

FSM-325
Students Notes

TQM Lecture

MANAGEMENT CONCEPTS

Management approaches used has changed over time

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Evolution of management approaches

- During the early history of our country, products were produced by skilled craftsmen
- The Industrial Revolution caused many changes
 - The need for skilled craftsmen declined
 - * Even true in agriculture
 - Taylorism became widely employed
 - * Basic concepts:
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 - * Problems emerged with this approach
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- Management by Objectives (MBO) evolved
 - To address problems of Taylorism
 - Popular in the late 1970's and 1980's
 - Basic approach:

- * The business or organization defines its objectives (goals)
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 - * Employees are evaluated on how successfully they fulfilled their planned contribution to the objectives
- There have been some problems in implementing MBO
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 - * Some find it difficult to identify how to contribute to the objectives

Total Quality Management (TQM)

"TQM means that the organization's culture is defined by and supports the constant attainment of customer satisfaction through an integrated system of tools, techniques and training." Sashkin and Kiserr

Early US pioneers were Drs. W. Edwards Deming and Joseph M. Juran

— Slow acceptance in the US

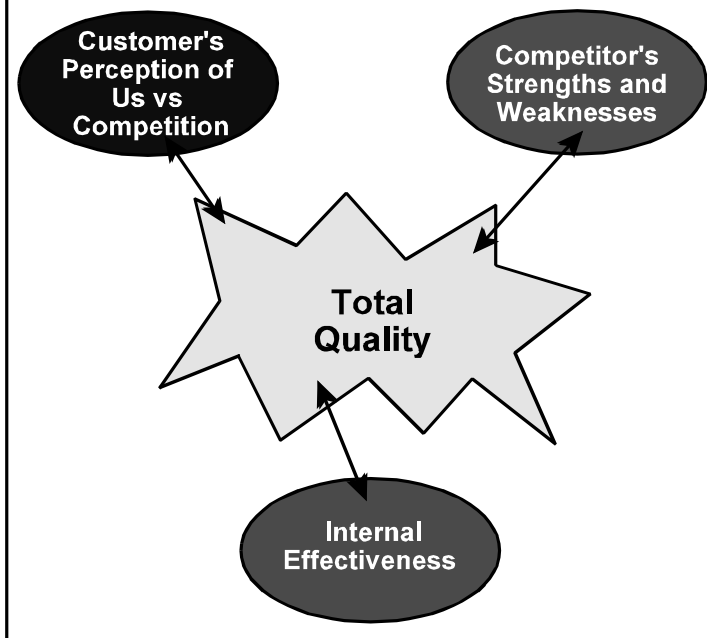
First wide scale utilization was in Japan following WW II

TOTAL QUALITY MANAGEMENT (TQM)

It is a philosophy that is designed to make an organization faster, flexible, focused and friendly. It leads to a structured system that focus each employee on the customer. It creates an environment that allows organization-wide participation in planing and implementing a continuous improvement process to meet customer needs.

SOURCE: G. Hoffherr, et. al., 1994

The Concepts of Total Quality



DEMING'S PRINCIPLES

- 1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.**
- 2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.**
- 3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.**

(Deming's Principles Continued)

- 4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.**
- 5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.**
- 6. Institute training on the job.**
- 7. Institute leadership. The aim of leadership should be to help people and machines and gadgets to do a better job. Leadership of management is in need of an overhaul, as well as leadership of production workers.**

(Deming's Principles Continued)

- 8. Drive out fear, so that everyone may work effectively for the company.**
- 9. Break down barriers among departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.**
- 10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity.**
- 11a. Eliminate work standards (quotas) on the factory floor. Substitute leadership.**
- 11b. Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.**

(Deming's Principles Continued)

- 12a. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.**
- 12b. Remove barriers that rob people in management and in engineering of their right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management objective, management by the numbers.**
- 13. Institute a vigorous program of education and self-improvement.**
- 14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.**

CULTURAL CHANGE

From

Grapevine and secrecy
Control of staff
Inspection & Firefighting
Internal focus on rules
Cost and schedule
Stability seeking
Adversarial relations
Allocating blame



To

Open communications
Empowerment
Prevention
External focus on customer
Quality of conformance
Cont. change & improvement
Co-operative relations
Solving problems at their roots

SOURCE: J. Pike & R. Barnes, 1994

JOSEPH M. JURAN 10 STEPS TO QUALITY

- 1. Build awareness of the need and opportunity for improvement**
- 2. Set goals for improvement**
- 3. Organize to reach the goals (establish quality control circles, identify problems, select projects, assign responsibilities)**
- 4. Provide training**
- 5. Carry out projects to solve problems**

(J. M. Juran 10 Steps to Quality Cont.)

- 6. Report progress**
- 7. Give recognition**
- 8. Communicate results**
- 9. Keep score on the various team efforts**
- 10. Maintain momentum by making annual improvement part of the regular system and process of the organization**

Points to remember about TQM

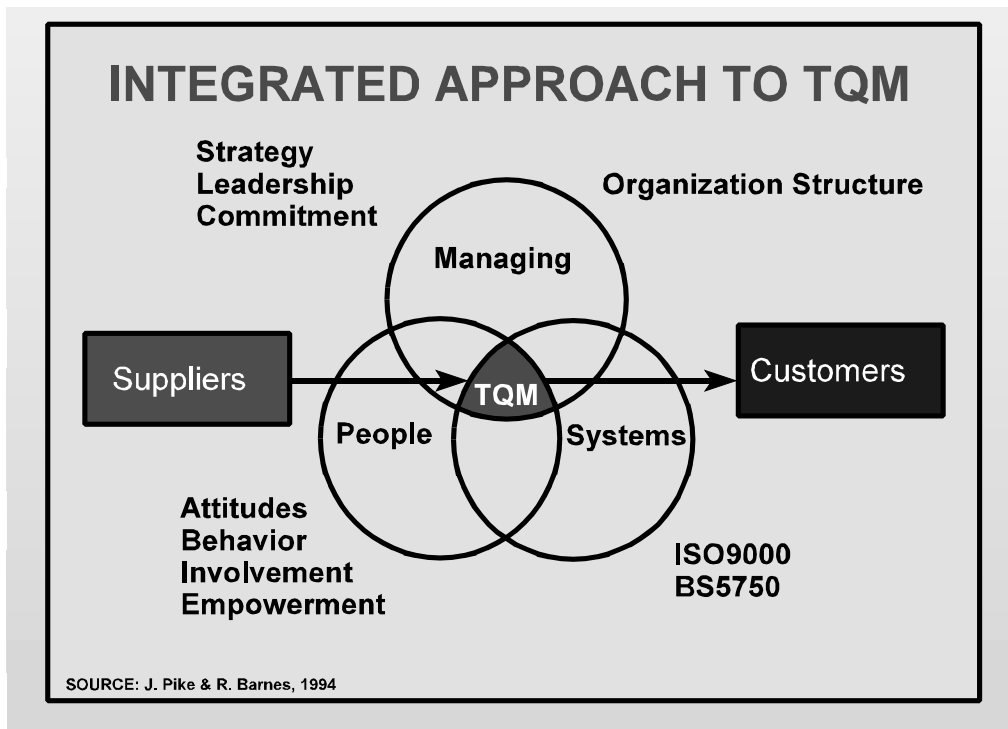
- It can work in all types and sizes of businesses and organizations
- It is not a short-term project, simple slogans, or an inspection program

An important contribution of the Japanese was the utilization of Quality Control (QC) Circles

- **Professor Kapru Ishikawa**
- **Helps management maintain links with the work force**
- **Reintroduces craftsmanship while maintaining the benefits of Taylorism**
- **QC involves a small group of workers who, under the leadership of their supervisors, helping identify, analyze and solve work-related problems**
 - **Workers feel part of the “team”**
 - **Workers need to be trained in problems solving methods**
 - **Workers are encouraged to express opinions**

DIMENSIONS OF QUALITY

- **Performance**
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- **Reliability**
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- **Durability**
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- **Aesthetics**
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TQM TOOLS

1. Data collection methods

- Direct observation
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- Questionnaires
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- Direct checking
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2. Analysis methods

- Non-quantitative

- Quantitative
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- Other techniques used
 - Benchmarking
 - Critical Path Analysis (CPA)
 - Many others

REASONS WHY TQM DOES SOMETIMES NOT WORK

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- Not an add-on program (not something you drop into place or add a new department to address)

- Need strong leaders to make it work (if leader leaves the process often fails)

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- Attempting to use traditional “proven” methods to solve problems

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- Attempting to apply in only a small area
 - Cross-functional teams are often needed

TQM at Grand Union	
BEHAVIORS BEFORE THE CHANGE	BEHAVIORS AFTER THE CHANGE
Bag Packers Ignore customers Lack of packing standards	Greet customers Respond to customers Ask for customers' preferences
Cashiers Ignore customers Lack of eye contact	Greet customers Respond to customers Assist customers Speak clearly Call customers by name
Shelf Stockers Ignore customers Don't know store products/location	Respond to customers Help customers with correct information Knowledgeable about product location
Department Workers Ignore customers Limited knowledge	Respond to customers Know products Know store
Department Managers Ignore customers Ignore workers	Respond to customers Reward employees for responding to customers
Store Managers Ignore customers	Respond to customers Reward employees for service Appraise employees on customer service
SOURCE: R. Schuler,	