Impressions from a Quality Tour in Japan: Deming to Knowledge Management.

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This paper reports on the authors' impressions of Japan after a 17-day trip to Japan in early 2001. The paper includes reports of meetings held with some of Japan's leading experts and practitioners in quality management. Meetings were held with Professor Yoshio Kondo of Kyoto University, Keiichi Sakamoto and Tatsuo Unozawa of the Japan Quality Award Committee, Ichiro Kotsuka, Union of Japanese Scientists and Engineers (JUSE), Professor Noriaki Kano, Science University of Tokyo, and Tomohiro Takanashi of the Japan Research Institute. Dr Robin Mann is the director of Massey University's Centre for Organisational Excellence Research and this was his fourth visit to Japan. Shigeri Nishide is a Japanese national who is undertaking research at the Centre for Organisational Excellence Research in New Zealand. The purpose of their visit was to develop relationships and networks that would be beneficial to the New Zealand Benchmarking Club (a Club managed by the Centre for Organisational Excellence Research) and to explore potential research opportunities that would be of benefit to both New Zealand and Japan.

Japan's Economic Decline

In the late 1970's until the late 1980's, many study tours were undertaken to Japan from Western organisations to learn more about how Japan achieved its economic success. On one of these study missions, a leading Japanese economist gave the reason why Japanese organisations were willing to share their techniques and secrets of success to Western organisations, "it would take you ten years to get to where we are now, and by that time we will be even further ahead. And besides, we know you won't do it!" (Department of Trade & Industry, 1985).

In 2001, due to Japan's economic decline, a number of Japanese experts believe that these sentiments can now be applied to Japan. One of these experts is Professor Kano, chairman of the Japan Society for Quality Control. He sees Japan's recent economic slump as a wake-up call that should make Japanese organisations realise the need to "do it". Others also believe that it is now time for Japanese organisations to re-assess their management systems and implement new practices and processes to stimulate an economic recovery. In fact, as the Japanese economy has become progressively weaker since the economic bubble burst in the early 1990s, there is evidence that the Japanese are in fact beginning to respond to this challenge. The establishment of the Japan Quality Award (JQA) in 1995 and the changes to the Deming Prize in 2000 to increase its accessibility are evidence of the changes taking place.

Compared with visits to Japan between 1997 and 1999, and the life in Japan before 1995 when one of the authors (Nishide) lived in Japan, the economic decline was generally not noticeable. People seemed to be buying, drinking, and eating out as much as ever, and happily paying $NZ8 for a cup of coffee and a $NZ50 surcharge for the privilege of sitting in some bars even before buying a drink. Many young people own Mini Disc (MD) Walkmans, people use vacuum cleaners with dust sensors, and most cars look brand new. From the Western point of view, Japan is still the throwaway society – it is still possible to visit their rubbish tips and come away with

what appears to be brand new bicycles and appliances (there are very few second-hand shops in Japan). It is difficult to notice that there is a decrease of consumption in Japan as the Japanese have for many years, been consuming much more than is necessary. This cycle of purchasing new products such as home appliances, still appears to be much shorter than in countries such as New Zealand, Australia, and the UK. The Japanese are always quick to buy new products or products with the latest features. They like to keep ahead of their neighbours; when they purchase something, they like to be the first to own the latest and the best (Nippon Steel Human Resources Development, 1992). New products penetrate quickly and fade away quickly. This is probably why Japanese organisations, such as Sony, excel at introducing new products with new features.

The difference between the rich and the poor in Japan has been, for many years, much smaller than in most other countries in the world. The annual Prime Minister's Office survey shows that, for the last 20 years, about 90 percent of the Japanese have viewed themselves as middle class, with less than one per cent saying that they are upper class (Nippon Steel Human Resources Development, 1992). There is also little visible evidence of poverty in Japan. It was only on a previous visit to Japan in 1998 that we saw some homeless people. These people were living in tents with all their home appliances and it was reported on the national news as being due to the downturn in Japan's economy.

Taking a closer look at people's lives in Japan and talking to the Japanese can reveal the changes that have taken place since the economic bubble burst. Many new graduates are struggling to find a job (8% of university graduates are unable to find a job in comparison with an overall unemployment rate of 4.7% (Mitsubishi Research Institute, 2000)) and simple and cheap weddings, and second-hand clothes have become trendy amongst the young generation. The official interest rates on loans secured by government bonds have been at 0.5 percent since late 1995. The Bank of Japan lowered the rate further to 0.35 percent in February 2001, and to 0.25 percent in March 2001 whilst acknowledging that this was probably still not enough to stimulate the economy (Bank of Japan, 2001). The Japanese Government have decided to start teaching English in elementary schools from 2002 (English is presently taught from junior high school level), hoping that this will lead to improvements in international communication and economic performance. Another significant change has been the general interest in and promotion of ISO standards. On previous visits to Japan, for instance, the word ISO was rarely seen. During this visit, ISO was everywhere. Advertisements for ISO9000 training/seminars were even in the local newspapers, and cleaners at the local department store were wearing an ISO9000/14000 badge on their uniform.

Having observed these changes, it was interesting to hear the views of a number of experts on the outlook of the Japanese economy and on recent trends in quality management.

Meeting with Professor Yoshio Kondo

Our first meeting was at Professor Kondo's house in Kyoto. Yoshio Kondo is Professor Emeritus at Kyoto University. He has made some of the most significant contributions to the quality control area in Japan. His publications, both in English and Japanese, include *Human Motivation – A Key Factor for Management* (1991), and *Companywide Quality Control – Its Background and Development* (1995). He has received many prizes for his contributions to quality management including the Deming Prize (1971), the E.L. Grant Award (1977), the Tanigawa-Harris Award (1981), and the E. Jack Lancaster Award (1998).

Professor Kondo's present interest is in employee motivation. It was through his research in the quality control area that he began to recognise the importance of motivation to work. Kondo

(1995) stated that Japanese management systems especially companywide quality control (CWQC) is applicable to any industry and anywhere in the world. In introducing CWQC worldwide, he suggests that it is essential for people outside Japan to correctly understand what CWQC is and the importance of the various CWQC activities based on quality control (QC) techniques. The prime difference in CWQC compared to TQM (or as it is now called business excellence) in the West appears to be the visible emphasis placed on the Plan, Do, Check, Action Cycle, and the application of statistical approaches and methods by all employees for ensuring process control and improvement.

One of Kondo's concerns in implementing CWQC is that in the pursuit of improvements employees may lose their motivation. This is because new systems and processes (through standardisation) can reduce the freedom of people to make decisions and be creative. He suggests that an organisation is useless if employees lack motivation and agrees with the Japanese saying, 'a company is its people' (Kondo, 1991). The relationship between standardisation and employee motivation is discussed in some detail in Kondo's book (1995). Kondo's conclusion is that with careful implementation of CWQC organisations can improve employee motivation and increase standardisation, and therefore these two areas should not be considered as mutually exclusive but as mutually complementary.

In spite of his great contribution and success, Professor Kondo is a modest and friendly person. He liked talking about losing his suitcase whilst travelling, which resulted in him wearing his sports shirts at an important dinner party, rather than describing the great contributions he has made to the quality area in the past 50 years. As he received one of the highest honours that a Japanese civilian can gain, there is probably no need for him to explain his success. As he showed us the Imperial Medal of the Second Honour, which was presented by the Emperor in 2000, he was still talking about a humorous episode relating to his meeting with the Emperor.

Japan Quality Award Committee

Our other meetings were held in Tokyo. The first visit in Tokyo was to the Japan Quality Award Committee (JQAC) which established the Japan Quality Award (JQA) in December 1995. Shoichi Saba, Chairman of the Japan Quality Award Committee, explained the rationale for the Japan Quality Award in a presentation given at the Asian Productivity Organisation Top Management Forum in March 1999. "The accomplishments of the Malcolm Baldrige Award in promoting management innovation prompted a widespread view in Japan that companies should aim for quality enhancements not only in products and services, but also in the quality of their overall management. There was also a feeling that Japan should promote its own award system" (Asian Productivity Organisation, 2001). In response to these views, the JQA was established to provide services that would help to maintain long-term competitiveness. Keiichi Sakamoto and Tatsuo Unozawa, our hosts, believed that the JQA would help Japanese management and their companies to become more open and thus overcome the secretiveness that is often prevalent within Japanese companies. Tatsuo also explained that this secretiveness does not encourage the use of outward looking processes such as benchmarking which have been so successful in the West.

When the Deming Prize was mentioned, they appeared to be very careful about commenting on it. This is probably because there are many comparisons made in Japan between the Deming Prize and the JQA as they are sometimes viewed as competing awards. They emphasised that the Deming Prize and the JQA are not comparable and should be seen as two different prizes as both have different approaches. Although they said little about the Deming Prize, they explained that the reason for promoting the JQA is not primarily to have organisations striving to win an award

but to encourage organisations to use the model for self-assessment purposes as part of a continuous improvement process. In contrast, as a later visit to the Union of Japanese Scientists & Engineers (JUSE) revealed, the majority of companies apply for the Deming Prize primarily to win the Prize. JQAC's Quality Programme provides tools for quick external assessments and self-assessments (for example, using a CD-ROM tool) as well as providing the quality award process itself.

The 2000 version of JQA criteria focuses on four main concepts: customer focus, public responsibility, employee orientation, and competitiveness. The criteria also identify nine core values: quality, leadership, process, knowledge management, agility, partnership, social responsibility, management by fact, and globalisation. These core values are all related to the eight categories in the JQA Framework (Japan Quality Award Committee, 2000). Figure 1 shows the Framework of JQA 2000.

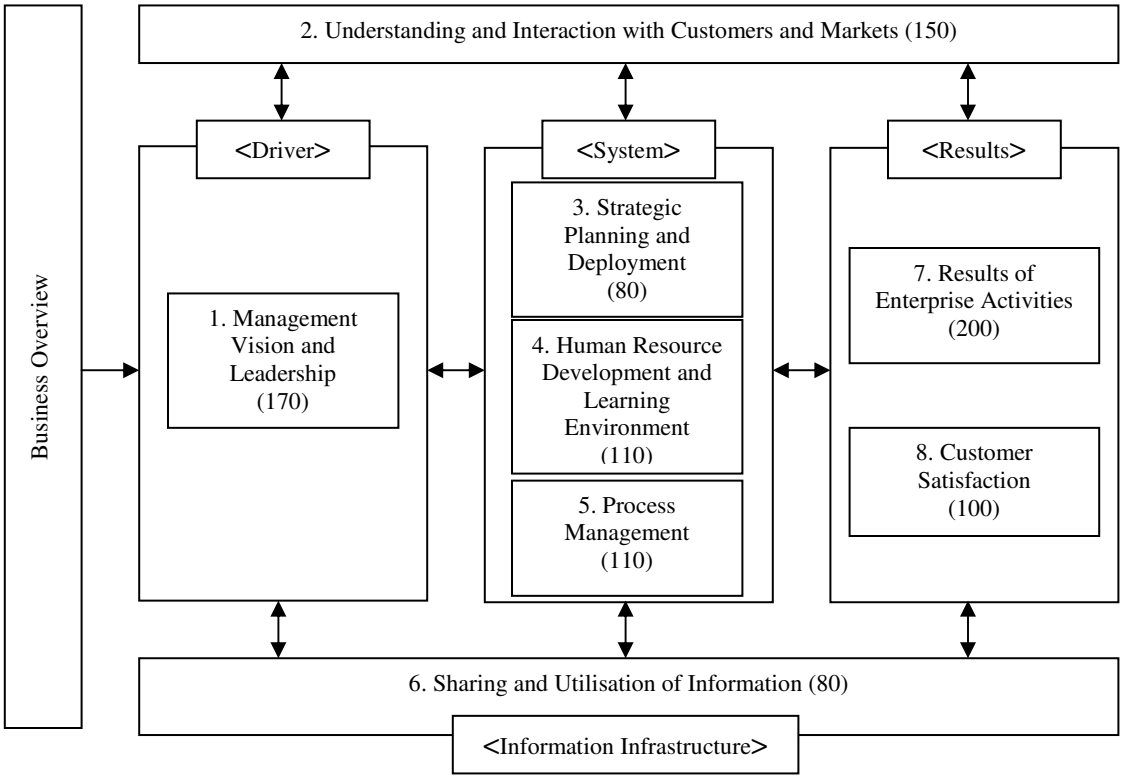

Figure 1. Framework of the Japan Quality Award - 2000 (Japan Quality Award Committee, 2000).

The JQA is based upon the Malcolm Baldrige Model (the business excellence model launched in 1987 in the United States to improve competitiveness and now promoted by nations around the world). The prime differences of the JQA relative to the Baldrige Model are the higher number of points allocated to customer focussed activities (250 points compared to 210 points in the Baldrige Model), and the lower number of points allocated to Results (300 points compared to 450 points in the Baldrige Model). Since JQAC's award system started in 1996, 63 organisations have applied for the award and nine have won it. These winners include NEC Semiconductor

Group (1996), Asahi Breweries (1997), Japan Research Institute (1998), Ricoh (1999), Fuji Xerox National Major Customer Operations (1999), and IBM (2000).

Keiichi was interested in the process used within New Zealand for selecting Baldrige Award evaluators (the New Zealand Business Excellence Award is based on the Baldrige Model and the New Zealand Business Excellence Foundation formally trains evaluators to be able to assess organisations against the Baldrige Criteria). In Japan, all potential evaluators go through a six-day programme and, only then are the most suited selected. In New Zealand evaluators are selected after a two-day evaluator training course and the completion of a 40-50 hour case study. To date over 3,000 evaluators in Japan have been trained; representing a steady increase in the number of evaluators trained each year.

When discussing the developments in organisational excellence within New Zealand, Keiichi was supportive of New Zealand's approach for providing awards to recognise different stages of business excellence achievement (for example, New Zealand's Progress Award, Commendation Award, Achievement Award, and the National Award). Tatsuo, as an expert of benchmarking, was interested in the New Zealand Benchmarking Club and was impressed about the activities the Club members were engaging in and the level of sharing taking place.

At the end of the meeting, according to the Japanese custom of presenting gifts on visits, we gave New Zealand chocolate for sharing at the JQAC office, and some famous noodles from the author's (Nishide's) hometown for Keiichi and Tatsuo themselves. This gave us a great opportunity to witness their friendliness. Keiichi told us Tatsuo was an expert of both benchmarking and noodles. Then Tatsuo started to tell us about the best noodle shops in Tokyo. They also asked us about rugby, knowing it was a popular sport in New Zealand. It was a pleasant and relaxing end to the meeting.

Japanese Union of Scientists and Engineers (JUSE)

The next meeting was held at the Union of Japanese Scientists and Engineers (JUSE), who first invited W.E. Deming to Japan in July 1950 and established the Deming Prize in 1951. Ichiro Kotsuka, Deputy General Manager of JUSE, provided a wealth of information on the use of Total Quality Management (TQM) in Asia and also about the Deming Prize. The Deming Prize is divided into three categories: The Deming Prize for Individuals, The Deming Application Prize given to companies or divisions of companies, and The Quality Control Award for operational business units. The Deming Application Prize involves the examination of an organisation according to the viewpoints shown in Figure 2. An appropriate weight is given to each viewpoint based on the applicant organisation's aims for TQM introduction and promotion, and the characteristics of its TQM practices (JUSE, 1999).

Apart from being the organisation behind the Deming Prize, JUSE is a major training provider on TQM techniques, particularly on the process side. One of their 13 regular TQM training courses, a TQM Executive Course, is a four-day course. This covers the effective practice of TQM, new product development, quality assurance, case study and group discussion. JUSE's TQM Middle Management Course is 12-days in duration, divided into four three-day courses over four months. This course consists of the basic concepts of Quality Control (QC); how to operate QC; QC methods; a case study; special lectures on strategy planning, information technology and marketing; and a group discussion. Their QC Basic Course, which was established in 1949, is a 30-day course (over six months) that mainly covers the seven management tools for QC and statistical control. Most of their courses are provided more than three times a year. The newest course from JUSE, the Japan Accreditation Board for Conformity Assessment (JAB) Accredited

ISO9000 Assessor Training Course, was established in 1995 and is held every month. Although ISO has become popular in the last few years in Japan, and even smaller organisation are considering applying ISO9000 and ISO14000, only a few people have a basic knowledge and understanding of ISO and how to apply it (Maki & Nyuhara, 2000). This course aims to rectify this situation.

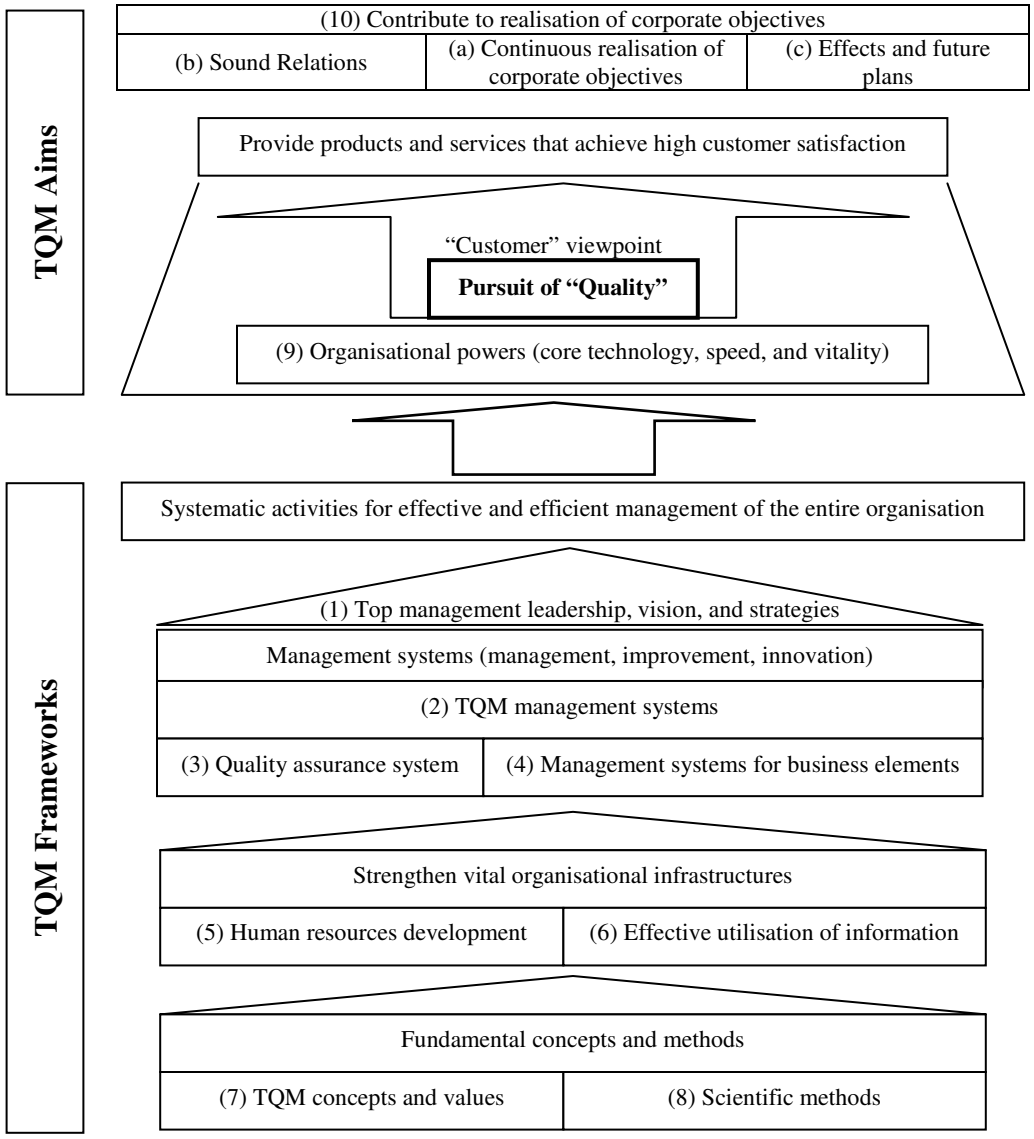

Figure 2. The Deming Prize Examination Viewpoints (Union of Japanese Scientists and Engineers, 1999).

It was interesting to hear, from Ichiro, of the growing popularity of Quality Control Circles (QCCs) throughout Asia, especially as many Western organisations tried to introduce QCCs in the late 1970s and 1980s and failed. This supported the predictions made by the founder of the QCC concept, Ishikawa (cited in International Management, 1982). He said, at the time, "Many Western companies mistakenly think that Quality Control Circles equal Company Wide Quality

Control. This is a real concern of mine, because nothing is more likely to make circles fail. It must be understood that circles are only part of a CWQC programme".

The strength of the QCC movement in Asia is represented by the popularity of the International Convention on QC Circles (ICQCC) which was originally only hosted in Tokyo, Seoul and Taipei between 1976 and 1983. Due to the interest throughout Asia the convention has since been hosted in Manila, Bangkok, New Delhi, Bali, Hong Kong, Kuala Lumpur, Beijing, Colombo and Singapore. The number of Quality Circles in Japan are continuing to increase with over 400,000 registered within Japan and over 3,000,000 people registered to a Quality Circle in 1997, compared with over 200,000 registered in Japan and over 1,900,000 people registered in 1984 (JUSE, 2001). Based on Asia's positive experience in using Quality Circles, it is perhaps time for the West to revisit the use of these voluntary improvement teams. As Kondo describes, Quality Circles can be a powerful method for enhancing an organisation's improvement efforts and stimulating a high degree of motivation amongst employees (Kondo, 1995).

In spite of the continuing popularity of QC Circles, Ichiro explained that the Deming Prize's popularity was diminishing in Japan. He believed that the reason for this was because organisations were only applying for the prize if they believed they could win it. He said that most companies that enter for the Deming Prize do win it at some point, but it can take many years. In contrast with the JQA, the Deming Prize framework itself is not designed for self-assessment (organisations that are willing to apply for the prize are encouraged to utilise the expertise of JUSE to improve). In contrast to the decreasing popularity of the Deming Prize in Japan, Ichiro explained that the prize was becoming increasingly popular in other Asian countries, especially in Taiwan.

To make the prize more accessible for organisations throughout Asia, including Japan, there were changes made to the Deming Prize programme in the year 2000, in particular, a Japan Quality Recognition Award was introduced. This award consists of two parts: Recognition of TQM Achievement, and Recognition of Quality Systems (QS) Innovation. Ichiro explained that the Recognition of TQM Achievement is given to organisations whose quality improvement shows steady progress, and is likely to reach the level worthy of receiving the Deming Application Prize if they continue to improve. The purpose of this prize is to motivate these organisations into further development leading to rapid TQM deployment. Recognition of QS Innovation is given to organisations that use innovative technologies for developing or enhancing quality management systems. The purpose of this award is to identify innovative approaches that can be shared with other organisations and to motivate the winners to develop further through the interchange of ideas with other organisations.

Ichiro was interested in some form of collaboration with New Zealand organisations and the New Zealand Benchmarking Club. Unfortunately, he added, many Japanese companies were not as open-minded. He mentioned that JUSE had promoted benchmarking occasionally but received little interest in it. He did not know of any other institutes/clubs promoting benchmarking in Japan. At the end of the meeting, we talked about the contributions made by such famous Quality Gurus as Juran, Deming, Feigenbaum, Taguchi and Ishikawa. Ichiro, through working over thirty years at JUSE, was in the privileged position to have known them all and it was fascinating to listen to Ichiro's personal account of their contribution to Japan.

On our arrival at JUSE, New Zealand and Japanese flags had been positioned so that they were crossing each other in recognition of our meeting. On the table, a number of small gifts were awaiting us. We were glad that we had brought chocolate and noodles to present to JUSE!

Meeting with Professor Noriaki Kano

Right after visiting JUSE, we visited the Science University of Tokyo to meet Professor Noriaki Kano, the chairman of the Japan Society for Quality Control. He also sits on the board of JUSE. Professor Kano provided a stimulating presentation on the Kano Model that he began developing in the 1970's through studying such companies as Konika (a camera manufacturer). The Kano Model integrates two dimensions: the degree of product or service performance fulfilment and the degree of user satisfaction. It also differentiates amongst basic, performance and exciting quality. Figure 3 shows the Kano Model.

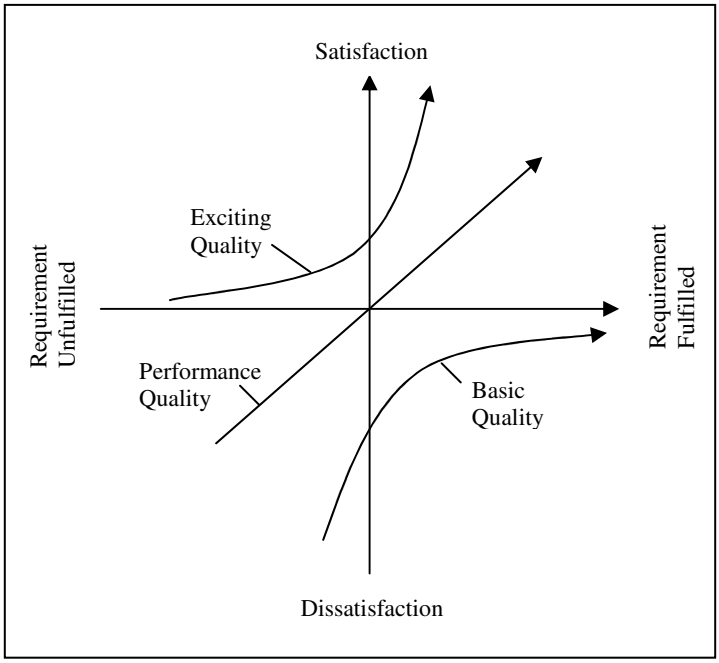

Figure 3. The Kano Model

Kano's research shows that if basic quality is not achieved, a high level of customer dissatisfaction will result. Even when it is achieved, it will only have a limited effect on customer satisfaction. Basic quality is often measured by warranty data, customer complaints, and other failure reports. Performance quality generates a linear relationship between customer satisfaction and the performance of the product: the better the performance, the greater the customer satisfaction. Performance quality is often improved by reacting to the voice of the customer (for example, through customer surveys or reviews). The last quality type, exciting quality, goes beyond customers' expectations and excites the customers. Exciting quality is difficult to specify by listening to customers because many customers do not realise what they want. Organisations must be creative and innovative to identify and offer exciting quality. As the customers are only excited by the same quality once, organisations must seek continuous improvement in quality to keep customers excited by their products/services. As time passes, exciting quality will become a performance quality and, eventually, might become a basic quality.

This one-and-a-half hour lecture on the Kano Model represented the output of many years' research. It was evident that in the global competitive environment, organisations will need to be

looking at how to use such models to help them to develop strategies for establishing and maintaining a competitive advantage in products and services.

Kano is a strong supporter of the Deming Model. He sated that the Deming Model had existed for 50 years and was, therefore, proven whilst the Baldrige Model was still relatively new and therefore it was more difficult to assess its true value. His argument makes sense. As quality management emphasises the evaluation of long-term organisational performance, quality criteria models also need to be evaluated in terms of their long-term effects. Kano believed that Japan's economic position (26^{th} in world competitiveness – IMD report, 2001) was disappointing but not a major problem because these things go in cycles. He suggested that most Japanese were too comfortable to react to rapid changes in the global market, and it needed to be a real crisis to motivate companies to change. He cited that one reason for the British success in the industrial revolution was that they were "industrious" demonstrated by the law restricting working hours to 20 hours a day. When a country is not industrious, it will lose its competitiveness.

We were delighted to have heard the lecture on the Kano Model from Professor Kano himself, especially, as he had made a special effort to meet us when he was still recovering from flu. Hopefully, after tasting some New Zealand wine, which we took with us as a gift for him, he would soon recover and come to New Zealand to give New Zealanders a lecture on the Kano Model.

Meeting with Tomohiro Takanashi from the Japan Research Institute

Our last meeting was with Tomohiro Takanashi, Counsellor, Japan Research Institute. He is also Managing Director of the Knowledge Management Society of Japan and Advisor to the Japan Quality Award Committee (JQAC). As a leading business consultant, accountant, commentator, writer of 14 books, and also being active in many fields including benchmarking and knowledge management, he provided a most positive outlook for Japan. He believed the Japan Quality Award (JQA), benchmarking, and knowledge management would be the key to Japan's future success.

Tomohiro has been promoting the importance of benchmarking since around 1995. Although the concept of benchmarking was originally born in Japan as a tool for quality control, it is not as popular in Japan as in the States where the Western concept of benchmarking was introduced and developed by Xerox. He suggested that the success of American organisations was largely due to the use of benchmarking, which helps organisations to identify "better practices" and improve. Tomohiro has also been promoting knowledge management to Japanese organisations in the last few years. He stated that knowledge management should follow the identification of best practices by benchmarking. An identified best practice should be included in an organisation's knowledge bank so that it can be accessed and shared by everyone within the organisation (Morita & Takanashi, 2000). As benchmarking and knowledge management can enhance performance against the Baldrige Model, Tomohiro suggested that the JQA would improve the performance of Japanese organisations. He also believed that there would be a meeting of minds between the JQAC and JUSE to ensure that the two bodies could co-exist together and offer complimentary services.

Tomohiro is undertaking a wide range of projects at the moment. Educating young leaders is one of them. He is presently developing an International MBA that involves working with the best universities around the world. He is also organising the Knowledge Management Olympics (a concept designed to attract the best ideas in knowledge management) and was interested in gaining support for this idea in New Zealand. He has also developed a JQA self-assessment tool

and is involved in the development of a benchmarking and best practices website with JQAC. He also appeared to be quite active in introducing new ideas from overseas to Japanese organisations, and was very interested in exploring ways of encouraging collaboration between New Zealand and Japanese organisations. Tomohiro added that Japanese organisations prefer to collaborate with well-known persons or organisations, therefore holding a seminar within Japan would be helpful to promote the benefit of collaboration. Once a person, organisation or even a country's expertise is acknowledged and becomes well known in Japan (not necessarily well known throughout the world), most organisations are willing to work with them. This seems to be one of the characteristics of the Japanese. Deming's work, for instance, was not originally recognised as important in the States, but became popular in Japan because of his willingness to share and work with Japanese organisations.

Tomohiro's work output was impressive. When we asked him how he could manage to do so much work, he said, 'this is my hobby.' As he finds his work so interesting, he had stopped playing golf and drinking with his colleagues, which are probably the two most popular things to do for Japanese business people. After knowing that he had stopped drinking, we needed courage to give our gift to Tomohiro, a bottle of New Zealand wine. His reaction was, 'As I have heard of the reputation of New Zealand wine, I will make this an exception. After all, I did not say I did not like drinking, did I?'

Final Reflections

Overall, the visit was extremely rewarding in learning more about Japan's approach to quality management, meeting with experts in the quality field, and discussing opportunities for collaborative work between New Zealand and Japan. Our conclusion from the visit was that Japan's willingness to "do it" (to adopt new approaches and learn from other countries) is growing. In particular, it will be interesting to follow how the Japanese utilise both the Deming Prize and JQA in the future to recover from the current economic situation.

Whilst the economic situation in Japan has deteriorated, our impression of Japan is that it is still one of the world's leading countries in terms of providing customer service. Its people seem to embody the values of quality. One just needs to go to a shop or a restaurant and see these in action. Our impressions of Japan are of the hotel porter who ran after us down the street to profusely apologise and return the equivalent of two New Zealand cents for which we had been overcharged on our hotel bill, garages that not only do a full service on your car whilst filling it with petrol but who guide you back into the traffic, trains that are always on time and can be relied on to the minute, and shop assistants that are always polite and treat customers with the utmost respect. Having experienced customer service and quality that are so culturally embedded in Japan, we believe that it will only be a matter of time before Japan's economy recovers.

For more information on Massey University's Centre for Organisational Excellence Research and the activities it manages such as the New Zealand Benchmarking Club, the Business Performance Improvement Resourc, www.bpir.com, and the Benchmarking and Performance Excellence Self-assessment, please contact, Dr Robin Mann. Email: r.s.mann@massey.ac.nz or Tel: 00 64 6 350 5445.

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