

# A Literature Review on *Kaizen*:

What Have We Learned over the Past 30 Years?<sup>1)</sup>

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## 1. Introduction

*Kaizen* is a Japanese word that refers to continuous improvement (CI)<sup>2)</sup>. This word includes two parts: “*Kai*” means “change” and “*Zen*” means “good or for the better” (Palmer, 2001, p. 55). In the field of management, the earliest continuous improvement program started in the 1800s when some companies encouraged their employees to introduce valuable ideas to help their teams or organizations improve work efficiency (Schroeder and Robinson, 1991). At that time, most of these companies used scientific methods to analyze the production process and tried their best to find solutions for the problems they encountered. During the World War II, the new program named “Training within Industry” proposed by the US government was adopted within the whole country. This program was introduced to Japan after the World War II (Robinson, 1990). In 1986, Imai analyzed and summarized successful experiences of Japanese manufacturing industries in a concept, he termed *Kaizen* in his influential book *Kaizen: The Key to Japan’s Competitive Success* (Imai, 1986) laid a foundation for theoretical model of *Kaizen* management, opened a new research field of *Kaizen* in management study and constructed a solid foundation for this domain. From then on, more and more researchers and practitioners around the world have paid attention to theoretical and practical fields of *Kaizen* management, and since then many research outcomes have been seen over the past 30 years.

At the beginning of *Kaizen* study, a lot of researchers from Japan and other countries proposed definitions of *Kaizen* from different perspectives, and they tried to explain the concept of *Kaizen* and designed a series of conceptual models. Alongside the development of *Kaizen* management practices, many different *Kaizen* methods developed by both scholars and practitioners could be used in management process. While many researchers have conducted empirical studies, case studies and surveys, to evaluate the validity and effect of *Kaizen* implementation within organizations in Japan and other countries, others conducted a series of studies

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2) In the author’s viewpoint, *Kaizen* includes many connotations within the term. For example, in the process of *Kaizen* management, workers instinctively use their mind not just their hands because workers are treated as humans who have a head, a pair of hands and a powerful heart. However, continuous improvement describes the status of the management process. Conceptually there is no much difference between these two terms.

on international *Kaizen* transfer among organizations of different cultural contexts. However, they overlooked the study on localization of *Kaizen* from the receiver's side as opposed to the study on transferability of *Kaizen* from the sender's side. During the end of the last century, innovation was given a lot of attention, and *Kaizen* and innovation are two related concepts that can be used to describe the status of a process. In recent years, several scholars started to study the relationship between *Kaizen* and innovation so as to extend the conceptual foundation of *Kaizen* into other external related research fields. Based on the status quo and emerging tendency of *Kaizen* study, section 2 and 3 present the review of definitions and methods of *Kaizen* as the basis of *Kaizen* study. Section 4 and 5 outline the study of *Kaizen* implementation and international *Kaizen* transfer. Furthermore, Section 6 extends the conceptual foundation of *Kaizen* into innovation study, explains the relationship between *Kaizen* and innovation. The research note is concluded by reviewing *Kaizen* studies in the past and indicating its prospect in the future.

## 2. Definition of *Kaizen*

Since Imai introduced the concept of *Kaizen* in management field in 1986, more and more scholars and practitioners have started to conduct in-depth studies of *Kaizen* from their interested fields. Nowadays, although a lot has been published about *Kaizen* by many researchers around the world, in the academic circle there still doesn't exist a consensus on the definition of *Kaizen*. Based on this, the author introduces a series of explanations of *Kaizen* in different groups to help readers understand the definition of *Kaizen* from different perspectives.

Several researchers regarded *Kaizen* as a principle, method or an effort. For example, Lillrank and Kano (1989) defined continuous improvement as a series of basic improvement principles. Nihon HR Kyōkai (1992) referred that CI is not only a method of improvement but also efforts of everyone in an organization and it can be applied in any work that needs to be well improved. Williams (2001) paid his attention to the cost of the production process, and he believed that CI is one of the most significant and valuable methods that can reduce the production cost in the long term.

Meanwhile, a group of researchers defined *Kaizen* as a process, project or an activity. Imai (1986) explained that *Kaizen* in the workplace is the process of continuous improvement that includes everyone in an organization so that the concept of *Kaizen* is rooted in three levels within an organization: management level, group level, and individual level. Fujimoto (1999) regarded *Kaizen* activity as a kind of activity that could change organizational routines in systematical ways. Paul Brunet and New (2003) explained *Kaizen* as a series of activities that have their specific functions for testing and ensuring continuous improvement so as to achieve organizational goals. In addition, Farris et al. (2009) described *Kaizen* event as "a focused and structured continuous improvement project" (p. 42). In order to achieve specific goals, the project should be implemented across different areas and functional departments in an accelerated timeframe.

In addition, some other scholars constructed the definition of *Kaizen* from the perspective of innovation. For instance, Bessant et al. (1994) defined CI as a "focused and continuous incremental innovation" (p. 17) that could be applied to the whole company. In 1997, Imai defined the concept of *Kaizen* by making a comparison between *Kaizen* and innovation. He believed that the former one is a kind of small improvement which can be obtained after a series of efforts while the latter one is a kind of radical improvement which can be obtained after new technologies and equipment are being adopted in the process of improvement. Iwao (2017) analyzed

and summarized the existing literature and regarded *Kaizen* as an accumulated process that could obtain the benefits of a series of “similarly small, mutually independent, incremental process innovations” (p. 1). This series of innovations should be conducted in three levels of workers, work-teams, and managers.

Besides the definitions above, other definitions of *Kaizen* were put forward by scholars. For example, Womack and Jones (1996) explained that *Kaizen* (CI) is an important concept in the research domain of lean manufacturing and the goal of *Kaizen* implementation is to help an organization systematically reduce different wastes. Once more, Cheser (1998) explained that *Kaizen* refers to making a series of tiny changes for the better in the workplace in order not only to reduce wastes but also to shorten lead time so as to improve the effectiveness of the production process. Bhuiyan and Baghel (2005) defined CI from the perspective of organizational culture, and they believed that CI is the organizational culture that targets the elimination of wastes in almost all parts and areas of an organization and all steps in the production process by adopting the methods and technologies to sustain improvement continuously.

The definitions of *Kaizen* that as mentioned above indicate the meaning of *Kaizen* in different ways stated by different people illustrating the difficulty of the general inexistence of a consensus in the academic milieu on the definition of *Kaizen*. One of the reasons is that many researchers defined *Kaizen* based on their specific research fields which makes their perspectives different. Fortunately, most of them have reached a consensus that *Kaizen* means “continuous improvement” and it could be implemented in any field that needs to be endlessly improved. From the author’s viewpoint, *Kaizen* can be regarded as a management philosophy that means “change for the better”. The concept of *Kaizen* could be extended and penetrated into methods and application of *Kaizen* from theory to practice, therefore, it is a meaningful and valuable concept that can be applied into every field and place that need to be improved in the long term.

### 3. Method of *Kaizen*

As a management philosophy, *Kaizen* could be explained as continuous improvement so that it has many different application methods that penetrate the concept into management practice. By conducting research and practice, a lot of scholars and practitioners summarized and developed many application methods of *Kaizen* to make further contributions to theory and practice. The author introduces and explains several typical *Kaizen* methods so as to help readers deeply understand *Kaizen* from theory to practice.

In general, the process of *Kaizen* management can be described as follows: “select target process, create team, set project goal and plan, observe the process, analyze the process, create implementation, implementation and make presentation” (Dhongade et al., 2013, p. 59). In details, as Imai (1986) mentioned in his book (see Figure 1. 1, p. 4), many practical methods and tools could be applied for example, TQC (Total Quality Control), QC Circles, Suggestion System, Automation, TPM (Total Productive Maintenance), *Kanban* System, 5-S (5 Steps), *Just-in-Time* Management and some statistical tools. Some of the typical methods of *Kaizen* are:

**PDCA Cycle.** The basic idea of the method of quality control was proposed by Walter A. Shewhart in 1930, and it was clearly explained and popularized by Edwards Deming in 1950. The four alphabets stand for the process of a whole cycle that can be regarded as: plan, do, check, and act. From the perspective of *Kaizen*, Imai (1986) said that “The PDCA cycle is a series of activities pursued for improvement” (p. 60–61). This is the foundation of *Kaizen* and also one of the application methods of *Kaizen*. It can be applied in any field that needs to be improved not only in quality control but also in general management process.

**Lean Manufacturing.** This method was developed from the idea of PDCA cycle. It is a significant and recognized way that aims to help an organization identify and reduce waste in the process of production so as to meet the customers' demands on products' quality (Bhuiyan and Baghel, 2005). A typical case is TPS (Toyota Production System) that was constructed by Ohno Taiichi in 1978 (1988 in the English version). In order to run TPS successfully, an organization needs to adopt a series of methods to follow *Just-in-Time* principle by conducting continuous improvement in the production process. After that, the concept and method of lean manufacturing were put forward by Womack, J. P., Jones, D. T. and Roos D. in 1990.

**Six Sigma.** This is a method that was introduced by Motorola Inc. in 1987. Linderman et al. (2003) defined *Six Sigma* as "an organized and systematic method for strategic process improvement and new product and service development that relies on statistical methods and the scientific method to make dramatic reductions in customer defined defect rates" (p. 195). By applying this method, an organization can achieve CI in a systematical way and precisely control the extent of CI implementation in scientific ways.

**Lean Six Sigma.** This is a kind of hybrid method that combines the methods of lean manufacturing and six sigma together. Alongside the development of management practice, many enterprises found that some problems couldn't be solved by using these two methods individually during the production process. However, lean six sigma method can combine the benefits of not only systematically reducing the waste but also conducting CI in scientific ways that can help shareholders obtain the expected effect and value of *Kaizen* in a fast way (George, 2002).

**Poka-Yoke.** Imai (1986) referred this Japanese word as a management tool and method that can help equipment operators identify, correct and prevent the mistakes that may occur when they operate the machines in the production process. Human errors are the factors that inevitably occur when workers running machines. In order to eliminate the defeats, workers should use a series of systematical ways to achieve the expected effect of "mistake proofing".

**5-S Movement.** This is one of the simplest methods of lean manufacturing in the management field of *Kaizen*. As Imai (1986, see p. 233) explained that 5-S stands for the five Japanese words: Seiri (straighten up), Seiton (put things in order), Seiso (clean up), Seiketsu (personal cleanliness), and Shitsuke (discipline). 5-S is a consistent process of *Kaizen* in a production process. Continuous improvement could be achieved by applying 5-S method step by step.

**7 QC Tools (Statistical Tools).** Seven statistical tools can help managers conduct quality control in the production process. They are: "Pareto diagrams, cause-and-effect diagrams, histograms, control charts, scatter diagrams, graphs, and check sheets" (Imai, 1986, p. 239-240). In recent years, many enterprises applied new seven QC tools, they are "relations diagram, affinity diagram, tree diagram, matrix diagram, matrix data-analysis diagram, process decision program chart, and arrow diagram" (Imai, 1986, p. 241-242).

**Andon.** *Andon* is a facility that looks like an electronic signboard, and it can be installed in the workplace or production lines of a factory. The signboard includes different signal lights that indicate the problems occur during the work process. Whenever there is a problem or defeat occur, the workers or managers who find the fault can press a button to stop the machine, check and solve the problem immediately and start to work after that. It is a useful tool that can be applied to *Kaizen* management in plants.

**Jidoka (Autonomation).** This is a Japanese word that means "intelligent automation". In TPS, it can be defined as "automation with a human touch" (Ohno, 1988, p. 4). By using *Jidoka* method, the defeats of a

production process can be easily and immediately found by workers so that these defects can be identified and corrected within a short period of time. *Jidoka* is one of the basic methods of TPS and is also a good way for manufacturers to achieve the expected effect of *Kaizen*.

The methods of *Kaizen* mentioned above are some typical ways that were summarized, developed and adopted by the organizations which have successfully applied them in their management processes. Besides these methods, these organizations also use many other techniques and methods of *Kaizen* that could be applied in most fields and places. For example: *Kaizen* Blitz, *Genba-Kaizen* Workshops, *Kaizen* Office, *Kaizen* Teian, etc. (Suárez-Barraza et al., 2011). Therefore, the issues on how to successfully apply the methods of *Kaizen* into management practice, fit the specific requirements and cultural contexts of different organizations, help them gradually form the organizational culture and atmosphere of *Kaizen* management need to be deeply studied and explored in the future.

#### 4. Implementation of *Kaizen*

From the studies on *Kaizen* in the field of management, the author finds that *Kaizen* management could be applied to most management activities and processes in different industries and countries that need to be continuously improved. In general, the study of *Kaizen* implementation usually focuses on the application of *Kaizen* within an organization regardless of any relationship to other organizations. The author summarizes a series of typical studies on the implementation of *Kaizen* into groups to indicate significant research outcomes of this domain.

In the study of *Kaizen* application, many researchers conducted studies on the implementation of *Kaizen* within the scope of an organization to discover and test the validity of *Kaizen* methods in the practical field. Lee (2000) tested the validity of *Kaizen* methods by conducting comparative case studies at Nichols food company. The author found that 5S method and team training program could improve the performance of employees and work environment, decrease defeat rates of production and reduce the time wasted during a work process. Paul Brunet and New (2003) conducted a study of eleven Japanese companies that made steel and motors, and they summarized some methods that could be used for *Kaizen* application during a production process. Abdolshah and Jahan (2006) led a research that focused on what methods could be efficiently applied during each specific period of CI implementation process. Chandrasekaran et al. (2008) explored the effect of *Kaizen* methods to solve “part mismatch problem” in assembly lines of automakers. They summarized the process as follows: collect related data, analyze the reasons for the problem, choose appropriate solution and correct faults in documents and actions.

In order to improve the validity of *Kaizen* methods that are applied in the implementation process, it is necessary for the organizations to focus on several factors that may affect *Kaizen* implementation. Wickens (1990) conducted a research of the Nissan Motor Plant in the United Kingdom. His study emphasized that the teamwork, leadership, and flexibility could improve the implementation of *Kaizen* methods and indicated that the direct communication between leader and his/her employees could make a positive contribution to *Kaizen* implementation. The research of Lindberg and Berger (1997) focused on CI implementation in different Swedish enterprises, and the authors emphasized the importance of teamwork during CI implementation process. Imai (2006) made a presentation at the 2006 Day of *Kaizen* Conference in Barcelona. In his report, he emphasized the importance of TFL (Total Flow Management) application in the process of *Kaizen* implementation. García

et al. (2013) led a survey that used statistical methods to explore critical factors involved in the successful implementation of *Kaizen* in several enterprises in Mexico. The most important seven factors were: “education and training in operators, communication process, documentation and evaluation of projects results, human resources integration, management commitment, and customer focus” (p. 537).

Besides all the studies stated above, other scholars conducted studies to develop research models for evaluating the performance of *Kaizen* implementation. Bessant and Caffyn (1997) developed a CI capability model that could be used for evaluating the level and extent of CI implementation. They listed several behaviors and characteristics that enterprises needed to develop and apply in the processes of CI implementation if they wanted to obtain effective outcomes. Hoang (2017) conducted a research on the implementation and transferability of basic principles and methods of *Kaizen* in Vietnam. The research conducted explored the relationship between *Kaizen* implementation and the improvement of organizational performance by carrying out a survey of 99 manufacturing factories in Vietnam. According to the data from the survey, it was concluded that “most dimensions of *Kaizen* practices related significantly to the performance improvement” (p. VII) by applying *Kaizen* methods in the organizational management process.

Since Imai introduced the definition of *Kaizen* in management study in 1986, a lot of studies have been done about the implementation of *Kaizen* within the scope of organizations in different industries and countries. The studies mentioned above are some typical ones that have had effective research outcomes within the last 30 years. In the future, researchers still need to do more studies in this domain, and more issues need to be solved during the process of *Kaizen* implementation in every management activity. In addition, in order to successfully apply *Kaizen* methods in the practical field, organizations should not only systematically apply the methods of *Kaizen* in right ways, but also need to develop suitable and effective *Kaizen* methods that could well fit their specific needs, conditions and cultural contexts. Therefore, how to coordinate the development of *Kaizen* methods and testing the validity of *Kaizen* implementation needs to be deeply studied for future research.

### 5. International Transfer of *Kaizen*

As we know *Kaizen* methods can be applied to any management activity that needs to be continuously improved. The study on *Kaizen* implementation usually focuses on the *Kaizen* application within an organization. Meanwhile, from the perspective of international business management, *Kaizen* methods could also be transferred among organizations of different industries and cultural contexts. If so, to what extent can organizations transfer these methods to different cultural contexts? Are there any factors that influence the international transfer process? What are they? What problems may these organizations encounter and how can they solve them? All these questions have been studied in the domain of international *Kaizen* transfer.

According to the study of Yokozawa (2007), studying the international transfer of management system could follow five approaches. Since *Kaizen* is a significant part of Japanese management system, the study on international transfer of *Kaizen* also fits these approaches. Firstly, from the perspective of rationalist, management system could be transferred and applied into organizations of different countries and cultural contexts because the senders could transfer the core and basic logic to the receivers (Harbison and Myers, 1959). Secondly, culturalists believed that it was difficult to transfer a management system into different organizations from one country to others because different countries have diverse cultural contexts (Oberg, 1963; White and Trevor, 1983). Thirdly, according to the universal management theory, a group of scholars



(Koontz, 1969; Ouchi, 1982; Kono, 1992) asserted that management system could be transferred abroad because the senders could successfully transfer the science components (theory) of the system to receivers but the artistic components (practice) could not be transferred. Fourthly, based on contingency theory, Beechler and Yang (1994) explained that international transfer of management system was influenced by several factors that might include strategy, environment, cultural context and others. Finally, according to the hybridization theory, transferring a management system from one organization to others needed to fit local environments and cultural contexts (Lillrank, 1995).

It could be easy for us to clearly analyze *Kaizen* management if we regard it as a management process. Some studies about the international Japanese management system transfer have relations to this issue. Ueki (1987) analyzed cross-border transfer process of Japanese management system by using a phase model that included four stages. After that, Miles (1995) developed a five steps model to describe the technology transfer process in management field. Szulanski (2000) developed a model to explain the process of knowledge transfer from one organization to the other by analyzing the difficulties of the transfer process. Based on systematically analyzed and summarized kinds of literature, Yokozawa (2011) constructed a model of international transfer of Japanese management system that consists of four phases, namely: pre-investment, communication, application, and integration.

Based on general ideas of contingency theory, a group of researchers conducted case studies and surveys to explore significant factors that influenced the process of international Japanese management system transfer. These factors could be categorized into three groups: organizational structure, organizational culture, and national level factors. Hayashi (1994) studied the organizational structure of typical Japanese companies and found that this structure could keep balance between organic and mechanistic models but tended to describe the responsibilities of specific jobs vaguely. Quinn and Rohrbaugh (1981) developed a model to categorize the organizational effectiveness, and they showed four different organizational cultures which were: clan, adhocracy, hierarchic and market. Anh, P. C., Yen, T. T. H. and Matsui, Y. (2015) conducted an empirical study and found that "there is positive correlation on *Kaizen* practices and cultures' dimensions in relation to performance of manufacturing companies in Vietnam" (p. 65). Yokozawa (2013) studied the influence of several national factors on the international transfer of *Kaizen*. Two of which were "levels of discipline of employees and eagerness of employees" (p. 1061).

In addition, a group of scholars summarized the problems occurred during the international transfer process and others studied and explored possible solutions for those issues. The problems include the differences of national cultures (Smeds, Olivari and Corso, 2001), communication problems (Jain and Tucker, 1995; Bessant, 2003), lack of suitable tools (Bessant, 2003), just to name a few. Most problems related to different environments and cultural contexts. In order to solve these problems, Japanese companies often transplant the management system with local used systems and ways (Abo, 1994; Kumon and Abo, 2004), establish greenfield and hire green workers (Oliver and Wilkinson, 1992) and help receivers form well fitted organizational cultures and develop suitable organizational structures if necessary (Hayashi, 1994; Saka, 2004).

Looking at all what has been said above, we can conclude that *Kaizen* application generally includes two primary domains. The study on the implementation of *Kaizen* focuses on *Kaizen* application within the organization on one hand, and the study on the international transfer of *Kaizen* focuses on *Kaizen* application among organizations of different cultural contexts on the other hand. Furthermore, we can infer that the

process of international *Kaizen* transfer could be regarded as one that involves teaching and learning processes. Therefore, the sender (e.g., parent company) should focus on the transferability of *Kaizen* related to the capability of *Kaizen* transfer (teaching process), on the other hand, the receiver (e.g., subsidiary) should focus on the localization of *Kaizen* related to the capability of localized *Kaizen* activity (learning process). However, most studies on international *Kaizen* transfer mix these two sides or just focus on the side of the sender but overlook the side of the receiver so that the study on the localization of *Kaizen* is the gap that needs to be filled in further research. A series of issues need to be studied in this domain, some of which are: how can an organization effectively localize *Kaizen* methods so as to fit their specific cultural contexts? What is the relationship between transferability and localization of *Kaizen*? How can an organization well coordinate these two aspects to facilitate the virtuous cycle of teaching and learning processes in international *Kaizen* transfer? More studies on these issues could make a great contribution to *Kaizen* study.

## 6. *Kaizen* and Innovation

As a meaningful management philosophy, the conceptual foundation of *Kaizen* could not only be extended from theory to practice but also be broadened from *Kaizen* study itself to other external related research fields. From the end of the 20<sup>th</sup> century, more attention was paid to the study on innovation<sup>3)</sup>. *Kaizen* and innovation are two different but related terms that could be used to describe the status of a management process. Until recently, many scholars and practitioners have reached a consensus that these two terms have a tight relationship so that they couldn't be separated absolutely. However, other researchers only discussed *Kaizen* and innovation from the conceptual aspect, and few scholars studied them from the practical and other theoretical perspectives.

Conceptually, many researchers thought that *Kaizen* (CI) is a kind of innovation. For instance, based on the studies carried out by Nelson and Winter (1982), Fujimoto (1999), Zollo and Winter (2002) and Helfat and Winter (2011), *Kaizen* is described as a kind of innovation that an organization can use to generate new ideas, technologies and develop new equipment that can change organizational routines. According to Imai (1986), Bessant and Caffyn (1997), *Kaizen* can be explained as a type of innovation that belongs to the management process different from innovation conducted in R&D department because *Kaizen* activity includes many tasks involved in the activities of decision making and problem solving. Bessant and Caffyn (1994) regarded CI as a form of "focused and continuous incremental innovation" (p. 18) which can be applied to the whole company. Koike et al. (2001) believed that the innovation process of *Kaizen* is the small scale's type of innovation in the manufacturing process. Boer and Gertsen (2003) defined CI as "continuous innovation" (p. 805) that includes many small changes with the combination of materials, forces and production methods that were mentioned by Schumpeter in 1934.

Besides the outlined viewpoints, Hammer et al. (1993) and Imai (1997) explained that improvement had two categories that namely: *Kaizen* (CI) and innovation. The former one stands for the small improvement that results from continuous efforts, and the later one stands for the radical improvement that comes from the input of new ideas or technologies. Caffyn (1999) referred CI capability as one of the abilities of an organization that includes a large percentage of its members in the innovation process to help the organization obtain strategic

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3) In general, innovation can be explained as the new, original and effective solution that breaks into a specific domain to meet existing, new and unarticulated requirements in it (Maryville, 1992; Frankelius, 2009).



advantages in the long term. Bhuiyan and Baghel (2005) regarded innovation as one of the sources of CI. They believed that CI could be implemented and achieved in two ways: one is the incremental improvement and the other one is the radical change that comes from the input of innovative ideas or new technologies. Anand et al. (2009) concluded that CI consisted of a series of process innovations that could improve the performance of an organization.

Nowadays, most researchers who studied the relationship between *Kaizen* and innovation conducted their studies from the conceptual aspect. Meanwhile, we can also find several researchers who explored the same research topic from the practical aspect. For instance, Birchall et al. (1996) conducted a survey among French small and medium enterprises (SMEs) to explore the source and nature of innovation. Among a series of factors, continuous improvement of work process was one of the most significant elements and sources of innovation. Terziovski (2001) explored the relationship among CI, innovation and organizational performance by conducting a survey of 115 enterprises of manufacturing industry in Australia. As a result, the author concluded that CI innovation strategy and system could indicate the level of performance of the SMEs. Iwao (2017) conducted a series of case studies to explain *Kaizen* from the perspective of innovation. He wrote a literature review of *Kaizen* from the aspect of innovation and estimated the scales of continuous improvement as an innovation by introducing the notion of "scope of coordination" (p. 1). In the end, the author found that shop-floor engineers played a significant role in the coordination of different levels within an organization to improve the extent of *Kaizen* implementation and inspire innovations.

*Kaizen* and innovation are two terms that can be used to describe the status of a management process from two different but related sides. Recently, several researchers have conducted studies to explore the relationship between these two notions from the conceptual perspective. However, few case study and survey estimated *Kaizen* and innovation management from practical level and other theoretical aspects. From the author's viewpoint, *Kaizen* management process could be explained as a kind of continuous innovation. After finishing one step of improvement, the organization could obtain a better result from previous work, and this result could be regarded as an innovative result. Based on this, it can be concluded that the organization could obtain continuous innovations when it implements *Kaizen* principles and methods in the management process.

## 7. Conclusion and Research Prospect

As an important concept that roots in Japanese management, *Kaizen* can be regarded as the key to Japan's competitive success in the international market. Since the introduction of the concept of *Kaizen* in 1986, definitions of *Kaizen* have been given from different perspectives. Although in the academic circle there still doesn't exist a consensus many researchers believe that *Kaizen* refers to continuous improvement. Alongside the development of *Kaizen* management practice, many application methods of *Kaizen* have been developed, applied and tested by organizations that need CI in their daily activities. The methods include but not limited to TQC, PDCA Cycle, QC Circles, Suggestion System, Autonomation, TPM, *Kanban* System, 5-S Movement, Just-in-Time, Lean Manufacturing, Six Sigma, Lean Six Sigma, *Poka-Yoke*, 7 QC Tools, *Andon*, etc. The definitions and methods of *Kaizen* are the basis of *Kaizen* study. Over the past 30 years, a lot of researchers studied the implementation and international transfer of *Kaizen* in different industries and countries by conducting case studies and surveys. They have obtained many valuable research outcomes and have given a series of suggestions to organization and practitioners that have a great interest in *Kaizen* management. In

order to strengthen the conceptual foundation of *Kaizen* study, the localization of *Kaizen* needs to be deeply studied in the future. Since the conceptual foundation of *Kaizen* could be extended from *Kaizen* study to other external related research fields, a group of scholars explored the relationship between *Kaizen* and innovation or studied *Kaizen* from the perspective of innovation. All these studies expanded the research scope of *Kaizen* from theory to practice, from quality, productivity, and lead time to general business, from manufacturing industry to other industries, from conceptual foundation to other research domains, and from Japan to the world. All theoretical and practical outcomes of *Kaizen* studies have significant influences on management study and industry study in the long term.

Although many issues of *Kaizen* management have been explored and studied over the past 30 years, issues like: exploring what the core and periphery features of *Kaizen* are, developing new application methods of *Kaizen* management, estimating the validity and effect of *Kaizen* implementation in different industries, developing suitable and effective ways to well transfer and localize *Kaizen* philosophy and its methods into different industries, countries and cultural contexts, discussing the relationship between *Kaizen* and innovation in theoretical and practical aspects, extending the study of *Kaizen* to other related research domains, etc. should be studied more in the future.

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