

Chapter 11

Dr. Ishikawa's International Activities

Professor Kaoru Ishikawa has made remarkable contributions internationally and significant progress toward quality control.

In 1958, Dr. Ishikawa joined QC Study Mission by Japan Productivity Center to the United States where he had technical exchanges on quality control with American counterparts. Starting with this mission, he devoted himself to international cooperation by attending QC conferences in various countries.

From 1959, he served as editor-in-chief of *Reports of Statistical Application Research, JUSE*, an English journal published by JUSE. Dr. Ishikawa worked hard to introduce practices and research of Japanese total quality control to the world.

From 1966 to 69, he participated Six-Man-Board as a representative of Japan for the preparation to found International Academy for Quality for the purpose of the internationalization of quality control. In 1969, IAQ (International Academy of Quality) was built consisting of the qualified experts of QC from the world. At the academy, Dr. Ishikawa served as President from 1981 to 1983, and as Chairman from 1984 to 1986.

For organizing the world's first international conference on quality control at Tokyo in 1969, he made a tremendous effort as vice chair of the technical session committee to lead the conference to a success. Then, he served as the chairman of program committees of the same conference held in Japan every nine years in 1978 and 1987 respectively.

In addition to his contribution to international exchanges regarding quality control, Dr. Ishikawa's great achievement was also in guiding quality control in developing countries. Particularly, he took part in educational programs at such Japanese institutions of international cooperation, Asian Productivity Organization (APO), Japan International Cooperation Agency (JICA), the Association for Overseas Technical Scholarship (AOTS), and Japan-China Economic Association, where he served as chief program coordinator or lecturer at many quality control seminars for professionals from developing countries. He also went overseas to give his lecture and guidance on quality control.

The number of countries Dr. Ishikawa visited was at total of 32 countries for

lecturing, conferencing, instructing, or researching. Its breakdown is as follows: 11 countries in Asia-Pacific, 2 countries in North America, 14 countries in Europe, Australia and South Africa. His trips added up to 143.

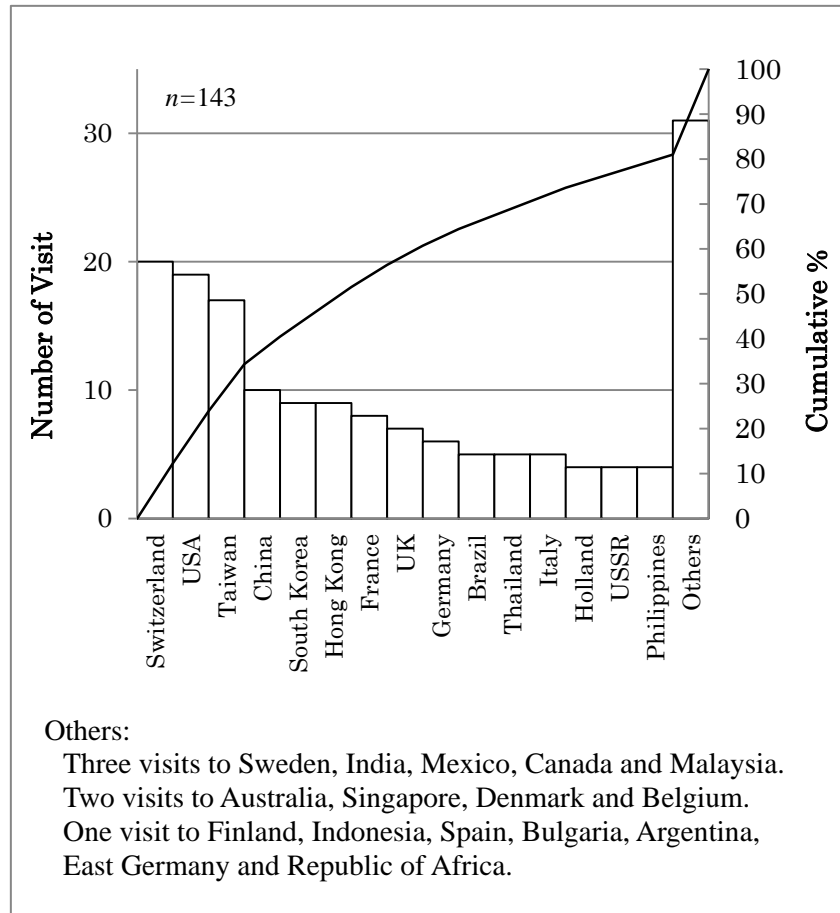


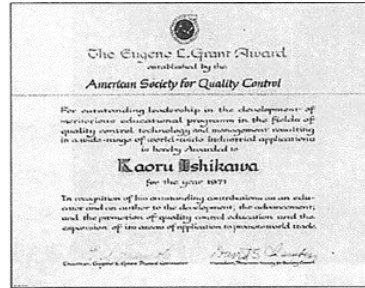
Figure 11.1 Pareto chart of Dr. Ishikawa's Overseas Destinations

Dr. Ishikawa also served as chairman of the Enterprise Management Working Group at Japan-China Economic Association since 1978 to his last days, as trustee at the Association for Overseas Technical Scholarship, as both president from 1978 and chairman from 1988 at Japan China Industry and Culture Center (Japan China Science, Technology and Culture Center from 1988), respectively.

For all of his efforts, American Society for Quality Control[†] awarded the Eugene L. Grant Medal to Dr. Ishikawa in 1972 for his contribution to education and spread of quality control; also the Shewhart Medal for his outstanding contribution for the progress of quality control in 1983. He was the first non-U.S. citizen to be elected

[†] ASQC was renamed to ASQ from 1997.

honorary member of American Society for Quality Control in 1986. The Asia-Pacific Quality Organization awarded the first international prize to Dr. Ishikawa in 1985 for his international contribution to the development of quality control.



Eugene L. Grant Award



Shewhart Medal

Dr. Ishikawa was chosen as honorary member at the following institutions: American Society for Quality Control (ASQC), Philippine Society for Quality, Argentine Society for Quality, Brazilian Society for Quality Control and Columbian Society for Quality. He was an honorary chairman at China Quality Control Association and Brazilian Society for Quality Control, honorary chairman at British Society for Quality Circle. Dr. Ishikawa is the only one non-US citizenship honorary member of ASQC so far.

11.1 Learning from Abroad

- (1) Quality Control Study Mission by Japan Productivity Center to the U.S. Foresight for Globalization

The very first introduction of Japanese practices of QC to outside this country took place in 1958 when Dr. Ishikawa visited U.S.A. as a member of QC Study Mission by Japan Productivity Center. This mission to the U.S. included latter-day leaders of Japanese TQC such as Mr. Noboru Yamaguchi (as the mission leader), Dr. Hajime Karatsu, Mr. Eizo Watanabe, Mr. Masao Ina as well as Dr. Ishikawa. The mission's report *Quality Control in America* (see material at the end of the document [B3]) is a valuable work to be referred as a bible of QC. The report touched upon such continuing discussion points as "Organization and Operation of QC," "Design of Quality," "Vendor-Vendee Relations," "Reliability," and others. One of characteristics of the

report was that the mission did not merely introduce actual American cases but frankly pointed out somethings in which U.S.A. was behind Japan such as economy of inspection.



Japan Productivity Center's QC Study Mission in U.S.A. at Allentown Plant of Western Electric, taken in 1956. Dr. Ishikawa was sub-leader. Front row from left: Kazuo Maki, Noboru Yamaguchi (leader), Dr. Ishikawa, Masao Sasaki and Eizo Watanabe. Second row from left: Hajime Karatsu, Toshio Mino, Masao Ina, Kouichi Yamamoto and Sadao Okada.

Furthermore, each chapter included a section titled “Recommendations” where the mission members wrote suggestions to Japan regarding quality control. Some of these are valid even today.

The report, with a focus on QC in Japan, and based on comparative study of cultures in USA and Japan, clarified very well both what to learn and what not to adopt, “as is.” These findings match with Dr. Ishikawa’s thinking, his life attitude and his way of researching. It would not be an exaggeration to say that his views on globalization, and quality control practice outside Japan in particular, were already shaped within him at that time.

After that, Dr. Ishikawa accelerated the introduction and spread of the Japanese way of QC, or TQC overseas at such opportunities as ASQC convention (1965, [39]) and EOQC convention in 1966.

It was in the late 1970s when Japanese TQC was paid attention from outside of

Japan. At the same time, Japanese had started to discuss the need for globalization of businesses. When I consider all these facts, Dr. Ishikawa was practicing globalization of Japanese TQC more than a decade before 1970s. It showed his astonishing foresight.

Actually in the beginning, he seemed to advertise the high quality of Made-in-Japan products through quality control, in order to assist in increasing exports. However, after Japanese enterprise expanded overseas, they called for business management including QC in a manner that fitted local conditions. Therefore Dr. Ishikawa started to preach that TQC should be globalized. Consequently, he succeeded in transferring Japanese TQC to non-Japanese firms that he had previously avoided because of a most difficult task. Dr. Ishikawa was in the forefront of globalization to raise the level of other countries by means of transferring Japanese TQC.

Dr. Ishikawa's pioneer spirit can be seen in the practice of globalization of Japanese TQC as he went ahead of the times by recognizing the roles and tasks of business corporations and practicing what he had to do.

(Hiroshi Osada)

Mourning the Death of Prof. Ishikawa

Noboru Yamaguchi

My personal relationship with Professor Ishikawa started at the very beginning of the introduction of Quality Control in Japan and has continued till now. I feel really sad as I am not able to see him anymore.

It was around 1949 or 1950 when I learned quality control for the first time at a lecture by Civil Communication Section (CCS). In those days, we were seriously thinking and worrying every day about how to reconstruct Japan at the national level and not just with individual or corporate perspectives. Then, learning statistical quality control gave us a lot of encouragement as we believed that this would be the basis of our national reconstruction.

We could study and learn this subject of quality control at the newly organized Union of Japanese Scientists and Engineers office located inside a building at Yaesu-side of the Tokyo Railway Station. Professor Ishikawa and many more from the University of Tokyo, Professor Mizuno and others from Tokyo Institute of Technology, and some of us from the industrial sector got involved in the program. The group started to learn the subject by collecting hard-to-find references, and mutually sharing the experience that we executed.

In 1958, the first mission to the United States was organized by Japan Productivity Center to study quality control. Since I had traveled together with the professor, we had developed a much closer personal relationship. It was customary for the mission members to meet reunite with their family one night two days Hakone resort in March every year. Professor Ishikawa and I were never absent from the reunion since it started. We held this reunion in this March, too and had a very enjoyable night. I will miss him.

He made up the ideal quality control that helped to develop Japan with the cooperation of all participants and brought it into business, which is surely his great achievement. Hoping for more advancement in quality control for the sake of further development of Japan, I would like to conclude my thoughts, which are dedicated to memory of the professor.

(Former managing director and honorable corporate associate,
TOSHIBA Corporation.)

In Memory of Prof. Kaoru Ishikawa

Hajime Karatsu

After the Emperor Showa passed away, I am afraid that many personalities of representing the Showa era are gone. Dr. Nishibori is gone and Dr. Ishikawa also passed away followed by, Konosuke Matsushita, founder of the Panasonic corporate group and today Miss Hibari Misora a national icon in entertainment business also died. The Showa years are coming to an end, I am afraid.

My personal relations with the professor started when I was at the Inspection Department of Nippon Telegraph and Telephone Public Corporation (currently NTT), where we started to learn QC as we were about to introduce American practice of QC in Japan. However, the climax came when I could join him in the very first mission to the U.S. to study quality control with Mr. Noboru Yamaguchi, then at TOSHIBA, as the leader. We travelled around the U.S. and prepared a final report in Washington DC. We visited some great practitioners such as Western Electric. On the other hand, we also found a misunderstanding that inspection is enough for controlling quality. Then, Professor Ishikawa gathered to give the American counterparts a lecture on this matter. It was really a mission with a great harvest.

Those original members have been together every March in Kowaki-en Hotel in Hakone resort, with their spouses, for almost twenty years. Last March, we met the Professor as usual, and found him to make a good recovery even he had been sick for a

long time. So we drank together again after a long interval. What a shock it was to hear about his sudden death. I immediately visited his residence in Chofu, Tokyo with my wife to offer our sincere condolence. But I could not find any word to Mrs. Ishikawa as we felt really sorry for her.

It is needless to say that the Professor left us tremendous achievements. I would like to just pick up some of these: he propagated to the world how wonderful Japanese TQC was. He also created the belief that high quality products from Japan could be accepted everywhere. These his contributions would have made a special place in history.

Still, he could have worked more if we consider the present extended-longevity of Japanese people. His death is a great loss to us. Please accept my sincere condolence.

(Professor at Tokai University;
President of Tokai University Fukuoka Junior College;
Former Managing Director of Matsushita Communication Industrial Co., Ltd.)

In Memory of Prof. Kaoru Ishikawa

Eizo Watanabe

Professor Ishikawa was my close associate to study QC since 1949 and I could learn a lot from him.

I pay my respect to his characteristic that he expressed his opinion to everyone in a straight forward manner but never left anyone with uncomfortable impression. It represented his belief that human nature is fundamentally good what he also described in QC Circle activity.

When we reached to the last venue, the Pentagon in Washington DC, as a first quality control study mission to U.S., I still remember the following. The professor and Mr. Hajime Karatsu raised many questions and gave their opinions on QC of military supplies which surprised the American counterparts. Without showing any sense of displeasure, they asked a lot of questions to Professor Ishikawa.

In 1983, Professor Ishikawa was awarded the Shewhart Medal of the year 1982 at the annual meeting of ASQC in Boston, Massachusetts. When I heard that nobody attended the meeting except the Professor, I decided to go there. When I was listening to an oral presentation at a session, he came in. As soon as he came in, the moderator stopped the presentation and introduced the Professor as the originator of QC Circle, with a huge applause. In addition to this welcome, I want to tell you one part of his

speech: the Professor told the audience that American foreman is a person to give an order, but Japanese foreman is a teacher and a leader.

He looked very cheerful while drinking and eating at our annual reunion of the first QC mission team held at Kowaki-en, March 11. His sudden death have made me really sad.

I sincerely pray for him in this time of his loss.

(Advisor at JUSE;
Formerly with Mitsubishi Metal Corporation)

(2) Quality Control Overseas Study Team of JUSE

JUSE's Quality Control Overseas Study Mission started in 1963, visiting USA first, with the leader Mr. Kenichi Koyanagi, Executive Director of JUSE. The principle "Give and Take" was initiated in the second mission in 1965 with the leader Dr. Kaoru Ishikawa. The second mission was suddenly formed in February, 1995 and dispatched to USA because of the cancellation of an international conference on quality control in Tokyo. For a few months, the second mission compiled a Japanese-English reference table of QC technical terms, then they prepared "Agenda of Discussion," in both Japanese and English and reference materials with a brief description on 'how it is done in Japan' for every critical question to Americans.

In those days, Japanese quality control was not popular among those Americans, hence the great majority of the time was spent for the questions to Americans. However, Prof. Ishikawa as the team leader always tried to discuss as equally by saying "We are doing this way in Japan and how about you in USA?" These practices became a tradition from the following teams as documented in "Actual State of Quality Control in Japan," a report compiled by respective teams in English, which has been highly appreciated at every destination of the teams. Since "QC Circle Overseas Training Missions" started in 1968, it has been customary to prepare a report including experience of the team members recorded in English. Moreover, they have been done presentations using the tape pre-recorded in English. Thus, "Give and Take" is not a principle, however it is implemented in all the study missions sent by JUSE.

(By Junji Noguchi, Executive Director & Secretary General, JUSE)

Remembering Prof. Ishikawa

Yoshio Kondo

It was 1951 when I first time met Prof. Ishikawa at the fifth JUSE QC Basic Course in Osaka. I had learned a lot from him for almost forty years since then. In one's lifetime, there are always a handful of very influential teachers and seniors; Professor was definitely one of them for me.

I joined the seventh QC Study Mission to U.S. by JUSE as a sub-leader under Dr. Ishikawa, who was the leader. For this mission, Professor Ishikawa planned a new concept of visiting plant and exchanging program based on his vast experience in the past. The members could learn such little-known concepts in Japan at that time like design review, product liability and others. We also visited GM's facilities at Lordstown, Ohio, a hot topic in newspapers for their workers' motivation. To learn the real situations, let the team members accumulate a lot to their experiences. We also improved our communication while drinking almost every night at the hotel by gathering in one room with the drawers used as shift tables or chairs.

Mr. and Mrs. Ishikawa went to Washington DC ahead of the rest of the team members who were enjoying great scenery of Grand Canyon. At that time, International Academy of Quality (IAQ), a focus area for him over the years, was about to be born. Regarding IAQ, I recall that it was very successful due to the professor's great personal effort. Particularly, at a party in Kyoto, where IAQ meeting was held in 1978, everyone joined in a circle of popular folk dancing TANKO-BUSHI following the leader's dance, a good old memory of me. Dr. Ishikawa, later, was elected to Vice Chairman, Chairman and Honorary Member of IAQ.

At his funeral, Mr. J. Douglas Ekins attended on behalf of American Society for Quality Control (ASQC). When ASQC's annual convention was held in Toronto, Canada after his death, at its opening event on May 8, 1989, Mr. Bill Golomski, having a lot of friends in Japan, made a speech to mourn his death and praise his achievements, for five minutes before the scheduled proceedings, which was followed by a standing ovation and silent prayer by all the participants of around 3,000. I think it was a quite uncommon prayer to an individual by ASQC.

(Professor Emeritus, Kyoto University)

Prof. Ishikawa and HONDA

Taro Yasukawa

As Japan saw an emerging problem of defective automobiles, following the United States since late 1960s, it compelled Honda Motor, where I was working then, to enhance quality assurance more stringently. As I was asked to formulate a better organization for quality assurance, I proposed to carry out re-education on QC for everyone, quality audit and introduction of QC Circle activity to my superior. Then I requested Prof Ishikawa to guide us on how to realize these, as I was assisted by him previously for middle-management training at JUSE as well as meetings at ASQC.

With a lot of experience in QC guidance in various industrial fields, Professor Ishikawa was well exposed to realities of the industrial world and he could tell us the way to promote QC in a suitable manner for HONDA while introducing many experts from academic field. We organized overnight-stay training programs for selected young members inside and outside the company including major vendors as well to enhance their QC expertise and it was called HBC. This practice is being kept even today, twenty-some years later.

As our QC education and circle activity took off, just two-year ahead of the company's 25th anniversary, we decided to promote HONDA's own TQC titled as NEW HONDA PLAN for overall up gradation of quality of our business structure. A dozen of promising mid-level employees from various departments were assigned for re-examining all the business tasks and making the reform plans leaving their original designations.

At that time, I joined the seventh QC study mission to U.S. with Professor Ishikawa as the leader and we could attend the annual convention of ASQC and the first IAQ in addition to a dozen-more visits and Japan-US exchange to deal with QC. I was surprised to see how meticulously Dr. Ishikawa personally prepared for the mission including building of team work spirit, definition of roles of each team member; it was really marvelous to see him behaving as an internationally sophisticated person to summarize each record of the mission. During our stay in U.S., he predicted that product liability (PL) would emerge as a social issue in tomorrow's Japan. Right after coming back home, he organized a study group dedicated to PL and tried to develop preventive actions to deal with it. HONDA, too, set up its own in-company PL committee for the implementation of countermeasures and necessary actions.

Shortly after, I quit HONDA and took part in a new business at NTN Toyo Bearing. Meanwhile, HONDA kept on growing as full-fledged car assembler accepted in the

global market. Last year, as Honda replaced its top management, an executive, thinking that HONDA needs a change of its corporate constitution, came to me for asking my opinion on how to renovate its corporate strength to out-ride the harder challenges to come. This executive thought HONDA needed promoting TQC. As we were ex-Naval engineering officers, I could consult Mr. Kenichiro Imai, president of Japanese Society for Quality Control and I was able to introduce Professor Noriaki Kano of Science University of Tokyo, a disciple of Dr. Ishikawa and a good supporter of HONDA's internal culture. The plans were put into practice and HONDA has been promoting TQM since then.

By writing this remembrance of Professor Ishikawa, I feel very emotional to place on record this behind-the-scene information as an ex-HONDA guy and all I can wish is that the deceased would watch more development of HONDA from up there.

(President, New Wave Co., Ltd.;
formerly with HONDA Motor Co., Ltd.)

11.2 Overseas Publicity: Reports of Statistical Application Research, JUSE

Reports of Statistical Application Research, JUSE or known as *JUSE English Report*, is an academic journal on applied statistics in English and was founded in 1951; each issue carries contributed papers that have been reviewed and judged worthy of publication by at least two referees. At its inception, there was no means for Japanese statistical professionals to publish their statistical theory or papers to deal with applied statistics to colleagues outside Japan. The journal was intended as a forum to release study results from "Research Groups on Applications of Statistical Methods" headed by Tatsuo Kawata, to the industrial sector as well as to further promote research of statistical theories. In order to respond to requests by researchers and engineers in this field, Kenichi Koyanagi, Managing Director of JUSE, took a decisive step in launching its editorial committee consisting of the members of the QC Research Group and Professor Tatsuo Kawata of Tokyo Institute of Technology as the chairman on 16 September 1949. The first issue of the journal was published in March 1951. Professor Ishikawa was one of the original editorial committee members from the start. Table 1 shows the original members of the editorial committee while Table 2 lists the original members of Research Group on Applications of Statistical Methods.

Table 1 Editorial Committee Members of *JUSE English Report* at its Inception

Chairman	
Tatsuo Kawata	Tokyo Institute of Technology
Members	
Kaoru Ishikawa	the University of Tokyo
Motosaburo Masuyama	the University of Tokyo
Shigeru Mizuno	Tokyo Institute of Technology
Heihachi Sakamoto	Kobe University

Table 2 Research Group on Applications of Statistical Methods

Chairman	
Tatsuo Kawata	Tokyo Institute of Technology
Secretariat/Accounting	
Kenichi Koyanagi	Union of Japanese Scientists and Engineers
Members	
Motosaburo Masuyama	the University of Tokyo
Heihachi Sakamoto	Kobe University
Shigeru Mizuno	Tokyo Institute of Technology
Kaoru Ishikawa	the University of Tokyo
Eizaburo Nishibori	
Masao Goto	Prime Minister's Office
Masao Kogure	Tokyo Institute of Technology
Shin Miura	Mitsui Chemicals
Eizo Watanabe	Taihei Mining

Publication of *JUSE English Report* at the start, however, was not scheduled; Vol. 1 covered from March 1951 to March 1952, Vol. 2 from April 1952 to May 1953, Vol. 3 started from December 1953 to May 1955, Vol. 4 from May 1955 to March 1957 and Vol. 5 started from October 1957 to December 1958. Thus, it took eight years to reach a total of five volumes but the journal's fundamental character and position as professional publication was almost consolidated at the same time. It was 1959 when Professor Kaoru Ishikawa assumed the position of chairman of the editorial committee and its editorial policy, even seen today, of separating Section A to deal with statistical theory, and Section B for practice of statistical theory he inaugurated. For the record, the editorial committee when Professor Ishikawa became chairman of the journal is as shown in Table 3.

Table 3 Editorial Committee Members of *JUSE English Report* when Professor Ishikawa assumed the Position as Chairman

Chairman	
Kaoru Ishikawa	the University of Tokyo
Members	
[A-Section]	
Motosaburo Masuyama	the University of Tokyo
Sigeiti Moriguti	the University of Tokyo
Kinichiro Saito	Sophia University
Kiyonori Kunisawa	Tokyo Institute of Technology
Genichi Taguchi	Nippon Telegraph and Telephone Public Corporation
[B-Section]	
Shin Miura	Mitsui Chemicals
Shigeru Mizuno	Tokyo Institute of Technology
Masao Kogure	Tokyo Institute of Technology
Fujio Umibe	Tokyo Shibaura Denki
Ikuro Kusaba	Tokyo Institute of Technology

The journal, particularly after Professor Ishikawa became its editorial committee chairman, expanded the range of focus of subjects introduced, and accepted more papers from overseas for internationalization, in addition to a revision of its posting rules, and the “C-Section” and “Short Notes” were added in 1967. This C-Section was intended to introduce actual cases of quality control and statistical applications as well as kaizen cases by QC Circle to the world. From the late 1970s, the number of papers related to C-Section showed an increase. In the meantime, the editorial committee members were assigned specific roles to examine such publications as *Genba To QC-magazine* (QC Circle-monthly magazine, today) or *Hinshitsu Kanri* (Statistical Quality Control) magazine as well as presented reports at various symposium to verify their fitness for publication by the journal; sometimes the editorial committee encouraged the original authors to submit their papers, in order to enhance the value of this C-Section.

Furthermore, the journal featured such topics as how QC is being taught in Japan or reports of QC Circle at certain occasions, as Professor Ishikawa decided. Its copies were distributed to the attendants of International Conference on Quality Control (ICQC), performing the role of printed media to inform about QC practice in Japan, to the world. The journal helped in both internationalization of Japanese practice of quality control and Japan’s international cooperation.

In the meantime, each research paper posted in A- and B-Sections of the journal were highly evaluated as academic articles, and served as materials to evaluate academic performance for the degrees of many scholars who supported Japan's quality control. Academic societies had to support the significant function as a number of excellent articles appeared. Thus Professor Ishikawa made a great contribution to establishment of the credibility of the journal inside Japan and out.

Table 4 Editorial Committee Members of *JUSE English Report* during Last Years of Professor Ishikawa

Chairman	
Kaoru Ishikawa	President, Musashi Institute of Technology; Professor Emeritus at the University of Tokyo
Members	
Hirotsugu Akaike	Institute of Statistical Mathematics
Akira Asai	Chiba University
Chihiro Hirotsu	the University of Tokyo
Makoto Kadoyama	University of International Business and Commerce
Masao Kogure	Tokyo Institute of Technology
Hitoshi Kume	the University of Tokyo
Hajime Makabe	Tokyo Institute of Technology
Tadakazu Okuno	Science University of Tokyo
Hidenori Morimura	Tokyo Institute of Technology
Hiroshi Shiomi	Chuo University
Fujio Umibe	TOSHIBA Research Consulting
Yasutoshi Washio	Keio University

In recent years, the number of submission from both domestic and foreign sources is declining, despite the fact that there used to be more articles submitted from Asian and Europe/American countries until the middle of 1980's, and the journal was highly evaluated internationally, with subscription and exchange in over 60 countries. However, since the late 1980s, submission of articles suddenly decreased and it is becoming more difficult to sustain its quarterly publishing, in spite of great efforts by the editorial committee members. This decline can be attributed to a large number of other opportunities at academic societies in Japan as well as abroad for relevant works of the Section A and B. It is regrettable to conclude that this journal's original purpose was fulfilled and it is necessary to pursue new missions in order to sustain its publication.

(Toshihiro Arai, Deputy General Manager,
Research & Development Department, JUSE)

Prof. Ishikawa, a Natural-Born Leader

Tadakazu Okuno

Professor Kaoru Ishikawa was a man of selfless devotion to TQC, only for the sake of welfare and happiness of mankind. Free from favoritism by companies, he treated equally those whom he met, without any personal preference of any country of the world. He made his painstaking efforts to pursue his grand goals. I feel I must take off my hat to his way of living. Professor Ishikawa accepted many important requests, and did every job so sincerely that I sometimes thought, “Why doesn’t he ask someone else to do such a petty job?”

In my long acquaintance with him, I was deeply impressed by the following three episodes.

First, the editing of the *Reports of Statistical Application Research, JUSE*; he was its editor-in-chief as chairman of the editorial committee from 1959 to 1989, when he passed away. Professor Ishikawa attended almost all editorial committee meetings held in every two months. He kept his eye on every detailed element including selection of referees and correspondence between referees and the authors. Even when the secretariat was not performing well, he never got angry but rather said, “Well, you better do it this way next time,” speaking like a gentle uncle. His incredible patience was outstanding, as every editorial committee member agreed. This journal provided with an opportunity for young researchers to publish their paper in English about mathematical statistics, in its early days. Later, through his proposal, the journal added a section dedicated to the introduction of cases where QC had been applied as well as the latest status of TQC activity.

Secondly, from 1971, he continued to be chairperson of ISO/TC 69, a working group, to study applications of statistical methods, in the Japanese Standards Association. He assigned relevant experts to six subcommittees under TC 69 in order to maintain the accuracy and consistency of JIS of Japan to International Standards. The number of reference materials grew to surpass 1,600 in all. Professor Ishikawa had an encyclopedic memory of these documents, saying “Japan proposed this matter just three years ago,” while examining a new proposal. He dispatched younger experts to foster their growth to European countries, where annual conferences were held. Professor

Ishikawa played a greater role than any ordinary person could do.

Finally, he served as chairman of the so-called QCG, a friendship golf competition among executives of the Deming Prize winning companies and members of the Deming Application Prize subcommittee. The competition was held seven times a year. Professor Ishikawa was personally involved in recording, organizing and rating each member's golf handicap, all by himself, where his "record keeping mania" became apparent. As he said, 'Participation is what counts at this QCG.' He did not scrutinize scores but he made new rules so that everyone could become a champion even just once in several years, by adjusting handicaps such as lowering one's handicap by 20 percent if he won this time, or increasing substantially when another player won all games in a year. Consequently, it became the norm to accept players who had a handicap over 40.

The professor hit a hole-in-one in this competition; nobody has before or since. We created the "Ishikawa Cup" to commemorate him in 1990, so that his name will remain. (See Section 5.1)

(Trustee and Professor, Management Science,
Faculty of Engineering Division, Science University of Tokyo)

11.3 The International Academy for Quality: Leadership of Quality Control in the World

Professor Kaoru Ishikawa, always paying attention to movements in overseas in addition to the domestic ones, made his positive and appropriate activities. This section is devoted to portray his activities to deal with International Academy for Quality (ISQ).

IAQ was founded in 1972. Quality control had been promoted by regions of Asia, America and Europe and working institutions at each region, JUSE, ASQC and EOQC, respectively as representing organizations of each region. However it started in the late 1960s to try to set up a global organization to cover all those institutions where the membership should be given to individuals proved by a certain procedure stipulated by its own by-laws. A committee of six persons including Dr. Ishikawa was the driving force to inaugurate IAQ.

ASQC	Dr. Armand V. Feigenbaum (U.S.A.) Mr. E. Jack Lancaster (U.S.A) † 24 June 1980 [†]
EOQC	Mr. Frank Nixon (U.K.)

[†] † expresses the date of one's death.

Mr. Georges Borel (France) † 29 September 1982
JUSE Dr. Kaoru Ishikawa (Japan) † 16 April 1989
Dr. Masao Kogure (Japan)

IAQ was established for the purpose of “using of world-wide resource persons for realization of mutual understanding and cooperative spirit at both domestic and international levels, toward contribution in constructing basic idea, theory and practices to achieve quality of products and services by promotion of more studies.” For realizing its purpose, IAQ is conducting the following activities:

1. Exchange of technical information
2. Domestic/international collaboration
3. Research and development projects
4. Publishing

Professor Ishikawa devoted himself not only to these activities but also to increase the membership in Japan. As of writing this manuscript, total members of IAQ is over 60 people from some 25 countries included seven members from Japanese membership ranked as the second after the U.S.A.

IAQ's leadership consists of board of trustees with a chairman, president and no less than three trustees and its executive committee with president, no more than five vice-presidents and a secretary general with three-year term for all position holders. Professor Ishikawa, then, served the President (1981–83) and Chairman (1984–86), all in an energetic manner and he became its Academician Emeritus in 1987.

(Yoshio Kondo)

11.4 International Conference on Quality Control

The world's very first international conference on Quality Control was originally planned to be held in the autumn of 1965, a year after the Tokyo Olympic Games. However, it was too soon and it was not possible to get the consensus of all stakeholders, furthermore the plan was postponed due to illness of Mr. Kenichi Koyanagi, the first managing director of JUSE, who was an advocate and power source of the conference. The original plans were cancelled; we dispatched our message to domestic and world stakeholders that the plan would be postponed. We received many responses to this message and we received a lot of replies saying “regret” and “encouragement” as

represented by the message saying “We regret to lose a chance to visit Japan, but we strongly urge you to convene the conference as soon as possible.”

JUSE, then, organized “The Second Quality Control Overseas Study Team” (See Section 11.1 (2)) with Professor Kaoru Ishikawa as the leader in a hasty manner, and dispatched it to the U.S. from which we had received the largest number of messages of regret. Professor Ishikawa reported back that “a sudden rise in momentum to hold international conferences on quality control, made a joint sessions between the American Society for Quality Control (ASQC) and the European Organization for Quality Control (EOQC) in New York from June 1 to 3, and in Stockholm from June 6 to 9, 1966, by changing their original annual conventions respectively. They asked for Japan’s cooperation at the events.” He also reported that “I found a persistent wish to visit Japan, among the relevant officials which calls for early execution of Tokyo Conference.”

His report caused us to decide to organize a conference in Tokyo, three years after the New York-Stockholm Conferences in 1966. Professor Ishikawa, on our behalf, was to announce the schedule publicly, at the Stockholm conference.

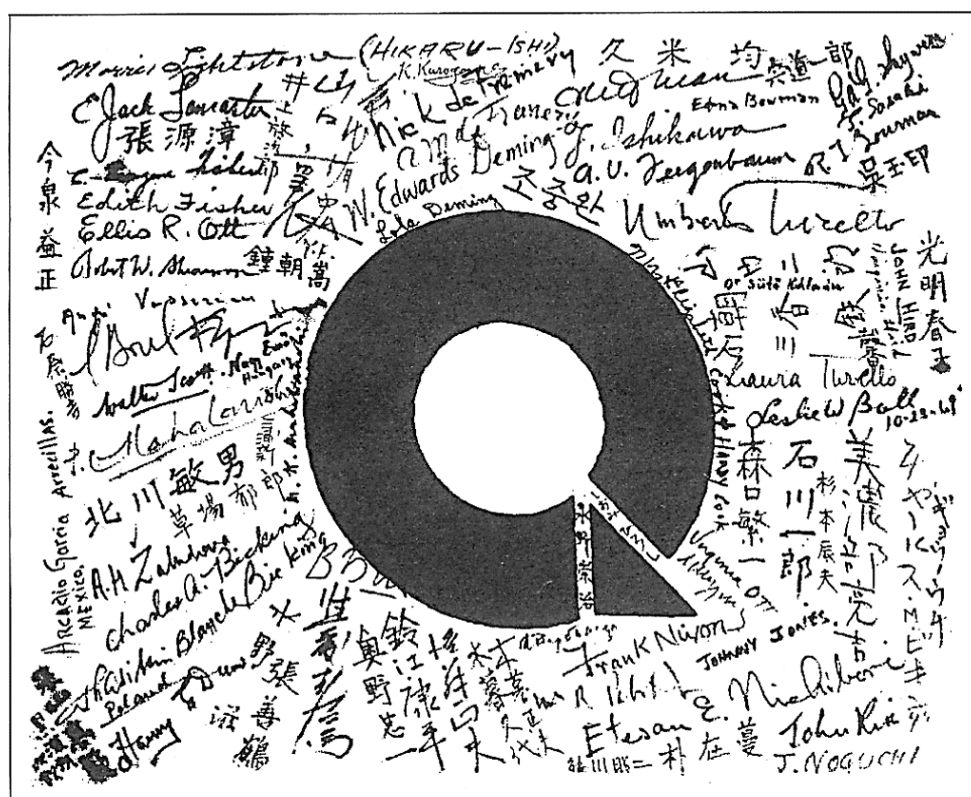
Professor Ishikawa made his speech to officially propose the Tokyo Conference plans and to invite relevant people to it, at the opening session of the Stockholm Conference on 9 June 1966. His message was as follows; its impressive nature memorability by many attendants at the venue is still poignant: “‘Seeing is believing,’ as this proverb says you are advised to join the Tokyo Conference, to watch Japan’s practice of quality control including QC Circle activity. Since Japan has a total of 14 participants at this Stockholm conference, I urge each country to dispatch 14 people to the Tokyo conference, respectively.”

The conference in Tokyo became the first international forum called International Conference on Quality Control 1969 Tokyo or ICQC 1969 Tokyo, in short, with its theme of “World Prosperity through Quality.” Upon the success of the conference, ASQC, EOQC and JUSE decided to organize the following conferences by region: America, Europe and Japan, every three years. The following are the venues and themes:

- 1972 Washington DC, USA; “The Consumer—An International Quality Concern”
- 1975 Venice, Italy; “The New Frontiers in Quality and Reliability of Products and Service”
- 1978 Tokyo, Japan; “International Cooperation to Solve Quality Problems”
- 1981 San Francisco, USA; “Quality: A Prerequisite to Survival”

- 1984 Brighton, UK; (No specific theme)
- 1987 Tokyo, Japan; “Quality First—Again and Ever”
- 1990 San Francisco, USA; “Total Quality, An international Imperative”
- 1993 Helsinki, Finland (planned)

These international conferences have become “holy places” to deepen association and friendship, as well as to exchange information among all those involved in quality control, in every country. In the above listing, the theme of each conference represents a matter of concern at that year and the host country’s strength. I also notice the shift of the times in them. Professor Ishikawa was enthusiastic to choose each theme. Not only in Japanese, but he repeated to brush up the wording of theme in English to reach the final, well-polished selection. He was present at each conference; as the head of the executive committee when Tokyo hosted, and as Japan’s representative at conferences elsewhere. Thus, Professor Ishikawa dedicated himself to the internationalization of quality by his own leadership. (Junji Noguchi)



Names signed on a big flag at ICQC '69 – Tokyo by Participants (a collection of Mr. Masumasa Imaizumi)

11.5 International Cooperation

(1) Cooperation through the Association for Overseas Technical Scholarship (AOTS)

The Association for Overseas Technical Scholarship (AOTS) is a public interest organization founded in 1959 for the purpose of hosting and training industrial engineers and technical personnel from overseas countries, to serve for the promotion of international economic cooperation and to lead mutual economic progress as well as friendly relations.

When a training course named “Promotion of Export Industries of Developing Countries,” in 1974 organized by the United Nations Industrial Development Organization (UNIDO) and the Ministry of International Trade and Industry (MITI) of Japan and implemented by AOTS, was established AOTS formally invited Professor Kaoru Ishikawa. Later the name of this training course was changed to “Quality Improvement of Industrial Products” in 1977 to focus on the quality issues to this date. AOTS asked Professor Ishikawa to serve as chief lecturer of these training courses for each year until he passed away. In late 1970s, when there was a conflict of views between AOTS and an officer-in-charge at UNIDO’s Vienna Head Office, we faced serious difficulties to continue the training. We asked Professor Ishikawa to visit Vienna for giving his advice to our counterpart at UNIDO.

Consequently, the operation of relevant training project became very smooth. Incidentally, we heard that visit to UNIDO Head Office had great impact on other quality control-related training projects by this UN organization. In 1986, as the total number of attendees in all these courses surpassed the mark of 100, we organized a follow-up workshop in Malaysia and Professor Ishikawa was pleased to join the session all the way from Tokyo, just for the purpose of our event.

Besides these training seminars, AOTS also invited Professor Ishikawa to work as a resource speaker in various training projects including as the chief lecturer at six-week-long “QC Training Courses” for Chinese managers/engineers (September 1980–March 1986) organized with the support of Japan-China Economic Association at the request of China’s Enterprise Management Association; as lecturer at “UNIDO Production Management Training Courses for Mechanical Engineering-related Manufacturing” (September 1970 to December 1978) as well as “AOTS Quality Control Training Courses” (June 1982 till his last day).



Professor Ishikawa delivered his commemorative lecture at the 1st World Convention of AOTS Alumni Societies in Tokyo. (March 1986)

Professor Kaoru Ishikawa served on the board of AOTS from 1985 and dedicated himself to enrich and promote economic and technical cooperation of Japan through AOTS operations. (Ms. Hiroko Yamada, AOTS)

Dr. Ishikawa and I

Nagaaki Yamamoto

When did I meet him for the first time? I am not sure if it was in Vienna or Tokyo. I still remember when the Professor visited UNIDO in Vienna where I was working for facilitation of quality control training project implemented by AOTS; yes, it was when general assembly of ISI was convened in Geneva, and he met with relevant specialized section of UNIDO to explain the features of Japanese Total Quality Control. It was September of 1979.

Even though I was not directly in charge of that specialist team, I arranged his meeting at the request of Japanese Embassy as prominent Professor Ishikawa was coming to Vienna. My wife and I, as I recall, had dinner with him. I asked “what do you prefer meat or fish, sir?” then he replied “I like fish.” Then we took him to Lind Meyer restaurant located by the river Danube specializing fish menu. I recommended whitefish caught in the Danube and white wine. Professor Ishikawa was very pleased to enjoy the

dish and drink, saying “As the specialists now understand better, AOTS can operate the seminar well from this time.” After this pleasant evening at the restaurant, I remember I had seen him off back to his hotel. His visit intended to convince a particular UNIDO staff to understand importance and effectiveness of TQC. This episode represents compassionate and sincere character.

After I returned to AOTS in 1983, and we owed the professor so much. It’s including a commemorative lecture at the first AOTS Alumni Representative Conference held in 1986 at Tokyo. His remarks impressed the attendants deeply. Then in November 2nd, 1989 when 30th anniversary of the foundation of AOTS at KEIDANREN Hall, Tokyo, AOTS gave a small present as a token of our appreciation to his wife on behalf of Professor Ishikawa who was awarded for his special service over long years after his death. I felt sad but it was a solace for me to express our sincere gratitude to her. His compassionate and sincere character is still a valuable mark for me. By writing this essay, I think of him and praying for him.

(Senior Managing Director, AOTS)

A Great Missionary of QC

Ms. Hiroko Yamada

These days, the Association for Overseas Technical Scholarship (AOTS), where I work for, is getting to be known as educational institute on quality control in English for people from overseas countries, though much less than JUSE, the originator. Ex-participants of QC training courses by AOTS are very active in various fields of developing countries where AOTS focuses on.

Recalling those initial days, I must admit that we owed very much to Professor Ishikawa for AOTS to grow up to today’s shape. In 1974, on the request of United Nations Industrial Development Organization (UNIDO), AOTS was about to launch a new training course for promotion of export industries. The first implementation was not as effective as we expected, because we were doing trials and errors. While finalizing the plan for second course, we visited JUSE in Sendagaya, Tokyo to meet Professor Ishikawa and requested his cooperation, as we were so desperate for any good help. Smoking as usual, the professor simply told us “Understood. Now my disciple named Noriaki Kano is in Iran for teaching QC. When he would come back, I would ask him to help you across the board.”

This very first encounter with him was about to change the entire training

operations of AOTS. Professor Ishikawa was kind enough to introduce other experts and companies in close relations with him one after another. Thanks to their help, AOTS was empowered to organize several QC training courses regularly. I still remember that old small JUSE office floor where I met him. Back in those days, I never imagined that this room was the general headquarters of QC and that Dr. Ishikawa was well known expert in the world.

I had to take off my hat to his commitment shown when we launched different quality control training for Chinese people which lasted from 1980 to 1986. He told us “We do not train just QC technical staffs at plants. We should nurture leaders in China’s QC for the next generation.” He encouraged and scolded us the secretariat as we tended to choose easy ways. For the long duration of six months, Professor Ishikawa took initiative in formulating training daily schedule, arranging resource speakers and even finding sponsor companies for the trainees.

Professor Ishikawa was truly treating everyone in fair manner: us, the inexperienced staff, and the trainees from various countries and regions of the world. I had never seen him showing off his fame and achievement. The news of Dr. Ishikawa’s sudden death was announced in the magazine of AOTS to over 30,000 ex-trainees in the world. Then, AOTS received an avalanche of condolence messages.

His conviction and passion for the spread of QC deserves a title of a great missionary of QC. The number of those fortunate ex-trainees who could be taught directly by Professor Ishikawa amounts to over 700. He planted seeds. They are now scattered around the world and growing very steadily.

(Manager, Overseas Training, Overseas Operation Division at AOTS)

(2) Cooperation through Asian Productivity Organization

Asian Productivity Organization (APO) was established in May 1961 based on government-to-government agreements. It is a region-based international organization to carry out human resource development including management and technical training for economic development with enhancement of productivity in the region. APO chose quality control as a means to improve productivity and it always requested advice and guidance of Professor Ishikawa for planning of the relevant projects. His cooperation to APO can be described as follows:

1. APO organized a symposium on quality control in Tokyo from 3rd to 11th. August 1964. Professor Ishikawa planned this symposium, delivered his special lecture “Role of Statistical Method in Quality Control,” and served as a

leader at the panel discussion on “Quality Control Education Programs in Japan.” In those days, since reference materials in English were not well prepared, he ordered two graduate students in Ishikawa Laboratory of the University of Tokyo: Mr. Tomoyoshi Takematsu and Mr. Noriaki Kano, to translate Japanese material to English. Professor Ishikawa used that translated text in his lecture. This symposium was the first international conference in Asia to focus on quality control.

2. Professor Ishikawa, with Dr. Noriaki Kano, was sent to Iran in April 1978 for organizing a QC seminar and giving advice to local enterprises as APO experts. In Tehran, he served as a leader at top management seminar while advising the Iranian government on industrial standardization and national promotion of quality control.
3. He published two books, *Guide to Quality Control* (1974) and *Quality Control Circles at Work* (1984) as APO publications. The former, in particular, became a popular English title with over 120,000 copies sold since the first print in 1974 and translated later to Spanish, French, Italian, Indonesian, Dutch Hebrew and Portuguese. Besides, he helped APO to prepare five volumes of slide material on quality control.
4. Professor Ishikawa delivered his special lecture at the first “TQC training course” with 23 participants from 12 countries in 1986.

(Secretariat, Asian Productivity Organization)

A Tribute to Dr. Ishikawa

S. Nazim Zaidi

The association of the Asian Productivity Organization (APO) with the late Dr. Kaoru Ishikawa was spread over fifteen years. It started in early 1970s when the APO decided to translate the JUSE book *Genba no QC Shuho* (ed. Ishikawa)[†]. No one at the APO or Dr. Ishikawa himself ever realized at that time that we were embarking on an epoch-making decision. Epoch-making, because it turned the tide of translating QC materials from English into Japanese, it generated the keen foreign interest in knowing about various practices of Japanese industry and above all it made Dr. Ishikawa the undisputed authority on the quality control in the western world. Needless to say that

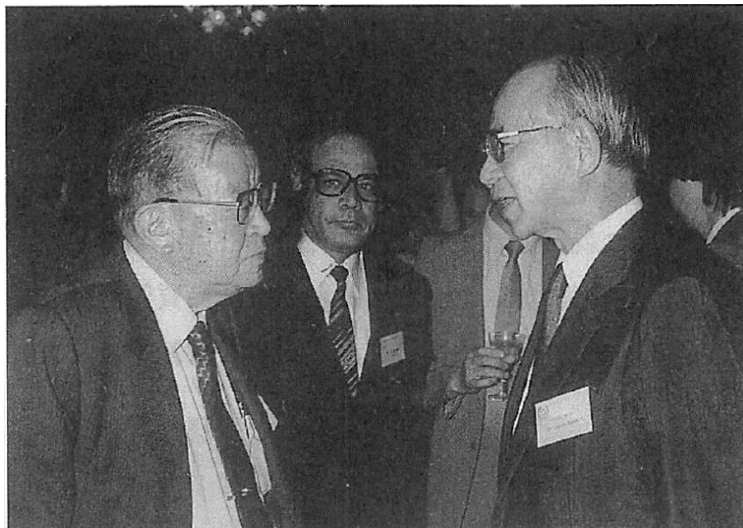
[†] *Guide to Quality Control* (1st ed. 1974)

the Guide to Quality Control is still the unbeaten bestseller on the subject with current sale of around 30,000 copies annually with 70 percent being sold in the United States. Many other titles with his name are also selling well in all parts of the world.

It was around early 1980s that Dr. Ishikawa became known as the QC expert in the western world and from that time onward his visitors mostly comprised of businessmen, industrialists, productivity practitioners, consultants and academicians from the States and European countries who were visiting Japan to know more on Japanese practices. Dr. Ishikawa had by that time taken over as the President of Musashi Institute of Technology in Tokyo and the foreign visitors found him a most willing person to talk on QC and QCC.

I had the privilege of meeting him for over a dozen times. It was sometimes related to matters pertaining to the books on *Guide to Quality Control* and *QCC at work* and at times asking questions on various aspects of QC, and I had always found him a warm, open-minded and hospitable person.

He was dedicated to the QC cause and anyone wishing to talk on the subject, he would be most willing to receive him. Many Asian countries were keen to invite him on QCC conventions, and Dr. Ishikawa would either attend or send a message.



At the reception for the 25th anniversary of APO foundation with the then Chief of Secretariat Yokota (May 1986)

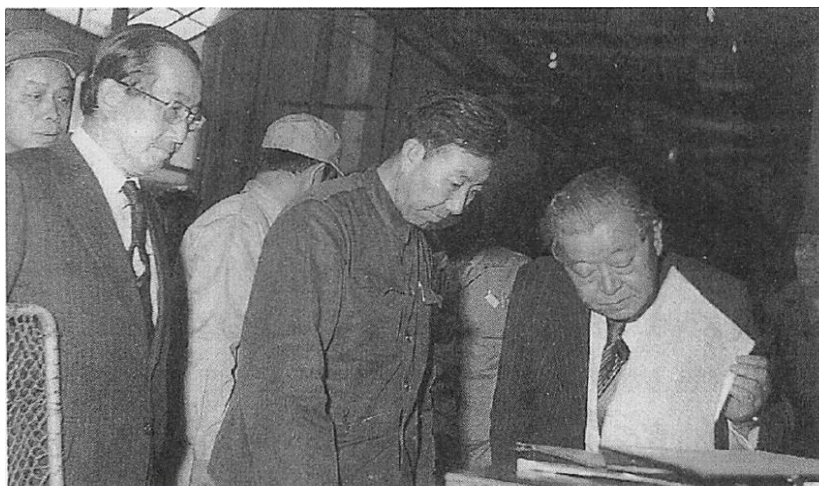
He personified in himself the basic concepts behind QC Circle activities which he had been propounding in his writings. He firmly believed that QCC gives respect to humanity by allowing worker to do his work on his own way and draws out and develops the infinite potential of the worker. When Dr. Ishikawa was talking to his visitor, one could see clearly his belief in humanity writ large on his facial expression.

He will long be remembered not only as an authority on quality control but as a person full of warmth, kindness, hospitality, and understanding for other points of view.

(Public affair manager, Asian Productivity Organization (APO))

(3) Cooperation through the Japan-China Economic Association

In November 1978, a working group to deal with management of business corporations within the Japan-China Economic Association was established and Professor Kaoru Ishikawa assumed responsibility as its first group leader and offered his advice until his death. During those years, the working group collaborated with China National Economic Committee and its affiliates, China Enterprise Control Association, and China Quality Control Association, guided and advised for better business management, and improvement of quality control in China. To be specific, a total of 134 executives were invited to Japan to undertake six-month advanced training every year between 1980 to 1986; Professor Ishikawa worked wholeheartedly not only as a lecturer on the present status of QC in Japan in each program but also as a commentator and mentor at sessions where the trainees made their presentations. These Chinese executives who visited Japan became senior managers in manufacturing industries in China after the training. His attitude and behavior were highly appreciated by all those relevant Chinese institutions. China Quality Control Association gave Professor Ishikawa a title of honorary advisor. In 1983, Professor Ishikawa visited China for two weeks when he talked to senior leadership team of Chinese government in economic field with lectured on quality control and business counseling, and he gave great contribution for the enhancement of quality control in China.



At Beijing Engines, with Mr. Kawai, Chairman of Komatsu Ltd. (1979)