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Armand V. Feigenbaum - The Proponent of Total Quality Control

Deming's speech to the Japanese revolutionized their perspective on quality and gave birth to the idea of using quality as yardstick for success. Deming's idea of quality soon caught on, and using this lead, a General Electric (GE) Quality Control engineer named Armand V. Feigenbaum proposed the theory of Total Quality Control.

Armand V. Feigenbaum – An overview

Feigenbaum published his first book on Total Quality Control (TQC) when he was a doctoral student at the Massachusetts Institute of Technology in Boston. By 1950 the book had become quite popular, and the Japanese saw great potential in using TQC as a tool to achieve high quality.

Feigenbaum's idea of TQC came from his experiences being in charge of quality at General Electric (GE). During this period, he was in constant contact with world-class companies such as Hitachi and Toshiba. By studying the quality procedures at these companies, he realized the need for a "total approach to quality." By this, he meant that all processes and units related to quality must aim at creating a high quality end product. In short, he believed that high quality could be achieved only through organizational support. He also asserted that quality must be a priority and not an afterthought.

For the next ten years (1958 to 1968), he was the Director of Manufacturing Operations and Quality Control at GE. Eventually, his pioneering work in quality propelled him to President of GE. Later he took over as the President of the American Society for Quality Control and subsequently became the chairman of the International Academy for Quality. His knowledge and intellect earned him the prestigious Edward Deming Medal and the Lancaster Award for his international contribution to quality and productivity.

In his later years, Feigenbaum joined the board of overseers for the United States, Malcolm Baldrige National Quality Award Program.

Feigenbaum's Ideas

Feigenbaum's book, *Quality Control: Principles, Practices and Administration*, was provoked by the idea that quality control is management's responsibility. He stressed that management should thoroughly understand the aspects that control quality, namely humans. Therefore, management needs to work on improving employee consistency and quality.

According to Feigenbaum, statistical tools make up a very small percentage of the quality control program.

Quality Control

Feigenbaum defined quality control as "an effective system for coordinating the quality maintenance and quality improvement efforts of the various groups in an organization so



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as to enable production at the most economical levels which allow for full customer satisfaction.”

According to Feigenbaum, quality did not mean giving the best product to the customer. More important as a tool was control, which focuses on the following:

1. Devising clear and achievable quality standards
2. Enhancing existing working conditions to reach the desired quality standards.
3. Setting new quality standards with an aim to further improve.

Feigenbaum TQC

Feigenbaum presented quality in a holistic perspective. According to him, quality must encompass all the phases in the manufacturing of a product. This includes design, manufacturing, quality checks, sales, after-sales services, and customer satisfaction when the product is delivered to the customer. Given that these factors control the perception of quality, he proposed controls to control the above-mentioned phases.

- New-design control
- Incoming material control
- Product control
- Special process studies.

Since these controls affect the quality of the product, they must be used to influence the quality of the end product.

Misconception in quality control

According to Feigenbaum, many organizations commit the blunder of viewing statistical tools as a means to control quality. However, he suggested that statistical tools make up only a small percentage of the quality control program. In short, statistical tools and techniques are a subset of the main quality control system.

Modern quality control

Feigenbaum’s idea of modern quality control was more management-based. He recommends:

- Increasing operator efficiency by educating them on quality in order to enhance overall quality.
- Aiming to increase quality awareness throughout the organization.
- Involving the entire organization in each and every quality initiative undertaken.

He believed that quality control must not be viewed as a cost reduction tool but as an administrative effort to:

- Provide a channel for knowledge integration and communication, thus enhancing product quality.



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- Encourage employee participation in organizational quality control initiatives.

Grow constantly, not abruptly

Feigenbaum's modern quality control initiative stressed continuous improvement. He believed that the success of a quality control program depends on its ability to encompass more employees as it progresses.

Often organizations leap into new concepts and techniques, and ultimately they become dejected. Feigenbaum advised climbing one step at a time. Therefore, he suggested that organizations allow the quality control program to develop slowly. Later, the emphasis should be on implementing the features of the quality control program throughout the organization.

Feigenbaum's second book

In 1983, Feigenbaum wrote his second book on Total Quality Control. In this book, he focused on the buyers' perspective of quality. He also explained why a few companies were able to implement successful quality control programs and why others were not. Simply put, the book focused on how to achieve Total Quality Control.

The book argued that organizations must look at quality as a gateway to success. Essentially, the book argued that "Quality is in its essence a way of managing the organization. Like finance and marketing, quality has now become an essential element of modern management"

TQC today – A best Practice

It has been over forty years since Feigenbaum published his book on TQC. His book on TQC presents 10 attributes that are still critical to organizations today.

1. Quality control must be a company-wide process.
2. Quality is defined by the customer.
3. Quality and cost is a sum, not a difference.
4. Quality requires both individual and team enthusiasm.
5. Quality is a way of managing.
6. Quality and innovation are interdependent.
7. Quality is an ethic.
8. Enhanced quality demands continuous improvement.
9. Quality is the most cost-effective and least capital-intensive route to productivity.
10. Quality is implemented with a total system connected with customers and suppliers.

Summary



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Feigenbaum's idea of Total Quality Control as a management responsibility has been widely appreciated and implemented. Nevertheless, it is only through entire workforce dedication that high quality by Total Quality Control can be achieved.