

Managing Quality: Integrating the Supply Chain, 5e
Chapter 2 Quality Theory

1) A coherent group of general propositions used as principles of explanation for a class of phenomena is referred to as a(n) _____.

- A) postulate
- B) axiom
- C) theory
- D) corollary
- E) hypothesis

Answer: C

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

2) An arrow pointing from an independent variable to a dependent variable in a theoretical model typically implies _____.

- A) causality
- B) normality
- C) randomness
- D) proactivity
- E) synergy

Answer: A

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

3) The _____ of a theoretical model involves which variables or factors are included in the model.

- A) why
- B) what
- C) how
- D) who-where-when
- E) which

Answer: B

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

4) The _____ of a theoretical model involves the nature, direction, and extent of the relationship among the variables.

- A) why
- B) what
- C) how
- D) who-where-when
- E) which

Answer: C

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

5) The _____ of a theoretical model is the theoretical glue that holds the model together.

- A) why
- B) what
- C) how
- D) who-where-when
- E) which

Answer: A

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

6) The _____ of a theoretical model is responsible for placing contextual bounds on the theory.

- A) why
- B) what
- C) how
- D) who-where-when
- E) which

Answer: D

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

7) A theory that is generated by observation and description is said to have been developed by the process of _____.

- A) deduction
- B) abstraction
- C) simulation
- D) induction
- E) supposition

Answer: D

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

8) Researchers use _____ to propose a model based on prior research and design an experiment to test the theoretical model.

- A) supposition
- B) deduction
- C) induction
- D) simulation
- E) abstraction

Answer: B

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

9) The "14 points for management" were articulated by _____.

- A) Philip Crosby
- B) Joseph M. Juran
- C) Genichi Taguchi
- D) W. Edwards Deming
- E) Armand Feigenbaum

Answer: D

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

10) Deming believed that poor quality resulted from _____.

- A) poor management of the system for continual improvement
- B) poor human resource management
- C) consumer complacency
- D) a lack of commitment on the part of management
- E) poor engineering and design

Answer: A

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

11) Which of the following points for management devised by Deming involves the management committing resources to ensure that the quality job is completed?

- A) constantly improve the system
- B) eliminate work standards
- C) improve leadership
- D) adopt a new philosophy
- E) create constancy of purpose

Answer: E

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

12) _____ means that all workers are responsible for their own work and perform needed inspections at each stage of the process to maintain process control.

- A) Quality at the source
- B) In-process management
- C) Constancy of purpose
- D) Parallel processing
- E) Just-in-time approach

Answer: A

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

13) _____ minimizes the number of suppliers used, resulting in decreased variability.

- A) Parallel processing
- B) Just-in-time purchasing
- C) Management by objective
- D) In-process management
- E) Constancy of purpose

Answer: B

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

14) Which of the following points for management devised by Deming encourages parallel processing in focused teams?

- A) constantly improve the system
- B) create constancy of purpose
- C) institute education and self-improvement
- D) adopt a new philosophy
- E) break down barriers between departments

Answer: E

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

15) _____ refers to a process of setting annual goals, typically during a performance appraisal, that are binding on the employee.

- A) Just-in-time approach
- B) Management by objective
- C) In-process management
- D) Parallel processing
- E) Constancy of purpose

Answer: B

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

16) What are the three aspects of Juran's trilogy?

- A) planning, control, and improvement
- B) cost, quality, and customer satisfaction
- C) labor, management, and system
- D) organizing, management, and control
- E) leadership, cost, and quality

Answer: A

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

17) According to Juran, _____ is a process-related activity that ensures processes are stable and provides a relatively consistent outcome.

- A) control
- B) organizing
- C) planning
- D) improvement
- E) scheduling

Answer: A

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

18) _____ improvement implies that the process has been studied and that some major improvement has resulted in large, nonrandom improvement to the process.

- A) Ongoing
- B) Progressive
- C) Successive
- D) Continuous
- E) Breakthrough

Answer: E

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

19) According to Juran, the language of management is _____.

- A) labor
- B) quality
- C) money
- D) performance
- E) improvement

Answer: C

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

20) The driving force of the Century of Productivity was the movement known as _____.

- A) total quality management
- B) statistical process control
- C) human resource management
- D) scientific management
- E) behavioral modification

Answer: D

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

21) The theory of scientific management was proposed by _____.

- A) Frederick W. Taylor
- B) Joseph M. Juran
- C) Philip Crosby
- D) W. Edwards Deming
- E) Kaoru Ishikawa

Answer: A

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

22) _____ is also called the 80/20 rule.

- A) Ishikawa's quality philosophy
- B) Pareto's law
- C) Juran trilogy
- D) Taguchi method
- E) Deming's points for management

Answer: B

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

23) _____ was responsible for the development and dissemination of the basic seven tools of quality.

- A) Kaoru Ishikawa
- B) Philip Crosby
- C) Genichi Taguchi
- D) Armand Feigenbaum
- E) Joseph M. Juran

Answer: A

Topic: Leading Contributors to Quality Theory: Kaoru Ishikawa

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

24) _____ is credited with democratizing statistics.

- A) Armand Feigenbaum
- B) Joseph M. Juran
- C) Genichi Taguchi
- D) Philip Crosby
- E) Kaoru Ishikawa

Answer: E

Topic: Leading Contributors to Quality Theory: Kaoru Ishikawa

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

25) What is the major theoretical contribution of Kaoru Ishikawa?

- A) the concept of benchmarking
- B) his assertion that the entire organization should be involved in improving quality
- C) the zero-defects approach to quality improvement
- D) his emphasis on total involvement of the operating employees in improving quality
- E) the quality loss function and the concept of robust design

Answer: D

Topic: Leading Contributors to Quality Theory: Kaoru Ishikawa

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

26) What is the primary contribution of Armand Feigenbaum?

- A) the concept of benchmarking
- B) his assertion that the entire organization should be involved in improving quality
- C) the zero-defects approach to quality improvement
- D) his emphasis on total involvement of the operating employees in improving quality
- E) the quality loss function and the concept of robust design

Answer: B

Topic: Leading Contributors to Quality Theory: Armand Feigenbaum

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

27) What are the three steps proposed by Feigenbaum to improve quality?

- A) quality inspection, quality accountability, and quality control
- B) quality leadership, quality technology, and organizational commitment
- C) employee empowerment, total quality management, and statistical process control
- D) self-directed work teams, employee empowerment, and total quality management
- E) quality leadership, quality management, and total quality control

Answer: B

Topic: Leading Contributors to Quality Theory: Armand Feigenbaum

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

28) _____ proposed "The 19 steps of Total Quality Control."

- A) Philip Crosby
- B) W. Edwards Deming
- C) Joseph M. Juran
- D) Genichi Taguchi
- E) Armand Feigenbaum

Answer: E

Topic: Leading Contributors to Quality Theory: Armand Feigenbaum

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

29) What is the primary contribution of Philip Crosby?

- A) the concept of benchmarking
- B) his assertion that the entire organization should be involved in improving quality
- C) the zero-defects approach to quality improvement
- D) his emphasis on total involvement of the operating employees in improving quality
- E) the quality loss function and the concept of robust design

Answer: C

Topic: Leading Contributors to Quality Theory: Philip Crosby

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

30) What is the primary contribution of Genichi Taguchi?

- A) the concept of benchmarking
- B) his assertion that the entire organization should be involved in improving quality
- C) the zero-defects approach to quality improvement
- D) his emphasis on total involvement of the operating employees in improving quality
- E) the quality loss function and the concept of robust design

Answer: E

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

31) Quality loss function and robust design are concepts included in _____.

- A) Ishikawa's quality philosophy
- B) the Taguchi method
- C) Deming's 14 points for management
- D) the Juran trilogy
- E) Pareto's law

Answer: B

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

32) _____ refers to a reference point for determining the quality level of a product or service.

- A) Quality of conformance
- B) Hothouse quality
- C) Quality loss function
- D) Specific quality
- E) Ideal quality

Answer: E

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

33) The Taguchi concept of _____ states that products and services should be designed so that they are inherently defect-free and of high quality.

- A) homoscedasticity
- B) robust design
- C) quality loss function
- D) ideal quality
- E) design conformance

Answer: B

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

34) _____ is the principle pioneer of benchmarking.

- A) Robert C. Camp
- B) Tom Peters
- C) Michael Hammer
- D) James Champy
- E) Stephen R. Covey

Answer: A

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

35) What is the primary contribution of Robert C. Camp?

- A) the concept of benchmarking
- B) his assertion that the entire organization should be involved in improving quality
- C) the zero-defects approach to quality improvement
- D) his emphasis on total involvement of the operating employees in improving quality
- E) the quality loss function and the concept of robust design

Answer: A

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

36) Michael Hammer and James Champy are most closely identified with _____,

- A) statistical process control
- B) reengineering
- C) total quality management
- D) benchmarking
- E) Six Sigma quality

Answer: B

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

37) Which of the following variables is at the core of quality management?

- A) quality breakthrough
- B) quality assurance
- C) strategic planning
- D) information analysis
- E) team approach

Answer: B

Topic: Resolving the Differences in Quality Approaches: An Integrative View

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

38) Quality experts agree that quality can be assured only during the _____ phase.

- A) production
- B) marketing
- C) analysis
- D) testing
- E) design

Answer: E

Topic: Resolving the Differences in Quality Approaches: An Integrative View

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

39) Which of the following factors is not addressed by the reengineering approach to quality improvement?

- A) team approach
- B) information analysis
- C) strategic planning
- D) customer focus
- E) quality assurance

Answer: B

Topic: Resolving the Differences in Quality Approaches: An Integrative View

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

40) An arrow pointing from an independent variable to a dependent variable in a theoretical model typically implies causality.

Answer: TRUE

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

41) The four elements of a theory are what, how, why, and who-where-when.

Answer: TRUE

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

42) The "what" of a theoretical model involves the nature, direction, and extent of the relationship among the variables.

Answer: FALSE

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

43) The "why" of a theory is the theoretical model that holds the model together.

Answer: TRUE

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

44) A theory that is generated by observation and description is said to have been developed by the process of deduction.

Answer: FALSE

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

45) Using deduction, researchers propose a model based on prior research and design an experiment to test the theoretical model.

Answer: TRUE

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

46) W. Edwards Deming enumerated the 14 points for management.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

47) According to Deming, poor quality was the fault of labor.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

48) Constancy of purpose means that management commits resources in order to achieve quick returns and bottom-line results.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

49) Deming proposes the need for mass inspection to improve quality.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

50) Quality at the source means that all workers are responsible for their own work and perform needed inspections at each stage of the process to maintain process control.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

51) Just-in-time purchasing increases the number of suppliers used, resulting in increased variability.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

52) Just-in-time purchasing involves the usage of long-term contracts that result in the ability to develop and certify suppliers.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

53) The departmental approach to design results in fast design cycles.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

54) Deming stressed the need for work standards on the factory floor.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

55) Management by objective refers to a process of setting annual goals that are binding on the employee.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

56) The three aspects of the Juran trilogy are planning, control, and improvement.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

57) Control involves gathering data about a process to ensure the process is consistent.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

58) Breakthrough improvement implies the process has been studied and that some major improvement has resulted in large nonrandom improvement to the process.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

59) The theory of scientific management was proposed by Joseph Juran.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

60) According to the theory of scientific management, the managers and engineers should be responsible for planning and executing the plans.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

61) Kaoru Ishikawa is credited with democratizing statistics.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Kaoru Ishikawa

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

62) The major theoretical contribution of Ishikawa is his emphasis on total involvement of the operating employees in improving quality.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Kaoru Ishikawa

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

63) According to Kaoru Ishikawa, the ideal state of quality control is when inspection is no longer necessary.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Kaoru Ishikawa

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

64) Feigenbaum's three-step process to improve quality include quality leadership, quality technology, and organizational commitment.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Armand Feigenbaum

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

65) Hothouse quality refers to quality programs that receive a lot of hoopla and no follow-through.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Armand Feigenbaum

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

66) The zero-defects approach to quality improvement was proposed by Armand Feigenbaum.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: Philip Crosby

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

67) The Taguchi method provides a method for adjusting the mean of a process by optimizing controllable variables.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

68) Quality loss function and robust design are concepts included in Ishikawa's quality philosophy.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

69) Ideal quality refers to a reference point for determining the quality level of a product or service.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

70) The Taguchi concept of robust design states that products and services should be designed so that they are inherently defect-free and of high quality.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

71) Tom Peters is the principle pioneer of benchmarking.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

72) Robert C. Camp's approach to management is value-based in that he proposes that people in management live a life that balances professional with personal and spiritual growth.

Answer: FALSE

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

73) Michael Hammer and James Champy are most closely identified with reengineering.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

74) The underlying precept of re-engineering is that firms can become inflexible and resistant to change.

Answer: TRUE

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of

managing quality

75) Firms that are successful in improving quality take a contingency approach.

Answer: TRUE

Topic: Viewing Quality Theory from a Contingency Perspective

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

76) Strategic planning is at the core of quality management.

Answer: FALSE

Topic: Resolving the Differences in Quality Approaches: An Integrative View

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

77) Fact-based improvement refers to an approach that favors information gathering and analysis.

Answer: TRUE

Topic: Resolving the Differences in Quality Approaches: An Integrative View

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

78) The reengineering approach focuses on the need for in-depth information gathering and analysis.

Answer: FALSE

Topic: Resolving the Differences in Quality Approaches: An Integrative View

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

79) Define theory. Provide an example of the use of theory in a business organization.

Answer: Generally, theory is a "coherent group of general propositions used as principles of explanation for a class of phenomena." For example, it might have been observed that many companies that have implemented quality improvement have experienced improved worker morale. Therefore, a theoretical model of quality and worker morale might be developed.

Topic: What is Theory?

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

80) Discuss the contributions of W. Edwards Deming to quality thinking.

Answer: W. Edwards Deming has made a profound impact on quality thinking worldwide.

Throughout his career, Deming gave seminars, wrote books, taught classes, and published articles to explain his approach to quality management. Deming's mantra was "continual never-ending improvement." The essence of his thinking was that quality is a function of the management within a firm, and is not the sole responsibility of workers. Deming used statistics to support his arguments. He argued that the goals of higher levels of quality would perhaps never be completely met, but firms that continually worked toward higher levels of quality would get better. He articulated his thinking in his "14 Points for Management."

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

81) State Deming's 14 points for management.

Answer: Deming's 14 points for management represent many of the key principles that provide the basis for quality management in many organizations.

Create constancy of purpose.

Adopt a new philosophy.

Cease mass inspection.

End awarding business on the basis of price tag.

Constantly improve the system.

Institute training on the job.

Improve leadership.

Drive out fear.

Break down barriers between departments.

Eliminate slogans.

Eliminate work standards.

Remove barriers to pride.

Institute education and self-improvement.

Put everybody to work.

Topic: Leading Contributors to Quality Theory: W. Edwards Deming

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

82) Differentiate between control and breakthrough with an example.

Answer: According to Juran, control is a process-related activity that ensures processes are stable and provides a relatively consistent outcome. Control involves gathering data about a process to ensure the process is consistent.

Breakthrough improvement implies the process has been studied and that some major improvement has resulted in large nonrandom improvement to the process.

The difference between control and breakthrough can be understood when considering a disease such as polio. Control activities involved improving health by quarantining people who had the disease. Breakthrough improvement occurred with the development of the polio vaccine that eradicated the disease.

It is important to understand that control and breakthrough-related activities should occur simultaneously.

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

83) Describe Pareto analysis.

Answer: Joseph Juran identified an economic concept that he applied to quality problems. This economic concept is called Pareto's law or the 80/20 rule, and is named after the Italian economist Vilfredo Pareto. Pareto found that 80 percent of the wealth in Milan was held by 20

percent of the population. Using Pareto's law, we can see that the majority of quality problems are the result of relatively few causes.

Topic: Leading Contributors to Quality Theory: Joseph M. Juran

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

84) Discuss the contributions of Kaoru Ishikawa to quality thinking.

Answer: Kaoru Ishikawa provided tools that worked well within the Deming and Juran frameworks. Perhaps Ishikawa's greatest achievement was the development and dissemination of the basic seven tools of quality (B7). As the developer of these tools, Ishikawa is credited with democratizing statistics. The major theoretical contribution of Ishikawa is his emphasis on total involvement of the operating employees in improving quality. Ishikawa is credited for coining the term "company-wide quality control" in Japan. His ideas were synthesized into 11 points that made up his quality philosophy.

Topic: Leading Contributors to Quality Theory: Kaoru Ishikawa

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

85) Discuss the contributions of Armand Feigenbaum to quality thinking.

Answer: Armand Feigenbaum proposed 19 steps for improving quality. Feigenbaum's primary contribution to quality thinking in America was his assertion that the entire organization should be involved in improving quality. He was the first in the United States to move quality from the offices of the specialist back to the operating workers.

Feigenbaum proposes a three-step process to improving quality. These steps involve quality leadership, quality technology, and organizational commitment.

Leadership is the motivating force for quality improvement. Quality technology includes statistics and machinery that can be used to improve technology. Organizational commitment includes everyone in the quality struggle.

Major impediments to improving quality included the four deadly sins of hothouse quality, wishful thinking, producing overseas, and confining quality to the factory.

Topic: Leading Contributors to Quality Theory: Armand Feigenbaum

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

86) Discuss the contributions of Philip Crosby to quality theory.

Answer: Crosby specified a quality improvement program consisting of 14 steps. These steps underlie the Crosby zero-defects approach to quality improvement. His approach also emphasized the behavioral and motivational aspects of quality improvement rather than statistical approaches. In his 14 steps, Crosby prescribed actions for management and workers within the context of his program.

Topic: Leading Contributors to Quality Theory: Philip Crosby

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

87) Explain the Taguchi concept of robust design.

Answer: The Taguchi concept of robust design states that products and services should be designed so that they are inherently defect-free and of high quality. Taguchi devised a three-stage process that achieves robust design through what he terms concept design, parameter design, and tolerance design.

Topic: Leading Contributors to Quality Theory: Genichi Taguchi

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

88) Discuss the contributions of Stephen R. Covey to quality thinking.

Answer: Stephen R. Covey's approach to management is value-based in that he proposes that people in management live a life that balances professional with personal and spiritual growth. He coined seven habits based on his value-based approach to life.

Be proactive

Begin with the end in mind

Put first things first

Think win-win

Seek first to understand and then to be understood

Synergize

Sharpen the saw

Covey also published a book with an eighth habit:

Find your voice, and inspire others to find theirs

Topic: Leading Contributors to Quality Theory: The Rest of the Pack

Learning Outcome: Discuss the total cost of quality and compare the common methods of managing quality

89) Explain the concept of reengineering proposed by Michael Hammer and James Champy.

Answer: Michael Hammer and James Champy urged a form of deductive reasoning combined with entertainment that has resulted in unfortunate consequences for many people and companies. The product of this collaboration is termed reengineering. The underlying precept of reengineering is sound: Firms can become inflexible and resistant to change and must be able to change in order to become competitive.

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90) Identify and briefly discuss the core quality management content variables.

Answer: The core variables are leadership, employee improvement, quality assurance, customer role, and philosophy. The role of the leader in being the champion and major force behind quality improvement is critical. Leaders must be conversant with quality management approaches, and then lead by example. Employees must be trained and developed, and this must be viewed as a long-term undertaking that requires firms to invest in their employees. Quality can be assured only during the design phase. Therefore, efforts must be invested in designing products, services, and processes so that they are consistently of high quality. An understanding of the customer is key to quality management efforts.

Adoption of a philosophy toward quality improvement is important because it provides the company with a map to follow during their quest for improvement.

Topic: Resolving the Differences in Quality Approaches: An Integrative View

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