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Policy brief on

ERP Software for

Higher Education Institutions in Africa

The Association of African Universities

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ERP for Higher Education

What is ERP?

Enterprise Resource Planning (ERP) is a term applied to integrated software systems used to manage the internal and external resources of an organization. These include the physical assets, financial resources, materials and human resources (or staff). An ERP system facilitates the flow of information between all business functions and departments inside the organization and links to outside stakeholders as well. The key objective of implementing an ERP system is to bring together the disparate functions of the institution – e.g. enrolment, examination, finance, human resources etc in case of a higher education institution - into a single system environment and therefore make the operations run more smoothly and efficiently.

Problems with present traditional systems and perceptions

ERP solutions have existed in various avatars for the last three decades and are considered mainstay in the enterprise context. We have seen these systems grow from tracking and automation systems to decision support systems across small and medium enterprises, and not just the large enterprise.

In the context of education, this segment has seen some sporadic attempts. Most institutes, who have tried to adopt automation, have limited their attempts to some islands of functionality, and not taken an integrated approach to automation. The real benefits of automation have not been reaped owing to the dependence on several monolithic pieces of software that do not communicate with each other. In many cases, technology was also seen and still perceived as an expense and not an investment, which has the power to give tangible and intangible returns.

How ERP can revolutionise campus management?

An effective ERP solution needs to be able to address all issues and aspects in an institute. The ability of an educational institution to implement world-class processes is generally hindered by the absence of a single system.

Moreover, the nature of challenges for higher education institutions has changed substantially over the years. Educational institutions today are facing the demands of a new environment with:

- Changing student demographics and expectations
- More acute resource constraints
- Greater demands for institutional accountability

In view of the current automation scenario and the new challenges of today, the need therefore in higher education is for an ERP solution that is purpose-built to fit the unique requirements of the education industry, and that take a holistic approach to automation and streamlining of the entire gamut of functions and processes in an institute. Such a solution can introduce greater transparency, higher productivity and better controls across an institute.

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Impact of an ERP on different functions of the institute

An ERP implementation, by virtue of its integrated approach, can lead to distinct gains in efficiency and productivity across the key areas of an institution viz: Admissions, Administration, Learning, Financial, Human Resource, Student and Faculty management, as explained below:

Admissions & Enrolment

Admission is always a cumbersome process with a large amount of data required to be stored and managed. ERP can drastically simplify the admission process by

- Creating an environment that facilitates the propagation of information around the admission process, the courses available, selection criteria, fees, capture of information about applicants and supporting documents

- Managing procedures based on university/standards affiliations and common tests

- Enabling campaign management

- Automating the admission process and processes around the applicant database

- Facilitating the closure of the admission process for applicants, including the fees and registration processes

Administration

ERP can help an institute coordinate all tasks around student lifecycle management in a single place. It includes management of activities such as:

- Maintaining student information- attendance, marks, records, courses and overall performance

- Scheduling of classes, tests, examinations and events

- Library management for the institute can be automated

- Updating of the student database during promotion or course progression

- Report card and transcript generation for the students

- Management of student services around transport, canteen and hostel

- Management of the recruitment process

- Managing communities of practice, including for alumni and employers

Learning and Course Management

- Knowledge management for the institute including repositories of course material, notes and collaboratively generated content

- Connecting the various stakeholders such as teachers, students and parents to enable a more engaged learning process

Financial Management

- ERP makes financial management faster and easier, providing accurate information available at any given time

- Fee management of student- automated record of fees and other charges

- Payroll management of employee and staff

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- Purchase, Asset and Inventory management for the institute
- Analysis and generation of financial statement of the institute purchase and inventory, as well as statutory financial reporting
- Budget preparation and financial planning

HR & Payroll Management

ERP helps put an HR system into place, which enables:

- Managing the complete database of employees with detailed info
- Maintaining attendance records of staff
- Efficient payroll management for staff members
- Performance management and feedback

Benefits of an ERP

Institutes can gain substantially from ERP for their campuses, from quick decision-making, to better time and resource management. The entire functioning of the institute can be simplified and integrated, thereby improving the overall performance. It can ease processes and benefit various stakeholders:

Students: Student life can become easier with information available at all times – attendance, timetables, reports cards, event schedules, project assessments, internal assessments, and course materials. Thus, institution-student and faculty-student communication is improved with information being shared real-time resulting in students becoming more participative.

Faculty: Faculty can access information about courses and students at all times. They can plan out classes and assignments for their students

effectively. Evaluation also becomes easier and transparent. Faculty members can therefore dedicate more time towards core activities instead of unproductive tasks. Services such as leave management, payroll can also be automated.

Management: The most significant benefit that management can achieve is the reduction of burden on manpower. Cumbersome processes are simplified drastically. All data is accessible to all by the click of a button. With financial activities being automated, the management can obtain results, reports and analysis at any given point speeding up the decision making process. ERP can provide an excellent decision support system to the decision makers.

Parents/Guardians: Parents and guardians are often the most neglected stakeholders when it comes to accessing information about their wards. Parents can be empowered by providing a real-time dashboard of information on their wards, which they can access non-intrusively. This provides transparent flow of information between the institute and the parents, and help the parents become a more integral part of the whole learning process.

Considerations for implementing an ERP at your HEI

The most important considerations to be made by an educational institute while selecting and procuring an ERP solution are:

1. How comprehensive is it?
A solution that has cohesive and seamless flow and management of data across functions makes more sense to adopt. Also what is important is how the solution is able to translate all the data into information that facilitates decision-making, process optimization and regulatory and statutory compliance.

Is it relevant?

Selecting a solution designed to be generic can be futile. Also, a situation where custom-built campus management software is assembled to address these requirements, and may give the illusion of being the best fit for an institute in the short term, and at low cost. However, the solution starts falling short of expectations. It is also important to identify a solution with the right depth and coverage of features for the specific pain areas, and a partner company which has the right approach to implementation to ensure success of the project.

2. What's in it for the stakeholders?

A large part of the success is determined by the ready adoption of the solution by the stakeholders. The need is for a solution that effectively and painlessly empowers applicants, students, administrative staff, faculty, management, parents and alumni.

3. What about the cost implication?

A campus ERP solution does not have to be a cost burden. Technology such as cloud computing makes it possible for an institute to use campus ERP solution without managing IT infrastructure. However, since the cloud model assumes reliable and cost-effective availability of internet bandwidth, which is still an issue in parts of the continent, having the option of deploying the solution on-premise is invaluable. Both approaches have their respective advantages, and institutes have the freedom of choice to decide what works best for them.

4. Are you ready?

Take a long, hard look at your institution. It is important to analyze whether you have the money, manpower and long-term commitment to succeed on an ERP solution. ERP is a commitment over a considerable period of time. It means investment and a strain on your manpower. Even with outside consultants, ERP requires long-term, substantial, attention from your managerial and executive teams, in addition to a firm commitment from the very top.

Conclusion

Optimization and resource utilization is the key aspect of any 21st century educational institution, which has the drive to achieve the best outcomes from the existing infrastructure. An ERP can go a long way in assisting HEIs to integrate different administrative functions into a more systematic and cost effective approach, and thereby gain a strategic advantage by ensuring: (1) improved information access for planning and managing the institution, (2) improved services for the faculty, students, employees and other stakeholders, (3) lower business risks, and (4) increased income and decreased expenses due to improved efficiency.

A 21st century institution can certainly not ignore the power of automation, if it aspires to be world-class, and an ERP can pave the way for the same. Implementing an ERP is not a simple exercise as it requires concerted effort, investment and bandwidth on the part of the management and team; however the benefits accrued far outweigh the costs.

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