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LECTURE

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# WHAT ARE THE 7 BASIC TOOLS OF QUALITY?

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SIX SIGMA WHITE BELT

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# QUALITY







A woman with brown hair tied back, wearing tortoiseshell glasses, a white button-down shirt, and a dark grey blazer, is seated at a desk. She is looking down at a stack of papers in her hands. The background is a blurred brick wall. A white text box with a black border is overlaid on the right side of the image.

**IT WAS BELIEVED THAT  
MAINTAINING QUALITY IS  
THE JOB OF ONLY THE  
QUALITY ASSURANCE  
INSPECTORS**





**QUALITY IS EVERYONE'S JOB**

# **HOW TO ENSURE EVERY EMPLOYEE KNOWS EACH QUALITY IMPROVEMENT TOOLS?**



# IN THIS SECTION, YOU WILL LEARN

**WHAT ARE THE SEVEN BASIC TOOLS OF QUALITY?**

**BRIEF INTRODUCTION TO EACH TOOL**

**HISTORY OF THE SEVEN BASIC TOOLS OF QUALITY**





**Fishbone  
Diagram**



**Check  
Sheet**



**Control  
Chart**



**Histogram**



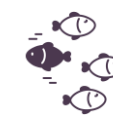
**Pareto  
Chart**



**Scatter  
Diagram**



**Stratification**



# **WHAT IS THE FOCUS OF THE SEVEN BASIC TOOLS OF QUALITY?**



## FOCUS OF 7 QC TOOLS

- IDENTIFY ROOT CAUSES
- COLLATE DATA
- STREAMLINE PROCESSES
- HAVE A POSITIVE IMPACT ON QUALITY



**ARE THE SEVEN BASIC TOOLS OF QUALITY  
GRAPHICAL OR STATISTICAL TOOLS?**





**THESE ARE GRAPHICAL TOOLS DESIGNED TO SOLVE QUALITY ISSUES AND PROVIDE QUICK FIXES TO BUSINESS PROBLEMS**

# **WHY ARE THESE CALLED THE “BASIC TOOLS?”**





**THESE ARE SIMPLE TOOLS AND DO NOT REQUIRE  
COMPLEX STATISTICAL UNDERSTANDING**

# WHAT ARE THESE SEVEN BASIC TOOLS OF QUALITY?







**Fishbone  
Diagram**



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**IS A VISUAL TOOL**

**HELPS IN ORGANIZING IDENTIFIED ROOT CAUSES INTO DIFFERENT CATEGORIES**



**Check  
Sheet**

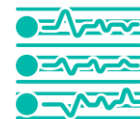


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**CHECK SHEETS ARE DATA COLLECTION FORMS  
DESIGNED TO COLLATE DATA IN SPECIFIC FORMAT  
HELPS IN MINIMIZING ERRORS DURING DATA COLLATION  
ALSO HELPS IN REDUCING THE TIME NEEDED TO SCRUBBING AND CLEANING THE DATA**



## Control Chart



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**CONTROL CHARTS ARE USED TO MONITOR THE PROCESS PERFORMANCE OVER A PERIOD**  
**COMPARE THE DATA WITH HISTORICAL RECORDS**  
**IDENTIFY IF THERE ARE ANY SPECIAL CAUSES PRESENT IN YOUR BUSINESS PROCESS**





## Histogram



**HISTOGRAM IS A FREQUENCY DISTRIBUTION DIAGRAM.**

**HELPS IDENTIFY IF YOUR DATA IS FOLLOWING A NORMAL DISTRIBUTION OR ANY OTHER DISTRIBUTION**



**Pareto  
Chart**



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**A PARETO CHART HELPS IDENTIFY THOSE 20% CAUSES THAT HAVE 80% EFFECTS  
IT IS A ROOT CAUSE ANALYSIS TOOL**



## Scatter Diagram



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**A SCATTER DIAGRAM HELPS UNDERSTAND THE IMPACT OF ONE OR MULTIPLE INDEPENDENT VARIABLES ON A DEPENDENT VARIABLE**

**IT HELPS DEFINE THE RELATIONSHIP OF THE VARIABLES IN DISCUSSION**





## Stratification



**STRATIFICATION IS USED TO SEGREGATE DATA BASED ON ITS SOURCES**

**IN SOME BOOKS OR CONTENT, STRATIFICATION IS REPLACED BY FLOWCHARTS OR RUN CHARTS**

# **WHAT IS THE HISTORY OF THE SEVEN BASIC TOOLS OF QUALITY?**

# HISTORY OF THE SEVEN BASIC TOOLS OF QUALITY

**DEVELOPED AFTER WORLD WAR II**

**KAORU ISHIKAWA INTRODUCED THESE TOOLS  
IN ONE PACKAGE AND THE BRAND NAME**

**INSPIRED BY THE SEVEN WEAPONS OF BENKEI**





# WHO IS BENKEI?

# WHO IS BENKEI?

**KNOWN AS THE WARRIOR MONK OF  
THE ANCIENT JAPANESE ERA**

**HE ARMED HIMSELF WITH SEVEN  
WEAPONS**

**HE CARRIED THESE WEAPONS ON HIS  
BACK WHEREVER HE WANDERED**

This picture was drawn by Kikuchi-Yosai (Japanese Painter)



# ***SMART GROWTH HACKS***



**DEDICATED TO YOUR CAREER SUCCESS**