

# The Impact of Management Information System on Teachers of an HEI in City of Malolos, Bulacan, Philippines

Glenn B. Brombuela\*, Arch. Dennis L. Estacio, \*\*, Freya Gay A. Jingco,\*\*\*  
Dr. Wendell Cabrera\*\*\*\*

\*(MGC New Life Christian Academy, Taguig City/ Email: [glenn.brombuela@mgcnewlife.ph](mailto:glenn.brombuela@mgcnewlife.ph))

\*\* (Bulacan State University, Malolos City, Bulacan/ Email: [dennis.estacio@bulsu.edu.ph](mailto:dennis.estacio@bulsu.edu.ph))

\*\*\*(Bulacan State University, Malolos City, Bulacan/ Email: [freyyay.jingco@bulsu.edu.ph](mailto:freyyay.jingco@bulsu.edu.ph))

\*\*\*\*(La Consolacion University Philippines/ [wendell.cabrera@gamil.com](mailto:wendell.cabrera@gamil.com))

\*\*\*\*\*

## Abstract:

The use of information technology in educational management has rapidly increased due to its efficiency and effectiveness. In the initial stages of its development, management information systems (MIS) main purpose and usage was to improve the efficiency of school office activities. This research sought to find out the impact of management information systems to improve performance in one HEI in City of Malolos, Bulacan. By knowing the impact would correct the situation in management information systems and make the most of all these systems and to correct mistake, if any, and then be able to update and improve the performance of management in in the said campus. This study utilized the Descriptive Research through survey method to obtain data and information needed in determining the Impact of Management Information System on Teachers. The said HEI in City of Malolos, Bulacan was represented by majority of permanent status servicing for more than ten years college faculty and administrators are highly familiar with use of Library Management Information System than eight other MIS such as registration, accounting, assessment, admission, evaluation and payment, medical and dental, and leaning management system. Ultimately it is concluded that MIS utilization in Bulacan State University helped the faculty in many aspects of their works both professional and academic works. The research showed that MIS has helped achieved the teaching, learning or administration objective of the faculty.

*Keywords* — management information system, information technology, efficiency, improve performance

\*\*\*\*\*

## I. INTRODUCTION

The COVID-19 pandemic has forced many organizations to undergo significant transformation, rethinking key elements of their business processes and use of technology to maintain operations whilst adhering to a changing landscape of guidelines and new procedures (Dwivedia, 2020).

The use of information technology in educational management has rapidly increased due to its efficiency and effectiveness. In the initial stages of its development, management information systems

(MIS) main purpose and usage was to improve the efficiency of school office activities. It was used to store student and personnel data. The most concern was being focused on data entry and collation, rather than upon data transfer or analysis. The value of management information was recognized during its integration stages. Overall review of literature highlighted positive impact of MIS on school administration and management including better accessibility to information, more efficient administration, higher utilization of school resources, reduction in workload, better time management, and improvement in the quality of

reports. A number of inhibitors to MIS use are evident in the literature; foremost among these are lack of time, lack of confidence or skills, lack of training, lack of senior management support, and lack of technical support. MIS can provide administrators and teachers with the information required for informed planning, policy-making, and evaluation. MIS have changed school management in the areas of leadership, decision making, workload, human resource management, communication, responsibility, and planning. These systems can assist the school manager in determining the aims of the school, formulating strategic plans, distributing resources, and evaluating staff performance as well as organizational success (Shah, 2014).

The information needs of modern organizations especially university institutions have become quite enormous and challenging to the extent that every institution needs to pay great attention to how information is gathered, stored, disseminated and utilized. This situation has arisen because of factors such as increased organizational size, expanded operational scope, competitive influence and overall environmental challenges. Today's organizations require tools to support quicker and automated decisions, as well as ways to minimize uncertainties and only an effective management information system can ameliorate this challenge (Bright, 2019). The impact of management information system in Bulacan State University, Main Campus have to be seen by enhancing communication among the administrative staff, lecturers, security personnel, laborers and students, deliver complex materials throughout the institution, provide an object system for recording and aggregate information, reduce expenses to labor intensive manual activities, support the organizations strategic goals and direction and enhance teaching and learning in the institution.

### **Rationale**

Management Information Systems, a critical asset in the 21st-century global economy due to its applications for managing admissions, registration, financial aid, managing human resources, and budgeting fiscal controls. The university's ability to customize its MIS is critical to institutional competitiveness.

This research sought to find out the impact of management information systems to improve performance in one HEI in City of Malolos, Bulacan. By knowing the impact, it would correct the situation in management information systems and make the most of all these systems and to correct mistake, if any, and then be able to update and improve the performance of management in in the said campus.

### **Purpose of the Study**

The study sought to find out the impact of management information system (MIS) to teachers in one HEI in City of Malolos, Bulacan. The specific objectives of the study were to;

1. Identify the Information Systems available at one HEI in City of Malolos, Bulacan.
2. Find out some of the challenges of MIS utilization in one HEI in City of Malolos, Bulacan.
3. Find out the impact of Management Information System in one HEI in City of Malolos, Bulacan.

### **Statement of the Problem**

The present study explores the impact of management information system (MIS) to teachers in one HEI in City of Malolos, Bulacan. The sub-problems through which the main problem will be reached are as follows:

1. What are the demographic characteristics of the respondents based on the following?
  - a. age;
  - b. sex;
  - c. years in service; and
  - d. employment status?
2. Which type of management information system utilized by BSU are the respondents familiar with?

Available at [www.ijared.com](http://www.ijared.com)

3. How do the respondents identify the effectivity of MIS?
4. What is the attitude of the respondents towards MIS utilization in an HEI in City of Malolos, Bulacan.?

### **Significance of the Study**

This study examines and identify the strength and weaknesses of the existing MIS of an HEI in City of Malolos, Bulacan and take corrective actions. Then, it will guide this HEI in City of Malolos, Bulacan and other higher education institutions in general as to the kind of MIS that will be effective in their day-to-day activities. Finally, it will be a vital document for professionals in the IT field regarding the design and implementation of MIS for institutions of higher learning. It will also help to identify the challenges in utilization of MIS in teaching and learning. This study enables the institution to employ pragmatic measures to correct the loopholes in teaching and learning with MIS.

## **II. METHODOLOGY**

### **Methods and Techniques Used**

This study utilized the Descriptive Research through survey method to obtain data and information needed in determining the Impact of Management Information System on Teachers of an HEI in City of Malolos, Bulacan, Philippines. Descriptive survey research designs are used in preliminary and exploratory studies to allow researchers to gather information and summarize present and interpret data for the purpose of clarification (Orodho 2003). The instrument used was devised based upon the criteria formulated by the researchers. Questionnaires were also utilized to gather relevant and pertinent data and information needed to answer the questions of the study.

As a common and popular strategy used in most research mentions that survey is used in answering the ‘who, what, where, how, much and how’ questions in business and management research. In accordance with some scholar, have reputed

surveys as very effective in attaining opinions, attitudes, and descriptions, as well as cause and effect relationships. (Ghauri and Gronhaug 2005). Additionally, posit that the survey strategy is frequently linked to the deductive approach, thus, explaining quantitative data as being analyzed using descriptive and inferential statistics. Surveys also require selecting populations for inclusion, pre-testing instruments, determining delivery methods, ensuring validity, and analyzing results. (Saunders et al. 2007)

### **Population of the Study**

The researchers involved 36 respondents representing the college deans, college secretaries, and faculty members comprising the non-regular, temporary and regular or permanent status of the teaching force of the thirteen colleges in the main campus of Bulacan State University.

### **Sampling Size and Sampling techniques**

Sample is the process whereby the population is limited to a relatively small portion. It promotes effective and efficient study. To elaborate the population of the study, the researchers sample size was 36 (thirty-six). Of these, three (3) were deans, three (3) were college secretaries and thirty (30) were regular, temporary and non-regular faculty members with the academic ranks ranging from instructor, assistant professor, associate professor, and professor. Random sampling technique was adopted to select the respondents for the study.

### **Data Collection Instruments**

Survey Questionnaires in google form was used in collecting data for this study with an informed consent. Since it was administered through online survey, all data gathered were kept confidential in compliance with Republic Act 10173 otherwise known as the Data Privacy Act of 2012 and shall only be used for school record purposes and shall be accessed only by authorized school personnel.

A questionnaire is an instrument that shows different kinds of questions or statements known as

items that are carefully planned and drafted to solicit responses. The validity and reliability of this technique is to a large extent guaranteed since respondents have enough time to think and supply responses. The validity and the reliability of this method can also be rest assured because the researcher looks out for specific factors that are related and relevant to the study and would not have any errors.

### Data Collection Procedure

The survey questions used in the conduct of this research study utilized the google form through online survey. The Researchers sent the google forms through email of their respective deans, college secretaries and co-faculty. The online survey questionnaires in google form consist of the inform consent for the respondent freedom or choice to answer or not to answer. The google form was automatically sent back to the researchers once accomplished. This method was used because it provides immediate and reliable feedback about a topic under study.

### Data Analysis

After the questionnaires were gathered, they were sorted, tabulated, and treated in the following manner: Mean Scores were computed to describe the impact of Management Information System on Teachers of an HEI in City of Malolos, Bulacan, Philippines from the 36 respondents representing the college deans, college secretaries, and faculty members. The results were organized systematically and discussed in accordance with the research questionnaires. The researchers based the analysis on this technique since it appears simple and requires no technical knowledge to interpret and understand results gathered.

## III.RESULTS AND DISCUSSION

This part presents the results and discussion of the data gathered. The primary purpose of this study is to find out the impact of management information

system (MIS) to faculty in one HEI in City of Malolos, Bulacan.

Sub-problem No.1: What are the demographic characteristics of the respondents based on the following:

### Age

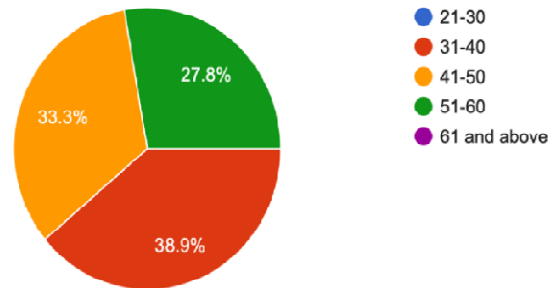


Figure 1. Age of the Respondents

The distribution of the respondents based on their age group is shown in Figure 1. The majority of the respondents, 14 faculty, comprises 38.9% between 31-40 years old. There were 12 respondents (33.3%) whose ages were between 41-50 years old. The remaining 27.8% percent belongs to the 10 respondents whose age is between 51-60. Unfortunately, none of the respondents belongs to the 21-30 age group and 61 and above age group. As Figure 1 exhibits, most of the respondents of the present study are middle-aged individuals.

### Sex

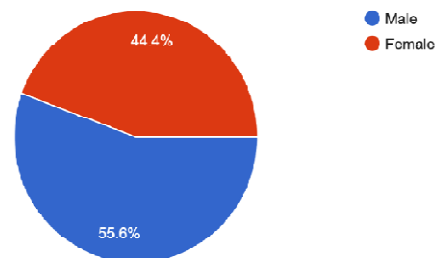


Figure 2. Sex of the Respondents

As Figure 2 shows, regarding sex, majority of the respondents, 20 faculty, were males covering 55.6% of the total sample population. The remaining 44.4% represents the 16 female respondents.

As Figure 4 exhibits, most of the respondents, 24 faculty or 66.6%, were permanent employees at one HEI in City of Malolos, Bulacan. 22.2% or eight (8) of the total population indicated that they in part-time employment. The remaining 11.1% belong to the four (4) faculty who were teaching under temporary assignment.

**Years in Service at Bulacan State University**

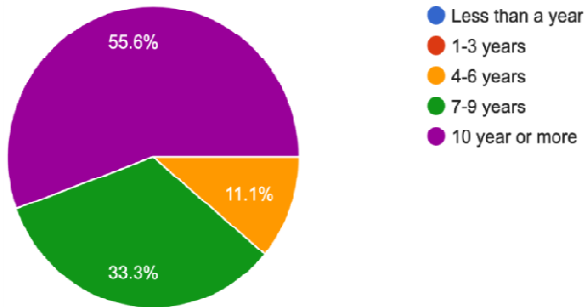


Figure 3: Years in Service of the Respondents

Concerning the years in service of the faculty in one HEI in City of Malolos, Bulacan, based on Figure 3, 20 faculty or 55.6% of the total population indicated that they were in the teaching service for 10 years and more. 33.3% belongs to the 12 faculty who have been teaching at one HEI in City of Malolos, Bulacan for 7-9 years already. The remaining 11.1% belong to the group of the four (4) faculty who have been teaching between 4 to 6 years. Unfortunately, none of the respondents have been teaching at one HEI in City of Malolos, Bulacan for less than a year until 3 years.

**Employment Status of the Respondents**

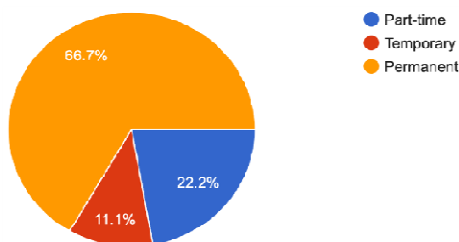


Figure 4: Status of the Respondents

**Sub-problem No. 2: Which type of management information system utilized by one HEI in City of Malolos, Bulacan are the respondents familiar with?**

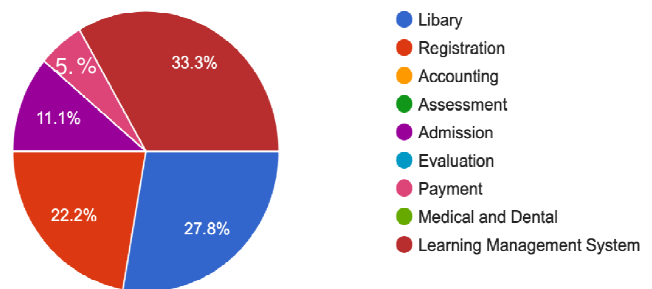


Figure 5: MIS Familiarization of the Respondents

As shown in Figure 5, the most commonly used MIS by one HEI in City of Malolos, Bulacan is for the Learning Management System (LMS) with 33.3%. Following this is the Library MIS which got 27.8%. 22.2% belongs to Registration while Admission got 11.1%. The remaining 5.6% is for the MIS being utilized for the Payment. The results show that most of the respondents were familiar with the information systems that are used by the lecturer, administrators and the students to achieve a set target.

Table 1. Accessibility to Information System

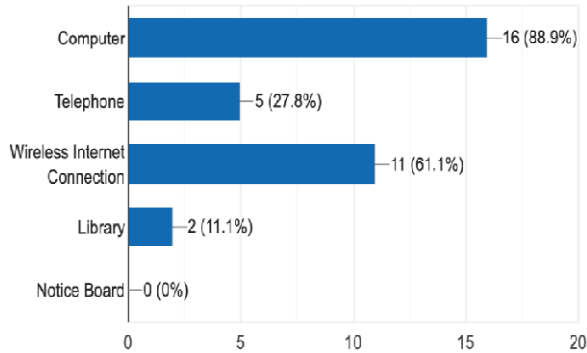


Table 1. presents the different modes of how the respondents can access the information system of the university. Among these technologies, thru “Computer” has the highest average of 88.9% as perceived by the faculty, while “Library” got the lowest average of 11.1%. 61.1% is for the “Wireless Internet Connection” while the remaining 27.8% belongs to “Telephone.” Unfortunately, none of the respondents chose “Notice Board.” From this result, one can conclude that since one HEI in City of Malolos, Bulacan is doing an online distance learning, the most used technology to access the MIS of the university are the ones that we can use even at the comfort of our homes.

**Sub-problem No. 3: How do the respondents identify the effectivity of MIS?**

Table 2. MIS Utilization

Items	Weighted Mean	Verbal Interpretation
MIS has helped achieved my teaching, learning or administration objective.	4.17	Agree
MIS has helped in my research project work.	4.00	Agree
MIS has made class presentations effective.	4.11	Agree
MIS has made Online Learning easy.	3.94	Agree

Inadequate MIS tools slow research work.	4.11	Agree
OVERALL MEAN	4.07	Agree

Table 2 shows how MIS utilization helped faculty in many aspects of their university life. The item that garnered the highest weighted mean score of 4.17 talks about how MIS has helped achieved the teaching, learning or administration objective of the respondents. On the other hand, the item that got the lowest weighted mean score of 3.94 states, “MIS has made Online Learning easy.” Based on the result presented in Table 3, one can conclude how MIS enhances the productivity of every faculty member of one HEI in City of Malolos, Bulacan, especially in the aspect of teaching-learning process and administrative work.

**Sub-problem No. 4: What is the attitude of the respondents towards MIS utilization in one HEI in City of Malolos, Bulacan?**

Table 3. Attitude of Respondents

The MIS provide access to information necessary for my professional growth and development.
The MIS enable teachers to attend webinars and update learnings.
The MIS of the whole university is helpful but lacked efficiency.
The MIS provide faster internet connectivity.
The MIS become the source for many offices works one needs to accomplish.

Table 3 shows the common comments among the eighteen (18) faculty respondents. They provide positive attitude towards the management information system of one HEI in City of Malolos, Bulacan by stating how it helps in achieving professional growth and development. Most of the comments in Table 3 supports the data on Table 2 (MIS Utilization) that implies satisfaction with the usefulness of MIS in one HEI in City of Malolos,

Bulacan. However, there is a respondent who mentioned that although MIS is helpful, it lacked efficiency in terms of urgency in requests & assistance regarding file retrieval of data needed.

#### **IV. CONCLUSION**

One HEI in City of Malolos, Bulacan represented by majority of permanent status servicing for more than ten years college faculty and administrators are highly familiar with use of Library Management Information System than eight other MIS such as registration, accounting, assessment, admission, evaluation and payment, medical and dental., and leaning management system.

Majority of the one HEI in City of Malolos, Bulacan faculty can access the information system of the university thru Computer, Wireless Internet Connection and Telephone. From this result, one can conclude that since this one HEI in City of Malolos, Bulacan is doing an online distance learning the most used technology to access the MIS of the university are the ones that we can use even at the comfort of our homes. Since its formal and full swing implementation of online classes beginning first semester of October 2020 up to the end conduct of this research in July 2021.

Ultimately it is concluded that MIS utilization in one HEI in City of Malolos, Bulacan helped the faculty in many aspects of their works both professional and academic works. The research showed that MIS has helped achieved the teaching, learning or administration objective of the faculty. This one HEI in City of Malolos, Bulacan faculty also expressed that MIS has made Online Learning easy. Based on the results of the survey MIS enhances the productivity of every faculty member, especially in the aspect of teaching-learning process and administrative work. Faculty has positive attitude and manifested satisfactions towards the management information system of this one HEI in City of Malolos, Bulacan as it helps in achieving professional growth and development. Although, there is lacked of efficiency in terms of urgency in

requests & assistance regarding file retrieval of data needed.

#### **V. RECOMMENDATION**

1. This HEI in City of Malolos, Bulacan may strengthen to make familiarize and more aware the faculty to its other MIS such as registration, accounting, assessment, admission, evaluation and payment, medical and dental., and leaning management system aside from Library.
2. The Management Information System of this one HEI in City of Malolos, Bulacan may continuously enhance by further introducing latest and useful application in aide of Computer, Wireless Internet Connection and Telephone.
3. This HEI in City of Malolos, Bulacan should invest more into its Management of Information System to support the faculty and teaching effectively and efficient as the online learning is playing integral part of the educational system.

#### **REFERENCES**

- (1) Adedipe, N.O. (1995). University management constraints and stresses: A personal experience. Text of a keynote address at the 1995 MIS national seminar organised by NUC.
- (2) Alabi, A.T. (2000). Management information system equipment utilization in Federal and State universities in Nigeria. *Ilorin Journal of Education*, 20, 105-112.
- (3) Bright, Antwi Amankwah, The Impact of Management Information System on University of
- (4) Education Winneba, Kumasi Campus-Ghana, *European Journal of Research and*
- (5) Reflection in Management. Sciences Vol. 7 No. 1, 2019 ISSN 2056-5992 Progressive Academic Publishing
- (6) Donnelly, J.H., Gibson, J.L. & Ivancevich, J.M. (1995). *Fundamental of management* (9th ed.). Chicago: Irwin.
- (7) Dwivedia, Yogesh K, Hughesa, D. Laurie, Impact of COVID-19 pandemic on information management

Available at [www.ijred.com](http://www.ijred.com)

- research and practice: Transforming education, work and life, International Journal of Information Management, Volume 55, December 2020, 102211
- (8) Ekwere, C.E. (1990). Evaluation of the management information systems in Universities: The case of University of Cross River State. Unpublished Ph.D. Thesis, University of Ibadan: Ibadan.
- (9) Fashiku, C.O. (2008). Relationship between management information system and organizational effectiveness in Indian colleges of education. Unpublished Ph.D. Thesis, University of Ilorin, Ilorin.
- (10) Gabriel, J. O'Brien, J (1999). Management Information Systems – Managing Information Technology in the Internetworked Enterprise. Boston: Irwin.
- (11) Ghauri, Pervez N. and Grønhaug, Kjell, (2005), Research Methods in Business Studies: A Practical Guide, Financial Times Prentice Hall,
- (12) Orodho, A. J. (2003). Essentials of educational and social sciences research method. Nairobi: Masola Publishers.
- (13) Republic Act 10173 – Data Privacy Act of 2012, National Privacy Commission  
<https://www.privacy.gov.ph/data-privacy-act/>
- (14) Saunders, Mark, Lewis, Philip, Thornhill, Adrian, (2011) Research Methods for Business Students, Financial Times/Prentice Hall
- (15) Shah, Madiha, Impact of Management Information Systems (MIS) on School Administration:  
What the Literature Says, Procedia - Social and Behavioral Sciences, Volume 116, 21 February 2014, Pages 2799-2804
- (16) Thierauf, R.J. (1987). Effective management information system (2nd ed.). Ohio: Merrill.