

A Study on the Effective Implementation of ERP System for Information System upon University Administration

Yeongreal Kim^a and Sanghwan Park^b

^a Dept. of Management Informations, .Professor, ,Chungbuk National University
361-763, Gaeshin-dong Heungduk-gu Cheong-ju, Chungbuk , Korea
Tel: +82- 43-261-2358, Fax: +82- 43-273-2355, E-mail: yrkim@chungbuk.ac.kr

^b Dept. of Management Informations, Master Cours. , Chungbuk National University
361-763, Gaeshin-dong Heungduk-gu Cheong-ju, Chungbuk , Korea
Tel: +82- 43-261-2355, Fax: +82- 43-273-2355, E-mail: shpark@chungbuk.ac.k

Abstract: *This dissertation searched for a social function and role of university, and problems of information-oriented universities through the analysis of the present conditions of university ERP systems in Korea. The purpose of this study is to find main success factors by investigating case studies on university ERP systems (university own development systems, Korean ERP systems, foreign ERP systems, etc.) and by referring to documentary records on the existing research.*

Especially, this study observed university management from an innovative aspect by studying success factors for information-oriented university connecting general functions of universities like education, research, and administration service, etc.

This study result will suggest outline effective and practical implementation strategies for university administration information systems.

Keywords: *ERP systems ; University ; Administration ; Information*

1. Background and Purpose of Study

Management Environment is changing rapidly beyond the limitation of space-time with rapid progress of Information Technology. It is unavoidable for Korean universities which give priority to reducing cost than making profit. Especially, Korean universities, these days, faces unlimited competitive environment such as open education, reduced new students with low birth-rate and relation with industries for creating profit. In such a difficult situation, this study was started to help Korean universities which are aiming to make better environment for education and study, and to overcome crises with advanced plan for university management.

This study enhanced reliability of actual case with successful factors through literature study for pre-existing study and typical case study such as self-development, domestic ERP or imported ERP. This study is especially focusing on successful factors for information system of administration which connects common functions of university such as educating, studying and serving, looking at university management from renewal view, and proposing evolutionary and practical successful strategy for university administration information system.

2. Way of Study

Unlike existing studying trend which applied cases based on literature, this study analyzed actual cases, grouped by representative types of Korean university administrative information system and selected the way that rises the value as case feature and standard model through literature study.

Case Study 1

In the case of M university, they built an overall information system (2000~2002) as a system integration through self-development for administrative information system. H university built Korean company made (URP by LG CNS for universities) ERP system (2002~2003). In the final, Y university selected imported ERP package (SAP) and build it (1999~2000; 2004).

Domestic universities adopted 3 representative methods which were given in the case study for information system. However, they can be grouped as self-development for their own needs and introducing ERP package. Table 1 shows the differences between two grouped ways even though it depends on size or feature of the university.

Table 1. The way of university Information System

Categories	Way of SI	Way of ERP
BPR	Self conducting of university Actual BPR is not possible (simple computation)	Introducing the best practice Natural conducting of BPR
Development & technical support	Depending on domestic SI	Global vendor Integrated system Verified technology
maintaining	Burden of overall maintain Impossibility for new tech Re-development in 3~4 years	Support for upgrade from vendor People in university keeps minimum maintain

ERP is based on standard advanced business process. If there are any differences of business procedures in the implementation, it can be standardized by restructuring. It means that can be advanced as the most effective business process integrating overall administration excluding existing process. For these reasons, introducing ERP system is more useful than self-developing (Dae-ki, Min, 2005).

Looking at the market share of solution vendors, foreign ERP vendors, SAP (17.4%), Oracle (14.8%), have 1/3 of the market. And domestic vendors, Samsung SDS (13%), Soft Power (6.3%), New Soft Tech (5.7%), KAT System (5.5%), Duzon Dass (4.9%), Yoengrimwon (4.8%), have rest of it (KIEC, 2005).

This shows that foreign vendors have strength because they have experience of implementation to foreign universities. Domestic universities prefer ERP of SAP and Oracle. According to Governmental support policy, industrial colleges took SAP ERP and educating colleges took Oracle ERP. The Governmental support will continue to 2007 and the vendors will be SAP and Oracle for now.

Case Study 2

We will look at successful factors on existing study and case study. And find the things in common and successful factors based on university peculiarity. Table 2 shows successful factors derived from existing study and case study.

Table 2 - Common Successful Factors from Existing Study

Successful factors from existing study	Successful factors from case study
Participation and support from CEO	Participation and support from CEO and members
Active participation of users	Minimizing the resistance of users
	Standardization of business process
Systematic planning and control	Enough financial support
	Proper project team and ERP organization
Performance of BPR	Combination of each module
	ERP package
Training for users	Maintaining and operating of system
	Educating for users
Selecting proper ERP package	Understanding for system
	Making clear goal and plan
Capacity of vendor	Continuous changing control
	vendor

In the table 2, we can find that successful factors between existing study and case study are almost same. The meaning is similar even if there are some differences between universities, vendors and ERP packages.

We tried to show core successful factors derived from existing study and case study. Those are active participation and support of CEO and members, systematic plan and control for project, establishing standard business process through BPR, training for users, and proper selection for vendor and ERP package. In addition, adequate financial support, continuous management after ERP system implementation, and understanding and managing of system are also important.

3. Strategy for Success

Figure 1 is what I suggest for “Successful strategy for university administrative information system” based on existing study and case study.

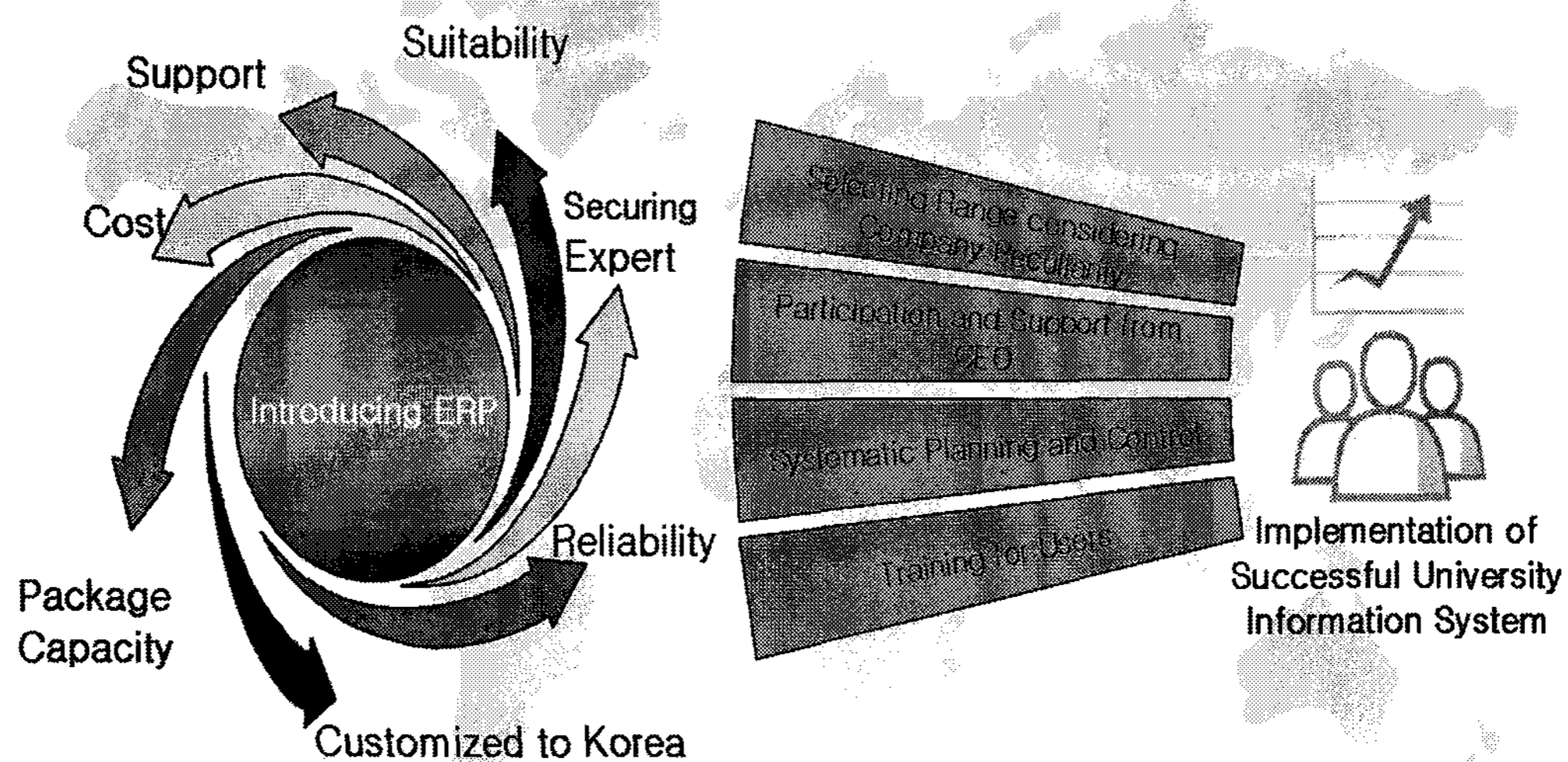


Figure 1. Successful strategy for university administrative information system

Successful university administrative information system is based on implementation of ERP package. Then, which one should we select? First, we have to look at the market share, implementation history, and financial condition of the vendor, and if the package is capable and proper. Also can it be customized to Korean culture because each country has specific educational culture? We have to consider not only purchasing price but also price of educating, consulting and infra-structuring.

If we have chosen proper ERP package, it means many things are done. But that's not enough. Selecting implementation range considering organization peculiarity shown in figure 1 means that we should arrange the applying range considering size, peculiarity, vision and strategy. Also, as shown in table 2, the CEO's will and support is more important than any other thing, if ERP package is chosen. Then with this support we can minimize risk factors that can be taken place during the implementation and minimize the resistance of the users.

The success strategies given above are just core things. There also can be more additional factors. However the strategies given above are the most important factors for university information system which are proved by case study.

4. Result of the Study

This study showed the strength of ERP packages comparing self-development and ERP system. This study also showed strength of foreign ERP that is already verified and has experience capering domestic ERP and foreign ERP. Domestic ERP has less competitiveness because of their low market share and less experience.

Thus universities that are going to introduce ERP system for their information system would better choose foreign ERP which has global standard and management innovation than domestic ERP. Some universities which were not willing to give information are planning to change their ERP from domestic ERP to foreign ERP. P University is already changing their ERP from L Company's ERP to foreign ERP. Of course there are some universities like C that already introduced foreign ERP but have problem because of lack of education and support. However, it is expectable that many universities will introduce foreign ERP due to

business abandonment of domestic companies, global inclination of universities and Governmental support. Besides, universities and vendors will have connections until ERP system is settled down in universities.

5. Limitations and tasks for future

Followings are the limitations.

First, universities have a tendency to exaggerate the effect of information system because they think it is an achievement or to conceal their experience and strategy.

Second, it was limited to have an interview with university information system expert because implementation has done by outsourcing. There was almost no one inside the university who knows well.

Third, it was difficult to collect information because many domestic companies that were running business abandoned the university information system business.

Forth, even though more universities willing to have ERP with Governmental support, many of them were self-developed. And I worried what if it is shown as a advertisement for specific company. Also I might focus on foreign ERP because of easiness of collecting information.

In the tasks of future overcoming these limitations, the study considering increase of special universities and connection with global universities should be performed. To prepare for open of university, the strategies for success should be given through comparing with foreign universities considering domestic university's peculiarity.

References :

[1] Ministry of Education and Human Resources Development. (2004), Report about " Serious operation of educational university administration information system (ERP) – Real time understanding for human resources, budget, and facilities.

[2] Dae-ki, Min. (2005). "How ERP Work for Information Systems in College," Journal of Natural science, Vol. 11, pp. 131-136.

[3] KIEC(Korea Institute for Electronic Commerce). (2005)