

# **Fundamentals of Total Quality Leadership**

## **Course Summary**

# Instructor Information

## Lesson Outline

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## Lesson Objectives

None

## Length of Instruction

This module takes approximately 2.5 hours

## Methods of Instruction

Lecture, videotape, and discussion

## Media Required

Overhead projector, screen, video cassette recorder, television monitor, chartpack and pad, and felt-tip pens

## Videotapes

"Flight of the Buffalo"

## Additional Reading

None

**Fundamentals of**  
**T**otal  
**Q**uality  
**L**eadership

Course Summary

**Fundamentals of Total Quality Leadership (FTQL)**

**Course Summary**

You should now understand that TQL is a new approach to doing business within the Department of the Navy, and that it requires new knowledge and actions.

# *Video...*

## ***“Flight of the Buffalo”***

### **Video: “Flight of the Buffalo”**

 **Video:** Show the videotape, "Flight of the Buffalo".

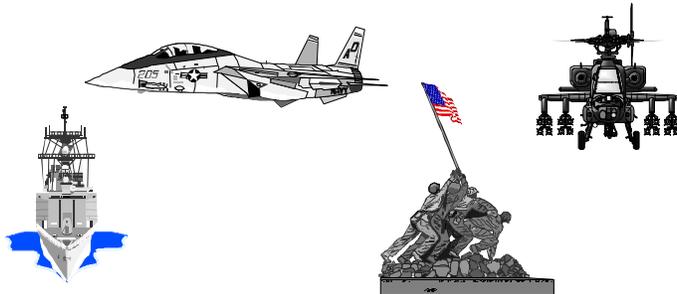
**Time: 30 minutes**

 **Discussion Questions:** Conduct a discussion and debrief of the video.

- 1. What does it mean by “line of sight to external customers”?**
- 2. Who handles customer complaints?**
- 3. What is the focus of the company?**
- 4. What does it mean “learn how to let others lead”?**

## **Course Mission Statement**

**To provide the student with a basic understanding of Total Quality Leadership principles and techniques that lead to improving mission performance and readiness**



## **Course Mission Statement**

***To provide the student with a basic understanding of Total Quality Leadership principles and techniques that lead to improving mission performance and readiness***

This course is designed to provide a fundamental look at the what, how, why, when and where of Total Quality Leadership. It is designed to lay the basic foundation upon which you can build your implementation and transformation efforts in your organization.

## Course Terminal Objectives

### You should now be able to:

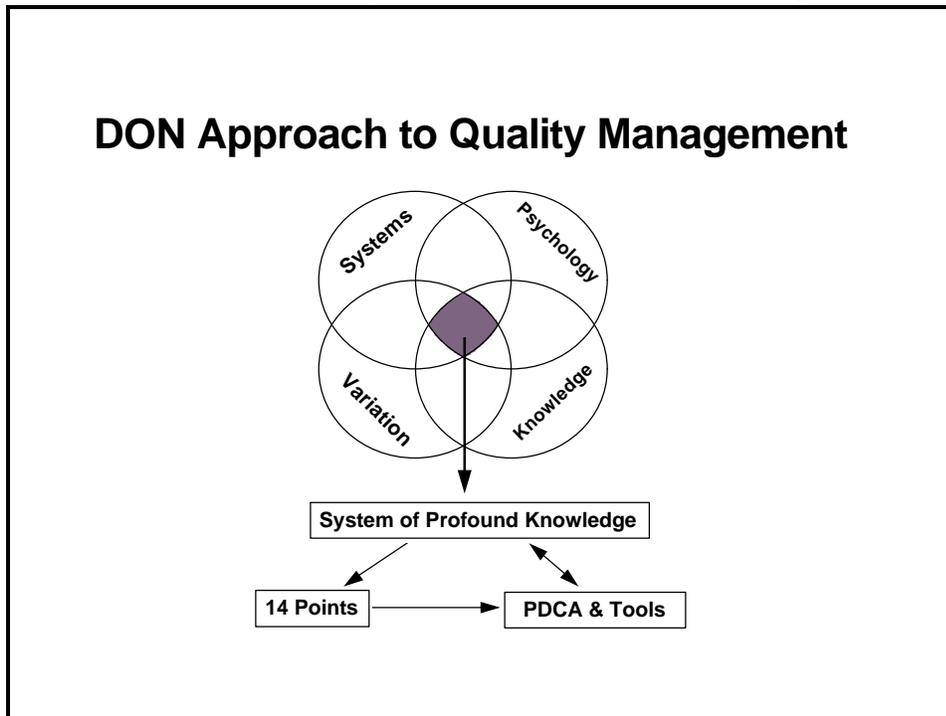
- #1 - Explain the DON quality approach
- #2 - Describe the quality improvement team structure
- #3 - Describe the System of Profound Knowledge
- #4 - Explain the Fourteen Obligations of Management
- #5 - Identify, construct and apply basic process improvement tools

### Course Terminal Objectives

The objective of the *Fundamentals of Total Quality Leadership* course is to enable you to understand the basic concepts of Total Quality Leadership. Our purpose has been to introduce you to the concepts, principles, and approaches to TQL. You have been shown how important and useful TQL can be in your future work in the Department of the Navy.

You should now be able to:

- TO #1 - Explain the DON quality approach
- TO #2 - Describe the quality improvement team structure
- TO #3 - Describe the System of Profound Knowledge
- TO #4 - Explain the Fourteen Obligations of Management
- TO #5 - Identify, construct, and apply basic process improvement tools



## DON Approach to Quality Management

**System of Profound Knowledge:** As you've learned, the DON approach to quality management is based on his System of Profound Knowledge. This system includes four parts: systems, psychology, variation and knowledge. The purpose of this system is to provide a foundation for continuous process improvement. The application of the System of Profound Knowledge will require time, study, and practice.

**The Fourteen Points:** The Fourteen Points represent the core of Deming's approach to total quality. They are an application of the System of Profound Knowledge.

**PDCA cycle:** The PDCA cycle is a scientific method for systematically gaining knowledge based on data. The two-way arrow between profound knowledge and the PDCA cycle represents the growth of knowledge. As new information is obtained, knowledge grows. As knowledge grows, more ideas are generated for improvement and innovation and are tested through the PDCA cycle.

**Tools:** You have learned a variety of **Tools** that are used when applying PDCA cycle. Some tools are for planning and others are for improving processes.

## DON Definition of TQL

The application of quantitative methods and the knowledge of people to assess and improve:

- ◆ The materials and services supplied to the organization
- ◆ All significant processes within the organization and
- ◆ Meeting the needs of the end-user, now and in the future

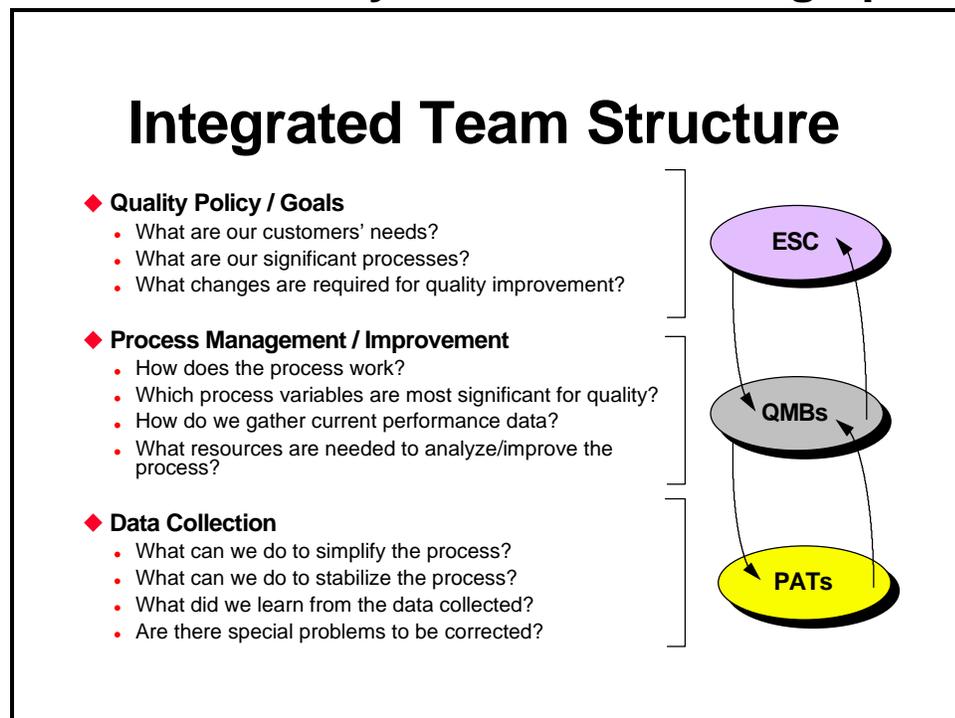
## DON Definition of TQL

Total Quality Leadership is the application of quantitative methods and the knowledge of people to assess and improve:

- ◆ The materials and services supplied to the organization
- ◆ All significant processes within the organization and
- ◆ Meeting the needs of the end-user, now and in the future

By now, each part of this definition should have greater meaning to you. Let's go over some of the elements again.

 **Instructor Direction:** Consider asking the students to describe their understanding about the elements of the TQL definition. Also ask them what is meant by the terms "total," "quality," and "leadership" in the definition.



### Integrated Team Structure

Here is a summary of the integration of the three types of teams, the issues they look at, and the types of questions they ask.

👉 **Instructor Direction:** Review the key points listed on the viewgraph. This is the time to clarify the team concept. It should be understood that there are three different jobs here (ESC, QMB, and PAT), going on in tandem. It should also be clear why QMBs are cross-functional. If these concepts are not clear, then a review of the Rummler and Brache (January 1991) article ([Managing the White Space](#)) may be necessary.

The down arrows indicate the downward flow of **Guidance and Resources** from the top to the bottom of the organization. The up arrows indicate the upward flow of **Data and Recommendations** from the bottom to the top of the organization. The arrows represent the downward and upward links.

## What To Do After This Course

- ◆ Keep learning about TQL concepts
- ◆ Consider how TQL could work in your organization
- ◆ Increase your Profound Knowledge
- ◆ Help your leaders apply the Fourteen Points
- ◆ Carry the message to others

### What To Do After This Course

You have gained a basic familiarity with the concepts of TQL. You will need to expand that understanding through continued education and practice. Now that you have completed this course, you should take some time during the next few weeks to read over the materials provided.

#### ◆ Keep learning about TQL concepts

This is just the first course in TQL. It is primarily background education, not training. You still need more education and quite a bit of training. Take some time to think about and discuss the theory and concepts of TQL and how to apply them to your organization. It takes time to understand all this information. Educational specialists call this time for thinking about what you have learned **incubation**.

Some of you may feel that you did not learn anything particularly new. Others will find the amount of material overwhelming. Experience over the years shows that TQL can appear to be deceptively simple, because some concepts seem to be common sense - nothing new. Don't fall into that trap.

Attending a few seminars and reading a few articles will not prepare you sufficiently. Education is continual and you need to become committed to your future educational process.

To help you and your organization get the needed training to implement TQL, the DON has developed a curriculum of TQL courses. This *Fundamentals of Total Quality Leadership* course is one of these courses, and a prerequisite to many others. Others include courses on implementing TQL, on methods and tools for improving processes, and on team skills that are needed to apply TQL in your organizations.

Some people feel pressured to begin TQL activities immediately, before top leaders, or enough people that will make up the critical mass, have been adequately educated and trained. These people will need to realize that participating in TQL is not a race and that to jump in inappropriately could suboptimize any planned efforts. Making short-term changes can be ill-advised. TQL is not a quick fix. It takes time and careful planning. It is a long-term process.

Also, beware of people who simply continue to do business as usual. They might only change the names of some of their working groups or use some TQL terms. Adopting a TQL veneer is very different from achieving a top-down, well thought out plan of continual process improvement.

#### ◆ **Consider how TQL could work in your organization**

As a member of the critical mass, you are expected to play a significant role in the transformation of your organization to Total Quality Leadership. When you return to your regular work, you can begin by looking at the processes in your daily routine and considering how TQL might be used to improve these processes. Then you will be ready with your ideas when your organization forms its' teams and begins to implement TQL from the top down.

#### ◆ **Increase your Profound Knowledge**

It is critically important for you to increase your profound knowledge for personal and professional growth. You might have a preference for or strength in one area over others. Seek to expand all of the areas as they form an integrated system that can only help you, wherever the application might be.

### ◆ **Help your leaders apply the Fourteen Points**

Major system changes will be made in a systematic and top-down manner as the leadership in your organization puts the Fourteen Points into practice. But you can begin helping your command's leaders begin practicing the Fourteen Points.

For example, can you identify and remove any barriers that affect subordinates in your organization? Can you eliminate any sources of fear that may be affecting people and their work? Can you encourage and support training and education for yourself and others?

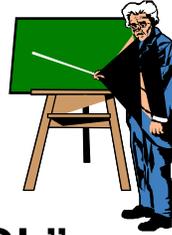
### ◆ **Carry the message to others**

You are part of the critical mass. That is why you were chosen to attend this course. One of your new jobs is to tell others in your organization about TQL. You can provide guidance and support as they learn about this new approach to quality.

**In conclusion** , we hope that you have begun to understand how the topics in this course fit together. This is a new way of looking at your organization and your work within the Department of the Navy. By learning these fundamental concepts of TQL, you have taken the first step. You are ready to help continue the transformation of the Department of the Navy through Total Quality Leadership.

## How To Present This Course

- ◆ Go through the DON TQL training sequence
- ◆ Command Training Matrix
- ◆ 3 Day “Fundamentals of TQL”
- ◆ 1 Day “Introduction to TQL”
- ◆ Viewgraphs in PowerPoint



### How To Present This Course

#### ◆ Go through the DON TQL training sequence

It is highly recommended to attend all of the TQL training covered earlier in the course. This course lays the basic foundation to build the rest of your training and education. Self-study is encouraged.

#### ◆ Command Training Matrix

The matrix list each of the viewgraphs contained in the FTQL course. (See matrix on the next page.)

#### ◆ 3 Day “Fundamentals of TQL”

The three day course includes all of the course content with the exception of five viewgraphs and the associated text. Also not included are the homework assignments and discussion, pre/post course assessments, and the Process Tamer exercise.

#### ◆ 1 Day “Introduction to TQL”

The one day course provides an “introductory” exposure to TQL that might be appropriate for your organization.

#### ◆ Viewgraphs in PowerPoint

The viewgraphs were developed in PowerPoint 4.0 and are contained in two 3.5" floppy discs. You have an option of printing black and white transparencies, color transparencies, or doing an

electronic slide show presentation. (See page S-24)

# Command Training Matrix

The foundational material presented in this course may have other applications. Many commands are conducting “end-user” training locally as part of their TQL training and education strategy. This training will vary due to unique command requirements depending upon their own implementation efforts. This course has been designed with that in mind.

The following matrix indicates the “recommended” course content for a particular audience. The five day course is the “train-the-trainer” course taught by the NLTU’s, locally or at remote sites, to Command TQL Coordinators and Quality Advisors. The three day course is the suggested “Fundamentals of TQL” course designed to be taught by Command Trainers to command end-users. The one day “Introduction to TQL” course is also designed to be taught by Command Trainers to command end-users.

Included in the FTQL Student Kit, received in the “Train-The-Trainer” course, are a student guide for the three day “Fundamentals of TQL” and the one day “Introduction to TQL” courses, an Instructor Guide, and two 3.5" floppy discs containing the viewgraphs.

**5 Day - “Fundamentals of TQL” for train-the-trainers**

**3 Day - “Fundamentals of TQL” for command end-users**

**1 Day - “Introduction to TQL” for command end-users**

<b>Course Overview</b>	<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1 Course Overview	X	X	X
VG-2 Course Administration	X	X	
VG-3 Course Mission Statement	X	X	X
VG-4 Course Terminal Objectives	X	X	
VG-5 Course Structure	X	X	X
VG-6 Course Schedule	X	X	
VG-7 DON Approach to Quality Management	X	X	X
VG-8 DON TQL Curriculum	X		
VG-9 TQL Training Sequence	X		

<b>Module 1 - DON Quality Approach</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	DON Quality Approach	X	X	X
VG-2	Learning Objectives	X	X	
VG-3	DON Quality Journey	X	X	
VG-4	Video: "The Prophet of Quality - Part 1"	X	X	
VG-5	Contributions of Dr. Deming	X	X	
VG-6	Definition of Quality	X	X	X
VG-7	Dimensions of Quality	X	X	X
VG-8	Quality Depends On	X	X	X
VG-9	Conditions for Quality	X	X	
VG-10	Customers and End-Users	X	X	
VG-11	Identifying Customers	X	X	
VG-12	What is a Process?	X	X	X
VG-13	Examples of Processes	X	X	X
VG-14	Significant and Critical Processes	X	X	
VG-15	Two Approaches to Quality	X	X	X
VG-16	Quality through Inspection	X	X	X
VG-17	Inspection Example	X	X	X
VG-18	Costs of Inspection	X	X	X
VG-19	Quality through Process Improvement	X	X	X
VG-20	Process Improvement	X	X	
VG-21	Investments in Process Improvement	X	X	X
VG-22	The Chain Reaction in the DON	X	X	X
VG-23	Why Focus on Quality?	X	X	X
VG-24	Benefits of Focusing on Quality	X	X	X
VG-25	DON Definition of Total Quality Leadership (TQL)	X	X	X
VG-26	Total Quality Leadership Model	X	X	X
VG-27	Total Quality Leadership is:	X	X	
VG-28	Total Quality Leadership is NOT:	X	X	
VG-29	Videos: "TQL Welcome Aboard" & "TQL: A Marine Experience"	X	X	X
VG-30	Module Summary	X	X	

<b>Module 2 - Quality Improvement Teams</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	Quality Improvement Teams	X	X	X
VG-2	Learning Objectives	X	X	
VG-3	Video: "Paradigm Principles"	X	X	
VG-4	The Traditional Organization	X	X	
VG-5	Conditions Created By Traditional Structure	X	X	
VG-6	Quality Improvement Team Structure	X	X	X
VG-7	Team Approach to Managing Quality	X	X	X
VG-8	Executive Steering Committee (ESC)	X	X	X
VG-9	Quality Management Board (QMB)	X	X	X
VG-10	Process Action Team (PAT)	X	X	X
VG-11	TQL Coordinator	X	X	
VG-12	Quality Advisor	X	X	
VG-13	Downward Link	X	X	
VG-14	Team Leader	X	X	
VG-15	Recorder and Team Member	X	X	
VG-16	Integrated Team Structure	X	X	
VG-17	Module Summary	X	X	

<b>Module 3-1 Systems</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	Systems	X	X	X
VG-2	Learning Objectives	X	X	
VG-3	DON Approach to Quality Management	X	X	
VG-4	What is a System?	X	X	X
VG-5	Systems and Subsystems	X	X	X
VG-6	Organization as an Extended System	X	X	X
VG-7	Optimization of the Organization	X	X	X
VG-8	Suboptimization of the Organization	X	X	X
VG-9	Conditions Leading to Suboptimization	X	X	
VG-10	Ways of Viewing the Organization	X	X	
VG-11	The Organization as a System, Subsystems, and Processes	X	X	X
VG-12	Extending Outside the Organization	X	X	
VG-13	Stakeholders in the Extended System	X	X	
VG-14	Measures in the Extended System	X	X	
VG-15	Extended System Example	X	X	
VG-16	Measurements in the Extended System	X	X	
VG-17	Lesson Summary	X	X	

<b>Module 3-2 Psychology</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	Psychology	X	X	
VG-2	Learning Objectives	X	X	
VG-3	DON Approach to Quality Management	X	X	
VG-4	Exercise: "Broken Squares"	X	X	
VG-5	Understanding People: Theory of Motivation	X	X	
VG-6	Understanding Similarities of People	X	X	X
VG-7	Understanding Differences of People	X	X	X
VG-8	Why Change is Difficult	X	X	
VG-9	How Change Occurs	X	X	
VG-10	Changing Organizational Culture	X	X	X
VG-11	Building the "Critical Mass"	X	X	
VG-12	Working in Teams	X	X	X
VG-13	Team Issues and Considerations	X	X	
VG-14	Video: "Competition, Cooperation and The Individual"	X	X	
VG-15	Lesson Summary	X	X	

<b>Module 3-3 Variation</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	Variation	X	X	
VG-2	Learning Objectives	X	X	
VG-3	DON Approach to Quality Management	X	X	
VG-4	Why Variation Occurs	X	X	X
VG-5	Shewhart's Discovery	X	X	X
VG-6	Understanding Variation	X	X	X
VG-7	Video: "The Batavia Incident"	X	X	
VG-8	Lessons from Batavia	X	X	
VG-9	Specification Loss Function	X	X	
VG-10	Quality Loss Function	X	X	
VG-11	Disadvantages of Specifications	X	X	
VG-12	Continual Improvement	X	X	
VG-13	Variation and Control Limits	X	X	
VG-14	Common Cause Variation	X	X	
VG-15	Special Cause Variation	X	X	
VG-16	Control Limits and Specification Limits	X	X	
VG-17	Stability and Capability	X	X	
VG-18	Stability and Capability related to Common Cause Variation	X	X	
VG-19	Stability and Capability related to Special Cause Variation	X	X	
VG-20	Benefits of Stable and Capable Processes	X	X	
VG-21	Reduction of Variation	X	X	
VG-22	Responsibility for Reducing Variation	X	X	
VG-23	Exercise: "The Red Bead Exercise"	X	X	
VG-24	Lessons from the Red Bead Exercise	X	X	
VG-25	Lesson Summary (1 of 2)	X	X	
VG-26	Lesson Summary (2 of 2)	X	X	

<b>Module 3-4 Knowledge</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	Theory of Knowledge	X	X	
VG-2	Learning Objectives	X	X	
VG-3	DON Approach to Quality Management	X	X	
VG-4	Theory of Knowledge	X	X	X
VG-5	Typical Approaches to Planning and Decision Making	X	X	X
VG-6	Quality Approaches to Planning and Decision Making	X	X	X
VG-7	Management and the Theory of Knowledge	X	X	
VG-8	Operational Definitions	X	X	
VG-9	The Plan-Do-Check-Act (PDCA) Cycle	X	X	X
VG-10	Plan Phase	X	X	
VG-11	Do Phase	X	X	
VG-12	Check Phase	X	X	
VG-13	Act Phase	X	X	
VG-14	PDCA Cycle and Process Improvement	X	X	X
VG-15	How the PDCA Cycle can be applied	X	X	
VG-16	Where the PDCA Cycle can be applied	X	X	
VG-17	Lesson Summary	X	X	

<b>Module 4 - Fourteen Obligations of Management</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	Fourteen Obligations of Management	X	X	X
VG-2	Learning Objectives	X	X	
VG-3	DON Approach to Quality Management	X	X	
VG-4	Fourteen Obligations of Management	X	X	X
VG-5	Point 1	X	X	
VG-6	Point 2	X	X	
VG-7	Point 3	X	X	
VG-8	Exercise: "The 'F' Test"	X	X	
VG-9	Point 4	X	X	
VG-10	Multiple Suppliers Increase Variation	X	X	
VG-11	Point 5	X	X	
VG-12	Point 6	X	X	
VG-13	Point 7	X	X	
VG-14	Navy and Marine Corps Principles of Leadership	X	X	
VG-15	Leadership and Management	X	X	
VG-16	Point 8	X	X	
VG-17	Point 9	X	X	
VG-18	Point 10	X	X	
VG-19	Point 11	X	X	
VG-20	Point 12	X	X	
VG-21	Point 13	X	X	
VG-22	Point 14	X	X	
VG-23	Seven Deadly Diseases	X	X	
VG-24	Module Summary	X	X	
VG-1A	Points 1-3			X
VG-2A	Points 4-8			X
VG-3A	Points 9-11			X
VG-4A	Points 12-14			X

<b>Module 5 - Basic Process Improvement Tools</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1	Basic Process Improvement Tools	X	X	X
VG-2	Learning Objectives	X	X	
VG-3	DON Approach to Quality Management	X	X	
VG-4	Basic Tools for Process Improvement	X	X	X
VG-5	Purpose of Tools	X	X	X
VG-6	Flowchart	X	X	X
VG-7	Symbols Used in Flowcharts	X	X	X
VG-8	Types of Flowcharts - Linear	X	X	X
VG-9	Types of Flowcharts - Deployment	X	X	
VG-10	Levels of Flowcharts	X	X	
VG-11	Guidelines for Flowcharting	X	X	
VG-12	Constructing a Flowchart	X	X	
VG-13	Constructing a Deployment Flowchart	X	X	
VG-14	Interpreting a Flowchart	X	X	
VG-15	Fire Drill Preparation Flowchart	X	X	
VG-16	Flowchart Exercise	X	X	
VG-17	Flowchart Exercise Example	X	X	X
VG-18	Brainstorming	X	X	X
VG-19	Guidelines for Brainstorming	X	X	
VG-20	Steps for Brainstorming	X	X	
VG-21	Brainstorming Example	X	X	
VG-22	Brainstorm Exercise	X	X	
VG-23	Affinity Diagram	X	X	X
VG-24	Guideline for Creating an Affinity Diagram	X	X	
VG-25	Step 1 - Display the Generated Ideas	X	X	
VG-26	Step 2 - Sort Ideas into Related Groups	X	X	
VG-27	Step 3 - Create Header Cards	X	X	
VG-28	Step 4 - Draw the Finished Affinity Diagram	X	X	X
VG-29	Affinity Exercise	X	X	
VG-30	Cause and Effect Diagram	X	X	X
VG-31	Basic Layout of Cause and Effect Diagrams	X	X	X
VG-32	Step 1 - Identify and define the effect	X	X	
VG-33	Step 2 - Fill in the effect box and draw the spine	X	X	
VG-34	Step 3 - Identify the main branches	X	X	
VG-35	Step 4 - Identify causes influencing the effect	X	X	
VG-36	Step 5, 6 - Add detailed levels, Analyze the diagram	X	X	
VG-37	Cause and Effect Diagram Example	X	X	X
VG-38	Cause and Effect Diagram Exercise	X	X	

<b>Module 5 - Basic Process Improvement Tools</b>		<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-39	Multivoting	X	X	X
VG-40	Procedures for Multivoting	X	X	
VG-41	Multivote Example #1 - 1st Vote Tally	X	X	
VG-42	Multivote Example #1 - 2nd VoteTally	X	X	
VG-43	Multivote Exercise	X	X	
VG-44	Nominal Group Technique (NGT)	X	X	X
VG-45	Procedures for NGT	X	X	
VG-46	NGT Example #1	X	X	
VG-47	NGT Example #2	X	X	
VG-48	NGT Exercise	X	X	
VG-49	Checksheets	X	X	X
VG-50	Guidelines for Checksheets	X	X	
VG-51	Types of Checksheets - Tally Format	X	X	
VG-52	Types of Checksheets - Location Format	X	X	
VG-53	Communication Gateway Setup Process	X	X	
VG-54	Checksheet Example #1	X	X	X
VG-55	Checksheet Example #2	X	X	X
VG-56	Checksheet Example #3	X	X	
VG-57	Pareto Chart	X	X	X
VG-58	Uses for Pareto Charts	X	X	
VG-59	Constructing a Pareto Chart	X	X	
VG-60	Example #1 - Checksheet	X	X	
VG-61	Example #1 - Data Sheet	X	X	
VG-62	Example #1 - Pareto Chart	X	X	X
VG-63	Example #2 - Checksheet	X	X	
VG-64	Example #2 - Data Sheet	X	X	
VG-65	Example #2 - Pareto Chart	X	X	X
VG-66	Example #3 - Checksheet	X	X	
VG-67	Example #3 - Data Sheet	X	X	
VG-68	Example #3 - Pareto Chart	X	X	
VG-69	Histogram	X	X	X
VG-70	Elements of a Histogram	X	X	
VG-71	Histogram Example #1	X	X	X
VG-72	Histogram Example #2	X	X	X
VG-73	Histogram Example #3	X	X	
VG-74	Run Chart	X	X	X
VG-75	Uses for Run Charts	X	X	
VG-76	Interpreting Run Charts: Run	X	X	
VG-77	Interpreting Run Charts: Trend	X	X	

<b>Module 5 - Basic Process Improvement Tools</b>	<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-78 Control Chart	X	X	
VG-79 Uses for Control Charts	X	X	
VG-80 Common Causes of Variation	X	X	
VG-81 Special Causes of Variation	X	X	
VG-82 Data Collection Plan	X	X	
VG-83 Process Tamer Exercise	X		
VG-84 Module Summary	X	X	

<b>Course Summary</b>	<b>5 Day</b>	<b>3 Day</b>	<b>1 Day</b>
VG-1 Course Summary	X	X	X
VG-2 Video: "Flight of the Buffalo"	X	X	
VG-3 Course Mission Statement	X	X	
VG-4 Course Terminal Objectives	X	X	
VG-5 DON Approach to Quality Management	X	X	
VG-6 DON Definition of TQL	X	X	
VG-7 Integrated Team Approach	X	X	
VG-8 What To Do After This Course	X		
VG-9 How To Present This Course	X		
VG-10 Class Graduation	X	X	

## FTQL PowerPoint Viewer 4.0 Installation

This installation is for Windows 3.1 operating systems. **Caution:** Windows will restart upon completion of this installation. Ensure all applications are closed.

1. From File Manager create new directory ("C:\FTQL" or whatever name you choose) on hard drive **(10 Meg free space required)** .
2. Select 3.5" drive (typically "a" or "b"). Copy contents of both floppies (FTQL1.exe in **disc 1** and FTQL2.exe in **disc 2**) to newly created directory.
3. From C:\FTQL, double click (or run) FTQL1.exe. It will self-extract into directory.
4. From C:\FTQL, double click (or run) FTQL2.exe. It will self-extract into directory.
5. From C:\FTQL, double click (or run) Vsetup.exe. (PowerPoint Viewer installation) (You may have to exit directory and return to directory to see newly installed files)
6. Change "install to" directory to **C:\FTQL** (or whatever directory you've been working in above).
7. Hit OK, PowerPoint Viewer will install and ask you to "restart" Windows, select OK. Upon restart, a PowerPoint Viewer icon will be created in the Microsoft Office Program Group.
8. When you run PowerPoint Viewer (double click), a menu of the FTQL modules/lessons will be presented for you to select from. Double click any of them for a presentation of that module/lesson. ESC key will back you out of the presentation.

### The following FTQL PowerPoint files should be installed:

Intro.ppt - All viewgraphs for the "Introduction to TQL" course

Module1.ppt - Viewgraphs for each module of the "Fundamentals of TQL" course

Module2.ppt

Module3-1.ppt

Module3-2.ppt

Module3-3.ppt

Module3-4.ppt

Module4.ppt

Module5.ppt

Overview.ppt

Summary.ppt

**Note:** To clean-up unneeded files in the "FTQL" (or whatever) directory, delete all files except, **pptview.exe** , **pptview.dll**, and any with a **.ppt extension**.



## **Class Graduation**



- ◆ **Post Course Assessment**
- ◆ **Course Critiques**
- ◆ **Course Expectations**
- ◆ **Graduation Certificates**

### **Class Graduation**

#### ◆ **Post Course Assessments**

Administer post-course assessment. This is only used in the five day train-the-trainer course.

#### ◆ **Course Critiques**

Collect course critiques from students. Explain the importance of the students providing feedback, both positive and negative. The goal is to improve the course and to provide the best learning environment as possible.

#### ◆ **Course Expectations**

If course expectations were done on day one, now would be a good time to review them. Hopefully the course met or exceeded expectations. It is not uncommon to have some expectations beyond the scope of this course. Address any issues that might arise.

#### ◆ **Graduation Certificates**

Issue graduation certificates and/or PG 13's as appropriate.

# **Department of the Navy Total Quality Leadership Glossary**

## **Appendix A**

## **DEPARTMENT OF THE NAVY TOTAL QUALITY LEADERSHIP GLOSSARY**

### **FOREWORD**

This glossary contains the terms used in the Department of the Navy (DON) Total Quality Leadership (TQL) education and training curriculum. Its purpose is to promote a common understanding of TQL concepts and terminology to aid communication and TQL implementation across the DON. Over time, these words will become a part of the everyday language and thinking of all DON personnel. As we gain further knowledge about how TQL works in our organization, other terms will be added to the lexicon. At the end of this document is a list of reference sources used to compile the glossary.

Linda M. Doherty  
Director, Total Quality Leadership Office,  
Office of the Under Secretary of the Navy

**14 "obligations" of management:** A different title for the 14 Points.

**14 Points:** Deming's guidance for application of his theory of management for improvement of quality, productivity, and competitive position. [Deming, 1986]

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## A

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**Act phase:** The fourth phase of the **Plan-Do-Check-Act, PDCA** ( Plan -Do-Study-Act, PDSA) cycle. In this phase, decisions are made regarding adopting changes.

**affinity diagram:** A planning tool that groups large amounts of ideas, opinions, and issues according to their perceived relationships.

**analytic study:** A type of study which provides information for actions to be taken on the cause system. The primary aim is to improve future performance.

**activity network diagram:** A tool used to plan the most appropriate path and schedule for the completion of any task. Also known as an arrow diagram.

**assessment:** A systematic method of determining the state or condition of something by collecting, analyzing, and interpreting data.

**attribute data:** Data that result from counting the number of occurrences or items in a single category of similar items or occurrences.

**average:** Also called the **mean**, the average is the most common measure of location for a set of numbers. It is the sum of all the values divided by the number of values. See also **median** and **mode**.

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**baseline data:** Data from a **stable process** used for comparison to evaluate the effectiveness of process changes. The term is also commonly applied to initial data collected in organizational surveys.

**basic graphic tools:** Charting and graphing procedures that are commonly used in **process improvement** . These tools assist in describing processes, identifying areas for improvement, and indicating the effects of changes. The commonly used tools are **flow charts, check sheets, cause-and-effect diagrams, Pareto charts, control charts, run charts, histograms, and scatter diagrams** .

**benchmark:** To take a measurement against a reference point.

**benchmarking:** A strategic and analytic process of continuously measuring an organization's products, services, and practices against a recognized leader in the studied area.

**bias:** In statistical terms, bias is the degree to which the mean value of a sample statistic approximates the distribution parameter.

**brainstorming:** An idea-generating technique used by teams to generate many ideas in a short period of time.

**bureaucratic hierarchy:** A form of organization and management characterized by specialization of functions, adherence to fixed rules, and a hierarchy of authority.

**business process reengineering (BPR):** see **reengineering** .

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**capable process:** A process that is stable and meets customer requirements.

**causal system:** The interaction of sources of variation that determine the nature of an output characteristic.

**cause-and-effect (fishbone, Ishikawa) diagram:** A graphic representation that organizes potential causes of process variation into general categories. Typically, these categories include methods, materials, machines, people, and environment.

**chain reaction:** Deming's theory that, as an organization improves quality, it improves productivity, captures market with better quality and lower price, stays in business, and provides jobs.

**charter:** A written document that describes the tasks, expected results, and resources to be used by a **quality improvement team** .

**Check phase:** The third phase of the **Plan-Do-Check-Act (PDCA) cycle** . It is the phase in which the effects of the "Do" phase are assessed. This phase is also referred to as the "Study" phase in the Plan-Do-Study-Act (PDSA) cycle. These cycles are the same except for their titles.

**check sheets:** Forms that are used to collect, organize, and analyze data.

**common causes:** Those sources of **variation** that are inherent in the process and affect all outputs of the process. (Moen et al., 1991)

**consensus:** A decision by a group that is acceptable to them, but is not necessarily unanimous nor arrived at by a majority vote.

**constancy of purpose:** A leadership obligation to establish and demonstrate commitment to the long-term aim of the organization.

**continual (or continuous) improvement:** Regular and frequent improvements. (See **process improvement**)

**control chart:** A statistical tool used to distinguish between **variation** in a **process** resulting from **common causes** and **variation** resulting from **special causes** .

**control limit:** A value calculated from data, that represents the limits of the **common cause** system and is used as a basis for taking action.

**correlation:** A statistic which indicates the degree and nature of the relationship between two or more variables.

**critical mass:** A sufficient number of people with authority, knowledge, and leadership to initiate and sustain organization-wide quality improvement.

**cross-functional team:** A team with members from more than one organizational function who have responsibility for some aspect of an identified process.

**customer:** The person or group who uses the output of a process. **External customers** reside outside the producing organization. **Internal customers** reside inside the producing organization. An **end-user** uses the product or service for whom it was intended.

**customer feedback system:** A system used by organizations for obtaining periodic information from customers about the quality of products and services.

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## D

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**data:** Information organized for analysis or used as the basis for decision-making.

**data collection plan:** A plan for gathering information. It establishes the why, who, what, how, where, and when of data collection.

**defect:** A characteristic of a product or service that fails to meet customer requirements.

**defective:** An item or service that contains one or more defects.

**demographic data:** Information that describe characteristics of people.

**dispersion:** (See **variation**.)

**distribution:** See **frequency distribution** .

**Do phase:** The second phase of the **Plan-Do-Check-Act (PDCA) cycle** . The phase in which the plan is carried out on a small scale.

**downward link:** A member from an ESC or QMB who is assigned to work with a subordinate team to provide guidance and support for the team's activities.

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**effectiveness:** The degree to which performance meets requirements or end-user expectations.

**efficiency:** The ratio of the **output** to the total **input** in a process.

**empowerment:** Delegation of decision making authority and the allocation of resources to improve processes.

**end-user:** (See **customer**.)

**enumerative study:** A type of study which describes the current situation and provides a rational basis for decision making on the source of the information. Valid predictions cannot be made from this type of study.

**environment:** Circumstances and conditions that interact with and affect an organization. These can include economic, political, cultural, and physical conditions inside or outside the organization.

**Executive Steering Committee (ESC):** The team composed of the top leaders in the organization who lead the quality improvement effort.

**extended system:** A system that extends beyond the boundaries of the producing organization to include the customers and the suppliers of the organization. Interactions among these components are managed by the producing organization using the principles of **system optimization** .

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**fishbone diagram:** (See **cause-and-effect diagram** .)

**flow chart:** A diagram that depicts the steps in a process.

**frame:** In statistical studies, is a list of sampling units of the **universe** .

**frequency distribution:** A representation of the location and **dispersion** of measured values.

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**Gantt chart:** A diagram used to plan and manage work in relation to time.

**goal:** A statement of a result to be achieved in the long term, representing a major accomplishment.

**Government Performance and Results Act (GPRA):** Public Law 103-62 enacted by the 103rd U.S. Congress. It establishes the requirement for **strategic planning** and performance measurement in Federal Executive agencies.

**Groupthink:** A mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' striving for unanimity overrides their motivation to realistically appraise alternative courses of action.

**groupware:** A networked personal computer system that enables groups to meet electronically.

**guiding principles:** The values and philosophy of an organization that guide the behavior of its members.

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**histogram:** A vertical bar graph that depicts the **frequency distribution** of a set of continuous data.

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**innovation:** The development of new processes, products, or services in response to anticipated customer requirements.

**inputs:** Resources used to produce a product or service.

**internal customer:** (See **customer**.)

**internal environment:** (See **environment**.)

**internal supplier:** (See **supplier**.)

**Ishikawa diagram:** (See **cause-and-effect** diagram.)

**ISO 9000:** A generic term for the series of standards sponsored by the International Organization for Standardization (ISO); the intent is to establish, document, and maintain a system for ensuring output quality for manufacturing and service firms.

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**judgment sample:** A **sample** used in **analytic studies** to determine the conditions to be studied and the measurements to be taken for each set of conditions. The sample is based on knowledge of the process.

**just-in-time:** The concept of supplying inputs only when they are needed for use.

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**leadership:** The process of inducing others to take action toward a common goal.

**learning organization:** A term popularized by Peter Senge in reference to organizations characterized by a cycle of learning that produces new capacities and fundamental shifts of mind, both individually and collectively.

**lower control limit (LCL):** (See **control limit**.)

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**Management:** The exercise of authority, whether formal or informal, in directing and coordinating the work of others. (Shafritz, 1980)

**management of participation:** Leadership actions that provide structure and direction for subordinate involvement in determining how work is accomplished.

**matrix diagram:** A graphic tool that shows the relationships between two or more qualitative variables.

**mean:** (See **average**.)

**measurement:** A criterion, basis, or standard for comparison.

**median:** The value in a set of data above and below which 50 percent of the data fall. In a data set consisting of an even number of values the median is the **average** of the two middle values.

**metrics:** (see **measurement**)

**mission:** An enduring statement of purpose. Describes what the organization does, who it does it for, and how it does it.

**mode:** The most frequent value in a set of values.

**multivoting:** A repetitive process used by a team to select the most important or popular items from a large list of items generated by the team.

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**National Performance Review (NPR):** An Executive initiative aimed at reducing costs and improving productivity in public sector organizations. (Gore, 1993)

**nominal group technique, (NGT):** A methodology used by a team to generate, list, and prioritize a large number of issues without creating "winners" and "losers" among the team members.

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**objectives:** Specific, measurable, mid-term and short-term performance targets necessary for achieving long-term goals.

**objectives matrix:** A technique used to combine different measures of performance into a summary index that allows for meaningful comparisons of performance.

**operational definitions:** Agreed upon meanings of terms and concepts that are stated so they can be measured in specific contexts.

**optimization:** A process of orchestrating the combined efforts of all components of a system toward achievement of the stated aim of the system. (Deming, 1986)

**organizational climate:** Workgroup members' shared perceptions of the policies, practices, and procedures of their workplace. Can be assessed through surveys.

**organizational culture:** A pattern of basic assumptions, invented, discovered, or developed by a given group, as it learns to cope with its problems of external adaptation and internal integration, that has worked well enough to be considered valid and therefore is to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (Schein, 1990)

**organizational values:** See **guiding principles**.

**outcome:** The consequences of the quality of products or services.

**output:** The products or services produced by a process.

**overadjustment:** Inappropriate action taken on a process because variation is mistakenly ascribed to a special cause when, in fact, the cause is part of the **common cause** system. Commonly known as "**tampering**."

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**paradigm:** A set of rules based on an explicit or implicit set of assumptions that explains how things work or ought to work.

**Pareto chart:** A vertical bar graph that displays categories of items in decreasing order of frequency or magnitude from left to right.

**participative management:** A management approach in which supervisors and their subordinates interact in defining and structuring how work is done.

**Plan-Do-Check-Act (PDCA) cycle:** Also known as the Shewhart or Deming cycle, it is an application of the scientific method useful for gaining knowledge about and improving processes. Also referred to as the Plan-Do-Study-Act (PDSA)

**Plan phase:** The first phase of the **Plan-Do-Check-Act (PDCA) cycle** . A plan based upon a prediction is developed in this phase. The plan identifies what needs to be improved, how it is to be implemented, and how the results are to be evaluated.

**planning assumption:** A belief, based upon past knowledge and experiences, about how current and future events, both internal and external to the organization, are likely to affect the achievement of desired results.

**prioritization matrix:** A graphic tool used to prioritize tasks, issues, or possible options based on known, weighted criteria.

**problem solving:** The action taken in response to a negative event.

**process:** A planned series of activities that result in a specific output. **Significant processes** are directly related to mission performance and, if improved, will positively affect organizational effectiveness.

**Process Action Team (PAT):** A team chartered by the **ESC** or a **QMB** and composed of individuals from within a single command function who work together on a stage of a process.

**process capability:** The predictable distribution of performance of a **stable process** .

**process decision program chart (PDPC):** A graphic tool that maps out conceivable negative events and contingencies that can occur in the execution of a plan and appropriate counter measures.

**process improvement:** The continuous endeavor to learn about the cause system in a process and to use this knowledge to change the process to reduce variation and complexity and to improve customer satisfaction. (Moen et al., 1991)

**process management:** Leadership actions required to begin and sustain continuous improvement of significant processes.

**process mapping:** Diagramming, usually with flowcharts, the extended view of a process for the purpose of improvement.

**profound knowledge:** Deming's term to describe the system of knowledge required to achieve organizational transformation and system optimization. It consists of four interdependent areas: appreciation for a system, knowledge about variation,

## Q

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**quality:** The extent to which a product or service meets or exceeds customer requirements and expectations.

**quality advisor:** A TQL support position within a DON organization. This person assists **QMBs** and **PATs** in data collection, analysis, and interpretation. The advisor also trains these teams in the use of methods and tools for process improvement.

**quality characteristic:** A property or attribute of a product or service that is considered important to a **stakeholder** .

**quality circle:** A small group that voluntarily performs quality improvement activities within the workplace. (Imai, 1986)

**quality function deployment (QFD):** A system for designing products or services based on customer requirements and involving all necessary operations of the producing organization.

**quality improvement team:** A team that has been established to improve quality. In the DON, the **ESCs**, **QMBs**, and **PATs** are the teams linked by charters to make process improvements.

**quality in daily work:** The application of total quality principles and techniques to the routine but important activities of individuals and work groups, with a systems focus on improving mission performance, and with the knowledge and support of leadership.

**quality loss function:** (See **Taguchi loss function** .)

**Quality Management Board (QMB):** A cross-functional team composed of managers, usually of the same organization level, who are jointly responsible for a process, system, product, or service.

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**random sample:** A sample selected in such a way that every member of a **frame** has an equal and independent chance of being selected.

**range:** A statistic that depicts the extent of **dispersion** in a set of data. It is determined by calculating the difference between the largest and smallest values in the data set.

**rational sample:** (See **judgment sample** .)

**rational subgrouping:** A method for dividing data into subgroups based upon some rational hypothesis in order to answer specific questions.

**reengineering:** The fundamental rethinking and radical redesign of business processes to bring dramatic improvements in performance. (Also known as **business process reengineering** , or **BPR**). (Hammer and Champy, 1993)

**reinventing government:** (See **National Performance Review, NPR** )

**representative sample:** A sample created with the intention of minimizing bias and increasing the validity of the results of a study. (See **bias**.)

**run chart:** A line graph that depicts data plotted over time. Run charts are used to assess and achieve process stability.

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**sample:** A subset of units from a frame or a cause system.

**sampling plan:** A process for data collection that provides for the logical and statistical treatment of the data.

**scatter diagram:** A graph depicting the strength and shape of the relationship between two variables.

**scientific method:** A systematic and consistent set of procedures designed to understand and predict behavior. See (**Plan-Do-Check-Act-Cycle**) .

**self-directed team:** A group of employees with responsibility for managing themselves and the work they do.

**significant process:** (See **process**.)

**special causes (of variation):** Causes that are not in the process all the time or do not affect every product or service, but arise because of specific circumstances. (Moen, et al., 1991)

**specification limits:** A range of values used to judge the acceptability of a product or service.

**stability:** A state in which a process has displayed a certain degree of consistency in the past and is expected to continue to do so in the near future.

**stable process:** A process in which **variation** arises only from **common causes** .

**stakeholders:** The groups and individuals inside or outside the organization who affect and are affected by the achievement of the organization's mission, goals, and strategies.

**standardization:** A method used to achieve uniform practice within a process.

**statistical control:** The condition describing a process from which all **special causes** have been eliminated and only common causes remain; evidenced on a **control chart** by the absence of points beyond the **control limits** and by the absence of nonrandom patterns or trends within the control limits. (See **stable process** .)

**statistical process control (SPC):** The application of statistical methods for the purpose of reducing process variation.

**statistical quality control:** The application of statistical methods to improve the quality of products. The emphasis is on acceptance sampling of the product rather than the process that produced the product.

**statistics:** Set of techniques for describing groups of data in order to make decisions.

**strategic framework:** The combination of an organization's mission, vision, and guiding principles which serves as a context for practicing strategic management.

**strategic goal:** A long-range change target that guides an organization's efforts in moving toward a desired future state.

**strategic intent:** A driving force compelling leadership toward its vision.

**strategic management:** A systems approach to identifying and making the necessary changes and measuring the organization's performance as it moves towards its vision.

**strategic plan:** A document that describes an organization's mission, vision, guiding principles, strategic goals, strategies, and objectives.

**strategic planning:** The process by which the guiding members of an organization envision its future and develop the necessary procedures and operations to achieve that future.

**strategy:** A means for achieving a long-range strategic goal.

**suboptimization:** A condition that occurs when the performance of a system component has a net negative effect on the performance of the total system.

**supplier:** The person or group who provides an input to a process. **External supplier:** An individual or group outside of an organization. **Internal supplier:** An individual or group within an organization.

**system:** A network of interdependent components that work together to accomplish a common aim. (Deming, 1993)

**system optimization:** (See **optimization** .)

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**Taguchi loss function:** The concept that there is an increasing economic loss as product quality characteristics deviate from their target value.

**tampering:** (See **overadjustment** .)

**team:** A group of individuals organized to work together to accomplish an aim.

**team leader:** A member of a team responsible for leading the team in the accomplishment of the aim.

**total quality:** A generic term referring to commonly used concepts and methods such as; prevention approach to quality, process improvement, analysis of variation, and customer defined quality.

**Total Quality Leadership (TQL):** The application of quantitative methods and the knowledge of people to assess and improve: materials and services supplied to the organization; all significant processes within the organization; and meeting the needs of the end-user, now and in the future. (Department of the Navy, 1991)

**TQL Coordinator:** A person selected by the commanding officer to assist in the implementation of TQL.

**TQL implementation plan:** consists of a list of activities and timelines that relate to establishing the practice of process management.

**tree diagram:** A graphic tool for mapping the full range of tasks needed to achieve the end goal, purpose, or objective.

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**underadjustment:** Not taking action on a process when action is needed.

**universe:** In a statistical study, universe represents the entire set of values possessing the property under investigation. (Deming, 1961)

**unstable process:** A process in which variation is a result of both **common** and **special causes** . (Moen et al., 1991)

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## V

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**variables data:** Values resulting from measurement of a continuous variable.

**variation:** The observed differences in characteristics produced by a process.

**vision:** An idealized view of a desirable and potentially achievable future state.

**voice of the customer:** The quality characteristics of a product or service that customers define as important to meet their needs.

**voice of the process:** The actual performance of the process.

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## W

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**white space:** The space represented on an organization chart between adjacent functions that must be managed and improved by owners of those functions to achieve system optimization. (Rummler & Brache, 1991)

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## Z

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**zero defects:** A situation that exists when all quality characteristics are produced within design specifications. This concept is reflected in the attitude that defects can be prevented, especially if more attention is given to the task at hand. The theme that most embodies this concept is "do it right the first time."

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## ABOUT THE TQL OFFICE

The mission of the Total Quality Leadership (TQL) Office, Office of the Under Secretary of the Navy is to assist the Department of the Navy leaders in their quality-focused improvement efforts. The TQL Office also provides technical advice to a number of organizations inside and outside government. The TQL Office has responsibilities in six key areas:

### Information and Communication

The TQL Office educates the DON about TQL policies and initiatives through the *TQLeader* and through articles and reports, and presentations at conferences and meetings. It has developed a computer-based quality information network to facilitate communication with DON organizations.

### Assessment

Systems are needed to assess and enhance TQL implementation in the DON. The TQL Office designs and develops feedback mechanisms in support of mission accomplishment. It also develops new approaches to improving organizational effectiveness.

### Consultant Services

TQL Office members provide technical advice to the Under Secretary of the Navy and other senior DON leaders on the application of TQL principles and methods within the DON and on strategic planning. Advice may also take the form of recommendations on implementing new laws, such as the Government Performance and Results Act, as well as on related initiatives.

### Education and Training

The TQL Office is responsible for ensuring the technical accuracy of the DON TQL curriculum. Having overseen the design and development of the courses, the staff now advises on the integration of TQL material into training pipelines. The TQL Office continues to publish handbooks and other publications on all aspects of organizational change and to design new courses.

### Networking and Liaison

The TQL Office has much to share with other organizations, both government and private, and much to learn from them. Staff members participate in TQL-related networks and professional organizations.

## New Technologies

Technology can provide critical support to DON quality improvement efforts. The job of the TQL Office is to assess new technologies related to organizational change and process improvement and translate them into applications for the DON.

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# **Course References and Suggested Readings**

## **Appendix B**

## Course References and Suggested Readings

All of the following books and articles contain useful information on TQL concepts. These references are provided for further study on the material presented in the Fundamentals of Total Quality Leadership (FTQL). Many of them were used while preparing this course. Modules numbers are in parentheses. The items that have no specific reference to a module are additional suggested readings.

### Books

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