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ERP SYSTEM APPLICATION IN THE EDUCATION ENVIRONMENTAL

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Abstract

The business environment is constantly changing and organizations need to adapt quickly to new market demands, so they need to procure high quality systems. ERP systems have a complex structure that contains many modules that can be adapted to any organization. Interest in these ERP systems has also begun to grow in the higher education environment, due to the demands of the business environment. The purpose of this discipline is to present the business process so that students have the necessary knowledge when they will engage in the business environment. The aim of the paper is to observe the skills that students will have after completing the discipline that refers to ERP systems. The authors resorted to the analysis of the articles dealing with this subject, identifying the main advantages and disadvantages of implementing a discipline in which to use an application such as ERP systems. ERP systems are most often used in the business environment for document processing, but also for more efficient management of the flow of information within the organisation. The reason why organisation use these systems is that these systems contain modules specific to each department within a company, allowing the proper centralization of information. In conclusion, the authors found that ERP systems would have many benefits over the development of students' business skills.

Keywords: Business environmental, ERP systems, higher education, knowledge

1. Introduction

The massive changes in the economic environment have determined the search for the most efficient systems in order to manage the activities as efficiently as possible. ERP systems offer the possibility for an organization to integrate all business processes, streamlining daily activities as much as possible. Thus, future students should have a solid knowledge of computer science to use these computer systems.

According to Karia and Soliman (2017), ERP systems are "the most appropriate integrated software applications useful for the functioning of the financial and human resources departments" (p. 144). Monk and Lycett (2014), Soliman and Karia (2016), Watson and Schneider (1999) believe that ERP systems are an excellent way to present the flow of information in an organization or to explain business processes.

Universities should provide educational programs that are adapted to market requirements, so that the profile of job candidates in the economic field corresponds to the skills required in the job description (Abele et al., 2015).

2. Problem Statement

The study in this article presents the advantages of implementing an ERP systems discipline in courses organized by the university for students and what would be the reason for the introduction of such a discipline.

The main reason for implementing an ERP systems discipline within the university program is determined by the market requirements of the employers. Companies considers that "top managers established a clear vision of the role of the ERP project in their business model" (Tchokogué et al., 2005, p. 151). Moon et al. (2007) consider that "ERP solution can be used to develop professional skills for engineering students and improve academic curricula" (p. 762).

Educational institutions must educate students to concepts, strategies, and tools that promote security of ERP systems so that after studying the certain course students understand technical, technological, management, and human security problems, identify and respond to information security challenges in ERP systems, evaluate and implement security solutions and tools to protect ERP systems against risks, and finally design information security policies, and evaluate and apply organizational security objectives (Tsiakis & Kargidis, 2013).

3. Purpose of the Study

The aim of this paper is to identify the benefits of ERP systems in an organization and to observe how the business process is understood by students. Studying these ERP systems will add value to the skills they will develop during the courses and seminars.

4. Research Questions

The authors also created some research questions, trying to add value to the literature.

    i.   Which are the main advantages of ERP systems?

    ii.   Which are the main competencies developed by the implementation in the university curriculum of a discipline regarding ERP systems?

    iii.   Which are the most studied modules of an ERP system in the university environment?

5. Research Methods

The research method used was based on the analysis of the articles dealing with the subject of the paper, taking into account in particular the skills or competencies developed as a result of students' participation in ERP systems courses.

The articles were selected from databases such as: Web of Science, Emerald, Google Scholar and others, selecting only the information relevant to the subject of the paper, answering based on the literature to the research questions.

6. Findings

Following the analysis of the literature, the main corresponding answers were identified for the research questions that the authors formulated.

In question 1, "What are the main advantages of ERP systems?", the main advantages of an ERP system are presented in table 1.

Table 1. Advantages of an ERP system

Advantage	Description
Flexible and mobile	easily adapts to customer requirements and can operate locally (intranet) or online (cloud)
Improves cash flow	allows adequate monitoring of cash flow and specific payback periods
Improves the customer experience	allows easier centralization and processing of information, allowing easier construction and processing of information allowing the construction and maintenance of beneficial relationships with customers and suppliers.
Increased data protection	data access is controlled based on a username and password, so you can see who, when and how has access to the data stored in the application database.
Increased productivity	redundant activities are reduced

Source: Noaman and Ahmed (2015)

Given the many benefits of ERP systems, more and more companies are deciding to implement ERP systems. Thus, the requirements regarding the competencies that a student or graduate should have are directed towards the knowledge of an ERP system.

If we get to question 2, "Which are the main competencies developed by the implementation in the university curriculum of a discipline regarding ERP systems?", we notice that ERP systems require a number of competencies that future college graduates should have. The disciplines studied by university students should develop the logic and creativity of future graduates, but also the ability to analyze data, because the data processed are integrated into a single database and must understand the flow of information within the organization.

The main skills are: understanding the business process and accounting, knowledge of configuring ERP systems, communication skills and empathy and general knowledge of IT (Kepler, 2022).

The reason why graduates should have knowledge about the business process and accounting is to perform an in-depth analysis of data stored and processed with ERP systems, but also to know the documents that formed the basis of the data entered in these ERP systems.

According to the Hipo.ro recruitment platform (2022), the main competencies that a graduate who will use ERP systems in the workplace will have are presented in figure 1:
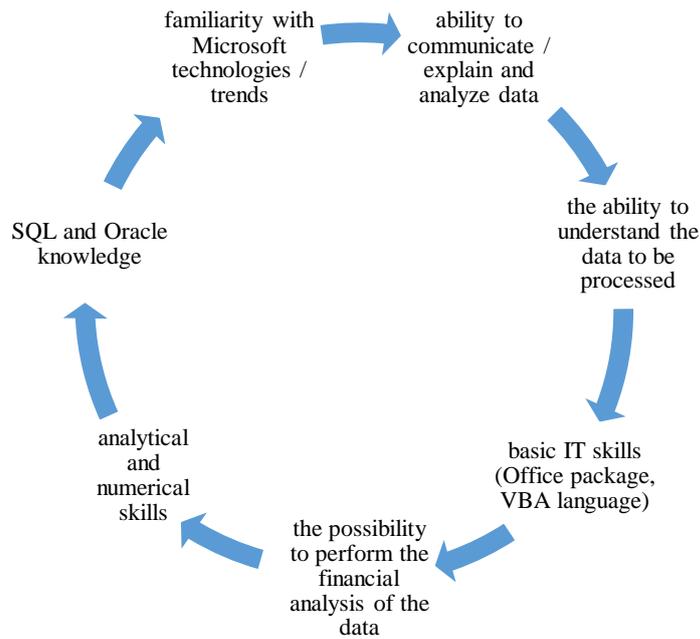
Figure 1. The main skills should have fresh graduates

Thus, university graduates should have a solid knowledge in the use of these systems, and this is possible only if they study disciplines in which ERP systems are presented.

At the university, the main modules approached are presented in table 2:

Table 2. The main modules of ERP systems studied in universities

Modules	Sub-modules
Sales and distribution (Production planning)	Product definition
	Bill of Materials
	Routing
	Order
	Consumption of raw materials and reception of finished products
	Calculation and recording of production cost
	Sale of finished products
Financial	Chart of Accounts
	Management of customer and supplier accounts
	Adding / modifying / viewing accounting notes
	Balance sheet
	Income statement

Source: Bucharest University of Economic Studies (2022)

7. Conclusions

As a result of mass digitization, more and more organizations are implementing ERP systems, because these systems provide adequate information security, but also the correct presentation of the flow of information within the department of an organization.

ERP systems provide an opportunity for organizations to increase the benefits they bring to the organization (Nandavadekar, 2010). However, university degree programs offering ERP systems courses should also include a series of courses on strategy / policy, data flow and business process structure.

As a result of the study conducted by the authors based on the literature, it was found that the implementation of a discipline related to ERP systems is beneficial for the development of skills of future graduates, given that more and more organizations use ERP systems because they provide clarity and adequate information security.

Acknowledgments

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