

Let's Learn from How Kaoru Ishikawa Established Kaizen (Japanese QC)

By Motokazu KANOKOGI (a *kaizen* evangelist)



Author
Motokazu Kanokogi

1. From the ODA Frontline

I have many opportunities to participate in the activities of ODA in relation to the transfer of *kaizen*, where we discuss a variety of issues such as 5S, QC circle (sometimes called *kaizen*), TQM, problem-solving, *kanban* and others. The actual program of my activity is eventually decided according to the situation within my ready capacity, and as a result, my activities eventually became diversified. So I would like to introduce here some cases that impressed me.

★ Expectations for *Kaizen* of Ethiopian Premier Meles

When a *kaizen* project started in Ethiopia under the leadership of Premier Meles, I had the honor of making a presentation on *kaizen* for him and he encouraged our team members by saying that he himself would be the first student of *kaizen*.

★ A small firm implementing an excellent *kaizen* model

There is a large demand for high-quality limousine taxis in Addis Ababa, a cosmopolitan city in the African continent. The owner of a small company running limousine taxi services seems to be an excellent *kaizen* model. He has gathered information about the likes and dislikes of his customers and organized them appropriately so that the information is effectively shared among his group of drivers through his education and training program. He also continuously implemented effective HR management to motivate his drivers to run a small-group activity to continuously improve their performance for customer satisfaction.



Photo: JICA

Ethiopian Premier Mr. Meles listens to Ambassador Mr. Komano and JICA kaizen leader Mr. Kanokogi, November 5, 2009.

★ A general manager enlightened by diagnosis & guidance

A general manager of a steel-processing works was eager to introduce *kaizen*. After several contacts with our team consisting of Japanese experts and officers of the local *kaizen* unit, it was agreed that we would take on the challenge of introducing Company-Wide QC (CWQC). Our team provided the company with a carefully designed manual describing how to proceed with group meetings, and jointly held a model meeting in which one of our team members played the role of chair. The general manager who had observed the meeting was very impressed to see his employees present good views and opinions there. He was pleased then, but he became puzzled about how to deal with the plans the model *kaizen* meeting offered, as he felt a kind of obligation to talk with his executive staff. So we offered another manual explaining the procedures of how to deal with the outcome of small-group activities as proposals to the general manager, so that he can consult with his staff before making his final decision. The general manager highly appreciated the effects of *kaizen* and the *kaizen* team members, and we were also happy to have the chance for the local officers to experience a successful transfer model of *kaizen* activities.

★ Japanese citizens' behavior shown in the 3.11 disaster promoted *kaizen* transfer.

At a seminar, I noticed the participants showed unusually strong interest in the *kaizen* lecture. Although there are many *kaizen* seminars offered by consultants from countries other than Japan, they were moved when they saw scenes in which Japanese citizens tried to sustain themselves in the horrible situation after the 3.11 disaster. They said that they wanted to hear about *kaizen* directly from a Japanese expert. The concentration of the participants was kept very



Photo: Author

A production manager explains his Ishikawa Diagram analysis in a kaizen seminar.

high throughout the seminar. A young government employee who had studied production management in the US told me that, after a long exchange of views and opinions among the participants including myself, she could understand that “Lean production aims at a healthy way to manage an organization to survive in a competitive market.”

★ Become aware of enormous effect of visualization

While lecturing on visualization, I showed a photo of minibuses going everywhere in African cities and asked the participants how people know the destination of the bus. The bus actually has no sign showing its destination. Passengers ask the drivers the destination and drivers answer every time they were asked; the driver looked so busy that one of my colleagues said that the driver must be the hardest worker in the world!

The participants instantly understood the effectiveness of visualization.

★ On-the-Job training

When I advised an Ethiopian shoe manufacturer who worked hard to sell its shoes in the Japanese market, I found that the most serious obstacle was the difference in the sense of time-keeping in every action in the trade between the supplier and the buyer. I made my best effort to get them to agree on a mutual sense of time-keeping. As a result, the manufacturer is now successfully trading its sheepskin shoes in stores in well-known shopping areas of Japan.

★ Understanding 5S differs from implementing it

The 5S - sorting, setting in order, cleaning (the first initials is ‘S’ in Japanese), standardizing and sustaining - is a set of fundamentals at every workplace.

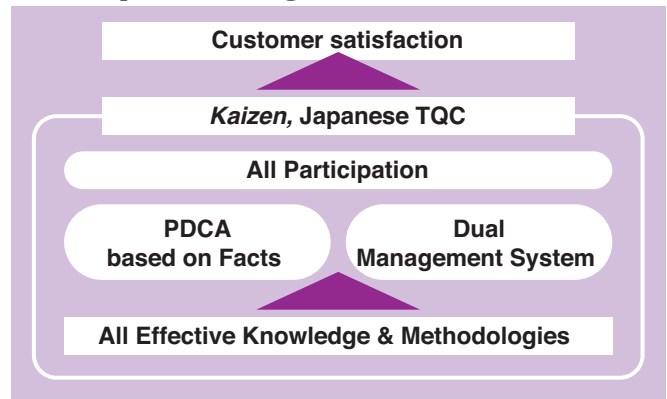
At a workplace, I had the local *kaizen* team members fully understand the 5S. They said that the 5S can be applied not only to spaces to place things, but also to such resources as human resources, financial matters, timing, and so forth. This was a good case. But there was also a regrettable case where a manufacturer failed to catch a good chance to open the door to a European market, only because it did not implement the 5S before the European buyer came to its factory, although I had given a 5S training to a director of the company in the preceding week.

2. What Kaizen Means

There are three meanings: ① “Improve,” as is written in dictionaries; ② “Japanese Quality Control,” which is a technical term. There were at least four TQCs such as TQC by Deming, TQC by Feigenbaum, TQC by Juran, and Japanese QC. The QC Research Group in the Japan Union of Scientists and Engineers (JUSE) headed by Kaoru Ishikawa initiated the work of establishing a management system in 1949. This management system was a logical management system based on the facts (using statistical methods) and used to be called Japanese QC or Company-Wide Quality Control (CWQC). But, since around 1990, it has been called Total Quality Management (TQM). Customizing imported knowledge such as “Taylor’s Scientific Management,” “Industrial Engineering,” “Statistical Quality Control,” and “Feigenbaum’s TQC,” Kaoru Ishikawa established a sophisticated management system called Japanese QC or Company-Wide QC (CWQC). Toyota’s *kanban* production system is the most symbolic success story to realize a new concept of a full

CHART 1

Conceptual Image of Kaizen



Source: Conceptual Image of kaizen

production control system, which was established as the outcome of long-term efforts based on Japanese QC. These success stories were introduced under the concept of the word “*kaizen*” in 1986 by Masaaki Imai in his book titled *Kaizen*. ③ As for the third meaning, on some ODA sites, *kaizen* is being used as “5S and *kaizen*,” where *kaizen* means QC circle-like activity with a suggestion system, in order to establish a first step towards the *kaizen* described above in ②.

3. Establishment, Features & Impact of Japanese QC

3-1. Establishment

The QC Research Group consisting of scientists and engineers from industrial, governmental and academic sectors of Japan, led by Kaoru Ishikawa, was organized in 1949 in JUSE, and addressed issues of quality improvement of Japanese industrial products. Diversified seminars regarding QC were designed and implemented, including seminars by Dr Deming and Dr Juran, and Kaoru Ishikawa was widely influential and played a remarkable role in establishing Japanese QC, which was applied and extended to almost all business sectors in Japan. In this successful case, Japan executed good ownership to select and customize knowledge and skills and successfully established a new system. In the 1970s, even some foreign companies wanted to introduce an essential part of the Japanese QC. This is a very rare success case of establishment of a Made-in-Japan system in history, while it has been said that Japan is good at introducing foreign knowledge.

3-2. Features

I understand that Kaoru Ishikawa had two basic recognitions.

The first one was that matters including organizations and members have to change in order to survive. Therefore, organizations have to be ready to change themselves.

The second one is that a management system shall have a function of addressing cross-cutting issues that may arise at every cross-section such as section, function, profession, work level, elitism, freedom and rules, religions, tribes, and so forth. Therefore, there is a constant need for education, training and study.

As a result of synergy effects with development in other fields such as ICT and globalization, the capacity of production management has been expanded so that a shift of production sites has become easier and many manual jobs are now done automatically by machine. Fields

where Japanese workers used to excel have been reduced.

It can be said that the job creation effect in manufacturing has been reduced as a result of the greater sophistication of production management.

3-3. Expansion of Japanese QC, Current Situation

While there was remarkable progress in technologies such as ICT and other advanced technologies, Japanese QC based on customer satisfaction has been extended beyond the manufacturing business to other industries, such as services, even including the public sector. For example, in the services industry, some parts of production are carried out in unity with consumption where customers are participating, whereas in the manufacturing industry, customers do not enter the workplace of production. The processes of the services industry are more complex and difficult to control than those of the manufacturing industry. The Japanese QC based on a careful consideration of customer satisfaction can be effectively applied to the services industry by making information into numerical and language data. The services industry has become more and more vital in many developing countries, which I think is an effect of the impact caused by Japanese QC.

Western countries, which became aware of the superiority of Japanese QC, introduced some of it to develop effective systems and methodologies such as Six Sigma and ISO 9000 families and other management systems. The effects have been extended to Taiwan, China and South Korea, and then to other developing countries, as well. In Japan, while various qualities have been improved even in the low economic growth period, a feeling of hopelessness spread in the economy, due to the fact that potential problems have increased without being addressed.

★ 3.11 Accidents at Fukushima Nuclear Power Plant #1

On 3.11, 2011, a big earthquake occurred and it caused a tsunami which caused the Fukushima nuclear plant #1 accident, and the plant accident caused enormous disasters. I first wanted to know the assumed height of tsunami when the plant was designed more than 40 years ago. I asked some government offices, but there was no answer to my question. According to the management system theory I learned, actions called 'corrective actions' must immediately be taken to correct an undesirable situation and other actions called 'preventive actions' must also be taken, to prevent reoccurrence of the same problem in the future. Needless to say, it is necessary to find out the root cause, in order to take proper preventive action.

In this case, the tsunami seemed to be the root cause. However, it is impossible to eliminate the tsunami itself, since it is a natural phenomenon. It is necessary to be equipped with a measure to prevent disasters caused by assumed possible natural phenomena.

When I heard that a spokesman announced that the tsunami was beyond their assumption, I was surprised, as I recalled a scene of a tsunami which I saw when I was a little child.

I saw a scene in a children's *kami-shibai*, a picture card show for children. The scene was powerful. Every villager was trying to push ahead to reach the top of a hill. Horrible waves were coming close behind the villagers.

Then I worked to collect information about tsunami. I found a love poem in which a huge tsunami was described, saying that a tsunami came to the mountain near Sendai Shiogama seashore. The poem, one

of the renowned Ogura hundred poems composed by the father of Seishonagon, a famous essay-writer in the Heian era, says:

"Did we not pledge eternal love, Wringing the tears from our sleeves, Swearing our love would never change, Like the waves that never break on Matsuyama?"

According to a report made by Togo Yoshida, a historical geographer in the Meiji era, the waves mean the huge tsunami caused by the Jogan Earthquake that attacked the Sendai area on July 9, 869, 1143 years ago, and Matsuyama means the small hill behind a temple today called Hokokuji, about 2 km from Shiogama Port. He concluded that the big tsunami reached the hill, but did not break on it.

According to the interim report issued at the end of 2011 by a government panel, all information regarding tsunami has not resulted in any effective attention from any of the concerned persons. It is necessary to clarify the reason why the potential risk of a tsunami had never been addressed effectively all through the history of nuclear power plants, which is the real cause of the disaster to be eliminated. I hope that future research will be executed following the basic way of thinking in Japanese QC.

★ Decision-making capacity of a democratic nation

In a previous issue of *Japan SPOTLIGHT* (March/April 2010), I expressed my anticipation of a new start of *kaizen* activity in the political sector of Japan. But I am still looking forward to seeing the effects of a large-scale cycle of Plan Do Check Act (PDCA) with a democratic process. In this connection, I'm worried about the lack of capacity of the academic sector and the mass media, which should take the initiative in developing ways to the future in addressing cross-cutting issues between humans and nature, or private and public. The reality is that the more the socio-economic structure is differentiated, the narrower the scope of people on the structure becomes, resulting in their reduced capacity to deal with cross-cutting issues. It is necessary to equip them with a sufficient function to deal with cross-cutting issues as the differentiation of society advances with the advancement of the socio-economic society. We need to recognize that we are still in the developing stage.

4. Conclusion

Kaizen is effective in solving almost all kinds of human problems in managing organizations in a democratic way, but only if good leadership is available. Kaoru Ishikawa successfully established *kaizen*, dramatically changing the image of made-in-Japan products from "cheap and nasty" to "high quality," and making the concept of quality expand beyond industrial products and goods to other items such as services, processing, environment and daily life. It is hoped that new challengers like Kaoru Ishikawa will appear in Japan to take the initiative to tackle the problems Japan is now facing. It is also hoped that many developing countries will be successful in introducing *kaizen*. The key to success is to find a person like Kaoru Ishikawa who is capable of executing ownership to customize systems so as to be suitable for the socio-economic culture of his or her country. **JS**

Motokazu Kanokogi is a Representative, Management System Studio. He worked at Mitsubishi Chemical Co. from 1958 to 1997.