



# CONTRIBUTIONS OF DEMING, JURAN AND CROSBY

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Course : Total Quality Management

**19ME514**  
**Unit -1 Introduction**  
**III Year /V Semester**  
**Mechanical Engineering**

# TOPIC OF THE DAY



# THE QUALITY GURUS

Individuals who have been identified as making a significant contribution to improving the quality of goods and services.

- Walter A. Shewhart- PDSA & TQC
- **W. Edwards Deming- PDCA & 14 Points**
- **Joseph M. Juran- Juran's Trilogy**
- Armand Feigenbaum- Customer
- **Philip Crosby- Quality**
- Genichi Taguchi- Loss function
- Kaoru Ishikawa- Cause and effect diagram & Quality circle

# CONTRIBUTIONS OF W. EDWARD DEMING





# DEMING'S 14 POINTS FOR MANAGEMENT

1. Create constancy of purpose for the improvement of the product and service.
2. Adopt the new philosophy.
3. Cease dependence on inspection to achieve quality.
4. End the practice of awarding business on the basis of price tag alone. Instead, minimize total cost by working with a single supplier.
5. Improve constantly and forever every process for planning, production, and service.
6. Institute training and retraining.



# DEMING'S 14 POINTS FOR MANAGEMENT

7. Adopt and institute leadership.
8. Drive out fear.
9. Breakdown barriers between staff areas.
10. Eliminate slogans, exhortations, and targets for the workforce.
11. Eliminate numerical quotas for the workforce and numerical goals for management.
12. Remove barriers that rob people of workmanship.
13. Institute a vigorous program of education and self-improvement for everyone.
14. Put everybody in the company to work to accomplish the transformation.



# THE JURAN TRILOGY

Juran views quality as fitness for use.

Juran Trilogy is designed to reduce the cost of quality over time.

1. QUALITY PLANNING
2. QUALITY CONTROL
3. QUALITY IMPROVEMENT



# 1. QUALITY PLANNING

- Determine internal & external customers.
- Their needs are discovered.
- Develop product / service features.
- Develop the processes able to produce the product / service features.
- Transfer plans to operations.





## 2. QUALITY CONTROL

Control is used by operating forces to help meet the product, process and service requirements.

1. Determine items to be controlled.
2. Set goals for the controls.
3. Measure actual performance.
4. Compare actual performance to goals.
5. Act on the difference.

# 3. QUALITY IMPROVEMENT

Aims to attain levels of performance that are higher than current levels.

- Establishment of quality council.
- Identify the improvement projects.
- Establish the project teams with a project leader.
- Provide the team with the resources.



# JURAN'S 10 STEPS TO QUALITY IMPROVEMENT

1. Build awareness of the need and opportunity for improvement.
2. Set goals for improvement.
3. Organize to reach the goals (establish a quality council, identify problems, select projects, appoint teams, designate facilitators).
4. Provide training.
5. Carry out projects to solve problems.
6. Report progress.



# CONTI..

7. Give recognition.
8. Communicate results.
9. Keep score.
10. Maintain momentum by making annual improvement part of the regular systems and processes of the company.



# CONTRIBUTIONS OF CROSBY

1. Quality is defined as conformance to requirements.
2. The system for causing Quality is prevention.
3. The performance standard must be zero defects.
4. The measurement of Quality is the Price of Nonconformance

# CROSBY'S 14 STEPS TO QUALITY IMPROVEMENT

1. Make it clear that management is committed to quality.
2. Form quality improvement teams with representatives from each department.
3. Determine where current and potential quality problems lie.
4. Evaluate the cost of quality and explain its use as a management tool.
5. Raise the quality awareness and personal concern of all employees.
6. Take actions to correct problems identified through previous steps.
7. Establish a committee for the zero-defects program.
8. Train supervisors to actively carry out their part of the quality improvement program.



# CONTI...

9. Hold a “zero-defects day” to let all employees realize that there has been a change.
10. Encourage individuals to establish improvement goals for themselves and their groups.
11. Encourage employees to communicate to management the obstacles they face in attaining their improvement goals.
12. Recognize and appreciate those who participate.
13. Establish quality councils to communicate on a regular basis.
14. Do it all over again to emphasize that the quality improvement program never ends.

# COMPARISON

	<b>Deming</b>	<b>Juran</b>	<b>Crosby</b>
<b>Definition of quality</b>	Continuous improvement	Fitness for use	Conformance to requirements
<b>Emphasis</b>	Tools/system	Measurement	Motivation (behaviour)
<b>Types of tools</b>	Statistical process control	Analytical, cost-of-quality	Minimal use
<b>Use of goals and targets</b>	Not used	Significant emphasis	Posted goals for workers





# REFERENCES

1. Dale H. Besterfield, "Total Quality Management", Third Edition, Pearson Education Asia, Indian Reprint, 2016.
2. Dr S. Kumar, "Total Quality Management", Laxmi Publications Ltd., New Delhi 2006.

