



BUSINESS PROCESS AND QUALITY MANAGEMENT IN HIGHER EDUCATION INSTITUTIONS

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Abstract

ASEAN countries will be integrate in The ASEAN Economic Community (AEC) by 2015. One of the AEC key characteristics is a single market and production base. This condition will be happening in higher education services sector. Higher Education Institutions (HEI) in ASEAN countries come at highly competition era. In order to success dealing with ASEAN integration, HEI must focus on quality, efficiency, effectively and productivity as a competitive advantage to survive in the market. For to be or remain competitive, HEI should manage their business process similar to Enterprises and SMEs. The advanced management concepts for manage business process is Business Process Management (BPM) that was evolved from Quality Management approach. BPM is a set of structured methods and technologies for managing business process. The purpose of this research was to develop business process management framework in HEI. The methodology that was used in this paper consists of literature review, descriptive methods and case studies. The significant contribution of this paper is a development of business process and quality management framework in HEI. The framework based on Deming cycle : Plan, Do, Check and Action, and Business Process Management Common Body of Knowledge (BPMCBOK). We proposed using IWA 2 Guidelines for self assessment purpose. We also suggested the opportunity for further research and additional works for shaping this framework.

Introduction

Business Process Management (BPM) is accepted globally as an organizational approach to enhance productivity and drive cost efficiencies [1]. Business Process Management is relatively new management approach. This concept derived from Frederick Taylor in 1911 [2] who was knowned as the father of scientific management as well as industrial engineering. The scientific management idea evolve in 1980s and emerge as Total Quality Management (TQM) concept. In 1990s, began with Rummler-Brache methodology together with James Harrington's Business Process Improvement [3], appear Business Process Redesign or Business Process Innovation as a prominent management approach. This approach also knowned as Business Process Reengineering (BPR), popularized by Hammer book with title "Reengineering the Corporation: A Manifesto for Business Revolution" [4]. Davenport and Short in 1990 [5] also predicted the new industrial engineering will be the combination of information technology and business process redesign. Now, the new industrial engineering also known as Business Process Management. Unfortunately, not many industrial engineering academicians and practitioners realized this transformation.

BPM is a new kind of management theory that appeared and developed quickly in recently years. It was established in the foundation of modern information technology, and focused the manager's attention on the enterprise's business process, instead of traditionally focuses on function [6]. There are some research concerning implemented BPM in various industries and services, such as in healthcare [7], bank [8], and manufacturing [9] and some others services sector. To the best of our knowledge, there is no research that has developed a framework, model or BPM implementation in educational institutions. The originality and value of this paper is



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providing an initial integration Business Process Management and Quality Management frameworks in Higher Education Institutions for to be developed and used by scholars and practitioners.

Business process management and quality management in HEI

There are many definitions of business process or business process management in the literature, which more or less are similar. Davenport [10] said that business process as a specific ordering of work activities across time and place, with a beginning, and end, and clearly identified inputs and outputs. They have internal or external customers and they cross organizational boundaries and they jointly realize a business goal. Weske [11] formulated business process management includes concepts, methods, and techniques to support the design, administration, configuration, enactment, and analysis of business process. Association of Business Process Management Professionals (ABPMP) [12] defined BPM more comprehensively as a disciplined approach to identify, design, execute, document, measure, monitor, and control both automated and non-automated business process to achieve consistent, targeted results aligned with an organization's strategic goals. BPM involves the deliberate, collaborative and increasingly technology-aided definition, improvement, innovation, and management of end-to-end business process that drive business results, create value, and enable an organization to meet its business objectives with more agility. BPM enables an enterprise to align its business process to its business strategy, leading to effective overall company performance through improvements of specific work activities either within a specific department, across the enterprise, or between organizations. From that definitions we can draw a conclusion that BPM approach will be able to be used to manage and improve educational process in HEIs.

Higher education institutions (HEIs) are concerned about insuring the quality of their services and satisfying their costumers requirements. These concerns have led HEIs to implement a quality management/assurance system with compliance to the ISO 9001 standard [13]. These standard is the popular among manufacturing and services sector including educational organizations. The ISO 9001 standard gives a set of generic requirements for implementing a quality management system (QMS) independently on the organization's activities. However, the education sector has its specificity that makes it different from manufacturing and other services sector processes. Consequently, the ISO 9001 requirements need to be interpreted in the educational institutions. The International Organization for Standardization (ISO) is concern of this problem. It has published the IWA 2 (2007) : Quality Management System-Guidelines for the Application of ISO 9001:2008 in Education and the ISO 9001:2008 Handbook for Educational Organizations-What to Do: Advice from IWA 2 Working Group. The focus of this paper in on the IWA 2 guidelines which can be used as self assessment tools in monitoring phase.

The underpinning of business process and quality management framework in HEI

PDCA (Plan-do-check-act) also known as Deming cycle (figure 1) is a iterative quality management methodology used in organizations for the continuous improvement of processes and products. A fundamental principle of the scientific method PDCA is iteration, once a hypothesis is confirmed or rejected, executing the cycle again will extend the knowledge further. Repeating the PDCA cycle can bring us closer to the business objectives.



FIGURE 1: Deming Cycle

ABPMP proposed the BPM lifecycle begins with developing a process driven strategy and plan for the organization. The plan starts with an understanding of organizational strategies and goals designed to ensure a compelling value proposition for customers. The second phase is process analysis. The analysis of business process incorporates several methodologies with the goal of understanding the current organizational processes in the context of the desired goals and objectives. Analysis assimilates information from strategic plans, process models, performance measurements, changes in the environment, and other factors in order to fully understand the business process in the context of the overall organization. The third phase is process design. Process Design activities focus on the intentional, thoughtful design of how end-to-end work occurs in order to deliver value to customers. The sequence of activities, including the design of what work is performed, at what time, in what location, by what process actors using what methodology is documented. Design defines what the organization wants the process to be and answers the what, when, where, who and how questions of how end-to-end work is executed. An important component of design is also ensuring that the proper management controls and metrics are in place for compliance and performance measurement. In an iterative BPM lifecycle, initial design activities may look at standardizing or automating current ad hoc activities, while more mature design activities may look at redesign of radically reminding a process, or incremental improvements designed for optimization.

The fourth phase is the implementation what have been planned. The fifth phase is measuring and monitoring process. Continuous measuring and monitoring of business processes provides the information necessary for process managers to adjust resources in order to meet process objectives. In the context of the BPM lifecycle, measuring and monitoring also provides critical process performance information through key measurements related to goals and value to the organization. The analysis of process performance information may result in improvement, redesign or reengineering activities. The sixth phase is process transformation. Process transformation implements the output of the iterative analysis and design cycle. It addresses organizational change management challenges and is aimed at continuous improvement and process optimization. In this context, “optimized processes” are those that consistently achieve predefined goals in terms of both efficiency and effectiveness. They are managed in such a way that they are able to respond to environmental changes for consistent results. The BPM lifecycle can be seen in figure 2

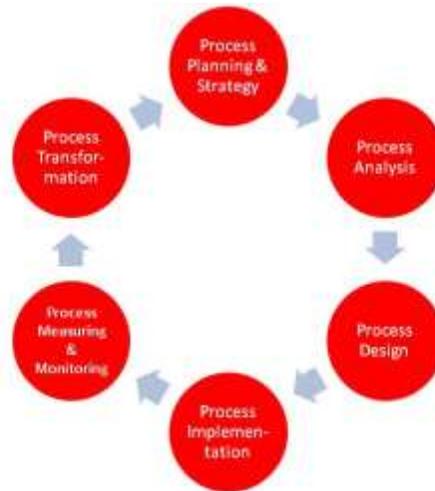


FIGURE 2: BPM Lifecycle

The analysis of business process and quality management framework in HEI

We proposed the integration of Deming cycle and BPM lifecycle in the context of in HEIs. In Indonesian HEIs as well as in our case study in Unika Atma Jaya Jakarta, which adopted Quality Management System, there are six steps of higher education management lifecycle : plan, do, monitoring, analysis, CAPA (corrective action and preventive action), standardization, which quite similar to Deming cycle. The first step in BPM lifecycle, process planning and strategy, is in the plan phase of HEI BPM Lifecycle. Business as usual in HEI at this step usually produce two kinds of deliverables : strategic planning and operational plan. Strategic planning mostly is designed for 5 years, and be created every 5 years. Meanwhile, operational plan is design for short term, every 1 year. We proposed in the plan phase of HEI BPM Lifecycle, HEIs also should design business process model. A process model may contain one or more diagrams, information about the objects on the diagram, information about the relationships between the objects, information about the relationships between object and their environment, and information about how the objects represented behave of perform. The objective of process modeling is to create a representation of the process that describes it accurately and sufficiently for the task at hand. Some of the common reasons for creating process models are as follows:

- To document an existing process clearly
- To use as a training aide
- To use as an assessment against standards and compliance requirements
- To understand how a process will perform under varying loads or in response to some anticipated change
- As the basis for analysis in identifying opportunities for improvement
- To design a new process of new approach for an existing process
- To provide a basis for communication and discussion
- To describe requirements for a new business operation



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The second stage is doing what have been planning. Business process implementation is the realization of an approved business process design. The scope of implementation process addresses :

1. Executable primary and support processes
2. Oversight management processes
3. Business rules related to all three types of processes, and
4. Relevant and controllable Business Process Management components in the organization's internal environment, e.g., policies, incentives, governance, and leadership style.

The third stage is monitoring and measuring the performance of the processes that have been done. Process performance management has many schools of thought about how best to approach and manage it. It's important to first review the definitions of process performance. All processes have a metric or measurement associated with the work or output of the process that is performed. These metrics are based on the following fundamental metric dimensions: time, cost, capacity and quality. There are other more common measures, such as efficiency and effectiveness, however, these measurements are generally a function of one or more of the four fundamental metrics mentioned above. In HEIs implements quality management system, IWA 2 Guidelines should be used as a tools for monitoring. The IWA 2 Gridlines made the HEIs easier to understand and monitoring process.

The fourth stage is analysis the process. Process analysis is accomplished through various techniques including interviewing, simulations and various other analytical techniques and methodologies. It often includes a study of the business environment and factors that contribute to or interact with the environment such as government, HEI regulations and competition. Other factors also considered include the context of the educational type, its strategy, students and industry needs, organizational culture, values and how the process will perform to achieve institution goals. An analysis generates the information necessary for the organization to make informed decisions assessing the activities of the business. Without it, decisions are made based on opinion or intuition rather than documented, validated facts. Before beginning an analysis, the scope of the project and the frameworks and tools to be used should be determined. These must be based on the results of the monitoring process.

The fifth process is CAPA (corrective action and preventive action). According to analysis process, the organization will design corrective action and/or preventive action. CAPA concept generally used in good manufacturing standard (GMP) and various ISO business standards. It focuses on the systematic investigation of the root causes of identified problems or identified risks in an attempt to prevent their recurrence (for corrective action) or to prevent occurrence (for preventive action). Corrective action is a reaction to any of the causes/non-conformance. Preventive action is prediction of problem and trying to avoid the occurrence through self initiated actions and analysis related with processes/products.

The sixth process is process transformation and standardization. Process transformation is the planned evolution of a business process using a clearly defined methodology and disciplined approach to ensure that the business process continues to meet business objectives. Business process are affected by many factors both in and out of the organization's control. Process transformation is enabled by business process management principles and governances adopted by the HEIs. Depending on the process maturity level of the organization, it will adopt various methods to monitor and respond to these factors in the appropriate manner and timeline to meet each individual situation. This may be achieved through a strategy of continuous improvement or by initiating projects as needed. Business Process and Quality Management Framework in HEI can be seen in figure 3.



FIGURE 3: Business Process and Quality Management Framework in HEI

Conclusion

The objective of this article was to develop business process and quality management framework in Higher Education Institution. The article commenced with an introductory background, then presented theoretical background and underpinnings, and continued with analysis of the framework. The framework is the integration between business process management and quality management system in HEI. In our future work we seek to provide a detailed analysis of each step. We will therefore elaborate a more formal and detailed business process and quality management framework. Moreover, we intend to develop appropriate business process and quality management procedures, rules and tools to support that framework. Finally, we consider this framework is a great value to theoretical and practical purposes in the context of HEIs. Business process and quality management creates opportunities to improve HEIs services and reduce costs

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