Review Article   **ISSN: 2394 - 658X**

Review Paper of College ERP System

[1]Prof. Pradip Balbudhe, [2]Ms. Nikita Dandekar, [3]Ms. Arti Nandekar

[1] Ass. Prof of Computer engineering, [2,3] Student of computer engineering, Suryodaya College of Engineering and Technology Nagpur, India

_____

ABSTRACT

ERP stands for enterprise resource planning. It is an integrated system through which an organization can manage the functioning of its various divisions whether logistics, production, finance, administration, finance and human resource. ERP has been widely used in various industry and businesses as it provides one application and single database to organize the entire enterprise. ERP system has been widely accepted and has shown positive response from the industry and business sectors. As a result, it has found its growth in the ever-growing education sector ranging from schools to higher educational institutes like universities. The ERP system is being quickly adapted by the educational sector to streamline its functioning. But the ERP model for educational sector is completely different from that of business sector. The available ERP models include the sub-categories which are influenced by the needs of the industry sector. Majority of the educational institutes are re-engineering the business model of ERP for their educational system, which is not completely in-accordance to their requirements, hence rendering it unsuccessful. In the present work the authors have reviewed the literature in relation with the pre-implementation stage of ERP system in educaetional sectors worldwide.

Key words: ERP system, Pre-implementation, Educational sector

_____

INTRODUCTION

An ERP system integrates many functions across the college, such as staff management, human resources, attendance and salary calculation, to deliver benefits such as efficiency and effective processing of information. ERP implementation describes the process of planning, configuring and deploying an ERP System. The process typically continues for a few months—and its complex, because an ERP system supports and automates many different functions.
To ensure a successful implementation, we observed the college needs to carefully define its requirements, determine how to redesign processes to take advantage of the system, and to create an ERP system to support those processes and successfully test it before deploying it to users. Successfully navigating all those steps on schedule requires careful planning and a structured, phased implementation approach.

LITERATURE SURVEY

ERP is stands for Enterprise Resource Planning. Enterprise resource planning (ERP) is business management software or a system which is typically used to manage core departmental data of respective business. ERP provides an integrated view of business processes, often in real-time, using common databases maintained by database management systems. ERP system track business resources— raw materials, cash, production capacity and the status of business commitments like: payroll, purchase orders, and orders. The application that makes up the system share data across the various departments (purchasing, accounting, sales, manufacturing etc.) That provides the core data. ERP facilitates information flow between business function, and manages connections to outside stakeholders.

_____

Every college has to maintain a management system for various sections which may include performance analysis, attendance system, test wise result, student information, fee structure, academic information, transport facility, staff information and many more. Managing all these sections manually on paper becomes very time consuming and complex tasks. In such system there is high possibility of misplacement of collected data and data redundancy

in the form of paper records in order to overcome these drawbacks there is a need to design and implement College ERP system where a college staff can track a student profile in all aspects of academic course.

College ERP system is an online web based system which implements a user friendly and attractive interface for college. The aim for deployment and implementation of this system is to replace manual system of colleges with an automated web based system. This College ERP system also manages data accurately and efficiently which is stored over a long period of time. College ERP system provides single access point to all administrative system of colleges. In previous systems all the departments are worked independently and separately. If anyone want to access that data collectively then it is not possible with such systems. System study of such system shows that all the booking was done manually on registers, which was very complicated job. Report generation of all records was also not possible in the existing system. Also the work of college was manually maintained and stored. All this data is maintained through register or file system in the college.

Current mode of working is based on manual system in which the all the data is first received from respective personnel and then entered in the registers or files. It is very complex job and time consuming also. The existing system is also dependent on students, if the students are absent. Then performance of student will be affected. Due to huge volume of data, a lot of problems are involved in maintaining, updating and retrieving selected information. Since previous system is totally maintained manually, some of the difficulties involved in existing system are as follows:

1. Redundancy of data.
2. Difficulty in updating the data.
3. Non-centralized data.
4. Delay in retrieving information.
5. Problem for keeping the data.
6. Not proper retrieval of information.

EXISTING SYSTEM

The existing system is not user friendly because the retrieval of data is very slow and data is stored manually. The use of the some technology can be complicated and time consuming. These systems need to handle by specialist for maintaining and update the system which can again be very costly.

It requires more calculations to generate the report like attendance calculation, percentage calculation etc. so it is generated at the end of the session. Hence requires more time to display the report.

All calculations to generate report is done manually so there is greater chance of errors. Here the faculty has to suffer a lot through the calculation and if there is a loss of some report then it may cause a lot of problem. This is time consuming also due to exaggerating calculation. Even after that there are some miscalculations which is very frustrating for the faculty. These calculations also effects the marks of the students which will finally led to their percentage.

In this existing system the papers can miss placed and documents can be loss. This will cause extra work for the admin department stuffs.

STAGES OF ERP IMPLEMENTATION

We divided the ERP implementation plan into six phases, each with specific objectives. The phases may vary somewhat depending on the college requirements, and they also may overlap.

1. DISCOVERY & PLANNING

All ERP projects start with a discovery and planning phase, which includes researching and selecting a system, setting up a project team and defining detailed system requirements. The project team will handle a broad range of roles related to the implementation, including laying out the project plan and target dates, ensuring adequate resources are allocated, making product and design decisions, and day-to-day project management.

2. DESIGN

The design phase works from detailed requirements and an understanding of current workflows to develop a detailed design for the new ERP system. This includes designing new, more efficient workflows and other processes that take

_____

advantage of the system. It's important to involve users in the design phase, since they have the most intimate understanding of current business processes. Involving them in the design also helps to ensure that they'll welcome the new system and take full advantage of it.

3. DEVELOPMENT

Armed with clear design requirements, the development phase can begin. This involves configuring and, where necessary, customizing the software to support the redesigned processes. It may also include developing integration with any of the organization's other existing business applications that won't be replaced by the ERP system. If you're using an on-premises ERP system, the organization will need to install the necessary hardware and software

4. TESTING

Testing and development may occur concurrently. For example, the project team may test specific modules and features, develop fixes or adjustments based on the results, and retest. Or, it may test one ERP module while another is still in development. Initial testing of the basic functions of the software should be followed by rigorous testing of the full capabilities of the system, including allowing some employees to test the system for all their day-to-day activities. This phase should also encompass testing of the migrated data and include introductory end-user training.

5. DEPLOYMENT

This is what we are waiting for: the day the system goes live. Being prepared for potential issues, since there may be a lot of moving parts and other resources, despite your best efforts to prepare them for the change. The project team is preparing to be readily available to answer questions, help users understand the system and attempt to fix any issues.

6. SUPPORT & UPDATE

Nurturing your ERP implementation after deployment helps to keep users happy and ensure the business achieves the desired benefits. The project team will still be responsible for the ERP system during this phase, but we will focus on listening for user feedback and adjusting the system accordingly. Some additional development and configuration may be needed as new features are added to the system.

7. MIGRATION OF DATA

Data migration is the initial step - and we have built a solid foundation on which to continue the implementation efforts. Our application analyst is taking major effort as it's their specialty. But our whole team is ready to assist them in:

- Data cleansing and verification
- Database setup
- Mapping legacy data to new database fields
- Data transfer to the new system
- Testing and verification of legacy data
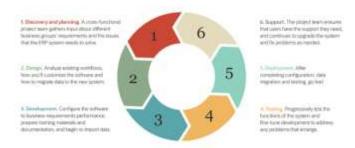- Testing and verification of new data inputs

Fig. 1 ERP Implementation

PROPOSED SYSTEM

The system architecture has a smart phone with android OS, a web services, a database server and the user as its components. The android smart phone or tablet must use 3G, 4G or Wi-Fi network for internet connectivity to ensure better performance.

The user will login to the application through an android smart phone. The user-type is verified with the database server and access is given to the appropriate user. The web application also can be used to login and perform certain operations such as ensures that internet is on.

This module allows the department Admin to update students about any college related information like exam dates, events, seminar etc. through notification message. The students can view notifications provided by the interface provided by application.

Admin can send message to only available options like all student, all faculty, specific faculty and to all.

CONCLUSION

With ERP software, every college and university can aim to be transparent to various parties that are genuinely interested in the running of the institution. The list includes names like audit authorities, board of directors, trustees, college unions, student groups and many others. The data, which will be generated on tested and well-designed software, will be more accurate than data that are processed manually. This will also help the management stay regular with their updates and maintain a system that is worth evaluation and appraisal. Cloud Next Vision is a leading provider of education software including ERP consultation and implementation for educational institutions. The ERP system developed by Cloud Next Vision for colleges and universities are characterized by quick access to information, synchronization and completely automated processes which save time.

REFERENCES

[1]. Xia Hu, Min Zhou," The Three-dimensional Teaching Mode of ERP Course in Colleges and Universities", IEEE-2011.
[2]. Chongjun Fan, Peng Zhang, Qin Liu, Jianzheng Yang," Research on ERP Teaching Model Reform for Application-oriented Talents Education" International Education Studies Vol. 4, No. 2; May 2011.
[3]. Wenjie Yang, Haoxue Liu, Jie Shi," The Design of Printing Enterprise Resources Planning (ERP) Software" IEEE-2010.
[4]. Pranab Garg, Dr. Himanshu Aggarwal "Comparative Analysis OfErp Institute Vs Non Erp Institute; Teacher Perspective, IJMBS-2011.
[5]. Sun, A., A. Yazdani and Overend, J (2005). "Achievement assessment for enterprise resource planning (ERP) system implementations based on critical success factors." Int. J. Production Economics 98: 189-203.
[6]. D. Habhouba, S. Cherkaoui, and A. Desrochers" Decision-Making Assistance in Engineering-Change Management Process" IEEE-2010, 344-349.
[7]. Nielsen, J. (2002). Critical success factors for implementing an ERP system in a university environment: A case study from the Australian International Journal of Human and Social Sciences 5:6 2010 398, HES. Faculty of Engineering and Information Technology. Brisbane, Griffith University. Bachelor: 189.
[8]. G. R. Faulhaber, "Design of service systems with priority reservation," in Conf. Rec. 1995 IJREAM Int. Conf. Communications, pp. 3–8.