

# AN OVERVIEW OF THE BUSINESS PROCESS RE-ENGINEERING IN HIGHER EDUCATION

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## ABSTRACT

*The re-engineering of business processes is critical for institutions across sectors worldwide to achieve performance improvement and competitive advantage. Competition within higher education forces higher education institutions, towards management, approaches such as business process re-engineering to improve effectiveness and efficiency. It is imperative that higher education institutions should priorities the strategic alignment and re-engineering of business processes that provide stakeholder satisfaction to create competitive advantage and survival.*

*Considering higher education institutions operate as an open system, the proposed framework is based on the systems approach to management. Given the dynamic nature of the higher education sector, the proposed framework promotes a business process re-engineering methodology. The aim of this paper is to pinpoint the latest researches, focusing the factors that form the points of BPR implementation in the practical ground of higher education.*

**Keywords:** Business process, re-engineering, BPR, higher education

## INTRODUCTION

During the last decades, the efficiency of administrative processes has become a major concern for many organizations. The organizations seek to improve processes by using different tools and methods (Chan and Spedding, 2003). academics and managers, they are focus and attention the re-engineering because re-engineering was not the new concept, by the development of technology and use of new managerial techniques, this contributes a great changes as big picture, one part was constitutional and the other was to develop the work at different managerial levels.

Reengineering became a suitable solution to success and development of organizations in general and specifically in educational one. In this issue educational process has two phases react with each other to complete it. One of them technical, concerned with students the other concerned with the teacher. When this relation is good, the educational process healthy as a system and we do not need to change. But if something has malfunction we need re-engineering and developing technical and educational phase in the behavior of students and teachers.

Process reengineering will undoubtedly eliminate stereotypes in operations and thus help to change old structures and reach innovative ways and thus help to bring significant benefits to the Organization. According to (Farmer, 1993) re-engineering operations help customer satisfaction, increased flexibility, improved competitiveness and increased productivity. This will bring new prospects for success through a significant change in operations (Abazid, 2017), (Nouban and Abazid, 2017).

The re-engineering can be used to solve past management failures, there are many factors like competition, change, financial risks, Customers, economic trends, operational challenges, global business trends. (Hammer and Champy, 1993), (Andrew and Stalick, 1994), (Caron et al., 1994), (Berman, 1994).

However, to compete efficiently it necessitates that all tertiary education be relevant to the economy and industry requirements. These institutes have to review processes to work effectively and efficiently by reducing costs and identifying core competencies. With a high level of competition, and competencies being imitated by other organizations, institutes can no longer rely on what they consider their strengths. The need to reorganize becomes evident. (Balaji, 2004).

### **What is Business Process Reengineering?**

“Business process re-engineering”- a term originally coined by (Hammer and Champy, 1993), refers to achieving a radical breakthrough in performance by breaking away from ineffective business practices and redesigning processes. (Porter, 1985) proposes that every organization's competitive advantage lies in its value chain. An analysis of the value chain shows the primary and support activities and the functional areas of strengths and weaknesses.

An administrative approach that seeks to radically redesign the service with the aim of making fundamental changes in the core processes, in order to reduce cost and time, improve quality, speed in delivery and storage capacity "(Shibli and Eagles, 2009), while (Ajami, 2008) defined BPR is process aimed at fundamentally redesigning administrative processes and this operation is appropriate in situations where the environment is rapidly changing and responsive.

Is a modern administrative approach that aims to radically and rapidly change organizations by redesigning strategic processes, policies, organizational structures, values and supporting assumptions in a non-traditional way (Amer and Kandil, 2010).

After re-engineering, companies were able to respond to customer demands while improving the quality of the output, achieve lower costs, productivity, and improved performance. (Balaji, 2004), (Hammer and Champy's, 1993).

A further definition of the concept of BPR as "the rethinking and radical design of the major processes of organizations to achieve results of tremendous improvement in modern performance measures: service, quality, cost and speed of work (Hammer and Schambee, 1995) .This definition includes four basic features of BPR: Fundamental Rethinking, Radical Redesign, Dramatic Results, processes. their interpretation as follows:

**Fundamental Rethinking:** It means that the time has come for each organization and each individual to look at the way they work and review what they are doing and ask themselves: Why do they do it? Is this work valuable? Can it be done better? All these questions are posed by the principle of BPR in a scientific way that helps organizations to reach answers to these important questions.

**Radical Redesign:** BPR it includes radical solutions to the current problems of labor, which is characterized by a method of BPR from other administrative concepts that were mostly seeking urgent solutions and improvements to the problems of work and obstacles.

**Dramatic Results:** BPR is not about formative and relative improvements, but achieved huge and high-performance. Organizations that have successfully implemented the concept of BPR

have achieved tremendous results in increasing productivity, reducing time to work and providing better services.

**Processes:** The principle of BPR is characterized by focusing on the work systems or known as the main processes and not departments.

### **Business process re-engineering in the education sector**

If universities aspire to be more competitive, it needs to apply the re-engineering principles to redesign their own processes. It is time for higher education organizations to learn from their business counterparts. This is the only approach higher education can take to be more effective as well as efficient. Higher education institutions need to be equipped to respond to this challenge as effectively and efficiently as possible. In order to accomplish this task, higher education institutions need to become “learning organizations”.

The highlight the importance of undertaking BPR initiatives in the education sector to reduce costs, improve services and achieve efficiency, flexibility (Davis and Mehta, 1997). interprets reengineering as "discarding the current way of doing business, and reinventing a new and better way to produce products and services.”.

Many tools can use to improve engineering in higher education such as change management, total quality management, restructuring, design, and systems development, and to achieve gains in service and costs (Jacka and Keller, 2002). The educational institutes, in pursuit of improved performance and quality, can use any or all of the above-mentioned tools to overcome inefficiencies (Fisher, 2001), (Davis and Metha, 1997), (Adenso-Díaz and Canteli, 2001). Recognizing the importance of quality and efficiency in all aspects of the educational institutes, ‘Malcolm Baldrige awards’, given for improvements in quality, has been extended to the educational institutes also from the year 1999.

(Liang et al. 1998) describe how information services at a university were integrated using reengineering. Reviews the use of information technologies (IT) for reengineering the education for construction engineering. He explains how IT based communication techniques facilitate the efficient sharing and exchange of information. (Allen and Fifield, 1999) studied the impact of organizational culture on the successful implementation of reengineering projects at United Kingdom (UK) Higher Education Institutions (HEI) without outlining the details involved in such projects.

Clearly calls for the use of re-engineering in higher education and can therefore be referred to as fundamental rethinking and re-engineering of processes to achieve a competitive advantage, and thus how clients, competition and change force higher education institutions to consider "fundamental rethinking and redesign" New types of leadership and management "(Davies, 1996).

### **BPR Dimensions**

BPR is a new paradigm is influenced by and influenced by some dimensions, like:

#### **1. organizational dimension - design organizational structure**

The organizational structure is a framework that illustrates the various departments and divisions of the Organization, explain the lines of power and flows between functions, as well as the various administrative units that work together. The organizational structure refers to the organization of different parts of the organization in a holistic setting that illustrates the structural elements and the relationship between these elements used in the management of the organization as a whole. It is the system of tasks, power relations and channels of

communication that are linked to the formal organizational structure, unlike the informal organizational structure. (Al-Otaibi, 2002).

### **Reasons for Restructuring organizational structure:**

1. A change in the objectives of the firm, as organization is the means by which it is achieved Objectives.
2. A change in the size of the organization.
3. Facing changes that facing the establishment, such as changes in its legal form or technology.
4. Lack of senior management functions.
5. Shortages or lack of operations within the firm, such as slow in decision making.
6. The new administration's desire to introduce new organizational ideas.

### **The Technological Dimension**

The spread of information technology has been the basis for the construction, design and use of MIS, which we can define as "a set of trained human elements and the mechanical elements needed to collect and operate data for conversion into decision-making information, this system consists of inputs, transformations and outputs. Information technology is one of the achievements of the technological scientific revolution that has a direct and significant impact on the formation of work within organizations. The use and application of information technology has many advantages for individuals, departments and systems. Among these benefits are Raising the level of performance, creating value for the organization, Competition among organizations, effective decision-making and re-engineering of operations (Morocco, 2006).

### **The human dimension**

Customers, employees are the most useful goal in order to mature process reengineering, so we must focus on human resources management is the method used by international organizations and institutions to select, develop and strengthen employees to achieve the full proportion of the workforce to serve the objectives of the company. If we can manage people and satisfaction well, then this will help to achieve the impossible.

### **Stages of BPR**

There are a lot of practical approaches used in the BPR, and all those approaches do not differ in the basics while the difference is in some sub-things. (Raslan, 2010). There are those who consider it six stages, while others are five phases of the BPR.

#### **1) Preparation**

It is the stage of mobilization and preparation and aims at mobilizing, organizing and revitalizing the workers who will be burdened with BPR, and include the outputs of preparation for the administrative Commissioning, organization, formation of the team and the Constitution, and this through: sense of the problem, management approval, team training.

#### **2) Selection**

At this stage, we identification customers, processes, performance level, value-added activities, the organizational chart of operations and available resources, are identified and the selection of processes to be subject to BPR.

### **3) Vision**

This stage aims at creating a vision that achieves the extraordinary achievement, a stage between the abstract idea and practical design, by understanding the structure of processes and understanding the flow of processes and determining performance measures and performance drivers.

### **4) Solution**

It includes two groups: the first group: Technical Design Processes and the second group: Organization of the Human Resource Environment of the Enterprise.

- A. The first group: It aims to design a solution that is capable of achieving the vision. This is accomplished through (relationship model, information management, consolidation of information points, and identification of alternatives, design control, redeployment, and technical application.
- B. The second group is the social design, in which the human and psychological dimensions of the BPR project are determined by describing and organizing jobs, identifying incentives and a new training system.

### **5) Transformation**

This stage includes the realization of vision and the implementation of technical and social design, including the preparation of business models, data models and the start of operation of the information system with its software or the design of new programs through (system testing, assessment of personal performance, system installation and startup, Correction and transformation.

### **Why must the higher education move to Re- engineering?**

In this section, we present the necessary changes to the higher education to re-engineering, that need to take place at universities (Al-Lozi, 2002), (Hammer and Champy's, 1993), (Al-Lozi, 1999), (Penrod and Dolence, 1991) and (Salimifard, et., 2010).

- **Several Jobs Combined into One**

Eliminate specialist's jobs, such as admissions, advising, registration, financial assistance, etc., and design the process such that "one individual or a group of individuals has a responsibility, or knowledge of, the entire process." Universities need to employ the case manager model, where an individual is responsible for the whole process of delivering the service to the customer. If there is a need for a new major, a new team will be formed to execute these functions.

- **Teams Make Decisions**

At a typical university, faculty committees serve as advisors to the administrators, who, in turn, make final decisions. In a reengineered university, even the final decisions will be made by these committees. Then, the managers (administrators) would concentrate on how to improve the process instead of how to supervise workers.

- **Processes Have Multiple Versions**

The re-engineered higher education system will have several versions depending on the market needs. Hence, it will be easier and quicker to create a new version as the need arises. The processes designed to handle uniform input can no longer handle the complexities caused by the changes in the characteristics of the input as well as the changes in the requirements of the marketplace.

- **A Case Manager Provides a Single Point of Contact**

Students will have a single point of contact to get answers to any concerns and problems they have. A re-engineered higher education institution will better serve its student population by providing the single point of contact. Undoubtedly, the information systems and technologies will play a major role in the success of such a transformation.

- **Centralized/Decentralized Operations are Prevalent**

As companies re-engineer their processes, they combine the advantages of centralization and decentralization. As specialists are no longer needed, expert systems should be used to make some of the decisions. Shared databases should be used to provide any kind of information needed to serve the customer. In doing so, the institution will increase its effectiveness with decentralized operations (case managers) and take advantage the economies of scale of centralized information.

- **Administrative Units Change from Functional Departments to Process Teams**

At a reengineered university, offices of admissions, registrar, offices of financial aid, offices of advising, will all disappear. Information specialists and technologist will support these functions so that case managers can perform these tasks.

- **Jobs Change from Simple Tasks to Multi-Dimensional Work**

Individuals or groups of individuals who used to perform a single task, such as admit a student, receive payments, teach classes, and key in grades will now form teams who are responsible for the whole process. Generalists will replace old jobs consisting of specialists.

- **People's Role Change from Controlled to Empowered**

In academia, although professors are more empowered than their business counterparts, administration traditionally controls resource allocation. In addition to the ability and the authority to make process decisions, case managers at a reengineered university will also be empowered to make decisions on allocating resources.

- **Organizational Structures Change from Hierarchical to Flat**

When checks and controls are reduced and the case managers are empowered to make their own decisions, the traditional hierarchical organizational structures are no longer needed. In a reengineered institution, there would be no associate deans, department chairs, associate directors, coordinators, etc. There would be multiple versions of processes owned and operated by a team led by a case manager.

## **CONCLUSION**

As higher education institutions are leaders in the use and innovation of these technologies, it makes perfect sense that they also embark on reengineering their organizations. In addition to IT, the impact of the top management to the success of reengineering is insurmountable.

We believe that reengineering is the only thing that stands between higher education institutions and disaster in this fast-changing world. It is time for higher education institutions to reinvent themselves.

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