How to Improve the Design of Enterprise Resource Planning (ERP) System

Feng-Hsiung HOU*
Dongguan University of Technology, 523106, NO. 251, Xueyuan Rd., Guancheng District, Dongguan, Guangdong Province, P.R. China
*Corresponding author

Keywords: Enterprise resource planning, Design, Organization.

Abstract. The purpose of this research was to explore how to improve the design of Enterprise Resource Planning (ERP) system and to find the best way for improve the use of Enterprise Resource Planning (ERP) in organizational operations. The research samples were 164 organizations in Dongguan. The participants of this research were one ERP user from each sample organization. Enterprise Resource Planning (ERP) is an invaluable tool in nearly every organization. An organization that cannot apply Enterprise Resource Planning (ERP) both as operational tool and as a managerial tool may have a tremendous disadvantage compared to its competitors. This study investigates the role of the designer’s for designed Enterprise Resource Planning (ERP) in the organizations and to find the best way for improve Enterprise Resource Planning (ERP) systems in organizational operations. This study offer important information about the impact of the designer’s roles for designed Enterprise Resource Planning (ERP) in the organizations.

Introduction
We believe that understanding and applying Enterprise Resource Planning (ERP) system could enhance the quality of organizational operations. Enterprise Resource Planning (ERP) system has brought efficiencies to many organizations—but it's also taught organizations a lot about how not to put in enterprise applications. The pain of installing such complex software imparted valuable lessons on how to deal with people, planning, and processes. The purpose of this research was to explore how to improve the design of Enterprise Resource Planning (ERP) system and to find the best way for improve the use of Enterprise Resource Planning (ERP) in organizational operations. This study may offer important information about how to successfully design the Enterprise Resource Planning (ERP) system for organizational operations in future. The research question was: What are the best ways for improve the design of Enterprise Resource Planning (ERP) system?

Literature Review
Organizations around the world have been implementing Enterprise Resource Planning (ERP) systems since the 1990s to have a uniform information system in their respective organizations and to reengineer their business processes [1]. Today, the software is extending beyond its core functionality to include sales-force automation, data warehousing, document management, and after-sales service and support. But perhaps the most important new frontier is supply-chain management. All the major ERP vendors are racing to deliver supply-chain capabilities that increase efficiency and productivity for their key customers. By linking supply-chain applications with other business systems, users can slash cycle times and reduce inventory. They can also reach beyond their own corporate walls to better connect with suppliers, distributors, and end customers [2]. A. Ahmed Al-Johani and E. Ahmed Youssef [3] stated that ten lessons for Enterprise Resource Planning (ERP) application implementation are in following: (1) Make Enterprise Resource Planning (ERP) calculations and business justifications for application projects prior to implementation; (2) Beware feature
creep-limit growth in application scope by devising a project plan and sticking with it; (3) Strive to
finish on time, leaving out optional features if necessary; (4) Map out business processes before
implementing applications; (5) Don't customize unless absolutely necessary; be willing to adopt
application best practices; (6) Avoid a "big bang" all-at-once implementation; roll out applications
one module at a time to minimize pain and maximize business returns; (7) Carefully weigh platform
and integration issues; don't be swayed by features alone; (8) Don't dictate an implementation;
 solicit-and act on-user feedback; (9) Get the business side to take ownership of an application; (10)
Train, train, train.

A review of the literature found that several authors stated that the designers’ roles for
organizational developments and operations are creating a vision statement. These procedures start
with a freewheeling, brainstorming session in which a draft statement is developed. Subsequent
meetings are devoted to refinement and restatement of the vision, while also adding detail (going
down the pyramid). Each step is intended to provide an interactive approach to vision development,
as well as to add more information to the statement. Establishing an initial vision statement is clearly
the most important part of the process. Exactly how it is done is not as important as doing it. The
process was design to be reworked as each step unfolds, but there must be a starting point. There are
four steps to creating a vision statement: (a) first draft; (b) develop a view of one's future environment
and test it against the vision; (c) restatement of the vision; and (d) backwards deployment.

Methodology

This study employed survey research to conduct the research process and the research data measured
by the Survey of Designer’s Roles for Designed Enterprise Resource Planning. The research samples
were 164 organizations in Dongguan. The participants of this research were one ERP user from each
sample organization. Next, the research employed a stratified random sample. A list of all
organizations’ employee was obtained from each sample organization. The random sample was
selected by assigning a number to each organizational employee in organization. The data collected
from organizations’ ERP user from each sample organizations. The date of data collection was end
June 2017. The Statistical Package for the Social Sciences (SPSS) computer software program was
used to complete the analysis of data.

Presentations and Analysis of Data

Analysis of total sample provided the results of descriptive statistics of the survey instrument. This
section also showed the survey results related to the primary research question. The descriptive
statistics results also indicated that designers of ERP could give members dedicated leadership and
clear direction for the process of enterprise resource planning (ERP) in (a) marketing; (b) top
management; (c) manufacturing; (d) human resources; (f) consumer imaging; (g) service
management; and (h) quality management. The descriptive statistics results stated that organizational
designers also could give themselves and their organizational members: (a) high-quality education;
and (b) training and the development of end-user training.

The descriptive statistics results reported that designers of ERP must to: (a) be an adherence and
compliance to standards for the enterprise resource planning; (b) to select and manage the enterprise
resource planning’s support relationships; (c) to create effective enterprise resource planning’s
infrastructure-services support; (d) to create on-going communication regarding enterprise resource
planning’s directions, changes, progress, accomplishments and benefits; and (f) to orchestrate the
enterprise resource planning’s relations across businesses, functions, geographies, and shared
services.

The descriptive statistics results showed that designers of ERP needed to create the implementation
review board that acts as gatekeeper for (a) the enterprise resource planning ’s phases; (b) gives
approval to proceed of the enterprise resource planning; (c) reviews deliverables of the enterprise

229
resource planning. Organizational designers also need to create the enterprise resource planning’s: (a) change-management program; (b) role definitions; (c) responsibility definitions; and (d) reporting definitions.

These results response the primary research question: What are the best ways for improve the design of Enterprise Resource Planning (ERP) system? This section of research contained the interpretation and presentation of the data in narrative and statistical form. Next section of research contains conclusions, and recommendations.

Conclusions and Recommendations

The major focus of the study was to determine if there was a significant role of ERP designers for designed Enterprise Resource Planning (ERP) in organizations. Research question was examined.

Specifically, the primary research question asked that there was a significant roles of ERP designers for designed Enterprise Resource Planning (ERP) system in organizations. Research participants were surveyed and tested scores to explore the way. The descriptive statistics was conducted to explore if a way existed for the roles of ERP designers for designed Enterprise Resource Planning (ERP) system.

Therefore, there were several significant ways of ERP designers’ roles for designed Enterprise Resource Planning (ERP) system. The finding responded the primary research question: What are the best ways for design the Enterprise Resource Planning (ERP) system?

The goal of this study was to help designers of ERP understand how important for roles on designed Enterprise Resource Planning (ERP) system. The study showed the existence of significant ERP designers’ roles on designed Enterprise Resource Planning (ERP) in the organizations. What are the implications of these findings? The results substantiated the existence of several important ERP designers’ roles on designed Enterprise Resource Planning (ERP) in the organizations.

Overall, the study accomplished the task of establishing the ERP designers’ important roles on designed Enterprise Resource Planning (ERP) in the business organizations. The results of this research responded the primary research question: What are the best ways for improve the design of Enterprise Resource Planning (ERP) system?

Recommendations

The study provided a starting point for investigating the ERP designers’ roles on designed Enterprise Resource Planning (ERP) in the organizations. While providing useful information, further research should be conducted to obtain more concise information in the ERP designers’ roles on designed Enterprise Resource Planning (ERP). For some of organizations involved in the study, it would be interesting to investigate further with larger groups of participants, focusing on different kind of organizations around the world. The future research also could focus on how to improve the ERP designer’s roles on designed Enterprise Resource Planning (ERP) in the any kinds of organizations around the world.

The best way for design the Enterprise Resource Planning (ERP) has been established in this study. The challenge now is to assist organization plan for create roles of ERP designers on designed Enterprise Resource Planning (ERP) to exceed organizational goals in their organizations. However, with the following recommendations, organizations can effectively cerate the roles of ERP designers on designed Enterprise Resource Planning (ERP) to gain competitive advantages for their organizations:

1. Designers of ERP could create dedicated leadership and clear direction for the process of Enterprise Resource Planning (ERP).

2. Designers of ERP need to be an adherence and compliance to standards for the Enterprise Resource Planning (ERP) and to select and manage the enterprise resource planning’s support relationships.
3. Designers of ERP need to create effective Enterprise Resource Planning’s infrastructure.
4. Designers of ERP need to orchestrate the Enterprise Resource Planning’s relations across businesses, functions, geographies, and shared services.
5. Designers of ERP needed to create the implementation review board for Enterprise Resource Planning’s operations

References

