

Management Information System and Its Competitive Advantages for School and University Organization in the New World Order

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Abstract— This study aimed to examine how schools and universities gain competitive advantages from Management Information System (MIS) in managing online courses countering impacts of global pandemic outbreak. Literature review technique was used in analysing research findings concluded by some researchers. Results indicate MIS improved both school and university performance in delivering online teaching learning services. It provided fast and comprehensive information enabling the educational organizations to design appropriate instructional designs for various students. Future studies are advised to focus on various organizational factors to retrieve more comprehensive insights on strategies to pursuing successful online education services.

Keywords— *management information system, education service, online course, student, teacher, learners*

I. INTRODUCTION

Information system is highly regarded as one of the most important management components that needs to be handled properly. Pandemic condition experienced by most countries in the world has influenced how education system is carried out (Baran, Correia, & Thompson, 2011; Code, Ralph, & Forde, 2020). They perform their best in providing teaching learning services to students and other learners during the emerging situation. Educational executives choose system information management (SIM) as a strategic technique in management school and university organizations. It promisingly provides competitive advantages to an education institution in gaining educational objectives and thoroughly winning competitiveness in the delivery of education services.

Since the restrictions are applied during pandemic outbreaks, schools as well as universities are not

advised to deliver courses or teaching and learning activities offline. Lecturers are suggested to organize virtual teaching and learning activities for all students (Code et al., 2020; Hollweck & Doucet). They need to design and prepare learning specific approaches, learning material, instructional media, and evaluation instruments to support the effectiveness of teaching and learning programs during this emergence situation (Burhanuddin, 2020; Burhanuddin, Bambang Budi, & Achmad, 2020).

Distance learning requires the help of technology so that it can take place well. The quality of distance learning needs to be supported by technology-based learning tools. The use of technology as a learning medium is very important for teachers to do. Therefore, teachers need to prepare good learning media to support this learning (Prestiadi, 2020, Wiyono, 2021).

II. LITERATURE REVIEW

A. Innovative approach in delivering teaching learning experiences

Most countries are challenged by pandemic outbreak in managing education institutions, specifically how their schools and universities deal with such an emergent condition (Burhanuddin, 2020; Rasmitadila et al., 2020). The education institutions have differing capacity in dealing with this emerging situation. Schools Executives of educational offices, central governments, and practitioners as well as teachers and lecturers thus must work collaboratively to develop innovative teaching learning models. Specifically in developing innovative approaches that could be used during this covid-19 outbreak (Baran et al., 2011; Code et al., 2020). Sustaining educational efforts to provide learning opportunities to students, innovative approaches are required in designing

learning delivery system or model. This is necessary to support the schools to be survive within this changing global environment.

B. Competitive advantages of Management Information System at schools and universities

Schools as well as universities need to employ a web-based instructional model enabling teachers reach all learners and make them fully and individually engaged in learning activities. While during pandemic condition where students and teachers are advised to keep social distance, this teaching learning model can provide students at all levels having enjoyable learning experiences (Burhanuddin, 2020; Burhanuddin et al., 2020). This is possible to be performed when instructional material and teaching learning strategies are designed through utilizing proper electronic delivery system or called as web-based model.

Properly operated information system supports educational executives dealing proportionally with competitive forces challenging the school and university organizations. It responsively provides comprehensive information upon the behaviour of forces emerging probably from competitors.

Based on this information, school and university leaders are able to explore alternative strategies to deal with organizational forces. This is possible to be applied through counteracting potential forces as described in Figure 1. Universities for example can use the data collected by the established information system to response the demands coming from job employers, customers, graduates, and deal with the challenges of other university as competitors. University executives and their team in particular can design instructional material, provide students with job-related skill trainings, and create innovative teaching learning approaches to respond job employers' demands coming from local and global environment.

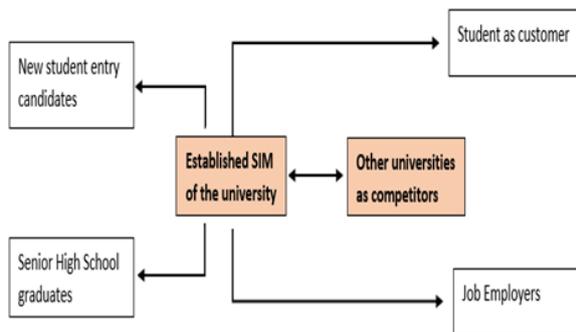


Figure.1 The established SIM and its links to organizational forces

C. The model to be applied in designing online instructional activities

Continuing innovations supported by advanced information technology has transformed conventional works (Laudon, 2013), particularly experienced at

various institutions as well as school and university organizations. New invented electronic technologies have forced these organizations to use hi-tech products in order to fulfill the demands of society in obtaining their services. Some examples of the new technology products are cloud computerised electronics, sophisticated mobile phone, tablet, and smart robotic machines. These products have been used by most schools and universities to achieve their education service objectives. The new changes have occurred currently in particular during pandemic situation today. Innovations built in these items enable educational leaders, lecturers, and teachers to design innovative web-based instructions including online teaching learning models. Schools and universities then need to build up appropriate management information system (MIS) in supporting the development and implementation of online-instructional programs. This makes the educational institutions are possible to produce proper instructional designs for various students during the pandemic condition. The model as shown in Figure 2 can be used as an alternative to implement MIS in supporting the development of instructional designs as innovative solutions to school and university in delivering learning experiences to all learners.

The Figure 2 explains how school organizations deal with human resources, organization, and technology products when designing online teaching models. Working with these components, school and university executives must consider threats or challenges coming from global environments. These include social, economic, political, local values and beliefs, religion, and government policies. Acceptable teaching learning models will be gained successfully when addressing such elements in designing the models. Innovative education solutions can be created through establishing lower cost learning practices, easily accessed by most students or learners, and supporting to the achievements learning outcomes.

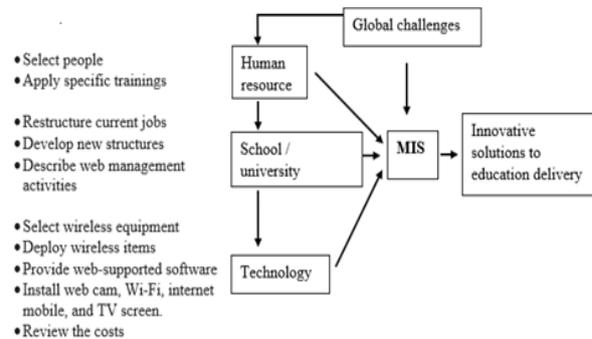


Figure.2 Implementation of MIS in developing online education services

III. METHOD

This paper is written based on critical literature review analysis. Both quantitative and qualitative research findings from several studies are retrieved to

highlight the elements related with online courses. What sorts of competitive advantages of information management in providing online learning courses, and how the online courses are to be managed and their effectiveness enhanced will be explored through examining the main conclusions and related propositions suggested by researchers.

IV. RESULT AND DISCUSSION

Review of the selected literatures highlight research findings show that school and university management policies can be made based on accurate information provided by the effective system information (Bartley & Golek, 2004; Mitropoulos, Patsos, & Douligeris, 2007) found in their studies that information system employed in managing education system can increase data retention, increased efficiency in using time and other organizational resources (Bartley & Golek, 2004).

Management information system used within school administration units can support the building of robust structure for asset management jobs (Love, Zhou, Matthews, Sing, & Carey, 2015). It is able to provide instant and precise information any time needed by administrative staff in handling the works of school facility management including for example planning, procuring, registration, facility utility administration, and maintenance.

The use effective management information system in delivering online courses could ensure the satisfaction of students as customer of a school system (Rasmitadila et al., 2020). It helped the schools around the world to increase learners' participation during teaching and learning activities, increased learning outcomes and loyalty for individual students, retention, and implementation (Seeman & O'Hara, 2006).

Improving the effectiveness of teaching and learning practices within the classroom during pandemic outbreak, another research finding suggests schools to improve the effective use of online teaching learning services (Burhanuddin, 2020; Burhanuddin et al., 2020). There are some important things that need to be prepared when a school organization need to implement online learning courses. These include school environment, facility, learning material, online teaching models and strategies, web related skills of teachers, and wi-fi-support systems built in the school building. All these elements have to be planned and properly built and facilitated. Otherwise, students and teachers are not able to gain successful learning experiences and pursuing their designated objectives.

Other studies indicate teaching learning programs designed involving WBI (Web-Base Instruction) can provide excellent learning conditions for most students in the classroom. It helped teachers developed teaching strategies in achieving learning domains organize learning materials while considering students' ability and their prior experience and knowledge (Mahnaz MoallemPh, 2001). Experimental studies highlighted

by Noguera and Watson (2004) also indicated that the use of information technology in a classroom increased learning achievements, students satisfaction with learning experiences and activities designed by teachers, and positive attitude towards instructional materials learnt by the students

The use of effective information management could help the school as an organization to increase the security system in handling the important data (Debar & Viinikka, 2006). This is necessary for a school system when working with the data that relates to individual students and other parties especially organizational forces to ensure sound services management and in fulfilling school customer and stakeholders' satisfaction.

The use of management information system in organizing online courses provide competitive advantages for any educational institutions as well as school and university those delivering online learning experiences to students. It provides accurate information regarding local and global organizational forces that could be considered in developing teaching learning models and approaches for pandemic condition. This is relevant with Mitropoulos et al. (2007) (2007) and (2004) that school policies addressing online courses can be developed appropriately by educational leaders when the policies are made based on reliable information of the organizational forces.

Successful management information system supports the educational organizations to design a system where people work within specific tasks addressing online learning services during pandemic situation. This supports the implementation of online courses' programs in providing students with effective learning experiences and optimizing the achievement of educational objectives. Such a condition is in line with a conclusion of a study by Love & Zhou (2015). It matches with findings of the studies highlighted by Seeman and O'Hara (2006) and Rasmitadila et al. (2020). They contended all parties involved in the online learning courses which being supported by established information systems experienced highly satisfied services performed by school and university.

The use of comprehensive information addressing specific pandemic condition enabled educational leaders to design proper teaching learning strategies to enhance institutional performance in during pandemic outbreak. Teaches, lecturers, parent, other stakeholders had clear directions how they work collaboratively to improve students' knowledge, skill, and citizenship behaviour. This is in pertinent with MoallemPh (2001) and Burhanuddin (2020). As concluded by Noguera and Watson (2004), the effectiveness of management information system was also found to strengthen both school and university efforts in organizing online learning programs.

V. CONCLUSIONS

This study adds to the growing body of literature concerning on the competitive advantages of system information management obtained by educational organizations those managing online learning courses. Only the school and university those having well established management information system that can maintain their customers and get strong supports from stakeholders. Learning outcomes of education programs are constantly achieved by all learners or participants even in the new world order protocol.

Both school and university that organize online learning courses, then have to apply an effective data and information management that may relate to various students, related parties, and internal or external forces that predicted to influence the success of a learning system in fulfilling customer satisfaction. Supporting components of a teaching learning model including environment, learning material, facility, online teaching models and strategies, web related skills of teachers, and wi-fi-support systems – all must be planed and prepared properly. The fulfilment of these could ensure students obtain great learning experiences and successfully pursue their educational objectives.

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