

A Rational Approach of SAP ERP Based HR Module for an Educational Institute

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Abstract- Since mechanization business is increasing in the world, the HR module in Enterprise Resource Planning (ERP) has rich features which are static in nature and integrates seamlessly with assorted modules. ERP systems are adopted by various academic institutes for key management and educational offerings. ERP based HR module provides huge solutions for HR stream and making it feasible for different branches to get access to specific worker record. SAP ERP (Enterprise Resource Planning) is commercial software that integrates all the data in single software, considering numerous factors like time and cost. This helps to manage the complete information and process about the employees in an organization. This paper emphasis on techniques of ERP-based HR module for educational institutes to utilize the human sources.

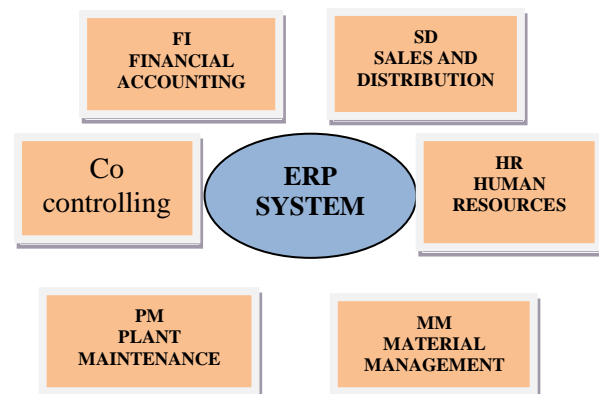
Index Terms-ERP, Academic Institute, HR module.

1. INTRODUCTION

With the introduction of ERP systems, any educational organization, the data in their statistics device is a file, a folder, an e-book, or any digital information from any electronic device. The ERP device is the quality answer for any information system which remains your system simple after it has built the structure of the system in over a time. Optimization and resource usage is the key component of any enterprise which has the inclination to attain the first-class outcome from the prevailing infrastructure. Institute control is the largest mission for any organization to gain the favored desires, excellent quality and the targets. ERP structures are followed by the numerous educational organizations for key managerial and theoretical services. In an educational organization the combination of all enterprise resources represents the mixing of systems for human resource management (monitoring of employees) and finance (accounting, payments, investments and finances) that was once reinforced through discrete and often incompatible data applications. Nowadays, industries are renewing the human assets and turning them into one of the essential features of the challenge management. In an organization HR functions are fully integrated and mainly focusing on management, recruitment and providing direction for the people who are working. The research on HRM in the framework of ERP is relatively new.

2. ENTERPRISE RESOURCE PLANNING SYSTEM

Enterprise Resource Planning (ERP) is software that combines all streams and functions across an organization onto a single computer system and serves all the department's particular needs. ERP is a common name for all software provided by various vendors. Some of the ERP vendors are SAP, ORACLE, BANN, Microsoft etc. The Enterprise Resource Planning solution through SAP (a software package) is found to be suitable to deal with our huge network of business.



2.1. Benefits of SAP-ERP

- SAP is primarily using in all business management tasks of a company which includes paying invoices, managing product and customer information, and controlling finances.
- SAP is managing the tasks in modules that all work together in single system by sharing information.

Common database is used in SAP R/3 because as you enter the information in the system and that is made available to the rest of the organization immediately.

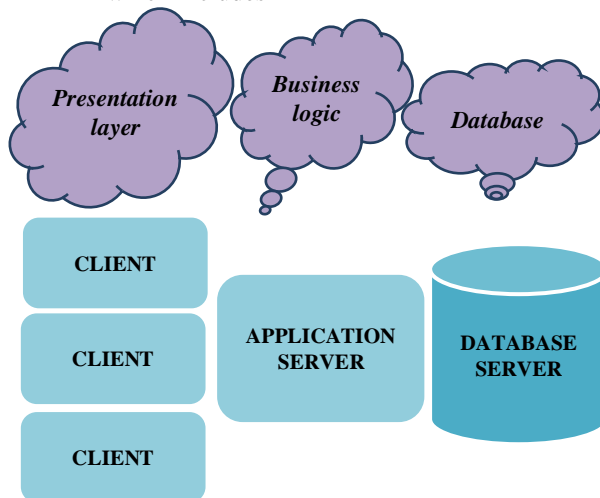
- Increasing the inventory leads to greater inventory rate, poor inventory costs, low setup times, and paper work.
- Provides greater and effective control on account, quality and less re-work improves supply demand linkage with remote locations and branches in different locations.

2.2. 3-Tier architecture of SAP

- **Presentation Layer:** This layer typically consists of components that make up SAP GUI. This layer acts as the interface between system and its users. The presentation layer collects the data from the user and sends it to the application layer and displays the data that has retrieved back.
- **Application Layer:** This layer consists of application servers and message servers. It is used to execute the business logic and process the business logic, client transactions and coordinate access to the database.
- **Database Layer:** This layer consists of central database system which stores the data, that are loaded into application servers.

3. NEED OF ERP SYSTEM IN EDUCATIONAL INSTITUTION

- For any educational organization, the importance of data for an information system can be a file, a folder, an e-book, or any electronic data from any electronic device. The main objective of building any information system and processes that system which includes



- Structured information.
- No duplicate information.

- It should provide user decision making capabilities.
- User satisfaction is met for its objectives.

| Student Information System | Operations | | Admin |
|----------------------------|--------------------|----------------|-----------------|
| | Finance & Accounts | HR & Payroll | |
| Admission | Book-keeping | Staff Database | Front Office |
| Academics | Fees | Recruitment | Hostel |
| Placement | Procurement | Appraisal | Assets & Estate |
| Alumni | Stores & Inventory | Leave | Transportation |
| | Research Projects | Payroll | |

3.1. Re-Engineering

Reengineering is a concept this is applicable to all industries, especially information and communication technology (ICT) tasks no matter organizational type, length, subculture, or location. The business enterprise aid making plans (ERP) machine regularly calls for agencies to trade their current business methods to harmonize functional activities.

3.2. Application of re-engineering:

ERP (Enterprise Resource Planning) integrates set of software developed to share data across the organization which reduces redundant business processes. The system is deployed in an organization to streamline its functions. SAP is the tool or software suite that is being implemented as part of re-engineering processes ranging from entering an order to maintain activities, invoices, and beyond. The Enterprise Resource Planning revolves around Business Process Re-engineering (BPR).

4. PHASES OF ERP SAP

SAP is not just a software package, which can be loaded in a computer and used. It is a stage by stage development process. It involves many stages developed by a huge team for at least 18 months of work.

The phases of ERP, i.e., Accelerated SAP (ASAP) tools are tailor-made for an effective, fast, and well-organized:

- Project Preparation – This phase defines the goals & objective, scope, strategy, schedule and resources
- Business Blueprint- This phase illustrates about the requirements, document business process, baseline scope, refines overall schedule which is similarly a pattern.

- Realization –This phase depicts about the system implementation, testing and release it for the production.
- Final Preparation – The final stage is all about testing the artifact, end user training, and managing the system and its activities.
- Go Live and Support – Pre-production to live production and support organization.

5. ERP BASED HR MODULE

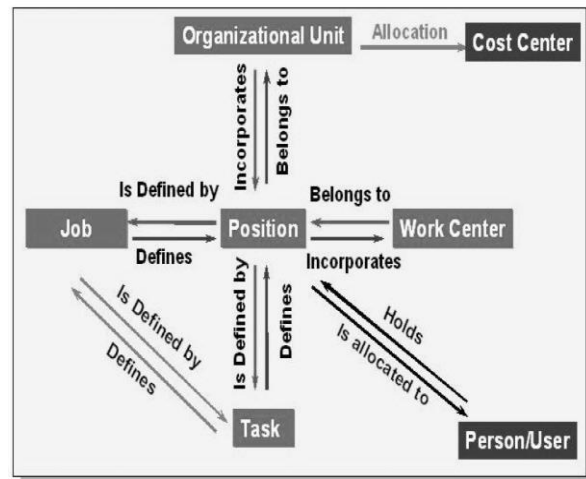
Human resources are utilized in a good manner and the work is done effectively to the maximum satisfaction of an individual personnel, ERP-based HR module will be implemented in an educational organizations. HR module which is described in this paper is the combinations of following sub- modules:

1. Organizational Management.
2. Personnel Administration.
3. Time Management.
4. Payroll Accounting.

5.1. Organizational Management

Organizational management includes structure of an organization, staffing schedules & task description. It determines about the statistical structure of organizational information. It also determines about the development of data and tracks it to be fit in an organization. Within organizational control, a structure is defined that illustrates departments, positions that are connected, jobs and attributes related to the organization held with the aid of personnel.

The figure below shows the data model & relationships among them. This data model contains various data objects that are useful for defining the structure in SAP HR organizational management sub module.



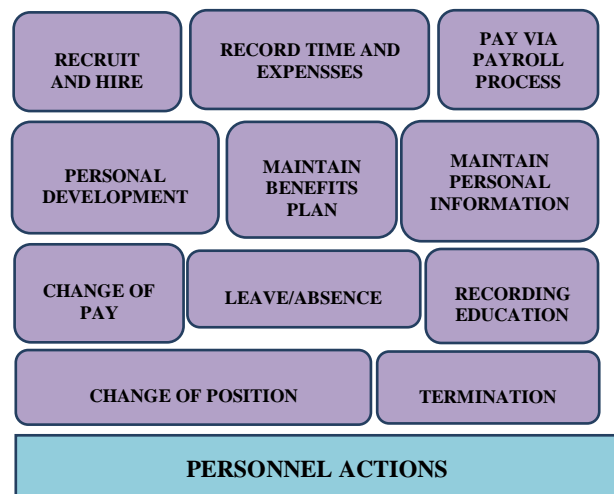
5.2. Personal administration

The personal management comprises of HR master data, employee’s administration, recruitment and salary administration. The employee’s management sub modules especially offer with the private statistics of worker. It keeps information and commands for brand new hires, rehires, status adjustments, transfers, salary increases, promotions, leaves, and terminations.

This totally responsible for storing the master data, system configuration, and transactions to complete the Hire to Retire process. It includes the following information and processes.

- Personnel Management
- Recruitment
- Organization Structure
- Compensation Management
- Personnel Development

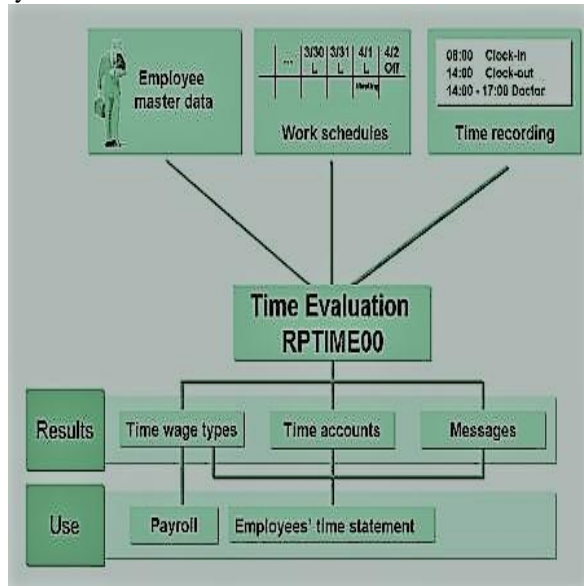
The figure below shows the typical hire to retire business process associated with the HR module.



5.3. Time management

Time management illustrates about the shift planning, recording time and leave management. The work time module gathers standardized time and work associated efforts. In this sub module we can hold academic calendar and additionally shift reports of an employee.

Figure below indicates the time control evaluation system for hr module.

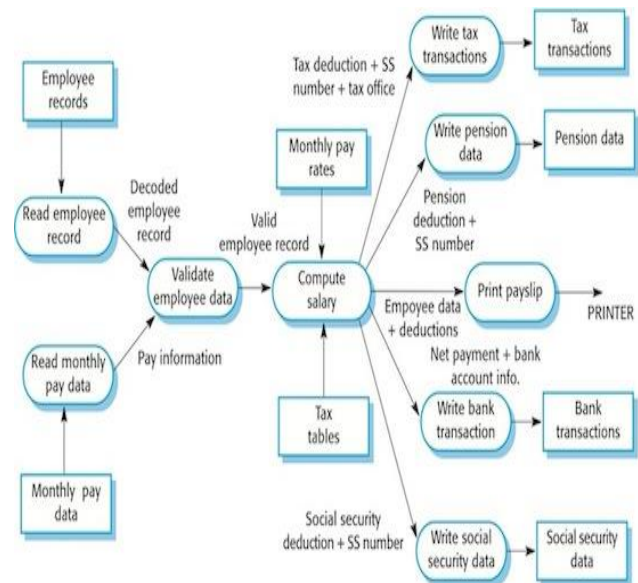


5.4. Payroll Accounting

Payroll system determines about the salary management, statutory reporting, and attendance control for payroll calculation. The payroll module automates the pay technique via collecting facts on worker time and attendance, calculating various deductions and taxes, and producing periodic pay cheques. This module can embody all worker-associated transactions in addition to integrate with the existing monetary management structures.

Consistent with the general integration of sap R/3, the HR module shares statistics with other modules. The payroll tactics use some rich features to print cheques, manipulate charge and bank records, and manages bills to tax government and other third-party vendors. Payroll results are also posted to preferred ledger money owed to be used in periodic income and cost reporting.

The figure below shows the flow chart of HR module for Payroll management.



6. CONCLUSION:

Nowadays several educational organizations adopts the traditional information technology systems. They were developed to accomplish some specific risks and provide reviews and evaluate the events which have already taken place. The ERP is the best solution for keeping the system simple and building the system architecture of any information system. In today's world it is necessity for any organization or institution to convert their organizational information into real time to achieve their goals successfully.

This provides a dominant solution for data manipulation handling in an educational organization. The employee effectively manages the data/information about the people in an organization and integrates it with other SAP modules and external systems. Hence the implementation of SAP HR module helps to provide unified process, builds operational efficiency, and minimizes the time complexity while transactions and reduces the pressure of personnel.

Acknowledgments

This section should come before the References. Funding information may also be included here.

REFERENCES:

1. Bedell, M. D., Floyd, B. D., Nicols, K. M., & Ellis, R. (2007). Enterprise resource planning software in the human resource classroom *Journal of Management Education*, 31(1), 43-63.
2. Helena Tadinen. Human Resources Management Aspects of Enterprise Resource Planning (ERP) Systems Projects, 2005.

3. J. CHENN Planning for ERP systems: analysis and future trend. *Business Process Management Journal*, Vol.7, No. 5 (2001), 374-386.
4. SAP Corporate Press Release – June 13, 2001 (2001), <http://www.sap.com>
5. W.-H. Tsai, W.-R.Lin, S.-J.Lin, J.-L.Hsu., “Investigation of ERP Implementation Problems in Organization Environment”.