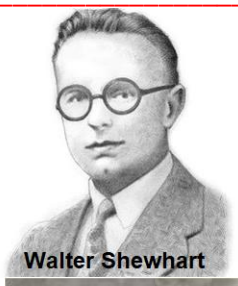
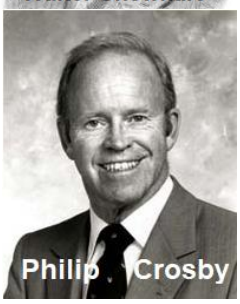
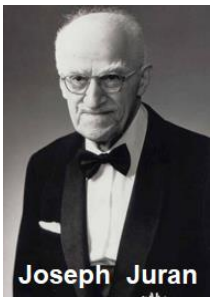
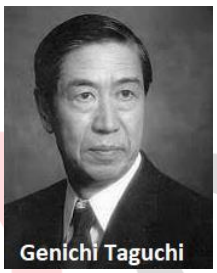
Quality Gurus
&
their contribution

- Walter Shewhart
- Edward Demings
- Philip Crosby
- Joseph Juran
- Armand Feigenbaum
- Kaoru Ishikawa
- Genichi Taguchi
- Shigeo Shingo
- James Harrington



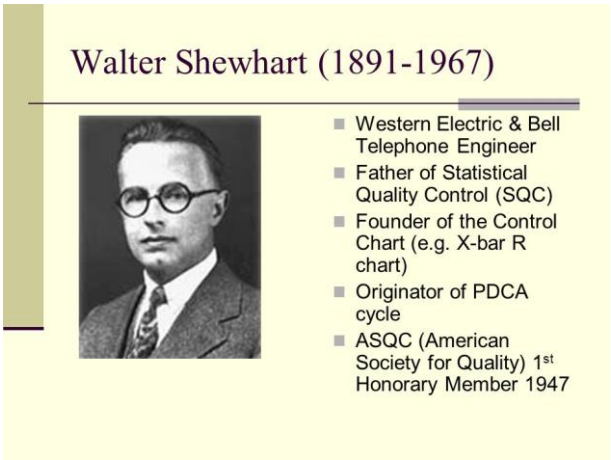






Quality Gurus & their contribution

Quality Guru.	Main Contribution
Walter A. Shewhart	– Contributed to understanding of process variability. – Developed concept of statistical control charts.
W. Edwards Deming	– Stressed management's responsibility for quality. – Developed "14 Points" to guide companies in quality improvement.
Joseph M. Juran	– Defined quality as "fitness for use." – Developed concept of cost of quality.
Armand V. Feigenbaum	– Introduced concept of total quality control.
Philip B. Crosby	– Coined phrase "quality is free." – Introduced concept of zero defects.
Kaoru Ishikawa	– Developed cause-and-effect diagrams. – Identified concept of "internal customer."
Genichi Taguchi	– Focused on product design quality. – Developed Taguchi loss function.

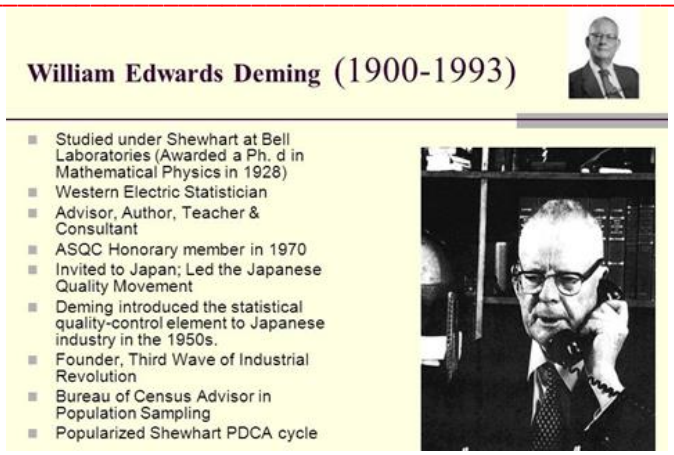


Contribution of Walter Shewhart

- Grandfather of quality control
- Used statistics to explain process variability
- Deming made PDSA cycle for his work
- Developed statistical quality charts

Contribution of Edward Deming

- Greatest influence on quality control
- Father of Quality Control
- Implemented statistical quality control in Japan post WW2
- Reduce uncertainty & variability
- If Japan can: why can't we was broadcast for him
- Associated with Japanese union of scientist & engineers (JUSE)
- Stressed management responsibility
- Contributed to TQM
- PDCA/PDSA quality cycles
- Deming prize in quality in Japan



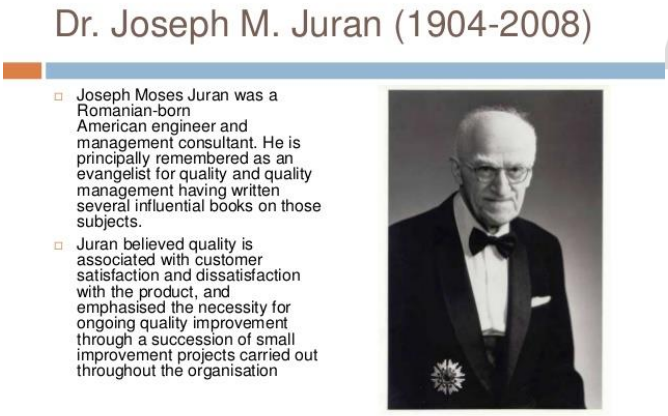
- 14 Points of TQM
- 7 deadly sins of management
- System of Profound knowledge

Contribution of Kaoru Ishikawa

- Cause effect diagram (fishbone diagram)
- Wrote book "Guide to Quality Control"
- Wrote book "What Is Total Quality Control"
- Father of the Quality Circle Movement
- Quality Circle
- Problem solving methodology
- Concept of "Internal customer"

Contribution of Joseph Juran

- Quality defined as "Fitness for use"
- Quality Trilogy
- Quality Planning Roadmap
- "Little Q" & "Big Q" concept of quality
- Developed concept of "cost of quality"
- Stresses management methods



Shigeo Shingo

- Born:- 1909
- Died:- 1990
- Shigeo Shingo, born in Saga City, Japan.
- He was a Japanese industrial engineer who distinguished himself as one of the world's leading experts on manufacturing practices and The Toyota Production System.
- Shingo is known far more in the West than in Japan.

Contribution of Shigeo Shingo

- Consultant for Toyota
- Achieved Toyota production system
- **Poka Yoke** system (avoiding errors) & Single minute exchange dies
- Shingo prize awarded for excellence in manufacturing
- Concept of source inspection
- Mistake proofing, stop mistakes repeating
- Reduce changeover time
- Just in Time system with Taiichi Ohno

Contribution of Philip Crosby

- Wrote book "Quality is Free"
- Absolutes of Quality Management,
- Zero Defects, Do it right the first time
- Quality Management Maturity Grid,
- 14 Quality Improvement Steps,
- Cost of Quality, Cost of Nonconformance
- Wrote "Quality Without Tears"
- "Quality is conformance to requirements; non-quality is nonconformance."
- 4 Absolutes of quality management

Philip B. Crosby

- Born in West Virginia in 1926
- An influential author, consultant and philosopher
- A graduate of Western Reserve University; completed a degree at Ohio College Of Podiatric Medicine.
- Wrote the best-seller Quality Is Free in 1979
- Philip Crosby Associates Incorporated
- published his book ***Quality is Free*** in 1979.

Armand Vallin Feigenbaum

- Born:- April 6, 1922
- Died:- November 13, 2014
- He was an American quality control expert and businessman.
- Feigenbaum concept's of Total Quality Control , known today as total quality management , combines management methods and economic theory with organizational principles.

Contribution of Anmand Feigenbaum

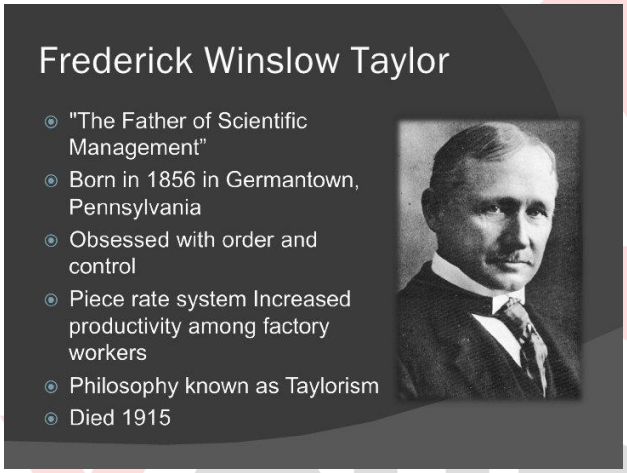
- Total Quality Control
- He used statistical techniques
- Was founding chairman of the International Academy for Quality
- Quality as a "Total Field" customer
- Customer defined quality

Contribution of Genichi Taguchi

- Father of Scientific Management
- Indian Statistical Institute visiting professor
- "Design of experiment" methods, orthogonal array
- Robust design in the area of product development, offline quality control
- The noise factors (environmental variation during the product's usage, manufacturing variation)
- Flexible system designs and concurrent engineering, Tolerance design
- Loss function, loss due to poor quality

Who is Dr. Genichi Taguchi?

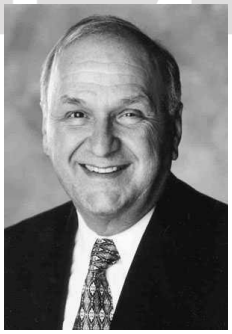
- Born in 1924 in the town of Tokamachi, Japan
- Studied Textile Engineering and earned his doctorate from Kyushu University (Japan) in 1962
- Developed much of his thinking in isolation from the school of Ronald Fisher (Factorial DOE), only coming into direct contact in 1954.
- Pioneered his method with Dr. Yuin Wu in 1966 while consulting with Bell Labs



Contribution of Frederick Taylor

- Father of scientific management
- Principle of scientific management
- Divide entire work in small elements
- Select, train & teach workers scientifically
- Division of labour
- Piece rate incentive system
- Time & motion study
- Improvement in industrial efficiency

Contribution of James Harrington



- Process Improvement
- Worked with IBM
- Served as president and chairman of the American Society for Quality
- Quality profit connection
- High performance Benchmarking

Q 1 Which of the following Quality Guru is credited with concept of "quality control charts"

a) Edward Deming b) Ishikawa

c) Shewhart d) Taylor

Ans c) Shewhart used quality control charts to analyse the data for quality control purposes.

Q 2 Which of the following Quality Guru is credited with concept of "quality circles"

a) Edward Deming b) Ishikawa c) Shewhart d) Taylor

Ans b) Ishikawa is known as father of quality circle movement

Q 3 Which of the following Quality Guru is credited with concept of "quality cycle"

a) Edward Deming b) Ishikawa c) Shewhart d) Taylor

Ans a) Edward Deming popularized the concept of PDCA & PDSA quality cycle

Q4 Which of the following Quality Guru is credited with concept of "Total quality control"

a) Edward Deming b) Ishikawa c) Shewhart d) Feigenbaum

Ans d) Feigenbaum popularized concept of Total quality control

Q5 Which of the following scholar is associated with principle of scientific management?

a) Edward Deming b) Ishikawa c) Shewhart d) Taylor

Ans d) Taylor preached principle of scientific management to bring efficiency in the system

Q6 Poka Yoke is Japanese word which simple means

a) Concurrent Engineering b) Zero defect c) Maximum quality d) Avoiding error

Ans d) Poka Yoke means avoiding error & this concept was provided by Shigeo Shingo