STRATEGY FOR THE EFFECTIVENESS OF THE IMPLEMENTATION OF ACADEMIC INFORMATION SYSTEMS IN COLLEGE IN EFFORTS TO IMPROVE INFORMATION QUALITY

Awan Setiawan*

Langlangbuana University
Indonesia
awans2425@gmail.com

Iman Sudirman

Pasundan University
Indonesia
imansudirman@unpas.ac.id

Nurman Helmi

Pasundan University
Indonesia
helmi@unpas.ac.id

Erwin Yulianto

Langlangbuana University
Indonesia
rwinyulianto@yahoo.com

Ruhanda

Langlangbuana University
Indonesia
askaraya07@gmail.com

*Corresponding Author email: awans2425@gmail.com

Submission: 31 March 2021

Revised: 08 May 2021

Accepted: 27 May 2021

Peer-review under responsibility of 5th ASIA International Multidisciplinary Conference 2021 (Online)

Scientific Committee

<http://connectingasia.org/scientific-committee/>

© 2021 Published by Readers Insight Publisher,

Office # 6, First Floor, A & K Plaza, Near D Watson, F-10 Markaz, Islamabad. Pakistan,

editor@readersinsight.net

This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

ABSTRACT

Information systems research success has begun to decline in the past few years, but existing research is still inaccurate in its definition and in the factors that involve the information system success. This research has designed to analyze, study, and find out the performance from implementing academic information systems in universities in an effort to improve the quality of information. The research was conducted using a qualitative approach and case studies, namely problem formulation, study proposition, analysis unit, data linkage to the proposition, the criteria for interpreting the findings and making conclusions and recommendations. From the results of the research data analysis, several conclusions were obtained, namely, the academic information system running in universities has not met expectations. The performance of academic information systems that can support the smooth operation of the universities is not well understood. It is necessary to formulate an optimal academic information system strengthening strategy that can support the smooth operation of the universities.

Keywords: *Quality System; Information Quality; Service Quality; Information Security*

RESEARCH HIGHLIGHTS

For organizations, one of the most important needs today is information systems (IS). The success of organizational today is highly dependent on the degree to which information systems governance is implemented (Indriani & Marlindawati, 2016).

Success in implementing an information system in an organizational management, in this case a college, has several inhibiting factors. (Mustakini, 2005) argued that the failure in the implementation of information systems is divided into technical and non-technical aspects.

Can be seen in table 1 below is a description of the effectiveness of the information system used by one of the tertiary institutions,

Table 1. College Academic Information System Users

Variables	2015		2016		2017		2018		2019	
	Total	Access	Total	Access	Total	Access	Total	Access	Total	Access
Faculty Full Time	81	71	83	79	90	79	93	83	97	75
Faculty Part Time	192	106	196	120	209	119	247	103	243	120
Staff	82	29	85	38	85	35	92	35	93	31
Student (Bachelor)	831	592	983	687	1124	664	1202	632	1549	454
Student (Post bachelor)	1644	728	1717	1045	2233	914	2294	857	2304	889
Total	2830	54%	3064	64%	3741	48%	3928	44%	4286	37%

Based on that table, it can be seen that along with the increase in the number of users in the higher education institution, it is not accompanied by an increase in the effectiveness of existing users based on the total number of accesses from year to year.

Research Objectives

Information systems determines the current organizational life cycle in the era of science and technology (Subiyakto, 2017). It is important to evaluate the performance of each system that has been implemented in order to understand the quality of the system's

success in achieving the objectives previously set (Prasti, 2018). In the research conducted (Setiawan & Yulianto, 2017), integration of business functions is obtained through the Information System / Information Technology Master Plan (IS / ITSP) model.

One of the new regulations implemented by the Ministry of Education and Culture during the Covid-19 pandemic is an online learning system carried out at various levels of education. Based on the statement of the Minister of Education and Culture of the Republic of Indonesia (2019), "School digitization is a new breakthrough in the world of education by utilizing developments in information technology in various aspects of teaching". School digitization is the main program that the Ministry of Education and Culture will undertake in 2021.

The propositions raised in this study are as follows:

1. Improvement of the system quality from the academic information system.
2. Improvement of the information quality from the academic information system.
3. Improving the quality of higher education services with an academic information system
4. It is necessary to increase awareness of information security in higher education

From the conclusion of the proposition above, it is necessary to formulate a strategy to raise the effectiveness from the academic information system in universities in an effort to improve the quality of information.

Methodology

This research use Literature Review Method as the methodology. The reason for using this method is because this study aims to solve dynamic problems by utilizing previous research in the form of papers, journals, or books. The process of the Literature Review method can be seen in Figure 1 below.

Fig. 1. Literature Review Process

Source: (Machi & McEvoy, 2016)

Results

To improve the quality of this system will use parameters from previous research sourced from (Jogiyanto, 2007). The parameters for measuring the quality of an information system include access convenience, system flexibility, system integrity, and response time.

To improve the quality of this information will use parameters from previous research sourced from (Susanto, 2015). The parameters for measuring the quality of information in an information system are accurate, relevant, timely, and complete.

The parameters used to study to improve the quality of this service will use parameters from previous research sourced from (Tjiptono & Chandra, 2011). It is said that the parameters for measuring the service quality of an information system include reliability, responsiveness, assurance, empathy, and physical evidence.

To increase information security awareness at higher education institutions, will use parameters from (McLeod Jr & Schell, 2008). In this study, a strategy will be formulated to increase information security awareness in tertiary institutions in accordance with the three basic principles presented by (McLeod Jr & Schell, 2008) namely confidentiality, integrity, and availability.

Findings

The quality of academic information systems in tertiary institutions still needs to be improved in quality of systems, information, and services. Besides that, the awareness of tertiary institutions and academic system implementers of information security can also be said to be lacking. To improve the quality of the system, improvements can be made to the parameters of access convenience, system flexibility, system integrity, and response time. Improving the quality of information by applying accurate, relevant, timely and complete parameters. Improving service quality by applying parameters of reliability, responsiveness, assurance, empathy, and physical evidence. Increasing awareness of information security by applying the parameters of confidentiality, integrity, dan availability.

Acknowledgement

This research was conducted independently at a tertiary institution in Indonesia. Many thanks to the promoters, co-promoters, fellow lecturers, students and friends who have helped this research.

References

- Indriani, P., & Marlindawati, M. (2016). Pengukuran Tingkat Kepuasan Pengguna E-Learning dengan Penerapan Model End Using Computing Satisfaction (EUCS) (Studi Kasus: Universitas Bina Darma dan STMIK MDP). *Jurnal Ilmiah Matrik*.
- Jogiyanto, H. M. (2007). *Sistem Informasi Keperilakuan*. Edisi Revisi. Andi.
- Machi, & McEvoy. (2016). *The Literature Review Six Steps to Success (Ed 3)*. Corwin.
- McLeod Jr, R., & Schell, G. P. (2008). *Sistem Informasi Manajemen Edisi 10*. Salemba Empat.
- Mustakini, J. H. (2005). *Analisis dan Desain Sistem Informasi*. Andi.
- Prasti, T. V. (2018). Analisis Reaksi Pasar atas Pengumuman Peringkat Perusahaan pada Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup (PROPER).

- Setiawan, A., & Yulianto, E. (2017). Information System Strategic Planning Using IT Balanced Scorecard in Ward & Peppard Framework Model. *Internation Journal of Engineering and Technology (IJET)*, 1864–1872.
- Subiyakto, A. (2017). *Development of the readiness and success model for assessing the information system integration*. International Conference on Science and Technology.
- Susanto, A. (2015). What factors influence the quality of accounting information. *Internation Journal of Applied Business and Economic Research*, 3995–4014.
- Tjiptono, F., & Chandra, G. (2011). *Service, Quality & Satisfaction (edisi ketiga)*. Andi.

Author's Biography

Awan Setiawan is a lecturer at the Informatics Study Program at Langlangbuana University and is also active as a consultant and project manager in the fields of Information Technology. Currently, the author is pursuing a doctoral education at Pasundan University with a concentration in Operations Management.

Prof. Dr. Ir. Iman Sudirman, DEA is an active lecturer at Pasundan University and the Bandung Institute of Technology. He has served as Unpas Rector for the period 1995 - 2003. Currently he is the promoter of the first author at Pasundan University.

Dr. Ir. H. M. Nurman Helmi, DEA, M.Sc. is an active lecturer at Pasundan University, He has served as Unpas Head of Study Industrial Engineering Pasundan University. He is currently the co-promoter of the first author at Pasundan University

Erwin Yulianto is a lecturer at the Informatics Study Program at Langlangbuana University. and is also active as a consultant and project manager in the fields of Information Technology, HRM, Risk Management, Finance and Business. Currently the author is completing a Dissertation on Information Systems Studies.

Ruhanda serves as Vice Rector II at Langlangbuana University Bandung. Currently the author is completing a dissertation with a concentration in Human Resource Management