

The Role of Continuous Improvement on Employee Performance in the steel industry

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Abstract: The researcher intends to present the role of Continuous Improvement (CI) strategy for the performance of employees in the steel industry. It is certain that every organization must have a human resource department as the main units in work performance. The purpose of this study is to examine the utilization of Continuous Improvement (CI) influence employee performance. The amount of the sample size required by the researcher from employees in the steel industry. The data was collected by questionnaires before calculated according to the rule of structural equation model (SEM). The analysis of the continuous improvement practices in the steel industry indicated that there was a positive relationship regarding the implementation of the model. The ability of employees can be improved by Continuous Improvement (CI) practices such as people learning from their experiences, both positive and negative; individuals seeking out opportunities for learning/personal development; individuals and groups at all levels share their learning from all work experiences; managers accepting, and where necessary act on all the learning that takes place; and designated individuals use the organizational mechanisms to deploy the learning that is captured across the organization. That is important to increase ability of all employees.

Keywords: *Continuous Improvement (CI), Employee Performance, Steel Industry.*

Introduction

Nowadays, every organization invests in a large variety of human resources which are high value organizational capitals. Human resource is regarded as human capital or intellectual capital, and is significant to an economic system. Since every organization requires competent workers, it should essentially realize how to build on the advantages of its human resources. In order to build a competitive advantage, the organization must have higher competent personnel. Therefore, personnel must be developed continuously and systematically. Training and development must include explicit planning and be substantially managed. In particular, personnel must understand the working proficiency and communication between superiors and subordinates within the organization. Furthermore, they must realize how to use the equipment, machines, work appliances, as well as new technologies. Additionally, they must recognize how to utilize the continuous improvement system for their work. Such a system will solve work-related difficulties, detect work-related errors and produce higher work quality. As a result, an organization should train its personnel in order to reap the benefits of appropriate and quality personnel. For example: personnel characteristics should include being knowledgeable, creative, and willing to perform high-

quality work. On the other hand, management executives need to place equivalent importance on different groups of people within the organization. Moreover, they would be impartial in allocating compensation, benefits, services and occupational opportunities, as well as the quality of work performance. Incidentally, the organization should recognize the significance of building a positive work environment and encourage employees to devote themselves to their organization. In addition, the organization should focus on its management team, which can assist the building up of a cooperative employee group. This cooperation can contribute to the fostering of a learning organization where everyone comes to realize the advantages and disadvantages of reciprocity. This realization can solve work-related problems and build competitive advantages for the organization. Considering the status of current world economic circumstances, a significant factor is the utilization of domestic austerity, especially in large economy countries such as The United States of America and European countries. This factor necessitates a strict monetary policy as well as the payment reduction of each country. Thus, the governments have to assist in maintaining the economic stability of each country. Manufacturing, trading and exchanging products in a market will flow if the economic circumstances facilitate the trade and the manufacturing resources are utilized completely. If complete utility of every factor of production is undertaken, full employment can be assured. Besides, the levels of product prices will not highly increase. In addition, it can be assured that the country will have the possible highest income and profits will extend across the entire many cities. The steel industry is one of the basic industries which is significant for all developing countries in the world. The industry has included many machines and many employees for production and export of their products; therefore, it's important to have high standards of working because of its connection with numerous influential industries such as automotive industry, electrical appliances, electronics, furniture, canned food (package), machinery and construction industry. For economic stimulation, the government ministry has plans to invest in the steel industry, specifically in transportation projects. Employees with highest knowledge and ability to work in the industry will continue to be employed. Many organizations have success in their business model because of the strategies and abilities utilized by their employees. Companies will manage by low cost strategy such as Continuous Improvement (CI). Competitive advantage is an important aspect to consider when employing ability staff. Qualities that many companies are seeking are employee commitment, staff morale, and work demands.

Continuous Improvement (CI)

Continuous Improvement (CI) is a concept that is efficiently utilized in administration and management. This notion emphasizes the participation of each employee to search for a new approach in order to regularly enhance work performance as well as the work environment. The keys to Kaizen are to maintain the good and to develop it continuously.

Gao (2011, p.12) Continuous Improvement (CI), or “Kaizen” in the Japanese language. The significance of the Kaizen process is to utilize employees’ knowledge and capacities in performance improvement through a use of minimal investment. In this case, a minimal improvement increases gradually and continuously. However, the Kaizen process is in contrast to innovation. To clarify, innovation is a significant change that utilizes highly complex technologies including massive investment funds. Thus, no matter what economic

circumstances are, Kaizen can be utilized for improvement.

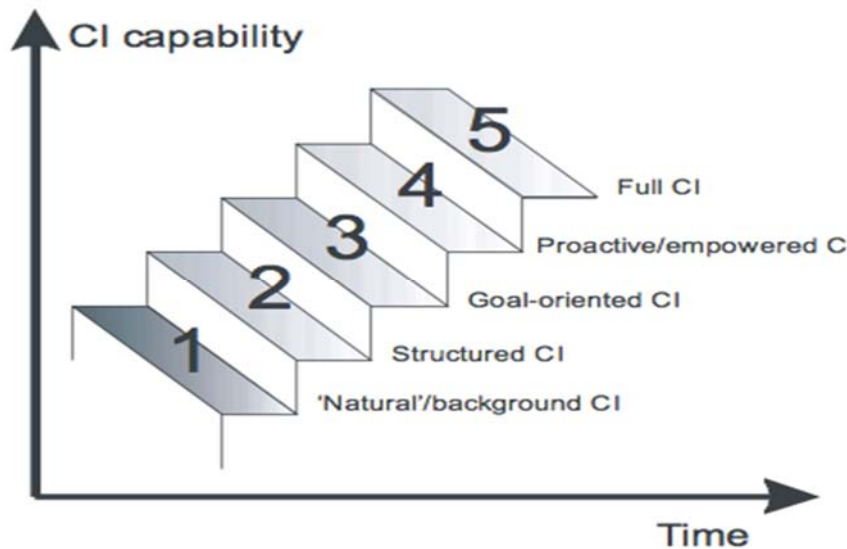
Jorgensen et al. (2006, p.329) The five stages of maturity in the CI Model (based on Bessant & Caffyn, 1997; Caffyn, 1999) includes: 1) 'Natural'/background CI. There is no formal CI structure, problem-solving is random, and the dominant mode of problem-solving is by specialists; 2) Structured CI. There are formal attempts to create and sustain CI, and a formal problem-solving process is used, supported by basic CI tools. CI is often parallel to operations; 3) Goal-oriented CI. All of stage 2, plus formal deployment of strategic goals and monitoring and measurement of CI against these goals; 4) Proactive/empowered CI. All of stage 3, plus the responsibility for CI is devolved to the problem-solving units; and 5) Full CI capability—the learning organization. CI has become a dominant way of life, involving everyone in the organization. Learning is automatically captured and shared.

In figure 1, Level 1: Natural/background CI: There isn't a consistent, professional standard for problem-solving within the workplace. There is a lack of formal support. Management typically controls the solutions. Employees are not solution-based when confronted with problems. Level 2: Structured CI: The CI initiative begins. The industry is implementing new structures and patterns to allow the staff to participate in the problem-solving process. The staff is becoming more aware of how to function within the company as they are trained with CI tools. Level 3: Goal-oriented CI: As the company implements more of the CI model, formal development helps create a stronger company within. During this stage, goals, behavior and concerns are addressed. An approach to stabilize and create solutions toward these goals is established and maintained. Staff are encouraged to participate in activities that strengthen their problem-solving abilities. Level 4: Proactive/empowered: As the staff becomes more integrated in the new system, they are encouraged to have more independence as more responsibilities are delegated. Management allows staff to work through problems within groups or individually as a means to share authority, thus empowering each employee. This level allows experimentation to form as a means to create experience through trial and error. Level 5: Full CI: After the goals and behavioral standards are established and the staff is aware of how to function with independence, the CI model has been fully implemented and the company will begin to see major positive results. Experimentation still occurs as a way for employees to practice their autonomy. Employees are trained to have an automatic response in solving problems. They can function without the control of management. Given this much responsibility, employees are held to high ethical standards and should practice integrity throughout each decision-making process. Companies can build more trust within their staff; therefore, work performance and ethics will improve. Continuous Improvement ability has to be used many times to achieve full CI benefits in organization.

When the organization use Continuous Improvement strategy then the employees' behavior become routine that the organization during becomes organization learning such as 1. People learn from their experiences; both positive and negative. 2. Individuals seek out opportunities for learning; personal development (e.g. actively experiment, set their own learning objectives) 3. Individual and groups at all levels share (make available) their learning from all work experiences. 4. The organization articulates and consolidates (captures and shares) the learning of individuals and groups. 5. Managers accept and where necessary, act on all the learning that takes place. 6. People and team ensure that their learning is captured by making

use of the mechanisms provided for doing so. 7. Designated individual(s) use organizational mechanisms to deploy the learning that is captured across the organization.

Figure 1: The five stages of maturity in the CI Model



(Based on Bessant & Caffyn, 1997; Caffyn, 1999. Source: Jorgensen et al, 2006, p.329)

Research Methodology

The purpose of this study is to examine the utilization the following research question - does the utilization of Continuous Improvement (CI) influence employee performance? Also, how employees practice good performance in the steel industry? The hypothesis of this study was Continuous Improvement (CI) has positive effects on employee performance. Data sources can be divided into two types, primary and secondary, both of which are employed within the continuous improvement research. Primary data are those that have to be collected for the first time by the investigator though observation, while secondary data includes pre-existing information gathered by someone else for purpose of study. These may be internal or external to the organizations researched, in terms of where the researcher can be found. The amount of the sample size required by the researcher that 250 people included employees in the steel industry. The analysis of the continuous improvement practices in the steel industry indicated that there was a positive relationship regarding the implementation of the model. The data was collected by questionnaires before calculated according to the rule of structural equation model (SEM). Continuous Improvement (CI) was the dependent variable of the model, observed variables for measurement had become the greatest challenges for research due to the wide variety of concept and definition of goal within the steel industry. Variables used for this study were what people learned from their experiences, both positive and negative. Individuals seek out opportunities for learning/personal development, individual and groups at all levels share (make available) their learning from all work experiences, managers accept and where necessary act on all the learning that takes place, and designated individuals use organizational mechanisms to deploy the learning that is captured across the organization. All these aspects of employee performance in the steel industry have thoroughly reviewed from the earlier relevant studies and have represented good measurement for Continuous

Improvement (CI) construct. Employee performance was the dependent variable of the model, observed variables for firm performance measurement had become the greatest challenges for research due to the wide variety of concept and definition of employee performance. Variables used for this study were employee commitment, staff morale, and work demands, all of these aspects of employee performance had been thoroughly reviewed from the earlier relevant studies and have represented good measurement for employee performance construct.

Conclusion

The steel industry has applied full Continuous Improvement (CI) strategies like the organization learning to achieve tremendous growth and development as an organization. Employees in the steel industry have practiced Continuous Improvement (CI) activities such as everyone learns from their experiences both good and bad, employees seek out opportunities for learning and personal development by setting their own learning/career objectives, and employees feel comfortable to reach out to colleagues at all levels in the organization to share and receive information needed to support their work. Managers accept and where necessary act on all of the learning that takes place, and appropriate organizational processes are used to deploy what has been learned across the organization. When a strategy is initially used, there may be a faulty initial stage. However, as the strategy is improved and adjusted, repetition can remedy any faultiness. Subsequently, such fallibility can be dealt with immediately. This can build the self-efficacy required for learning experiences using strategies accurately. Although some strategies are effective in a particular country's context, other countries may experience different effects in particular parts of a strategy. The resulting different experiences can occur due to various organizational cultures. Also, work-related obstacles frequently arise. Even though one problem is solved, a new problem will predictably arise. Therefore, Continuous Improvement (CI) is necessary for every organization to solve difficulties and enhance its contributions. Thus, the personnel of the steel-manufacturing group are significant representatives of all organizations. The study; revealed that if the organizations utilize a Continuous Improvement(CI) strategy in their management, their personnel's performance would increase. The steel industry is the organizations that drive many countries forward. Thus, an in-depth case study of other industries might be useful to deepen understandings of this topic.

Direction for Future Research

Every organization needs to take into account the importance of maintaining product quality as well as product development. Considering the production, the production costs must be economical, and the product must be beneficial to the organization. Many achievements are accomplished by the capacities of all-level personnel in a particular organization: the managers from various divisions such as human resources, machinery, strategy, product quality, marketing and product improvement. Personnel must be experts in the production. Additional and related future research would be related to administration strategies. Strategic theories for administration should be introduced to the organization in order to create competitive advantage. Examples of strategic theories include TRIZ methodology and the Monozukuri development of industrial personnel. Apart from strategic theories, the factors that prevent the increase of industrial products should be studied through engagement of

organizational development. Organizational development plays a role in searching out for and solving these problems.

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