The university website is rich in information	19(31.7%)	24(40.0%)	15(25.0%)	2(3.3%)
Is the information on the school portal helpful	21(35.0%)	31(51.7%)	5(8.3%)	3(5.0%)
Is the information on the faculty's portal helpful	33(55.0%)	27(45.0%)	0(0.0%)	0(0.0%)
There are challenges to using the school portal	33(55.0%)	6(10.0%)	8(13.3%)	13(21.7%)
Do you think lecturers' assessment can be done through the school portal	0(0.0%)	0(0.0%)	41(68.3%)	19(31.7%)
The course resources on the learning management system are actively available	5(8.3%)	9(15.0%)	34(56.7%)	12(20.0%)
The course resources were placed online promptly	15(25.0%)	23(38.3%)	13(21.7%)	9(15.0%)
I find the school website design pleasant	14(23.3%)	18(30.0%)	16(26.7%)	12(20.0%)
The computer-based test is user-friendly	18(30.0%)	17(28.3%)	13(21.7%)	12(20.0%)
It is easy to navigate the computer-based test during the examination and test	8(13.3%)	13(21.7%)	33(55.0%)	6(10.0%)
The given time on the computer-based test is student-friendly	11(18.3%)	16(26.7%)	21(35.0%)	12(20.0%)
The computer-based test is better and easier to attempt than the paperwork	21(35.0%)	33(55.0%)	3(5.0%)	3(5.0%)
I find school fees payment easy on the school portal	33(55.0%)	27(45.0%)	0(0.0%)	0(0.0%)

Test of Hypotheses

This study evaluates a single hypothesis, which was examined with Microsoft's help using the SPSS software. The Chi-square 2 statistical test was used to assess the hypothesis, as was previously mentioned. Here are the outcomes of the hypothesis test:

Table 6 Management information system has no significant effect on service delivery in Yobe State University

	Mean	Std. Deviation	N
Management of an information system	1.98818	1.26276	60
Service delivery	2.3818	1.29979	60

Ho: Management information system has no significant effect on service delivery in Yobe State University

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Table 7 Chi-Square Tests

	Value	Df	Asymp Sig. (2-sided)
Pearson Chi-Square	36.042 ^a	8	.000
Likelihood Ratio	34.036	8	.000
Linear-by-Linear Association	.287	1	.592
N of Valid Cases	275		

Decision Rule

If the calculated chi-square is greater than the critical chi-square (i.e. $2_{cal} > 2_{critical}$) – reject the null hypothesis and accept the alternative hypothesis accordingly.

Result

Table 2 shows the chi-square test statistics computed from the frequency distribution that the chi-square computed value $\chi^2 = 36.042$ is greater than chi-square table value $\chi^2_{0.05} = 15.51$ with 8 degrees of freedom at 0.05 level of significance.

Decision

Since the chi-square computed $\chi^2_{cal} = 36.042$ is greater than the critical $\chi^2_{critical} = 15.51$, the null hypothesis should be rejected. Therefore, we conclude that the Management information system has a significant effect on service delivery in Yobe State University

V. CONCLUSION

The purpose of this study was to evaluate a single hypothesis, which was examined with Microsoft's help using the SPSS software. The Chi-square χ^2 statistical test was used to assess the hypothesis, as was previously mentioned. Here are the outcomes of the hypothesis test.

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