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“JAPAN SHOULD BE THE GLOBAL DISSEMINATOR OF TQC”

from “Total Quality Control”, Vol. 44, No. 2 (Feb. 1993)



TQC is a truly remarkable administrative system, especially in our manufacturing industry. This system has evolved little by little in line with the transformation of social conditions, and has finally

reached a state of near-perfection. But after we publicize TQC to the international realm of business, TQC experts will be in greater demand than ever. In this context, we would deeply appreciate TQC specialists listing all the superb merits of TQC so as to make a better presentation to the world, with Japan playing the pivotal role as the center of TQC dissemination.

JUKI products are preferred by clients representing more than 160 nations. Our overseas corporate establishments are also engaged in promoting TQC to make things even better. But it's not all export, because JUKI is also importing merchandise and marketing it in Japan.

Let me give you a sample case that might interest you. It happened recently when we entered into business negotiations with an American company. At the outset discussions did not progress smoothly owing to problems related to the disclosure of data on quality control and the like, which later we found to be caused primarily by misunderstanding. But soon afterward it was revealed that JUKI had been promoting TQC. Evidently that resolved the matter, and negotiations moved much more easily toward ultimate success. The fact that both JUKI and the American firm had a common interest in TQC as applied to manufactured products is what lubricated the deal we finally made. In more than one way we take off our hat to TQC.

I, for one, sincerely hope that Japan's government will make use of TQC's universal way of thinking and modus

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(1981 winner of the Deming Application Prize for Division)

operand when carrying out measures for international cooperation. I believe that Japan should take the lead in implementing a worldwide TQC campaign.

Ever since the Meiji Era (1868-1912) Japan has been adopting all sorts of culture, including education, from the Occident. But so far as TQC is concerned, Japan has all the basic ingredients necessary to set itself up as the home base from which TQC is diffused throughout the community of nations.

As a manufacturer, JUKI has made great efforts to set up a streamlined organization, one that starts with planning and carries the operation through stages of development, manufacturing sales, delivery and post-sales servicing, all thoroughly knowledgeable of the needs of our clients and fully capable of satisfying their demands from a global point of view. But no matter how tried, unfortunately our goal fell short of prime.

Thus in December 1988, on the occasion of the golden anniversary of the establishment of JUKI, we introduced a new set of corporate mottoes. One of them goes, “To promote integrated quality administration.” There were, however, adverse comments to the effect that any motto containing the phrase “quality control” would not set well with our sales and administration personnel.

Nevertheless, despite the opposition, JUKI adopted “integrated quality administration” as its corporate motto. It has come to sound quite familiar to us and, at the same time, represents our basic policy of integrated TQC administration.

Subsequently we printed our mottoes on small cards and made sure that each and every JUKI employee got one, with instructions to keep it handy at all times. By occasionally reading these cards, the concept incorporated in our mottoes will not dim in the collective mind of our workforce. ★

“IN SEARCH OF HIGH-QUALITY SOCIETY”

“from 30th Top Management Quality Conference”



Japan's First Turning Point: Defeat in World War II

The Japanese people of my generation are believed to have undergone three stages in life. The first was Japan's era of militarism prior to and during World War II. Japan's defeat dramatically revised their lifestyle, however, and ushered in the second stage for our generation: the period of selfless devotion to rebuilding our nation's economy under the war-renouncing new Constitution. The third era is that during which Japan emerged as an economic superpower making full use of its technological innovation and high competitive edge in world trade.

Having experience these three periods means that my generation has gone through two major turnarounds in history. Since those of you in my audience today are persons interested in gaining a working knowledge of and skills in quality control, I'll try to put quality control into its proper perspective in relation to these two turning points.

The first turnaround was an outgrowth of widespread international opinion that Japanese products were “cheap and shoddy.” Still, somehow Japan had to survive as a resourceless exporter of manufactured goods in the postwar era.

This, then, made it important for Japan to introduce greater quality to its products and give them added value. Fortunately the art of statistical quality control (SQC) was brought to Japan in those days by Edward Deming and other scholars. The SQC formula was considered as a boon by the Japanese: a way to improve the quality of their merchandise. In an effort to adapt SQC to Japan's industrial climate, the Japanese later evolved it into total quality control (TQC). This fervent devotion to improving the quality of their goods has gone far to propel our nation to the status of a great economic power.

Our company, Yokogawa Hewlett Packard, has been among the beneficiaries of quality control. Ten years have passed since we received the Deming Prize. Through our quality control efforts during the past decade we have re-

Keynote address by
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Chairman of the Board
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markably improved our management performance. Not only that, at Hewlett Packard subsidiaries around the world the failure rate of our products has been reduced to a tenth of the level we had ten years ago.

Clearly, the use of quality control bailed Japan out of its postwar period of crisis. Not only did it help war-devastated Japan become an affluent nation, it set a good example for the rest of the world.

Contradictions in Being an Economic Superpower

The second turning point evidently is upon us now and is the result of both internal and external conflicts caused by Japan's emergence as an economic superpower. Admittedly it comes as a matter of wonder that an export-led country like Japan was able to develop and produce manufactured goods highly competitive in the global market. At the same time, though, the effect of our triumph in world exports is a huge trade imbalance in favor of Japan.

We should also remember that the international acclaim regarding the high quality of Japanese products in actuality is based only on the output of specific types of industry in which Japan holds a competitive edge, such as steel and automotive manufacture, electronics and construction.

Even today many industrial sectors in Japan are not exposed to severe competition in the world market, as they can still get by with low productivity under government regulations and protection.

Moreover, when it comes to Japanese corporate behavior, or administrative guidance and regulations, there are many systems and practices that the rest of the world have yet to accept or even understand.

Added to this, the nation's inflated realty and stock prices, followed by a sharp drop in their values, not only left Japan with deep fiscal wounds; the bursting of its economic bubble has widened the income difference between the haves and have-nots, the precipitate being increased dissatisfaction among urban workers and production laborers who must

depend entirely on their wages to fulfill their hopes in life.

Is Japan Really an Advanced QC Country?

Over the years we have tried to learn QC techniques from our predecessors and give practical application to their teaching in business operations. But when I put Japanese society in its proper perspective as related to the wisdom of QC procedure, I often wonder if Japan is really a QC leader.

The crux of QC procedure is being “consumer-oriented.” But as things stand today, the climate surrounding Japan’s agriculture, distribution, real estate, securities and other forms of endeavor seems to deviate from the principles of free market economy. A number of irregularities among these industries have made big news in recent years.

The name of the QC game is “Statistics Speak.” But the fact remains that such key national issues as revisions of the tax law and the election system have not been debated objectively in context with the study of data. Instead, so-called “kitchen” or “partisan politics” and personal interests are often more forceful and take precedence in disputes over such issues.

Usually an organization is divided vertically into specialized divisions or departments. Important in QC for business is cross-functional management aimed at achieving company-wide objectives. Japan’s political administration is vertically divided, too, but in a way that it encourages each governmental agency to put its own interests ahead of the others, and this presents an obstacle that hinders making timely governmental decisions which serve the best interests of the nation as a whole.

An important principle of QC techniques is to “define the focus of a policy.” I believe this is the lone option for Japan as a resourceless nation if it wants to survive and prosper using its technology. Unfortunately, though, Japan’s colleges and universities are forced to get by with poor research facilities and equipment, compared with many seats of higher learning abroad, places called “centers of excellence.” This poses a serious handicap for Japanese researchers in pursuing their academic studies. Japanese colleges and universities should make it a key policy to improve their facilities in an effort to help motivated researchers seek Nobel Prizes, thereby ushering Japan into a new technological era befitting the twenty-first century. But these institutions claim to find themselves in financial straits owing to insufficient funding as well as budgetary ceilings. I marvel that Japan’s colleges and universities have been unable to secure the kind of budgets that can meet their academic needs in defiance of all the money available in current years.

Entree to improvement through QC is to undertake a program of soul-searching regarding what Japan does, then take action to resolve its problems. It would be more in line

with the principles of QC for Japan, a nation that has amassed a huge trade surplus, to resolve domestic problems to reform itself rather than criticize other nations for their deficiencies. By taking such an approach, I’m sure Japan can make a more meaningful contribution to the rest of the world and assure true happiness for its populace.

Having said this, I believe we still have many instances that contradict the popular idea that Japan is an advanced country as seen from its QC principles.

The tremendous energy of the Japanese people during the postwar era has boosted their nation to the status of an economic superpower. But having attained that lofty state, Japan now seems to have lost its objective and suffered from the many pains inflicted during the course of high economic growth. It appears to no longer know which way to turn.

This situation points to the fact that we now squarely face the second turning point. Here I believe that the 1990s will mark the most important shift in the history of postwar Japan. If we’re successful in surmounting this challenge, I foresee Japan evolving into one of the most well-balanced, affluent nations in the world, one truly seeking to let its people enjoy higher quality life in the coming century. In addition Japan, as a technology-centered country, can use its resources of skilled manpower and make further efforts in taking the lead to cope with the global challenge of protecting natural resources and our earth, and thereby contribute to the world as a whole.

On the other hand, if Japan fails to weather this challenge, we may find ourselves an isolated nation and in a rapid state of economic decline.

I further believe that the 1990s will provide the final opportunity for Japan to improve its social infrastructure. Fortunately the nation’s trade and other balance sheets are still in a healthy condition. This decade will stand as the last chance for Japan to prepare for the problems anticipated for the nation in the coming century, among the most important of them being a worsening labor shortage, an aging population, and increasingly limited shortages of natural resources. This, then, is what Japan’s second turning point is all about.

The Search for High-quality Society

Once again, the QC formula did wonders in helping postwar Japan at the time of its first turning point: It armed the nation with badly needed practical knowhow for improving the quality of its manufactured goods. Now then, what can QC do for today’s Japan, a country facing difficult challenges at the second major turning point in its postwar era? Until last October I served as chairman of the Japanese Society for Quality Control, and during my tenure in that capacity I gave serious thought to this question.

As I mentioned, Japan is part of the turbulent times

affecting the world today and a number of important domestic problems await resolve. This, then, forms Japan's second national postwar crisis. Once more, the QC formula helped Japan to survive its first postwar crisis. But it appears that contemporary Japanese society is not quite in tune with the principles of quality control.

Japan pulled through its first turning point, or crisis, by learning how to produce high-quality merchandise. This being the case, I propose that it be a national goal for the people, now confronted with their second turn, to create a high-quality society. Here, to say the least, quality control can play a major role in achieving such a society.

Good quality has universal value. Everyone shares the hope of getting good quality. And in this context I have no doubt whatever that Japan leads the world in the production of quality goods.

Nowadays the Japanese people have come to seek high quality among processes and services in every sector of society. By satisfying these needs I'm sure that Japan can further evolve into a distinctive nation capable of winning the respect of other countries around the globe. As regards communications with other lands, I believe a QC-based approach and method will be of great help to Japan in clearing linguistic and cultural barriers.

Above all - and this is indeed fortunate - Japan has the kind of tradition that blends well with a high-quality society. Its national assets include works of art, industrial prowess and technology, high standards of education, superior social safety, and a great amount of natural beauty.

All this leads me to surmise that the next goal for Japan in preparing for its second turning points is to create a high-quality society, just as its first turning point and goal was to create high-quality products. It is my firm belief that determination along these lines should be demonstrated by all of us who seek to promote QC activities.

First and foremost, I hope that those forms of industry already in the mainstream of competition will not relax their efforts to improve the quality of their operations and products. As a nation wanting for natural resources, Japan should develop products that unfailingly satisfy the needs of the market and of the consumer. To this end it will be essential for these forms of Japanese industry to continually upgrade their development and production processes.

Then, too, it will be necessary to pass along the superior knowhow developed by successful industries to Japan's low-productivity sectors of business. In his 1981 book "TQC: The Japanese Wisdom," Prof. Hajime Karatsu states: "The 1980s will be a golden age for Japanese industry. Nevertheless, many perplexing problems remain to be solved. Among them the greatest obstacle is the unbalanced prices of products. True, some of Japan's industrial wares

are the most inexpensive in the world. But a number of manufactured goods used in our daily life represent the highest prices of all among nations. The way to resolve this issue is clear: To transfer to low-productivity industries the technology developed by Japanese industries that enjoy the world's highest productivity."

Prof. Karatsu goes on to say, "The QC formula is the very method that can correct the situation. I suggest that such an approach also be applied as a means to improve the productivity of Japanese society as a whole. In 1990, following ten years of effort to promote that approach, the present outrageous pricing system should be successfully resolved. In addition Japan will grow to become a nation that can take the initiative in coping with various global problems concerning natural resources, the environment, energy and other issues."

Prof. Karatsu made these statements in 1980 when predicting what would happen to Japan's society in 1990. Ten years have passed. What progress has been made?

It is my sincere hope that those who study and practice quality control will gain a thorough insight to what a high-quality society in fact is, and do what they can to improve the "quality" of Japan in the coming twenty-first century.

Quality control is a practical and academic science linked to social structures as its very basis. As applied to the needs of business, the QC formula aims at improving corporate organizational structure, or individual processes and systems within a business operation, the result being improved quality of whatever the output.

Both the Japanese Society for Quality Control and the Society for the Study of TQC Systemization define "quality" in the following way.

In a narrow sense of the word, it refers to the quality of products and services. Given broader meaning, it includes the quality of anything ranging from local communities to international relations. And among these are corporate activities, regardless of their nature, that seek better quality in manufactured goods, that is, the quality of management, the quality of work, the quality of environment, the quality of people, the quality of information, and the quality of society.

Quality, in its broader sense, is the value concept that covers every segment of society, not only corporate activities but the system and process of systematic human endeavors and their output. And the ultimate end of the quest for quality is the realization of a high-quality society.

Finally, let me conclude by summarizing my great hope for quality control in a single phrase: "high-quality society." A high-quality society in light of the major turning point now facing us that determine the course Japan will take in the twenty-first century... this is what we seek. ★

Thank you.

TWELVE ARTICLES ON THE ACTIVATION OF THE QC CIRCLE FOR TOP MANAGEMENT (2)

from "Total Quality Control", Vol. 43, No. 6 (Jun.), No. 7 (Jul.), No. 8 (Aug.), No. 9 (Sep.) 1992, JUSE

Masao NEMOTO
1992 Deming Prize Medalist
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ARTICLE 7 The engineering, sales and administrative divisions are not required to have QC circles that are exactly the same as in the manufacturing division.

At one company, a section manager of the QC circle promotion office told me that he was having difficulties "because our engineering division's QC circle activities are quite dull."

In this company, when the QC circle has a meeting overtime, employees can receive overtime pay if an application is filed. According to this unique system, the company has been checking the number of circle meetings held by tabulating these application sheets. The manufacturing division has applied for about two hours of overtime almost every month for the QC circle meetings, while the engineering division has yet to issue an overtime application sheet. Based on this data, the company decided that the engineering division's QC circle activities have been quite dull.

The subsequent survey demonstrated that the engineering division did not actually develop the QC circle activity. However, I would like to present one question here: i.e., is it good for the company to force the engineering division to use the same QC circle system as at the manufacturing plant?

The nature of the work for personnel belonging to the engineering division is probably similar to that for the foreman. Therefore, we can conclude that introducing QC circle activity into the engineering division was not necessary. In spite of this, the engineering division should plan some optimal educational method to foster QC-consciousness. The same philosophy will be applied to other administrative divisions.

In these divisions, all staff may also be gathered to consider specific issue(s). Although this system resembles the QC circle, its characteristics are somewhat different. Since the section manager holds meetings to discuss themes that he has prepared, this system is completely separate from voluntary QC circle activities. To clarify the difference between this

system and QC circle, the former system is called the "Manager-Directed Improvement Group" in the Toyoda Gosei Co., Ltd.

ARTICLE 8 The character of the company's "unique QC circle" should be clear in the service industry!

In the manufacturer divisions, few QC circle leaders are managers. Although managers may be the leaders for one or two years after the introduction of QC circle activity system, they usually become advisors a few years later.

In the service industry, however, there are some cases in which managers work as QC circle leaders for a long time. Accordingly, the opinions of managers are strongly reflected when selecting the theme, and thus there arises the anxiety that the "independence" of each circle member may be slightly impaired. However, this system may be a good method for the service industry.

As described above, many QC circles provide activities slightly different from standard activities. Since each company changes and applies its QC circle system to meet its particular environment, the system changed is the best matched way only for that company. However, if the differences between the unique and standard systems are left unclear in the local presentation or information exchange meeting between the companies, some misunderstandings will occur with respect to each QC circle activity.

ARTICLE 9 All members should express their opinions during "brainstorming" sessions at the QC circle meeting!

Whenever I tour the shop floor and listen to suggested improvements from QC circles, I ask the members if they are brainstorming.

The expression "brainstorming" means that all members participate in free and cheerful discussions. Some discussions may seem useless when you think about them later. However, if brainstorming is prohibited from the beginning, member discussions will not be free or cheerful.

Also, good circumstances must be established such that all members are free to speak their opinions. A chairman, the circle leader, is the very personnel to take on such the role. Although “Is everyone attending the meeting?” has been the leader’s important self-evaluation item, “Are all members speaking?” and “Are you brainstorming?” are recently added items.

I would like to add one more comment on the philosophy of encouraging all members to speak. When selecting the QC circle theme, it is important to check whether the theme is appropriate for all members to express their opinions.

ARTICLE 10 Enough time should be allotted to discuss possible improvements.

When the QC circle is to discuss the next theme, enough time should be spent so that all members completely understand the problems at their workplace. Some leaders teach you to spend more time analyzing the data rather than selecting the theme. However, since such a method would result the circle leaders preparing a theme in advance, the members could not take advantage of this valuable opportunity.

If all members recognize problems at their workplace through discussions as described above, more results will be better than if you said, “Be careful not to generate nonconformities!” several times at each morning assembly.

As the next step, I would like to show how to screen themes to determine the final item. For a period of about one year after the introduction of the QC circle system, I recommend that the circle select “nonconforming quality” as a theme. In the service industry, “faulty service” will be the theme. “Defective work quality” may also be available. “Reduction of nonconforming quality” is the best way to learn and master the “seven QC tools” or the “QC story.” Although themes other than nonconforming quality may also be selected for the second and subsequent activities, even in such cases, it is preferable to select a subject related to quality at least half the time.

ARTICLE 11 Improvements should be agreed on by the superior.

When I attend the presentation on improvements achieved by QC circles, I feel some QC circles are implementing countermeasures without the consent of their superiors. It is likely that although the circles actually obtain agreements from superiors at every stage of the work, the details are omitted in the presentation. However, do all the circle members know the details? Or does every audience who attends the presentation understand it? Such an insufficient presentation may cause significant misunderstandings among people attending the presentation in order to learn the QC

circle system for future use.

In addition, many QC circles can propose the item of “standardization” in the QC story but cannot implement it. Standardization is often realized by the foreman. The theme of “remaining problems and future plans” can be treated in the same way. Therefore, for these items, every QC circle should report that “this is the final system decided on by our superior.”

However, if concerns related to the development of the QC circle activity remain during the process of improving QC circle activity, I think that the QC circle must work out an appropriate countermeasure and express its opinion accordingly.

ARTICLE 12 Notes on QC story

In the QC circle presentations, some activities do not follow the correct QC story. In this article, I would like to talk about common subjects that QC circles must relearn.

First, the items discussed in “selection of the theme” are confused with those screened through the survey and analysis process. It is wrong to explain the screened theme as an overall theme. Many people say “that this distinction” makes no difference. However, this logic is quite incorrect. Even if “contamination of oil” was selected as an important theme through survey and analysis and the resulting countermeasures effectively cleaned up the oil, improvement of the 5S of the workplace should absolutely remain the original theme. If any other results did not emerge, the 5S would not reach more than a medium level compared to other workplaces.

If “countermeasures on contaminated oil” will be the theme, the QC circle must explain why the team selected such a theme in the “selection of the theme” stage.

Second, I would like to explain investigative and analytical approaches to develop improvements, including the reduction of man-hours. Even though Pareto curves or cause-and-effect diagrams can always be effective tool for reducing “unfavorable matters” such as nonconforming quality or late delivery, they often become useless when trying to reduce man-hours. Although IE’s or Toyota’s production techniques must often be the best approach to reduce man-hours, the enforced use of Pareto curves or cause-and-effect diagrams would be an reasonable method. Even the presenter may say, “We added analysis based on Pareto curves and cause-and-effect diagrams for this presentation even though we didn’t employ either of them in actual practice. Thus we don’t have much confidence in our findings.” In this case, audiences will not understand the relevant presentation even if the instructor comments, “You don’t have to worry about the form of the presentation.” The instructor must clearly explain other QC techniques and how to use them so that each circle member will understand them completely. ★

Opening of JUSE Higashi-Koenji Annex and Reconstruction of JUSE Headquarters Buildings at Sendagaya, Visitors to JUSE are required to be confirmed their visiting place in JUSE

JUSE Higashi-Koenji Annex for our new educational facilities will make a start on July 1, 1993. This leads the followings:

- 1) Twenty-five staff of the 1st Operations Department of JUSE that is in charge of operating TQC seminars and courses in general, will be transferred to the Annex from JUSE Headquarters at Sendagaya. This entails that their works related TQC will be being operated there since July 1, 1993.
- 2) JUSE Headquarters Buildings at Sendagaya will start being constructed on the same day of opening of JUSE Higashi-Koenji Annex, July 1, 1993. This reconstruction works will continue for three months until September for JUSE Headquarters No. 1 Building. After this, in October, JUSE Headquarters No. 2 Building will enter into one-month reconstruction.

Basically, less than three persons visitors will be welcome to JUSE Headquarters at Sendagaya as before, and more than four visitors group will be to JUSE Higashi-Koenji Annex. Each location map will be sent beforehand to all visitor to JUSE, so please contact the International Cooperation Group, JUSE, as stated at the bottom.

- 5 F: VIP Lounge
- 4 F: Directors & Council Rooms
- 3 F: Lecture and Class Rooms
for International Seminar
(46 seating capacity)
- 2 F: Lecture Hall
(150 seating capacity)
- 1 F: Office & Reception
- 1 B: Lecture Hall
(150 seating capacity)
- 2 B: Social Hall



JUSE Higashi-Koenji Annex

Address: 1-2, Koenji-Minami, Suginami-ku, Tokyo 166
TEL: 03-5378-1211 FAX: 03-5378-1220

How to access: Getting off "Higashi-Koenji Station" in the Subway Marunouchi Line, then taking about three-minute walk to east along the Ome Avenue

However, when contacting JUSE, please address to the following as before.

International Cooperation Group
JUSE Headquarters
5-10-11, Sendagaya, Shibuya-ku, Tokyo 151
TEL: 03-5379-1227 FAX: 03-3225-1813

JUSE 1993 TQC INTERNATIONAL SEMINAR FOR ASIAN TOP MANAGEMENT -IN ENGLISH-

Date: July 12 to 16
Venue: JUSE Higashi-Koenji Annex
Accommodation: Tokyo Hilton International
Fee: Yen 434,000 / person (twin room)
Yen 506,000 / person (single room)

Above fees includes the following: Lecture note, interpretation and accommodation fees for six nights from Sunday to Friday, breakfasts, lunches and refreshments for five seminar days. These fees do not include dinner for each day.

OPTIONAL TOUR

Optional tour after the seminar for one week which is from July 17 to 22, is available. This tour gives you a chance to visit 4 companies in three big cities which are Kyoto, Osaka and Nagoya.

Fee: Yen 220,000 / person (twin room)
Yen 268,000 / person (single room)

Above fee includes the following: Accommodation fee for post tour (nights), interpretation fee, breakfasts and lunches during the tour, not including dinner for each day. For more detailed information, please write to the following:

International Cooperation Group
c/o JUSE
5-10-11 Sendagaya, Shibuya-ku, Tokyo 151
TEL: 03-5379-1227 FAX: 03-3225-1813

JUSE 8TH INTERNATIONAL SEMINAR ON TQC FOR SENIOR MANAGEMENT -ENGLISH COURSE-

Date: Oct. 4 to 8, '93 **Venue:** JUSE Higashi-Koenji Annex

Course brochure is now available, please ask to the above JUSE office

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