

# ERP SYSTEM: A Configuration Plan of Three SAP Modules for A University

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***Abstract—The central theme of this paper is to present the benefits Enterprise Resource Planning (ERP) system for Higher Education Institution (HEI) standard process and unified information. The findings of this study promote and assist the institution automate the business processes and increasing operational efficiencies. This study aimed to configure three SAP-ERP Modules namely Financial Accounting (FA), Material Management (MM), and Human Resources (HR) common to HEI. Specifically, to find out the current set-up, major challenges, and requirements in the implementation of the said three modules. A roadmap for optimizing the implementation of SAP-ERP systems assuring a cost-effective and on-time delivery of all projects was used, Accelerated System Applications and Products (ASAP). For the implication, the Institution may implement the configuration plan because it's the best technology that penetrates commerce, industries, and educational institutions focusing on standardization and synchronization of information.***

***Indexed Terms—ERP, SAP, FI, MM, HR, Configuration Plan***

## I. INTRODUCTION

In the international economy, there is an aggressive competition to win clients and retain them. A commercial organization must offer better value in the areas of quality, service, technological expertise, and total cost to keep the customers satisfied and earn their trust and business. Businesses need to think of ways to properly handle such data and processes to ensure smooth operations and be able to compete in the global economy where change is inevitable. In response, numerous companies have applied new information systems (IS), known as enterprise resource planning (ERP) systems.

According to Ziemba (2013), organizations have constantly looked for ways to increase efficiency, reduce costs, improve product quality, and increase customer satisfaction and shareholder value, and they have to realize that the source of success in this area lies in the performance of their processes. It turned out that it was not enough to look at an organization in terms of its functional structure only, but also as a network of interrelated business processes.

A typical ERP system will use multiple mechanisms of computer software and hardware to achieve the integration. The key element of most ERP systems is the use of a unified database to store data for the various system segments. ERP today serves as a key to the success of a company or organization. This is the reason why many companies today are already utilizing it, and more are trying to implement their enterprise integration.

The higher education system (Ahmed, F. F., 2015) should respond to the real requirements of the education system. Enrichments or mere adaptations of legacy solutions, which stemmed from the experience in business practice, are not always successful. This showed that ERP serves the education system and exposed the need for future business operations.

In connection, this study aimed to configure SAP ECC 6.0 and sought to answer the following: What is the current setup in the FA, MM, and HR areas? What are the major issues and challenges related to FA, MM, and HR implementation? What are the configuration requirements that will be considered in FA, MM, and HR implementation?

For the objectives, this study will determine the current setup, configuration requirement, and

challenges related to the implementation in the said three areas.

## II. REVIEW OF RELATED LITERATURE

Implementing an ERP system is a journey that requires strong project management techniques and entails direct and indirect costs throughout the life cycle stages of the system. It needs to realize that implementation took over budget and schedule, project planning and management, including the definition of functional requirements, the project's scope, data conversion, and business process re-engineering. Also, organizations need to better follow success factors within the system and enhance inter-agency collaboration for ERP support to achieve more cost-efficient ERP implementation, maintenance, and growth (Callejas and Terzi, 2012).

On the impact of the ERP system on academic performance (Burtamani & Shatat, 2021), Enterprise Resource Planning (ERP) system is a very powerful solution for many academic and non-academic institutions case it has been implemented and used effectively. Otherwise, the system will interrupt several business processes.

ERP software integrates systems so that every business function relies on a single database. With one source of information that contains accurate, real-time data, an ERP solution breaks up information logjams, helps staff make better decisions more quickly, and frees up their time to work on more high-value exercises like helping the business grow even faster. This is why many companies from different sectors could attest to the benefits of having a unified system for managing millions of data and processes (Grabski et. al, 2011).

Gaur, M. (2020) concluded that SAP S/4HANA migration is a huge step in setting up an organization to become more agile and effective hence there should be buy-in from all stakeholders, data readiness should be done beforehand, and selecting a vendor who fits into the organizational style of working will go a long way in setting up the migration endeavor for success. Data integrity and data usefulness after the migration is the holy grail of successfully migrating to the SAP ERP system.

SAP-ERP system has become widely utilized as a means to change IT systems and business processes (Al-Mashari, M., & Zairi, M., 2000), leading practices have demonstrated that success is essentially conditional on managing adequately the complex context of implementation, which necessitates organizational changes across various key areas related to strategy, business processes, IT, structure, culture, and management systems.

According to Le Duc, M. (2015), Higher education could thus potentially benefit from adopting ERP systems in their curricula, notably in business and information systems classes. ERP software system implementation in educational institutions also fosters data accuracy, data security, reduced lead time, quick changes, and faster and reduced paperwork. ERP system automates several tasks like grade calculation, stock alerts of stationery, sports equipment, and alerts about late coming students. It concludes that like any other industry, schools can prove to be a boon for the educational industry in myriad ways. With ongoing advancements in can expect the ERPs to pave way for an even greater amount of automation in the future.

Based on the article of Polancos (2018), highly efficient ERP systems like SAP can integrate all the operations of an educational institution like Finance, Admission, Results, Examination, Certificates, and others because it also digitally stores all the data in a central database which can be accessed quickly eliminating extensive paperwork. With ERP, modern educational establishments easily manage these piles of data and allow storing such data in predefined formats which can be quickly accessed by cross-sharing between different departments. Apart from the above-mentioned functions, some critical areas where ERP software is extremely useful in accounting – Like any finance module in any industry, the finance module in educational institutions takes care of accounts receivables/payables and defaults list preparation using the centerfire management function.

## III. METHODOLOGY

ASAP project management methodology was utilized for the techniques are continuously strived to optimize the SAP system.

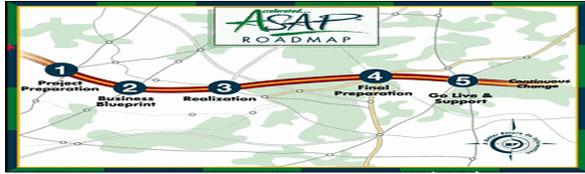


Figure 1. The Accelerated SAP Roadmap

ASAP roadmap is divided into five phases of implementation, each offering detailed plans to assist in the documentation, recommendations, and implementation of SAP systems.

**Phase 1: Project Preparation.** This phase is about the initial planning and preparation to set ASAP goals. Interviews, observation, and document analysis inside the offices of Human Resources, Accounting, and Supply and Procurement of the University were conducted.

**Phase 2: Business Blueprint.** The main activities involved in this phase are the definitions of the organization’s requirements on how the master data, business processes, and organizational structure are mapped in SAP. The As-IS and To-Be documents of the structure, processes, and master data of the institution were created.

**Phase 3: Realization.** In this phase, all the business and process requirements in the business blueprint are implemented.

**Phase 4: Final Preparation.** Under this phase, the project is enhanced and documented. For enrichment, weaknesses are noted and will be resolved.

**Phase 5: Go Live and Support.** This phase covers the maintenance and daily operation of the project. Functionalities are monitored in the actual environment.

• **SCOPE AND DELIMITATION**

This study focuses on the current setup of financial accounting, managing materials, and human resources in response to the needs and improves functional areas such as vendor and material master data, purchasing process, and sales management. Phase 3-5 of the ASAP methodology was not covered due to time constraints.

**DATA GATHERING TECHNIQUES**

To come up with a configuration plan, interview, observation, and document analysis were used.

The researcher interviewed the staff of the human resource, supply, procurement, and accounting offices of the University. Direct observation was conducted to see issues and problems in the business operations. Documents such as reports, purchase requests, purchase orders, and product prices are analyzed.

**IV. RESULTS AND DISCUSSION**

This chapter presents the results of the configuration of SAP Financial Accounting, Material Management, and Human Resources functional areas. It discussed the current setup, the issues and challenges, and the configuration requirements needed in the SAP implementation.

**Current Setup of Human Resources**

As of today, there is no centralized human resource application yet accessible by all branches catering to a holistic approach to the processes and data involving the human resource module.

**Organizational Structure.** The university is led by an Administrative Council under RA-10230 Section 12. The Administrative Council consists of the following: President of the University as Chairperson, Vice Presidents, Deans, directors, and other officials of equal rank as members, whose duty is to review and recommend to the Board the policies governing the administration, management, and development Planning of the University. Under RA-10230 Section 13, The Academic Council shall have the power to review and recommend the curricular offerings and rules of discipline of the university, subject to the approval of the Board. It shall fix the requirements for the admission of students as well as for their graduation and conferment of degrees, subject to review and approval by the Board through the President of the University. It shall have the disciplinary power over students of the University and shall formulate academic policies and rules and regulations on discipline, subject to the approval of the Board.

Processes. The HR module is a tool to manage the human capital of the organization. Various activities from the recruitment phase to the termination phase of the employee are segregated into different processes. The process is based on the Civil Service Commission Memorandum Circular Number 19, s.2005, Model Merit Systems for Faculty members of State Universities and Colleges and Local Colleges and Universities. The Merit system serves as a framework for the observance of the merit of principle in the recruitment, placement, promotion, and retention of faculty members.

HR Data. Daily Time Record was separately gathered through biometrics and payroll which is handled and processed using the Payroll System.

#### On Issues and Difficulties Encountered on the HR

The primary concern that exists in the Human Resource area is the inefficient generation of reports primarily attributed to the No centralized system. Distributed information normally yields other issues related to manipulating or locating information when needed.

#### Current Setup of Material Management

State University is strictly implementing the Republic Act 9184, where Procurement Planning or the Preparation of the Project Procurement Management Plan (PPMP) involves the Project Management Plan, which deals primarily with the below to obtain goods, infrastructure, and services from suppliers, contractors, and consultants. The PPMP serves as a guiding document in the procurement and contracts implementation process, as well as a vital reference in procurement monitoring. Moreover, it serves as an important tool in resource and financial management, allowing the Procuring Entity the flexibility to optimize the utilization of scarce resources. Well-planned procurement will significantly minimize the practice of doing short-cuts to ensure that the Procuring Entity can purchase its requirements for the delivery of public services.

#### On Issues and Difficulties Encountered on the MM

The primary concern that exists in the Material Management area is the inefficient generation of reports primarily attributed to No centralizing the inventory information for it was managed manually.

#### Current Setup of Financial Accounting

Financial Accounting includes the recording of its employees' compensation including gross wages, salaries, bonuses, commissions, and so on that have been earned by its employees.

Accounting involves all aspects of paying compensation and benefits to employees. The mandatory deductions to employees depend on what is applied, such as loans or cash advances. Employees should have all the basic requirements and these requirements are the needed documents before an employee will be added to the general payroll.

#### On Issues and Difficulties Encountered on the FA

The payslip is a report document whereas this will act as evidence for the deductions in the basic salary of an employee.

## V. CONCLUSION

State University enterprise is entitled to ERP suites to cater to the demands of their business functions. Through this, it will satisfy the requirements of departments and offices for them to serve their clients faster, easier and better.

## VI. RECOMMENDATION

Based on the findings, the benefits of the ERP system were realized. The adoption of ERP will optimize process integration, and information and enrich usage for the success of the university. This study recommends that SAP-ERP systems should be implemented to sustain their competitive advantage over the long term.

## ACKNOWLEDGMENT

I want to give glory and honor to the Almighty God for all the grace and favor poured out into this study. During this season, I am thankful to have my husband Froilan and my two kids Za-Zi.

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