

Dr. Kaoru Ishikawa and his influence in promotion of quality around the world and more particularly India — My personal experience

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Thank you. It is indeed a proud privilege for me to have this opportunity to share my personal experience what I learned from Prof. Ishikawa.

I would like to thank Prof. Kume, chairman of the organizing committee, and Dr. Kano, chairman of the executive committee for this function, for inviting me for this session.

I'm going to use the traditional QC study format to explain what we did and why we did it and how Prof. Ishikawa played an important role.

So let me start with before I heard about Prof. Ishikawa and my experience of quality control until then. I worked in industry for 25 years in various parts of India starting with Lucknow in the North, moving to Hyderabad in the center, Chennai in the South, Bhopal in the middle, Nashik in the west, and then back to Delhi in 1986.

I worked in industry in various positions, never in a quality function though. I was in engineering, production, procurement, design, and then general management until I became a chief executive and then of course I was responsible for the entire business.

During this period, I grew up, I learned how to manage, and I worked mostly with, out of those 25 years, 22 years with multinational companies operating in India: two American companies and one French company. The three others were Indian companies.

So let me begin by saying how I realized the need for quality, or I would say it in a different way because I didn't call it quality at that point of time.

So what you see on the left-hand side in the top corner is the plant I worked for. It was a graphite manufacturing facility, which was in Bhopal, and later on I moved to Nashik to a similar facility. We used to make graphite electrodes and over a period of time the quality wasn't too good. Sometimes we found the rejection rate actually went up. When it went up, we tried to find out why it went up and the role of the quality manager was to reject.

In this case, the role of the quality manager and of the owner was to reject for the simple reason that in India we had controlled prices so we couldn't sell a good product at a certain price beyond a certain point. But if you had a rejected product there was no

control so actually rejected products got a better price than the good products. So there was an incentive to reject and the quality managers were often very close to the top management who would rather like it rejected and make good money out of it.

But what I really realized was that when we make an electrode that goes into electric burn furnaces. If it's poor quality, then the consumption is high or it breaks down and the net result is the quality of steel produced is poor and the cost is high. Then in turn, the steel sheet goes into making power transmission units, agricultural equipment, and the power cost goes up and the agricultural equipment input goes up. Or some of it may be used to make a bicycle, and the cost of the bicycle goes up.

What we found over a period of time was that most of us were insulated against this price increase. The only ones who bore the brunt of this price were the poor people who had no linkage to the cost-of-living index, and the end result was the price paid by the ordinary person in India who had nowhere else to go.

So in that context we struggled how to make an improvement? We had inadequacy in knowing what to do, what method to follow. We had a licensing system, the government licensed whether you could produce something or not, which was a disincentive to quality and productivity.

For example, if a company had a license to make 100,000 scooters and they produce 105,000, it's not permitted. The owner may say he needs to make 5,000 more because his customers are waiting for one or two years, but the law says you can't, you can't satisfy the customer by producing more at the same facility. So you want to improve productivity but by law you can't produce more, even if you improve productivity, so those are the situations.

Then we said quality improvement requires better materials than equipment but we couldn't import anything. If we wanted to import, a heavy import tax was imposed, which increased the prices even further. So the whole cycle was a cost increasing cycle. And poor quality fetched better prices, as I explained.

So the result was a high-cost economy and increasing foreign debt. We didn't generate enough resources in India so we used to borrow from the IMF and World Bank. We were in a unsustainable situation, so at least we should take action. We realized that this cannot go on forever and that some reforms had to happen, they were imminent, and they had to happen sooner rather than later. So let's get ready for this.

It was in the context that I read about Japan's rapid economic growth based on quality control. I read an article by Dr. Deming talking about his 14 points and he mentioned about the role played by the Japanese Union of Scientists and Engineers. I was fortunately visiting Japan on work because the company I worked for, Great Lakes

Carbon from the USA, used to buy electrodes from Showa Denko.

So I came to Osaka and after visiting Showa Denko, since I heard about JUSE, I went to the JUSE office and I bought all of the literature written in English there. Some of these were Features of Quality Control in Japan, Guide to Quality Control, QC Circle Koryo, and many other publications. I took them back to India to study, and that's what started influencing me in many ways.

So the next phase was experimenting with learning from Dr. Ishikawa for application in the Indian socio-economic environment. This is something I learned from his writing, that you just can't copy what has been done in the West or in Japan. We need to find our own way. We can learn from others, but we just can't apply it blindly.

So the key learnings were first of all I recognized that total quality control resonates with the Indian philosophy and ethos. Until that time, most of the books relating to quality talked about techniques and methods, none of them ever mentioned about the human aspect of quality.

Here I read about Dr. Ishikawa, whether he is writing in a QC Circle or a guide to quality control, he first talks about the human aspect and how that is important. And that is nothing else but respect for humanity, which in our Indian philosophy we call ahimsa; intellectual honesty we call it satyam, based on facts, fact-based management; and then self-control or self-discipline, which is brhamcharya.

It was so closely associated with our own ethos that it made natural sense for us to follow. What happened in India was because we were ruled by the British for so long and we were used to the English language, all we read about on any subject was English literature so we are influenced by the way English-speaking people in the West worked. The challenge was that in our heart and the basic norms we are Asians, but intellectually we had started acting like the British or the Americans, and that's where the disharmony begins.

He said that everyone is responsible for the quality of his or her own work. In India the quality manager's work, nobody wanted it, concerning quality job, he had nothing else to do but to stop the production if he could, and even that he couldn't do because the owner wouldn't let him do that.

Then he started with education and training, including on-the-job training, and that it has to be companywide, cross-functional, and hierarchical, and another point I learned very quickly was it has to be nationwide. It will flourish in an environment but it won't happen in a vacuum. I also learned that top management involvement is absolutely essential.

I also realized that these books I bought from Japan, most of these were edited or

written by Dr. Ishikawa. Until I went there I didn't know much about Dr. Ishikawa, but when I read those books I found he was actually the Japanese face to the external world on quality. We recognized that many others made contributions, it was not him alone, but what we got to read in the English publications was very often Prof. Ishikawa. So that's where my association with Prof. Ishikawa started, even though I had never met him.

So in 1983 we started study groups in 18 companies to learn. What I started doing was applying it in real time, first in my own company where I was working as a general manager in Nashik. Nashik is a town northeast of Mumbai. It's a spiritual town originally but then it got industrialized over a period of time, let's say about the last 40 years or so. I actually found my spiritual guru when I was there because I was using study groups to learn about Indian philosophy and we had 25 groups working there.

Then suddenly I find Prof. Ishikawa's book guide to quality control also talks about study groups, self-study and study groups, so we started that in my own company ... ? ... and then 18 study groups started in Nashik.

The reason I wanted to get other companies involved is because that's how you have a common mouth. That way, Nashik being a small town, the business unit heads for many of these companies were residing in Nashik so the leadership involvement also started happening there.

We started with the training of middle management and engineers from various functions, we brought in cross-functionality right from the beginning in each organization, and we said that before we go to the workmen we should first learn ourselves. So education, training, and facilitation was provided and it became a Nashik citywide effort. This was the prelude to making it nationwide.

We also made it compulsory that all business unit heads, when we started, once a month we would meet and review the progress. This was done under the aegis of the Association of Indian Engineering Industries to make it citywide.

In the same year, the Quality Circle Forum of India started, and the QCFI since then has held conferences in every region and a national conference. The national conference is attended typically by 3,000 people even today, and is still very widely popular.

Then a breakthrough came with the CII, Confederation of Indian Industry, which is a kind of KEIDANREN here. I was a member. Because of the work we did in Nashik, they invited me onto the national committee and said why don't you share it with the rest, so we had an annual meeting with 60 top executives in Shrinagar, Kashmir, and we had some senior government officers also.

So I presented the need for change based on economic data in India. I said that TQC is a possible approach successfully practiced in Japan, and everybody knew that, and I discussed some initial experiments in Nashik and we received a very positive and enthusiastic response. The outcome was the role of business leaders and the government and they agreed to provide leadership to the quality movement. We planned to hold a national conference on TQM for business leaders.

So it is in this context that I wrote a letter, in those days there were no emails, to Dr. Juran, Dr. Deming, and Prof. Ishikawa. These were the three best-known names I knew at the time. I said that we have to talk to the business leaders, we are planning a conference, it's the best way that the notable people around the world come and address at a conference.

Unfortunately, we didn't hear from Dr. Deming or Dr. Juran, they probably thought India was not ready and we couldn't afford their fee because they charged 10,000 USD/day at that time, but Prof. Ishikawa readily agreed and he came, and he didn't charge any amount of fee. We just took care of his business-class fare.

This was the conference we had and was where Prof. Ishikawa gave his advice and the outcome was the National Conference For Business Leaders on Total Quality Management on April 29th and 30th in 1986. In India, business leaders don't want to have anything to do with quality but because of this work we did they were willing. Dr. Ishikawa's advice was sought and he was there for two days, addressing the conference for one day, and then he brought with him one Mr. Matsuda from Nippon Steel. His topic was how to apply companywide quality control in foreign countries, which was a very apt subject for us.

Dr. Krishnamurthy, the chairman of the conference, attended this conference because he was the most respected business leader in India. He was the recipient of the Grand Cordon of the Order of the Rising Sun in 2009, he was the first chairman of Maruti Suzuki car plant in India, and he was also the chairman of the Steel Authority of India, which is the largest company in India.

So he got involved and was very interested, because actually when I was doing this experiment in Nashik he called me to Delhi to discuss these things with him. So we formed a national committee on quality with 20 business leaders and I was secretary to this committee.

The most eventful part of my quality journey was the three days that I spent with Ishikawa-sensei. Two days at the conference and the third day I took him along with me to visit the Taj Mahal in Agra. My wife and two sons and Prof. Ishikawa, we drove to Agra, so that day I had Prof. Ishikawa all to myself and we could talk about many

things.

But just to summarize the key learning, people have innate goodness and immense potential. He said we should educate, train, and empower them. It is as simple as that. Do not be overawed by problems, however difficult those may be, because I talked to him about all the problems we are facing in India. He said don't worry. Many of these could actually be converted to opportunities.

And to my question on where should I work, where should I put my effort, he said choose to work with those organizations that have the greatest impact on people through their products and services and have a long future potential. That is to say to work in a yagna spirit, in a spirit of giving and not taking anything out of the system.

Then about the societal part, when I asked him, he said that a company can be called a TQC company only when its neighbors say so, and he has written this in his book as well. A company is a TQC company not when it wins awards but when the neighbors say that it is a TQC company. He said TQC takes root only when there is a felt need for it. I think this is the most important lesson I learned. Where there is no need, there will be no TQM. That's why I started with the need even though I didn't know about it at that time, as we have seen happen time and again. Many companies follow TQC or TQM but never realize it because they have never felt the need for it.

Then in 1988, taking his advice, I became a full-time advisor to CII. I left my job at that time as a chief executive to promote quality in India and establish the TQM division with a membership of 30 prominent business organizations. Only business leaders could become members of this committee, which soon turned into 100 organizations four years later. So we started working with those.

I attended the first TQC seminar in English by JUSE in 1988. I think three of the professors who spoke to me there are still present here, four of them actually, I've met them all. Under guidance of Dr. Ishikawa, we developed a cooperation arrangement with JUSE.

Under his guidance and persuasion, Mr. Noguchi was the secretary general, we had a discussion and they agreed to help us in two ways. One is he said to get the top management involved, and he also asked me if we would like to do it in India or Japan. I said Japan. In India no top manager or business leader wants to attend a program on quality, but if they come to Japan nobody knows what subject they are going to attend a program on. So we started doing that and he sent counselors to India to help many companies in this context.

Then Dr. Ishikawa gave me this book, *What is Total Quality Control?: The Japanese Way*, in English. I think this book had a tremendous influence on me and I

read it time and again and learn something new, something different. It makes me feel as if I have known Dr. Kaoru Ishikawa for many long years although I met him only twice. This book brings a relationship because he has written it in a very personal style of communication.

Phase 3 is about after he passed away and how his influence has continued. The annual TQM study mission now comes to Japan. It started with JUSE and has continued with many other organizations. Business leaders have adopted the TQM way of management, which has had a strong impact on business leaders. I think this is one important thing that transformed many business leaders, and they took the leadership role in quality management.

Counselors from Japan were sent to India to provide education, training, and consultancy. The first one was Prof. Kusaba, who came for just one day. Then Mr. Bunteru Kurahara came and I still recall a very interesting event.

He used to come and guide companies. One of the Japanese companies operating in India was Yuasa Batteries, which was in collaboration with Venu Srinivasan, whom Prof. Washio knows well. Mr. Srinivasan called me and he said the MD of Yuasa Batteries is Japanese and is asking me how Bunteru Kurahara is spending 10 days in India when I can't get him in Japan even for one day. He wanted to attend so I told Mr. Srinivasan that he could come and attend.

Then I asked Mr. Kurahara this question and he started laughing. He said, "It's no true come to India because I have no work in Japan. My mentor, Prof. Ishikawa, told me to spend 10 days a year in a country or in a region, which cannot afford me." So that's the kind of spirit he had. I once caught him changing his ticket from business class to first class paying from his pocket because we paid him for business class. So that is the kind of commitment they had shown.

Then there was Prof. Washio who still continues to come to India to serve India's business organization. Even though he is probably 85 years old, he is continuing to do so. And then there is Prof. Tsuda.

Then we started quality month celebrations every year, as here. We started the annual quality summit in 1989. Some of the organizations started work for challenging the Deming Application Prize.

And his influence has continued to grow through his disciples and grand disciples. We have Prof. Kume, whom I met for the first time in 1990 at the ISO/TC 176 committee meeting in Budapest and after that he has been helping us out. Then Prof. Kano, whom I met in 1993 in Helsinki at the EOQ Congress. And there is Prof. Isada who is also in a way connected with Dr. Ishikawa. Part of his education here was under

Dr. Ishikawa. Then there are Dr. Kano's disciples, Suzuki-san and Ando-san. So this continued association with Prof. Ishikawa through the lineage of disciples has made a tremendous difference to us in India.

He also helped open the Deming Prize to the world. He was influential in making this happen. I think the Deming Prize was opened in 1989 and the Japan Quality Medal in 1994. The first winner from outside Japan was in 1989 and it was Florida Power and Light. For the Deming prize in 1997, I think it was Phillips in Taiwan.

The first winner in India was in 1998 and the Japan Quality Medal was in 2000, the same company. From India as of 2014, this year's results have not yet been announced, we have 25 Deming Prize winners and six Japan Quality Metals, which is the largest number outside of Japan. This greatly contributed to the improvement of quality in Indian business organizations. I think it played a very, very crucial role in the movement towards quality in India and Prof. Ishikawa was personally responsible for making this happen. No other award in the world is open to anybody else in the world except companies in their own regions. This is the only one and that made a difference.

So now the impact on India through the influence of Prof. Ishikawa. Let me share this with you. These are the Deming Prize winners. The first one was in 1998 and then suddenly we had a spurt of many companies winning. The total as of now is 25 + 6, which is 31 winners, which is phenomenal.

Now, let's look at the economic activities. Look at the GDP growth rate. The source is the Reserve Bank of India. This was our rate of growth typically. It's a three-year period. This is in 1983 when we started TQC activities in India, and this in 1986 when Dr. Ishikawa came here. You suddenly find from 3.75 average we went up to around 6.84 in this period, so we were virtually 80% better than where we were earlier.

The automotive component industry was the path breaker because it was the first one to go in for the competition and most of these companies are privately owned. They have made a tremendous difference in India.

As you can see here, our GDP growth was around 3% for the 1950s, ever since independence, until 1980. That's when the intervention took place and that's where it took off. Even more important is the per capita GDP, which was virtually not good at all. It took off and started growing and this is when Dr. Ishikawa came to India in 1986. So you can see a correlation between the spurt in economic activity in terms of GDP growth in India and Dr. Ishikawa's visit.

Another indicator is India's share in the global trade, which was 0.5. Now it's gone to 1.4 or 1.5, which is virtually three times since this period. You can see until 2000 it was growing but before 1990 it was stagnant. In spite of the fact that in the 18th century

India's share was 17%, by the time the British left it was 0.4%, so that's the legacy we have had to overcome.

The auto component industry in terms of revenue, I'm giving you the reference of the auto component industry because they are the ones who have taken it the most seriously because of the competition in India, has grown three times in the last nine years in terms of revenue, five times in terms of exports, and they plan to increase by four times more, and in the next 10 years six times more.

Actually, multinational consulting companies in the late 1990s, in Britain it was headline news that these companies would not survive because they were privately owned and they had to compete with the Denso's of the world and the Delphi's and the Visteon's and the Bosch's. But not only have they survived, they have grown.

So the auto component share in manufacturing increased from 3% to 5% in nine years and it is expected to increase to 9%, and 21 out of 31 companies winning the Deming Prize are from the auto component industry. So that's the kind of impact he had.

Let me briefly talk about his impact and his contribution to the international quality community. What I'm going to do before starting there is share my understanding and totality of what Dr. Ishikawa talked about regarding companywide quality control.

I read an article written by Peter Drucker where he talked about the Taylor system in the US starting in the 1910s that talked about systems and specialists. Then there was the creativity group of Herzog, Carnegie, et al. who talked about creativity, and as Peter Drucker said, these two groups never talked to each other for seven years. They never met and they never talked.

So what really happened is the Japanese built a bridge across this using QC Circle and getting people involved in that. So that's the chain that happened in my life when I got into contact with Prof. Ishikawa and his thinking. The role of quality manager changed so that everybody is responsible for quality, not only horizontally but vertically. So that's how it started happening.

Then another important aspect was since most of the processes them in terms of numbers, how do we handle those numbers? Managing those numbers, making sense out of it, obviously you need some statistical method so you are taught the statistical methods through QC Circle in very simple language, easy to understand language, so people can be trained to first standardize and then improve.

So he used the people to develop the system, instead of industrial engineers who used to develop the system in the past and quality managers. He got everybody to work as a quality manager and industrial engineer and then he encouraged them to find a

better way. That contributed to creativity and you suddenly see there is no competition between standardization and creativity. Actually they work with each other the best way.

So the true improvements he brought was through daily management on quality, cost, delivery, safety, and morale. The systems drive. Then he showed them how to use a PDCA for creativity and individual improvement and then integrated with the company strategy through policy management.

So in a nutshell, what I would say is that Japan learned from the West but the rest of the world has been learning from Japan since then. It's a different matter. A good part of the world does not even want to acknowledge that.

My way of thinking is that it talks about the principles, concepts and tools that are known around the world. It is nothing new even though principles are of course varied in a way. Survival is the driver for competition and occasionally it is vision, or as Dr. Kano says, "Sweat we must." There is no shying away from hard work. That's what we need to do.

My understanding is whatever business management we talk about it is talking the language of CWQC but by using different terminology. It's customer focused, people involvement, next process of the customer, systematic improvement, and all companies around the world are practicing it.

Another aspect of Dr. Ishikawa is he contributed to the international quality community very aggressively and with a lot of hard work. He was a founding member in 1966 and later president and chairman of the International Academy for Quality. He was one among six founding members. He contributed to work pretty hard to that.

Then the first International Conference on Quality as part of IAQ was initiated and the first conference was held in 1969 in Tokyo. That's where the first book was published on how to apply the Japanese methods in other countries.

Then he played an active role as the director of International Organization for Standardization and chair of various committees. He used this as a means to harmonize economic activity around the world, so it was quality standardization and product standardization leading to harmonization.

I don't know of any other quality guru of this world who contributed to ISO. Everybody shies away from it but he spent an equal amount of time on ISO because he found it was important and relevant.

His perspective of QC promotion was starting with the plant. When I started my work in industry, quality was all about plant manufacturing. It went companywide, then groupwide, then countrywide, and then international, worldwide. So he really played the role of integrating quality across because his belief was that everybody in the world

needs to gain so the whole world needs to move in that direction. And as we do that more and more organizations will be influenced.

Of course, QC Circle are probably one of the most powerful people capability building and empowerment programs ever known. I agree with David when he says it will probably be difficult to beat this kind of program. The amount of creativity that it has unleashed around the world is unbelievable and I think all credit goes to him so he really is a global sensei.

Briefly, his legacy and its relevance, is it relevant today and tomorrow? That is a discussion that often happens. Probably, the way we practice has passed. Today and tomorrow is different. It may not involve the same thing and that's the danger.

It is obvious Dr. Kaoru Ishikawa has played a prominent role in the resurgence of the quality movement in India and we are indeed thankful to him for his guidance during the difficult time making a transition from regulated economy to deregulated economy. Again, in India it has happened in those sections of the economy where the competition is strong, but where the competition is weak it's still not happening.

I consider myself fortunate to have had the opportunity to meet such a great sensei and to learn from him. In a way, he contributed in molding my character. It is indeed humbling and satisfying to know I got an opportunity to spread his mission through the International Academy for Quality, which was in a way accidental. Greg and Noriaki Kano are responsible for pulling me into the academy.

I believe Dr. Ishikawa made an effective and enduring contribution to the development of theory and practice of total quality, or business excellence as we know today. As I mentioned earlier, I recognize there are many Japanese counselors who have made contributions, it was not him alone, but he has turned out to be the face and obviously he made an important contribution.

His greatest contribution was in influencing the business leaders and the operatives. He could influence the business leaders and he could influence the operatives, so that was his strength. At any level of the organization hierarchy he could influence all the people at the same time through simple to use and practical approaches that otherwise sounded very difficult.

I mean everybody read about statistical quality control and quality control. Juran's book has been available for years and years, decades, but Prof. Ishikawa wrote in a language that people could understand and relate to so that's what made the difference. And I think he did so with great humility, sincerity, generosity, and exceptional hard work.

Dr. Ishikawa's thoughts on quality management principles, concepts, and tools are

relevant to the current environment and will remain relevant in the future as well. That is what I think.

This commemoration is our homage to Dr. Ishikawa and to make his knowledge and wisdom available to the following generations to come. With grateful thanks, namaste.