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Strategic human resource management: enhancing performance with six sigma approach

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Abstract

Since its inception at Motorola, Six Sigma has been widely adopted by many different types of organizations. The effectiveness of Six Sigma is well supported by anecdotal evidence. However, academic research on Six Sigma is still in its early stage. This paper first reviewed the current literature on Six Sigma, and then performed a critical analysis of Six Sigma in light of the management literature. The review and analysis suggested that Six Sigma is best defined as a new approach to quality management. Consequently, Six Sigma provides an interesting context for a number of research questions. We then discussed these prospective research questions. This study laid a foundation for future research on Six Sigma. While still being debated, Six Sigma is strongly supported by the theoretical notion of zero defects. The Six Sigma's problem-solving methodology DMAIC has been one of several techniques used by organizations to improve the quality of their products and services. Six Sigma deployments in HR transforms typical HR practices with a proactive approach and leads to better, faster and more cost-effective services; improve internal customer satisfaction and greater motivation and job satisfaction of employees. The research develops various frameworks for Six Sigma deployment in HR and provides case studies of successful Six Sigma deployment in various areas of HR.
Keywords: - a) Six Sigma, b) Efficiency and effectiveness, c) Recruitment, d) DMAIC, e) Zero Defect

1. Introduction

Human resource (HR) is an important business function as it expedites the shaping of organizational culture, elevates employee engagement and boosting managerial effectiveness. As a result, organizations must develop the foundational HR capabilities for efficient service delivery. HR does offer services at different levels, reflecting and supporting other underlying organizational processes. However, HR faces numerous difficulties in a variety of areas, including enticing top talent, managing diversity, talent retention, effective training and development, boosting employee productivity, and managing performance, change, compensation, benefits, health and safety, regulatory compliance, and employee aspirations. Six Sigma deployments in HR provides consistency in operations and leads to quality excellence by providing better services at lower costs in these areas. This research explores Six Sigma deployment HR functions and provides case study of its successful deployment.

2. Method

Although Six Sigma truly has roots in a 19th-century mathematical theory, it was an engineer at Motorola who, in the 1980s, pioneered its use in the modern commercial world. Six Sigma has been developed and honed over the years into what is now recognized as one of the leading methodological methods for enhancing customer satisfaction and corporate operations. A framework called Six Sigma is intended to increase an organization's competitiveness by emphasizing effectiveness and efficiency. It is a methodical approach to problem-solving that is focused on variation reduction and defect elimination, which ultimately leads to process improvement.

Six Sigma Belts

The Six Sigma approach uses a set of "belts" akin to those in martial arts to recognize the knowledge and expertise of project managers.
Here is a brief description of each as there has been much written about the specifics of these belts elsewhere:
• White Belt - This is the introduction level to Six Sigma. These people won't run projects or even be officially part of a Six Sigma project team, but they have a basic understanding of the concepts.
• Yellow Belt - Yellow belt members will work as a project team member, review processes, and support the team.
• Green Belt - These individuals work on the team of black belt projects, and lead Green Belt level projects. They can also provide guidance to lower belt levels.
• Black Belt - Black belts lead problem solving projects, provide coaching to others, and are generally seen as leaders within a company.
• Master Black Belt - Master Black Belts spend most of their time training black belts and green belts. They can also be involved with the Six Sigma program to develop metrics and strategies.
Lean Six Sigma Laws
Learning about the five guiding principles is crucial while attempting to adopt Six Sigma. These guidelines make sure that everyone can apply the techniques efficiently and benefit the most from the system. The following guidelines apply:
• Law of the Market - This is a simple way of saying that customers always must be put first when it comes to manufacturing products. No matter how great or innovative a product is, if customers won't buy it, the product will be a failure.
• Law of Flexibility - To the extent possible, processes and procedures should be able to be adjusted and improved as needed. If the market changes or a better process is developed, it should be as easy as possible to make the necessary changes.
• Law of Focus - Focusing on the problems within a company can help to discover solutions. No matter how bad a specific problem, or problem area is, it is important to remember that the rest of the facility is likely operating smoothly. Focusing on the problems can improve efficiency and reduce waste.
• Law of Velocity - Processes that have dozens of steps or details that need to be performed, it is likely too complicated. Keeping things moving along smoothly helps to keep production moving along quickly.
• Law of Complexity - The more complex a process is, the more problems could occur. Keeping processes as simple and straight forward helps to avoid a wide range of problems, and minimized the amount of waste that is produced.

2.1 Methodologies of Six Sigma

According to the 2005 book "JURAN Institute Six Sigma Breakthrough and Beyond" by Joseph A. De Feo and William Barnard, one of the main approaches employed within Six Sigma is divided into five categories. DMAIC: The DMAIC method is mostly used to enhance current business procedures. The symbols represent:
• Define the problem and the project goals
• Measure in detail the various aspects of the current process
• Analyze data to, among other things, find the root defects in a process
• Improve the process
• Control how the process is done in the future

Figure-1. DMAIC [www.sixsigmadaily.com]

3. Discussion

3.1. Six Sigma Deployment in HR Function by MNC Bank

At the Indian branch of a multinational corporation (MNC) bank, where HR supplied services to 1200 workers across four business divisions, Six Sigma was implemented (Pandey, 2007). In the bank, fulfilling the goal of customer happiness was made possible in large part by HR. In order to achieve process excellence and service excellence in banking operations for greater customer satisfaction, Six Sigma and HR processes were combined and focused. This allowed the company to grow its market share and revenue. This company is involved in a lot of mergers and acquisitions around the world. This case study of MNC Bank focuses on a Six Sigma intervention success story in the training function. The internal customer survey revealed that only 49% of training activities were effective, compared to the corporation's overall score of 56%. Benchmarking also demonstrated that top-tier businesses like Johnson and Johnson attained up to 70% customer satisfaction for training activities (Pandey, 2007). A change leader (Chief Operating Officer), a Black Belt, and a Green Belt quality leader made up the MNC Bank's Six Sigma project team. Owners and participants in the HR process make up the implementation team.

Various Steps of Six Sigma DMAIC Methodology Deployed by MNC Bank Are Explained Below-

Define

The first step in this process is to identify the services that the HR department offers to internal clients. In order of importance for ensuring internal customers' (i.e., employees') pleasure, services are then prioritized. Due to the extensive resource requirements of the Six Sigma process rollout, this stage is essential. The choice of a Six Sigma project in HR is based on procedures that are both expensive and crucial from a strategic and customer standpoint. Since the customer's voice is the primary source for problem identification, the following criteria are used to choose projects:

a-Surveys of customer satisfaction,

b-Pareto charts

c-Benchmarking, and

d- Prioritization is also included.

All of the aforementioned techniques were applied in MNC Bank to identify the issues that would prevent the training from being successful. The internal customer survey revealed that only 49% of training activities were effective, compared to the corporation's overall score of 56%.

Benchmarking also demonstrated that top-tier businesses like Johnson and Johnson attained up to 70% customer satisfaction for training activities (Pandey, 2007). MNC Bank invested significant resources in training and development activities, which strengthened the argument for Six Sigma intervention in training projects.

Measure

Critical to Quality (CTQ) and Critical to Cost (CTC) concerns pertinent to the chosen process determine the criteria for performance measurement.

The process mapping made it clear who the customers are and what their priorities are. Critical to quality questions (CTQ) refer to characteristics that have the greatest influence on quality and customer satisfaction. Outlining the primary process and its sub processes helps identify questions that are critical to the process (CTP). CTPs are recognized for each process since they are essential to controlling CTQ's qualities. In this step, MNC Bank created an action plan by defining the process scope and performance metrics to align training to the business's strategic objectives.

Analyze

The "measure of performance" is not the main focus of this stage; rather, it is the control of the inputs that influence the measures. Therefore, the goals of this step are to identify the times and locations of the problems. ANOVA, chi-square, and other statistical tests are used to identify the causes of variations. The analysis stage offers perceptions into the root reasons of the issue. In this stage, MNC Bank employed the Pareto chart, Madhuni 61 testing, and customer voice. Fishbone analysis was one of the process techniques employed for the analysis. The list of potential root causes generated by fishbone analysis aids in understanding the cause-and-effect link between the process fault and its effects. The HR department of MNC Bank determined training effectiveness scores in this step. The team held brainstorming meetings in response to the findings. The following variables were found to have an impact on training efficacy at MNC Bank:

a-Coaching

b-client information

c-product knowledge

d- an analysis of training needs,

e- formal training program round out the list.

The MNC Bank HR department also utilized the voice of the customer method to investigate the issue and determined the following aspects influencing training satisfaction:

a. Training opportunities should be offered to everyone as a matter of right rather than at the manager's discretion;

b. Training opportunities should be linked to organizational growth prospects; and

c. Associates require opportunities for facilitating and speaking, as well as.

d. Businesses should provide employees the chance to put their newly gained talents to use.

Improve

Prioritizing the root causes to be addressed because of their significant impact on quality was the first step in improvement. Plans of action are created to address the underlying issues. All identified reasons are evaluated based on how easily they can be put into practice. The MNC Bank highlighted the following underlying causes for improvement:

a. The training was not directly related to the associate's career advancement;
b. The associates needed opportunities to put their newly acquired skills and competencies to use; and
c. The associates needed to be involved and involved in the internal training process.

Control

The control stage's principal objective is to make sure that the successes that came from the preceding step—the improvement step—are maintained long after the project is complete. The control stage puts a framework in place for keeping track of overall performance and intervenes when anomalies arise. This step aims to assure the institutionalization of the improvement by performing "before and after analyses." To assure process competency, the MNC Bank created a quarterly HR review mechanism. Major Benefits of Six Sigma Implementation in MNC Bank's HR Department At MNC Bank, substantial funds were spent on training and development initiatives because they contributed to staff motivation and competence growth.

3.2. Six Sigma Deployment in HR Function by Engineering Company

Six Sigma technique was implemented in the Human Resources central function on one site of an engineering organization that render services to employees in four business divisions and other central support functions (Wyper & Harrison, 2000 *source-8). The Global engineering company is situated in 20 different locations where 8000 people are employed. Before the implementation of any improvement strategy the HR function of this organization, was considered as reactive, unorganized, overstaffed and unprofessional, rendering poor, slow and inefficient services. Therefore, the organization used Six Sigma in the HR domain to promote the enhancement of HR processes and achieve the strategic objectives of "right people in the right place at the right time at the right cost." The primary objectives were to develop and implement HR processes and measures of performance, with the focus on complete internal customer satisfaction. Rewarding, resourcing, communication and development were selected as the first processes to be analyzed. Six Sigma deployments in HR resulted in greater motivation and job satisfaction of employees, improved internal customer satisfaction, better, faster and more cost-effective HR services, and ultimately, improved business performance. The company achieved budgeted turnover with 15% fewer people with an overhead cost reduction of £250,000 and, for the first time, an annual employee bonus was declared. HR systems now transform problems into preventive actions that minimize the likelihood of reoccurrence. HR employees have originated several improvement ideas as they moved from being compliant to committed employees. Improved processes resulted in cost-saving due to better service quality and reduction in throughput time, defect and rework. The cost of HR function per employee has also been reduced by 34% in 18 months with the same or better service provided (Wyper & Harrison, 2000).

3.3. Six Sigma Deployment in HR: A Partner in Strategy Execution and Synchronization

Six Sigma seeks to fill the measurement effectiveness gaps that were discovered to be a significant shortcoming with existing HR-related metrics by rigorously assessing the chosen HR function scientifically. The internal customers (employees) of the organization are the focus of HR's functional efforts. Through the effective application of Six Sigma, organizational strategy (i.e., top management commitment), technical competence (i.e., workforce competency), and organizational culture are linked. The guiding concepts of Six Sigma deployments are alignment and focus. Each functional area is in charge of putting Six Sigma into practice and conducting regular reviews because it is an organization-wide intervention.

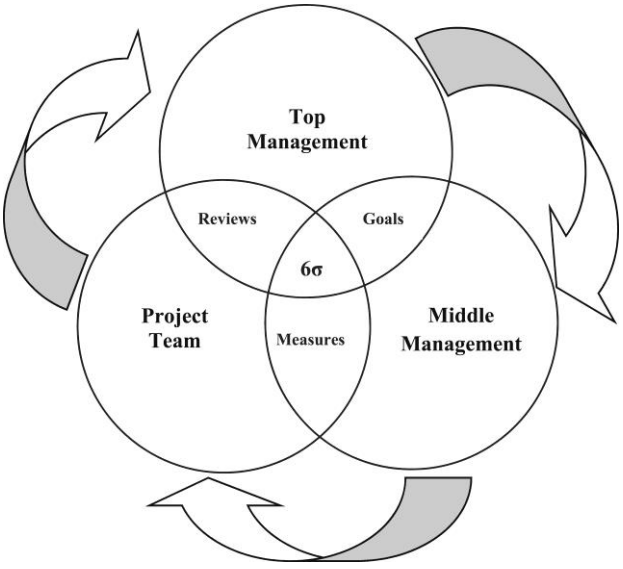

Figure-2. Six Sigma Deployment in HR- Strategic perspective [Source-Sage publications]

The organizational strategy is linked to Six Sigma implementations in HR. It enables the organization to develop and carry out strategic breakthroughs while successfully managing continuous improvement performance as a part of the TQM system. The top management establishes clear objectives for enhancing the HR process and offers resources and assistance to the middle management. It is emphasized that the ultimate goal of Six Sigma deployments in HR is to improve the process and minimize variation as much as feasible. The team implementing the Six Sigma project communicates with middle management and assesses the process's capability for future development. Together with the Six Sigma implementation team, top management discusses individual results (Figure 1). HR must participate as a partner in implementing the strategy. The HR function must invest time beyond service provision, record keeping, and auditing if it wants to be "true" strategic partners. Instead, HR specialists ought to devote more time to strategic HR planning as well as helping with organizational development, strategy creation, and strategic change. Figure 1 illustrates how Six Sigma deployment in HR serves as a navigation system to consistently and effectively lower performance variability through targeted breakthrough targets. Such initiatives are included with a crucial few strategies, initiatives, and measures that are established by top management and are essential to attaining the organization's vision and goal. Six Sigma implies a shift from a control-oriented approach to empowerment-oriented developmental activities, aiding in the synchronization of strategies and turning into a partner in their execution.

3.4. Six Sigma Deployment in HR: Managerial Implications

In order to optimize process outputs, Six Sigma is a data-driven improvement methodology that places more emphasis on defect prevention than defect discovery. The implementation of Six Sigma in HR aids in the reengineering of HR processes by improving the responsiveness, quality, and effectiveness of its offerings. Six Sigma's statistical methodology can be a useful tool for analyzing HR problems and enhancing the efficiency of the HR department. Six Sigma's methodologies would be more suitable for a thorough revamp of HR procedures because they place an emphasis on the entire process. With the use of simple and effective statistical techniques, firms can employ the potent Six Sigma strategy to constantly improve HR processes' effectiveness and efficiency.

Figure-2. DMAIC Process [Source 13-taskoconsulting.com]

Less than 50% of organizations had a remote working plan prior to the COVID-19 outbreak. Additionally, a lot of businesses in the banking, financial, and regulated sectors discourage remote work. The majority of them are now hurriedly developing remote work techniques. Numerous unrecognized issues have resulted from this. To meet the problems it poses, HR managers are working to create efficient systems and strategies. Since the implementation of Six Sigma in HR may aid in resolving post-COVID-19 HR issues, Six Sigma has created new opportunities for HR work programmes.

4. Six Sigma Implementation

Before beginning to certify personnel or give them Six Sigma training, organizations must have a project. There is no need for HR professionals to go out and obtain their training if they intend to apply Six Sigma in HR to help solve a problem they are already facing. HR specialists frequently lack the luxury of time to complete training before working on a challenge. While working on the project under the direction of this black belt, HR professionals may advance in their certification, learn how to use the tools, and win over other stakeholders at the same time because HR would be swiftly

resolving their issues. As a result, the black belt is assisting HR in solving the issue while HR is also receiving training and pursuing certification. The Six Sigma certification (with HR specialization) gives HR professionals a firm grasps of Six Sigma principles and equips them to contribute significantly to Six Sigma teams. With their expertise in change management, these Six Sigma-certified individuals also guarantee the team's efficiency and help establish the proper Six Sigma culture. To assist HR professionals in beginning the process, the Management and Strategy Institute (www.msicertified.com), an organization approved by the industry as a trainer and certifying body, also offers Six Sigma Green Belt and Six Sigma Black Belt Certification with HR specialization (Madhani, 2018a -source 8*).

5. Six Sigma Project Failure in HR

Potential reasons as previously discussed with many examples, using Six Sigma in HR has many advantages. However, because human behavior is so complicated, it is challenging to quantify several HR practices and apply Six Sigma to the HR department. The failure of Six Sigma initiatives in the HR function is not attributable to ineffective statistical methods or Six Sigma principles. Because of the way project teams implement the Six Sigma approach, it frequently fails. The principal causes of failure are as follows:

1. Lack of top management support- Six Sigma projects require leadership support to secure funding, overcome challenges, and assist the team's improvements, which embed themselves in the organization's culture and become an indelible way of conducting business. As a result, a Six Sigma project often faces far less resistance when top leadership fully supports it. Success also depends on management's active participation in Six Sigma projects via Master Black Belts and Black Belts.
2. Erratic Team Leadership: Ineffective team leaders are to blame for the failure of Six Sigma programmes. The experienced black belt who leads Six Sigma project teams typically ensures that they stay on task and make progress. However, the black belt is typically moved to another project as soon as the team begins to make progress. Therefore, a project team runs the danger of losing focus and failing to achieve its performance target when effective leadership is absent. Thus, until the project is over, the black belts who oversee the 70 Compensation & Benefits Review 54(2) Six Sigma teams must remain in place to avoid this problem. Black Belts must develop a replacement for their leadership on the Six Sigma project team if a long-term commitment is not feasible.
3. No connection to financial success- Six Sigma initiatives that concentrate on lowering costs or boosting effectiveness with a favorable financial impact receive more attention, command more respect, and receive more backing from senior management than activities that are not specifically related to financial success. A Six Sigma project that yields transparent financial rewards aids in concentrating the attention of the project's team and the leadership of the organization.

6. Conclusion

This study is distinctive because it conducts a thorough investigation of a case study to highlight the effective application of Six Sigma in the HR function. This case study was chosen from among those in engineering. The company's Six Sigma implementation successfully controlled and resolved the different HR difficulties it encountered. The use of Six Sigma in the HR function changes the total workflow and develops new capabilities for boosting business performance. This study is distinctive because it conducts a thorough investigation of a case study to highlight the effective application of Six Sigma in the HR function. This case study was chosen from among those in engineering. The company's Six Sigma implementation successfully controlled and resolved the different HR difficulties it encountered. The use of Six Sigma in the HR function changes the total workflow and develops new capabilities for boosting business performance.

Conflict of Interest

The authors declares that there is no conflict of interest in this manuscript.

References

i. Lanyon, S. (2003). At Raytheon Six Sigma works, too, to improve HR management processes. *Journal of Organizational Excellence*, 22, 29-42. https://doi.org/10.1002/npr.10088.
ii. Larson, A. (2003). Demystifying six sigma. AMACOM.
iii. Madhani, P. M. (2017). Six Sigma deployment in sales and marketing: Enhancing competitive Madhani 71 advantages. *The IUP Journal of Business Strategy*, 14, 40-63
iv. Madhani, P. M. (2018a). Enhancing HR competitiveness: A Six Sigma approach. *World at Work Journal*, 27, 30-37. https://doi.org/10.2139/ ssrn.367299
v. Madhani, P. M. (2022b). The 'High-Road' approach to compensation and benefits practices: Enhancing competitive advantages. *International Journal of Applied Management Sciences and Engineering*, 9(1). Forthcoming
vi. Pandey, A. (2007). Strategically focused training in Six Sigma way: a case study. *Journal of European Industrial Training*, 31, 145-162. https://doi.org/10.1108/03090590710734363
vii. Tolga Taner, M., Sezen, B. (2009). An application of Six Sigma methodology to turnover intentions in health care. *International Journal of Health Care Quality Assurance*, 22, 252-265. https:// doi.org/10.1108/09526860910953520
viii. Wyper, B., Harrison, A. (2000). Deployment of Six Sigma methodology in human resource function: A case study. *Total Quality Management*, 11, 720-727. https://doi.org/10.1080/ 09544120050008129.
ix. https://sixsigmastudyguide.com/what-is-six-sigma/
x. https://taskoconsulting.com/dmaic/
xi. https://www.creativesafetysupply.com/articles/sixsigma-principles/