

Enriching The Field of Quality Management: Study of Contribution By Quality Gurus

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Abstract

The contribution made by quality gurus has enriched the field of quality management. Pioneering with Shewhart, Deming to Taguchi, many stalwarts have made their significant contribution. In the today's world-class manufacturing, quality becomes standard of informality. Therefore, the purpose of this paper is to analyze various concepts and contribution made by various quality Gurus. This paper focuses on conceptual theory given by quality gurus.

Keywords: Quality, Quality Guru, Quality control

1. Introduction

Quality-the word has the power to change the market. Today, customers are becoming very much quality conscious. Hence to sustain in a fiercely competitive market, corporates need a tool to win, and that tool is quality. Quality is regarded as the characteristics that customer wants in the product. In the era of world-class manufacturing, quality becomes a standard of informality. The historical roots of quality management could be traced from the 20th century. Walter Shewhart has given first sketch of control chart at Bell Telephone Laboratories in 1924. Then many gurus have made their contribution in the field of quality management.

A guru is a teacher, philosopher. A Quality Guru means all of the philosophers who made quality as an essential approach/philosophy in the business world have a significant impact on business culture.

Walter A Shewhart had introduced the term 'Quality Assurance'. Quality is a broad term. No single definition can exactly give what quality means. However,

Joseph Juran defines Quality as 'fitness for use' while Genichi Taguchi Defines quality as 'uniformity around the target value'. As per Garvin, quality is regarded as a multidimensional concept.

This paper will focus on the contribution made by W. Edward Deming, Joseph Juran, Kaoru Ishikawa and Philip Crosby.

Research Objectives: The study was conducted with the following goals in view:

1. To study literature related to the contribution made by Quality Gurus
2. To formulate a comparative chart among the contribution made by Quality Gurus.

Contribution by Quality Gurus:

Walter Shewhart:

Shewhart had introduced a problem identifying and solving techniques in 1939 known as Plan-Do-Check-Act (PDCA) cycle. Many philosophers referred to him as "Father of Statistical Quality control." The control charts are widely used to monitor the process. The basic principles of quality control are discussed in Shewhart's book, 'Economic Control of quality of manufactured product'.

W. Edward Deming:

Dr W. Edward Deming is known as the father of Total Quality Management. His significant contributions are 'Deming Cycle', 'Seven Deadly Waste' and 'Fourteen points for quality improvement'. Deming joined Census Bureau in the U.S., where he applied concepts of control charts. After World War II, Japan was striving to come up, Japanese companies were producing inferior quality product compared to developed countries. To overcome these problems, the Union of Japanese Scientist & Engineers (JUSE) invited Deming to Japan. Japanese companies started working on principles given by Deming. Here Deming implemented concepts of PDCA cycle, 14 Points of quality improvement. Japanese industry following Deming has shown results very positive. (Behnam Neyestani).

Deming's philosophy focuses on reducing manufacturing process variation. More the variations in the process more chances of failure, inconsistencies. (John Bank)

Joseph Juran

Joseph Juran was also invited by JUSE to Japan. His emphasis was more on managerial aspects of quality. Juran introduced managerial dimensions and the role of management to achieve quality. He focuses on goal setting, planning and controlling. His significant contribution is Juran's trilogy. He delivered lectures on quality which were broadcasted on Japanese national radio. The common man who listened to these lectures has changed his thinking about quality. The common man is the person who is an employee of the industry. It had given a boost to quality movement in Japan. The book published by him, 'Quality Control Handbook' has laid down the foundation of modern quality management. Juran advocated that quality is associated with customer satisfaction with manufactured products. Juran has developed TQM philosophy by well-defined Ten Steps. He believes that quality happens only through projects. Juran took quality beyond technical aspects of quality control to management philosophy.

Philip Crosby

Philip Crosby is a well-known quality philosopher. He wrote a book titled as 'Quality is free' Then after this 'Quality is free' become a proverb in the management discipline. He defines quality means conforms to requirements and not goodness. The process should be designed to produce zero defects in the product. The process should be designed for prevention and not for appraisal. (Jain). He believes that mistakes happened because of lack of knowledge. He has given the principle of doing things right the first time.

Kaoru Ishikawa

Dr Kaoru Ishikawa is a well known Japanese quality guru. His significant contribution is the introduction of a cause-effect diagram known as the fishbone

diagram. He also contributed in development and implementation of Seven QC tools. He popularized seven QC tools in Japanese industries. He also contributed to developing the concept-Quality Circles. Quality circles conceptually based on problem-solving through cross-functional teams.

Comparative Chart highlighting significant contribution of Quality Gurus

Particulars	Deming	Juran	Crosby	Ishikawa
Definition	A predictable degree of uniformity and dependability at a low cost suited to market	Fitness for use	Conformance to use	Continuous improvement
Approach	The focus was on the use of statistical process control	The focus was on the use of statistical process control	Quality improvement starts from the top	Identify cause and improve
Aspects of Quality	Technical	Project/Philosophy	Motivational	Process
Quality ownership	Management	Management	Management	Everyone
Customer Satisfaction	Very important	Very important at each step of the product life cycle	Very important	Very important
Quality aspects	Knowledge of variation	Cost of poor quality	Quality is prevention by prevention	Importance of 7 QC tools

			not by appraisal	
Quality standards	Quality is a result of work efforts divided by the total cost	Majority of quality problems are the fault of poor management rather than poor workmanship	Performance standards must be zero defects	Cause effect diagram- fishbone diagram
Major concepts	Seven deadly diseases	Juran's Trilogy	Measurement of quality in the price of non-conformance	Root cause analysis
	14 principles of quality management	Ten Steps towards Quality	14 Step Quality Improvement Process	Importance of 7 QC tools
	Knowledge of variation	Quality improvement does not come free	Doing things right the first time	Introduced concept of Quality Circle
	PDCA cycle	All quality improvement takes place project by project	Quality improvement is a process	
Book	Out of crisis	Quality control handbook	Quality is free	What is Total Quality

				Control?
Awards	Japan's best-known quality award is the Deming Prize. Greatest honour to Deming	Recipient of Second Order of Sacred Treasure, Japan, 1981.	Founded Phil Crosby Associates 1979	Awarded Deming Prize in 1952 ASQC Ishikawa Medal inaugurated in 1994

Conclusion:

The quality gurus contributed to the field of quality management, and it enriched the field of quality management. In this paper, the contribution made by Deming, Ishikawa, Juran and Crosby is discussed. The researcher tries to compare and understand similarities among the contribution made.

While defining Quality, Deming said quality is a predictable degree of uniformity and dependability at a low cost suited to the market. His focus was on the use of statistical process control. He advocates the Technical aspects of quality. While Juran defines quality as 'fitness for use'. His focus was on the use of statistical process control. Juran advocates that quality is the management philosophy. Philip Crosby defines quality as Conformance to use. His focus was on a top-down approach. The Philp Crosby argued that quality itself is a motivational process. Prof. Ishikawa has given new aspects of quality by doing a blend of American & Japanese quality practices. He focuses on Identify cause and improves it.

Deming has given 14 principles of quality management, seven deadly diseases and knowledge of variation. While Juran has contributed through his famous Trilogy,

Ten Steps towards Quality and all quality improvement takes place project by project. Crosby has given measurement of quality in the price of non-conformance, 14 Step Quality Improvement Process and doing things right the first time. Ishikawa contributed by identifying 7 QC tools, Fishbone Diagram and Quality Circles.

Apart from quality gurus discussed in this paper, there many quality gurus like William Conway, Armand Feigenbaum, Genichi Taguchi and many more. All these gurus enriched the field of quality management.

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