



# User's Expectations and Reality of ERP System: Implementation Experience in Higher Education

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## ABSTRACT

The influence of users on the success of ERP system implementation cannot be over-emphasized. This paper focuses on the expectations of the users in ERP system implementation in higher education. We made some recommendations based on the findings of the study.

## INTRODUCTION

The users of disparate legacy system usually express their frustrations and difficulties in getting many routine tasks done in organizations. The response of many organizations to address such problems is to replace the legacy system with a modern Enterprise Resource Planning (ERP) system. During the process of putting together a business case to justify the investment in ERP system, users' expectations are raised and there are too many assumptions about the performance of ERP. Users are usually not aware about the extended learning curve and many other associated information systems implementation problems. Using the case of a mid-sized private university in mid-west US, the paper presents the experience of the users after the implementation of some modules of an ERP system.

The difficulties of ERP implementation have been well documented (Scott and Vessey 2000). However, there are few literatures that specifically focus on users' experience, especially in higher education environment. Chang et al (1999), examined the deployment of ERP systems in private organizations, but now that higher education institutions are increasingly adopting ERP to replace existing administrative and management systems, the users in this environment are not typical business users and their expectations as per the outcome of the ERP require further understanding. The success of any information systems implementation relies on the users. Much like business organizations, higher education institutions are also being driven to become more efficient, are faced with increased competition, and must do all of this with reduced funding. Unfortunately, there are not many frameworks, models or methodologies to support these ERP implementation efforts. Many available cases and tools to guide implementation are based on business organizations which present a different context to public organizations and higher education institutions

Most studies on ERP implementation have been conducted after the completion of the project. The study presented here was carried out simultaneously with the ERP implementation effort. The implication of this is access to vital information when it is still fresh in people's mind and opportunity to observe events as they occur. Despite the amount of literature on ERP implementation only a handful specifically focuses on higher education institutions. This does not mean that ERP is new to higher education institution, at least 600 colleges and universities in the USA have (successfully) implemented ERP systems. The lack of interest in ERP implementation in higher education could be due to the importance attributed to its impact in large businesses. In fact, the statistics about the benefits of ERP only focus on business organizations. There are however, a few articles that are dedicated to higher education where the views expressed reflect the lessons learned from ERP imple-

mentation projects in higher education. Yakovlev (2002) shared his experience of ERP implementation at University of Wisconsin - Superior and Siau and Messersmith (2003) and Sieber et al. (1999) discuss the SAP R/3 implementation at University of Nebraska.

In one of the few available articles, Swartz and Orgill (2001) shared their experience of ERP implementation at George Washington University and West Virginia University. They suggested that the use of consultants and the cost associated with ERP should not be underestimated in higher education environments. They also cautioned that institutions should limit customization and scope of the ERP project. Customization has been one of the most time consuming issues in ERP implementation. They conclude that ERP implementation in higher education is moving rapidly and that the ERP vendors are becoming more interested in ERP in higher education. However, the challenges still remain in designing a best practice model that best suits the needs of colleges and universities. All these literature also did not pay enough attention to the issue of users' involvement and its implication in the overall success of the ERP system implementation project.

## METHODOLOGY

To be able to answer the above questions and subsequently achieve the goal and objectives of the project, an exploratory case study and analysis (Yin, 1994) of ERP implementation project was conducted. Case study is typically qualitative in nature and focused upon behavioural documentation and explanation. In a case study, the researcher does not, or cannot control or manipulate the situation. The exploratory case study is appropriate for answering research questions that seek to establish how an outcome can be derived. The exploratory case study proposed here, constitutes an in-depth study of the ERP implementation and all associated issues at Agora University. The qualitative nature of the study was established based on the analysis and interpretation of qualitative data: transcribed audiotapes of the interviews, review of historical documents, and observations.

In support of case study methodology, Yin (1994) in his popular book on case study research, utilizes case study to investigate a contemporary phenomenon in its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident. The study relied on multiple sources of evidence and the data gathering was grounded on prior findings in the ERP literature. Nevertheless, the data gathering approaches (interviews, observations, historical document reviews) also support the discovery of new knowledge that might otherwise be overlooked. Yin (1994) observed that the triangulation of multiple sources of evidence permits convergence and corroboration of findings and builds a stronger, more convincing basis for conclusions.

This research method has been used extensively to conduct research in information systems and organizational sciences (Orlikowski and Baroudi 1991). The following procedures were used to conduct the exploratory case study:

- Each user's group was visited and individual data collection was conducted with the participants.

- Implementation of each module was fully monitored and carefully documented
- An historical document review was conducted in addition to observations on site.
- An analysis of all the data collected through individual interviews, the historical document review and observations was carried out. The data analysis includes iterative process of data reduction, triangulation of multiple data sources, and a search for alternative or negative evidence.
- The minute of the steering committee meetings were reviewed and 10 users of the first two modules of the ERP system that has been implemented were interviewed about their experience after six months of using the ERP system.

## FINDINGS

The users were daunted by the amount of changes involved and the unexpected rise in the work load. Despite the unflinching willingness of the users to make the systems implementation a success, they could not endure the frustration of the significant changes in the new systems. They were satisfied with how they did things in the old system, which many were considered to be a better system. The number of data input screens for a particular process had increased, in many situations by more than 500%. This was primarily due to the fact that data conversion, data entry and data cleaning were still in progress. The users acknowledged that they had some problems with the old system but they were familiar with working with it, all their aspirations and hopes that the new system would bring relief to their frustrations and eliminate the limitations of the old system were not yet been met. The users expected some changes and the need to compromise but they complained about the fact that no one told them how extensive the learning curve would be.

The analysis of the data revealed that the user's expectations were not met, at least during the first six months after the "go-live" date. There are many factors that are responsible for this. According to the users, they are not duly prepared for all the extra works that had to be done to make the system functions as expected. They are not also informed that it will take some time for the system to become stable and deliver all the promises. Based on the interview, none of the users contested their involvement in selection of the ERP system, yet they felt they might have made wrong assumptions about some key functionality of the system. However, the involvement of the users from the early stage of the project remains the most strategic move that continue to give the users the required sense of belonging and achievement. They are able to take responsibilities and work hard for the success of the project. The findings also show that the users require adequate and more elaborate training.

## RECOMMENDATIONS AND CONCLUSIONS

### Consciously Manage Expectations

ERP systems are large and come with many capabilities. They usually are introduced into an organization which wants to replace legacy systems. Most of these legacy systems are outdated and lack modern functionality. Users are often yearning for a change to these outdated systems. Thus, with the introduction of an ERP system come a high expectation from users, which were expressed in this case. They assessed their old system and suggested the features they would like to see in a new system. These new features were demonstrated and promised by the vendors, however when the system was implemented, it took too long for the user to see those anticipated changes. They became impatient about unmet expectations. Even though the system possesses most of the features they wanted, the time and efforts required to bring the system to the expected level had not been adequately conveyed to the users. In retrospect, the project manager agreed they could have managed the user's expectations differently. They could have taken time to educate the users on the requirements necessary for a successful

implementation and could have informed them about the necessary time required to realize benefits of a newly introduced system.

### Implement a Well Defined Communications Plan

With any system-wide initiative, it is imperative that communication is handled carefully. Since the implementation of ERP systems can directly affect everyone within an organization, having an adequate channel of communication can squelch possible problems at an early stage. As discussed in this case, there were concerted efforts for communication during the implementation of the ERP system at Agora University, yet it could have been better. Some actors (e.g. faculty) felt they were not duly consulted before the decision was made to buy the new system. Some others were not getting information about changes, system shutdowns, and upgrades at the right time. There was also confusion about different kinds of systems that were being implemented which led users to attribute the problems of the Portal to the ERP system. The project manager was of the opinion that more effort on communication would have been beneficial to the project. While the multilayered structure of the committees were designed to get information across to users from multiple sources, there was need for coordination and better utilization of communication media - email, web, newsletters workshops, seminars, etc.

### Spend Considerable Time on End User Training

Despite the investment on training consultants and training time, the complaint most often received from the end users suggested that no amount of training could be too much for the success of the ERP system implementation. The task of training the end users in an ERP implementation is usually underestimated. Most of the end users have some specific responsibilities which general training may not cover. Also, the training is most often focused on functionalities and the actual use is left to be figured out by individual users. For experienced users, this might seem an easy task but considering the low computer literacy level of many users, it might be a serious problem. The project manager acknowledged it was not realistic to provide tailored training to all end users however paying more attention to training needs could tremendously benefit the organization.

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