

1. Introduction to the special issue on Kaizen: an ancient operation innovation strategy for organizations of the XXI century

1.1 Introduction

This *The TQM Journal* Special Issue was centered in exploring the Kaizen philosophy from an academic perspective, one that studied Kaizen in all its aspects from its origins to its application in manufacturing and services.

From January to December 2017, a total of 22 manuscripts were received. Of those 22 manuscripts, half passed a rigorous double-blind peer-reviewed process, and as a result, they are being published in this Special Issue. However, before presenting each of the selected manuscripts, the background and importance of Kaizen in management studies is explained.

2. The importance of Kaizen approach in management studies

This Special Issue addressed the importance of the improvement concept in terms of the Japanese philosophy known as Kaizen (continuous improvement) (Imai, 1986). Kaizen originated in manufacturing processes (Imai, 1986; Fujimoto, 1999). Some authors attribute its beginning to the work of William Deming and Joseph Jurán (Mizuno, 1988), whereas others relate it to the improvement of processes in the Toyota Motor Corporation during the 1950s and 1960s (Nemoto, 1987; Bessant and Caffyn, 1997). Crucial elements in both cases are the importance of self-development, discipline and pride in one's work within the Japanese culture (Sakaiya, 1995; Suárez-Barraza *et al.*, 2011). The term Kaizen is the combination of two Japanese ideograms (Kanjis), Kai (改) which means change, and Zen (善), which means to improve or to be reborn (Newitt, 1996). The Japanese culture, oriented toward a philosophy of disciplined and constant self-improvement, which probably had its origin in the Bushido code of the "samurai" during medieval Japan (Sakaiya, 1995), easily assimilated the lessons of statistical process control, thus giving rise to the Japanese philosophy called Kaizen (Suárez-Barraza *et al.*, 2011).

This management approach is recognized as an improvement strategy capable of ensuring excellence and operational innovation (Brunet and New, 2003). The Kaizen philosophy approach has been present in the management arena for several years, even in the field of organizations at the practical level such as philosophy, technique and event (Montabon, 2005; Suárez-Barraza *et al.*, 2011; Cheser, 1998; Van Aken *et al.*, 2010). Therefore, there is a clear theoretical need to cover this conceptual gap through this Special Issue.

Within this context, it is necessary to deepen the knowledge of what is happening in organizations with the practice of Kaizen. The purpose of this special issue has a two-fold justification. First, it is to clarify the term Kaizen compared to other managerial practices like total quality management (TQM), small circle activities, lean thinking and Six Sigma. Second, it is to understand in depth this philosophy, its particular characteristics, its implementation and even the sustainability of this practice over time.

2.1 Proposed special issue outcome

We were seeking contributions reflecting different perspectives and methodological approaches that explore Kaizen applications as an operational innovation strategy for organizations in the context of the twenty-first century. All sectors are welcome, from manufacturing to services, either public or private. Empirical contributions are encouraged, as well as theoretical and conceptual papers which address the Kaizen philosophy and its



application as an operational innovation strategy in the current global environment of the twenty-first century.

Special topics that would be of interest to the editors of the special issue include, but are not limited, to the following:

- History roots of Kaizen in the Japanese culture and management arena.
- The concept of the Kaizen philosophy: is it possible to define?
- Kaizen: specific characteristics and critical success factors (CSFs).
- Case studies and action research on Kaizen implementations in manufacturing and service organizations.
- How Kaizen is applied in Japan and in western countries?
- How Kaizen is applied in Latin American countries?
- Kaizen implementation: drivers and barriers.

3. Content of the special issue

This first Kaizen Special Issue was an attempt to carry out a systematic and in-depth research on Kaizen philosophy. The published manuscripts range from the clarification of the Kaizen term to other improvement approaches such as TQM, lean thinking and Six Sigma, to research regarding the historical and managerial origins of Kaizen. The original call for papers invited the generation of research initiatives with the following themes: Kaizen origins, characteristics of the Kaizen philosophy, case studies and implementation in manufacturing and services, drivers and barriers in Kaizen application, and Kaizen events and their CSFs.

With the publication of this Special Issue in *The TQM Journal*, a significant progress is expected in the generation of Kaizen theory. Kaizen is a concept that has flourished in the manufacturing context for several years since its origins in Toyota Motor Corporation in the 1950s. In Academia, its progress has been slow and has been gradually built up over the years. This Special Issue shows that there is a genuine interest in understanding Kaizen as an ancestral strategy of continuous improvement.

The manuscripts of this Special Issue were selected following at all times the strict guidelines mentioned at the beginning of this Guest Editorial. In addition, scientific criteria for reviewing papers established by *The TQM Journal* and Emerald Publishing were followed. For this reason, each of the selected manuscripts represents a significant advance in research about Kaizen. Therefore, each manuscript is interesting and diverse in its content/findings/methodology/conclusions and covers one or more of the issues raised in the Special Issue's call for papers. The accepted manuscripts are described as follows.

Alvarado-Ramírez *et al.* (2018) make a comparison of the application of Kaizen in two Latin American cities (Puebla, Mexico and Quito, Ecuador). Using a qualitative methodology in the form of in-depth interviews with operational managers and continuous improvement of both countries, the authors identified the use of different techniques and tools in each country. In the same way, benefits and barriers of the application emerged, and finally, they concluded with the identification of Kaizen drivers and inhibitors in their implementation in Latin American companies.

Kuang Chen (2018) introduces in a very interesting way a new service quality methodology under a Kaizen environment. The innovative method presented by the author is the cross-reference multiplication matrix applied to a classification under the optics of the Fuzzy theory, which was applied in one university library. The results indicate that there are significant differences when comparing the MICMAC method with the important

performance analysis. In this service organization, Kaizen is presented in the applied form of this new methodology.

Another selected paper is the one presented by Jaca *et al.* (2018). It links Kaizen to an environmental methodology as a driver to implement Kaizen in Spanish companies. The methodology was the application of a measurement instrument to Spanish companies in order to validate the participation of employees in environmental projects with a Kaizen purpose behind. Findings indicate that this type of environmental methodologies are useful to prepare organizations to adopt Kaizen programs.

Marín-García *et al.* (2018) present the content analysis of a suggestion system (Kaizen Teian) in a Kaizen program that included permanent work teams in different organizations around the world. The methodology employed by the authors was the grounded theory. The authors identified facilitators and barriers of Kaizen Teian that verified previous work of a more practitioner approach, in addition to the levels of relevance and relationships between all the factors.

Another manuscript of empirical nature was presented by Fonseca and Dominguez (2018). The purpose of both authors was to assess the level of Kaizen implementation in Portuguese companies that are certified with ISO 9000:2015. Using a quantitative methodology with a validated survey sample of 309 valid answers, the authors found that the sample of Portuguese companies with ISO 9000:2015 had higher means and medians in the application of Kaizen techniques than those Portuguese companies that had implemented the ISO 9000:2008.

In another manuscript of quantitative methodological cut, González-Aleu *et al.* (2018) had the purpose to find the CSFs of Kaizen projects in hospitals. A retrospective survey was used in hospitals in the last two years to find the CSFs, with a sample of 116 valid responses. The findings indicated that 47 of the 53 CSFs found were rated as very high (four or higher in a six-point scale). Likewise, significant differences were found in the CSFs of the Kaizen projects with respect to previous academic and practitioner studies. Examples include data trustworthiness and team commitment to change.

In the field of systematic literature reviews, two manuscripts that employed this methodology were accepted. The first one was written by Álvarez-García *et al.* (2018). The authors conducted a descriptive bibliometric study in which they analyzed the citations of 138 articles from the SCOPUS database (Elsevier) related to Kaizen. After creating the *ad hoc* database, they obtained the bibliometric indicators. The results of this study show an exponential growth of Kaizen papers in recent years, especially since the year 2000. The same goes for citations regarding Kaizen over the years. The articles by Farris *et al.* (2009), Brunet and New (2003), Berger (1997) and Suárez-Barraza *et al.* (2009) were the most cited articles as found in the bibliometric study. The journals with the highest citations regarding Kaizen were *Hospital Material Management Quarterly* and *Journal of Manufacturing Technology of Management*. The second accepted manuscript related to a literature review was that of Carnerud *et al.* (2018). The authors performed a mixed methods approach to seek trends and patterns on Kaizen on research journals from the 1980s up to 2017. The employed technique was cross-industry standard process for data mining. Research results indicate that academic interest in the topic of Kaizen attained special interest in the mid-1990s, but from there, there was a decrease in Kaizen publications until the end of the first decade of the twenty-first century. As of 2010, the articles begin to break again. As the authors indicate, the need to clarify the term Kaizen (oriental version) vs continuous improvement (western version) is fundamental in order to have more light in these 30 years of evolution since its introduction in 1986 by Masaaki Imai.

The last cluster of manuscripts that were accepted in the Special Issue are those related to visualizing Kaizen as a philosophy. Méndez and Vila-Alonso (2018) study the change and sustainability of Kaizen change through a three-dimensional perspective (operational, emotional and behavioral). Employing an interpretive case study approach and the

grounded theory, the authors found that in the studied organizations the transformation process of the Kaizen type leads to create new habits, beliefs and feelings. This empirical work served to identify key elements for the sustainability of a Kaizen effort over time. Another very interesting manuscript that explored Kaizen in its philosophical roots is that of Chung (2018). Professor Chung's research focuses on presenting an integrated philosophical foundation for Kaizen. He does this by conceptually analyzing and triangulating six philosophies: traditional values, process-oriented philosophy, edification, completeness, improving perfection and true-mindfulness. The result of the research is a model called Kaizen Wheel that seeks to become a new paradigm for the unification of action and knowledge. This investigation deepened in each philosophical current in which one could relate to Kaizen from existentialism, North American pragmatism, even phenomenology and the Bushido Samurai code.

The last selected manuscript of the Special Issue was that of Chiarini *et al.* (2018). Similarly, it belongs to the cluster that tries to visualize Kaizen as a philosophy. The authors, unlike in the previous selected manuscripts, compare analytically and conceptually three perspectives related to the possible origin of Kaizen in the business world: the Toyota business model (Toyota Way), Zen Buddhism and the Toyota production system. The result of this work indicates that the three perspectives seem to have today a very strong influence on Kaizen. This finding has an extremely important practical implication because during the implementation of the Kaizen philosophy in "non-Japanese" environments, it is crucial to understand its roots, fundamentals and basic concepts in order to avoid errors and failures at the time of its application.

4. Final conclusions

Undertaking this Special Issue on a topic that has a practitioner origin was a real challenge for the guest editors and for *The TQM Journal*. The enthusiasm shown by several researchers from all over the world has made us think that the theoretical foundations of Kaizen can be found. Therefore, we hope that we have made a small contribution to develop these theoretical foundations in the academic management arena. We hope you enjoy this Special Issue as much as we did editing it.

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