Research Article

A Comparative Case Study on the Challenges Encountered by Philippine Private and Public Educational Institutions with their Existing Management Information System

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ABSTRACT

For the last two years, all Philippine educational institutions had to adapt flexible learning. All personnel and students underwent orientation and training to their institution's Management Information System (MIS). These institutions are utilizing either MIS mandated by the Department of Education, subscribed to or created by the institution itself. Challenges and concerns have been noted on the use of these MIS worldwide. Hence, this study elucidated the experiences and challenges of admistrators, faculty and students with their existing MIS among public and private educational institutions in the Philippines. Using a qualitative comparative case study design, the researchers draw the experiences of the participants on their existing MIS. The findings of the study revealed three main themes on the experiences of the participants with their existing MIS: excellent way to systematize and organize, a work in progress and encompassing of all institutional services. On the resolution of concerns and challenges with their MIS, prevailing themes were: having an efficient and expert Information Technology (IT) team, continuous feedback and improvement, and unresolved due to poor internet connectivity. As to how these challenges affected their performance, themes clustered on: improved and more efficient, negatively affected output and efficiency, and unaffected. This study highlighted the importance of proper orientation and training of all personnel and students, for an effective MIS which must be managed by an expert IT team. Despite the challenges encountered, the use of the MIS led to the better performance of the participants' duties and responsibilities

Keywords: *Management Information System, Challenges, Private and Public, Educational Institutions*

Introduction

The purpose and goals of education must be at the center of educational management. The important notion of educational management comes from making decisions and defining goals. The need of timely, cost-effective, and reliable data in evaluating education policy, defining education planning, and monitoring progress toward development goals is becoming increasingly vital in the quest of excellent education for everyone. To track progress toward policy objectives, an effective and efficient management information system (MIS) is vital (UNESCO, 2014).

School administrators such as school heads, deans and the likes use management information systems in planning, organizing, leadership and motivation, reporting and control, and management is done by high accuracy and efficiency within short time in the organization due to the benefits of MIS, which include close relation, exact control, and reliable data collection, as well as rapid data processing and conversion to information. The management information system aids in issue resolution in two fundamental ways: In the organization area, there is an information source that aids in the problem identification. The benefit of a management information system with this goal is that it alerts managers to potential problems. The management information system's biggest flaw is that it can't cater to each individual's unique needs. The majority of management information systems do not give precise data, hence the notion of a decision support system was born in response to this necessity (McLoyd, 1999).

The role of the MIS in an organization/school may be compared to that of the human heart. The heart is MIS, and the blood is information. The heart's function in the body is to supply clean blood to all of the body's elements, including the brain. The heart beats quicker and pumps more blood when it is needed. It regulates and controls incoming impure blood, processes it, and transports it in the correct quantity to the proper destination. It meets the demands of blood flow to the human body in both regular and emergency situations. In the organization, the MIS serves the similar purpose. The system guarantees that suitable data is collected from diverse sources, processed, and provided to all of the destinations that require it. The system should be able to conglomerate the information demands of a person, a group, and management functionaries such as middle managers and top managers (Mishra, 2013).

The MIS assists clerical personnel in transaction processing by answering their questions about transaction data, record status, and document references. It also aids junior management personnel by providing operational data for planning, scheduling, and control, as well as assisting them in making operational decisions to fix an out-of-control scenario. It aids middle management in the planning, establishment of goals, and control of corporate activities. It supports goal formulation, strategic planning, and the evolution of the organization's strategies and their implementation at the highest management level. Indeed, the management of MIS has an influence on the operations. The administration of marking, finance, manufacturing, and staff becomes more efficient with adequate support (Mishra, 2013).

Information systems help governments to arrange education in a cost-effective and effective manner. An Education Management Information System (EMIS) assists policymakers in managing an education system to deliver excellent outputs when it is institutionalized and directed by a clear vision and strategic planning (UNESCO, 2014). Unfortunately, many nations have spent money to develop education management information systems, but these systems are rarely institutionalized, lack a driving vision, and are not integrated into strategic planning procedures.

In the Philippines, Electronic Management Information System (EMIS) implementation regardless of the type of school by all means require initiative of the school head with the support of the workforce community, stakeholders and for the learning community, to source out of funds for wider implementation of school programs and services. Exposure to trainings, seminars-workshop and team building make

EMIS implementation in every module capacitates teachers and school heads to addressing the problems that may lead to the highest extent of EMIS implementation making the school perform at its best (Cuartero & Role, 2018).

Given the implementation of flexible online teaching and learning in the Philippines because of Covid 19, an effective management information system is an integral part of the operations of all educational institutions. Hence, it is the purport of this study to elucidate the challenges encountered by administrators, faculty and students of public and private institutions with their existing MIS to improve on information dissemination and training on the utilization of these information systems towards the attaintment of their respective institutional goals. Addressing these challenges will lead to improved utilization of MIS minimizing errors and concerns resulting to improved operations and delivery of services.

Purpose of the Study

This research elucidated the experiences and challenges of admistrators, faculty and students with their existing management information system among public and private educational institutions in the Philippines. Given the reliance of almost all institutions to management information systems, more so during the pandemic, the findings of this analysis will be used as a guide to further improve on information dissemination and training of all stakeholders on the use of their existing MIS to truly achieve the objective/s in utilizing such information system.

Research Questions

This research study would address the following questions:
1. What are the experiences of the participants in the utilization of their existing MIS?
2. What are the challenges encountered by the participants with their existing MIS and how were these challenges resolved?
3. To what extent did these challenges affect their performance and fullfillment of their assigned tasks?

Methodology
Research Design

This study essentially made used a qualitative comparative case study design to elucidate the experiences and challenges of admistrators, faculty and students with their existing management information system among public and private educational institutions Because of quarantine restrictions, the researchers initially gathered data thru Google Forms using open-ended questions formulated followed by interviews for clarification and validation. Following the qualitative research approach, thematic analysis was employed to analyze the transcribed recordings of interviews and responses thru Google forms.

Participants of the Study

The study participants included 24 participants composed of six school administrators, six teachers/faculty and twelve students from public and private educational institutions catering to basic and tertiary teaching and learning. Participants were recruited by purposive sampling. Informed consent was secured from all participants.

Data Collection

In compliance with the minimum health standards due to Covid 19, participants were asked to answer the following open-ended questions thru Google Form: (1) Describe your experience/s with your existing MIS, (2) How were the challenges and concerns on your MIS solved?, and (3) How did these experiences affect your performance and fulfillment of your duties and responsibilities?. Follow-up interviews were done virtually utilizing Google Meet, Zoom or Messenger applications. All data gathered thru Google Form and that of the follow interviews were transcribed verbatim for analysis.

Data Analysis

The following steps or phases were used to transform transcribed data: (1) reading the entire responses from the participants to get the meaning of the whole, (2) discriminating units from the participant's description of his/her

experiences, (3) verbalize the psychological insight in each of the meaning units, and (4) synthesizing all of the transformed meaning units into a consistent statement about the participants' experiences expressed on a specific or general level. To determine the perceptions, a thematic analysis was used. The investigation progressed from a comprehensive examination of data to the discovery of patterns and the development of themes. Qualitative data was acquired and encoded, resulting in "codes" of words or phrases that functioned as labels for data sections. To symbolize the specified topics, codes were created.

Ethical Consideration

To establish and safeguard ethics in conducting this study, ethical clearance was secured thru a local Research Ethics Committee of a private institution in the City of Malolos, Bulacan, Philippines. All participants in the study signed an informed consent and assent for those students 18 years and below prior to their participation. Observance of all ethical principles was done during the conduct of the study. All researchers declared no conflict of interests in conducting this study.

Results and Discussion

Twenty four participants consisting of six administrators, six faculty and twelve students responded thru Google Form and were interviewed. Half of the participants were from private educational institutions and the other half from government owned educational institutions.

The participants' description of their experiences with their existing MIS clustered around 3 main themes: 1) excellent way to systematize and organize, 2) a work in progress, and 3) encompassing of all institutional services.

Theme 1. Excellent Way to Systematize and Organize

The existing MIS provided systematic approaches to blended learning, organized school work for students including submissions and provided the necessary information needed by administrators in planning and managing their respective institutions.

Theme 2. A Work in Progress

Getting oriented fast to adapt to the existing MIS was perceived as challenging for both the teachers and administrators especially when one is not technology savvy. Concerns of the students were mostly on access and internet connectivity. One student participant and one faculty participant were unsure of their institution's existing MIS.

Theme 3. Encompassing of All Institutional Services

For all the participants, their institution's existing MIS provided the needed information and services as administrators, teachers and students. Almost all teaching-learning activities were provided on the learning management system including schedules, synchronous and asynchronous activities as well as submissions of assignments and projects. Enrolment was made easy given the MIS.

On how the challenges and concerns encountered by the participants resolved, the responses of the participants elicited three main themes: (1) having an efficient and expert Information Technology (IT) team, (2) continuous feedback and improvement, (3) unresolved due to poor internet connectivity.

Theme 1. Having An Efficient and Expert Information Technology (IT) Team

In assigning and hiring efficient and expert IT team, concerns and challenges were resolved fast and in a short period of time. A survey was done in the institutions of three student participants to elicit their concerns and difficulties which were immediately resolved by conducting a webinar on the use of the MIS and LMS. Trainings and tutorials were conducted on the MIS and LMS in other institutions by these IT experts to resolve, if not, prevent concerns. A help desk was set up in one institution.

Theme 2. Continuous Feedback and Improvement

Eliciting regular feedback and ensuring regular updating of the system prevent and resolve challenges and concerns on their MIS. Easy access to personnel assigned or chatbot facilitates ease in troubleshooting any concern. Lack of proper orientation was resolved with regular trainings designed based on the type or generation of learners.

Theme 3. Unresolved due to Poor Internet Connectivity

The most difficult concern or challenge encountered by all participants was on poor connectivity. This was a challenge to all teacher participants and a frustration to student participants.

The participants' responses clustered on three main themes when asked on how their experiences and challenges concerning their institution's MIS affected their performance and fulfillment of their duties and responsibilities: (1) improved and more efficient, (2) negatively affected output and efficiency, and (3) unaffected.

Theme 1. Improved and More Efficient

Because of the ease in communication and access to information facilated by their institution's MIS, tasks/activities were done in a short period of time. More work done and more outputs achieved.

Theme 2. Negatively Affected Output and Efficiency

Without proper training and orientation, a delay in encoding of grades and the quality of output was affected as expressed by four participants. More time was consumed on familiarization with the MIS instead of accomplishing the work or tasks assigned.

Theme 3. Unaffected

Fourty percent of the participants felt that their performance were unaffected by the utilization of their institution's Management Information System.

Discussion

Management information systems assist in giving the essential information to make effective and efficient decisions, as well as boosting the efficiency of such decisions in terms of correctness, comprehensiveness, and timeliness in supplying information, resulting in enhanced performance (Al Tai, 2005).

Given the objective of having an MIS to ensure a more effective and efficient way of service delivery in educational institutions, this qualitative comparative case study showed that this was achieved across all participants whether administrators, teachers or students. An MIS encompassing all services ensures better organization and service delivery. Indeed, a well managed information system advances the reputation of any educational institution. (Alyoubi & Alyoubi, 2013). Similarly, Eslake (2012) stated that accurate, trustworthy, and timely information is essential for efficient decision-making in practically every element of human endeavor, whether it is carried out by individuals or by community groups.

The main disadvantage of the management information system is that it is unable to address the unique needs of each individual (Babaei & Beikzad, 2013). This is in line with the findings of this study, which found that participants' worries and issues differed according on their expertise and experience with technology and their institutions' MIS.

Despite the challenges and concerns on the utilization of MIS, having an efficient and expert IT team is a key factor to promptly resolve and troubleshoot any concerns and difficulties of the participants. This team offers tutorials, training, orientation, and webinars to ensure that all employees and learners have the necessary knowledge and abilities to fully utilize the MIS. These conclusions are comparable to those of Lingham (2006), who noted that the MIS is a very complicated and fragile area in which managers must exercise extreme prudence. As a result, it is pivotal that businesses carefully pick the persons who will be in charge of controlling the systems. Furthermore, establishing an efficient MIS necessitates the efforts of both managers and professionals. The spe-

cialist is responsible for providing technical assistance. More importantly, functional specialists must be involved in order to contribute meaningful ideas related to their field of expertise (Bright & Asare, 2019).

While internet connectivity is a prime concern in fully utilizing MIS in the Philippines, improved and efficient performance of their tasks were noted by most of the participants with the use of their institution's MIS. This was also noted by El-Ebiary et al. (2016), wherein they found out that management information system succeeded in improving the productivity and performance of their duties. The system also lessen the administrative errors and aided in decision-making procedures.

A management information system will only be effective with proper orientation and training of all the members of the organization. Orientation and trainings must address all generation of administrative, teaching and non-teaching personnel and students especially in educational institutions. User requirements will also vary from university to university (Odhiambo, 2017). In addition, the success of any MIS depends on various factors including its design and operating effectiveness, active user participation, and support from top management (Yaser et al., 2014).

On their present MIS, continuous feedback and development quickly overcomes any difficulty or worry of the research participants. This conclusion is similar to Cuartero & Role (2018)'s local research, in which monitoring and assessment, technical help, benchmarking, and sharing of best practices led to the establishment of a sustainable Educational Management Information System (EMIS) that reflects the school's success.

This study highlighted the importance of proper orientation and training of all personnel and students, whether public or private educational institution, for an effective MIS which must be managed by an expert IT team. Regular updating and feedback must also be done for continuous improvement.Poor connectivity remains to be an important factor in maximizing the use of MIS. While generational differences may lead to a difference on how the MIS af-

fected one's performance of duties and responsibilities, it generally led to better performance accomplished in a shorter period of time.

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