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TOTAL QUALITY MANAGEMENT (TQM)

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COURSE DETAIL

Seminar Title : Total Quality Management (TQM)
Semester : lll
Code No. : SE531
Credit Hour : 2
Course Objective : This course aims to impart in graduates the basic conceptual knowledge about quality Management and its effects on overall business functions.

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SYLLABUS

Unit I: Introduction

Introduction to Total Quality Management
Understanding the concept of Total Quality Management
Development trends of TQM
TQM concepts by quality Gurus

Unit II: Tools for Quality Improvement

5's, Seven wastages, Seven quality control tools
Conceptual approach to SQC

Unit III: Quality Costs and Maintenance

Gravin Eight quality dimension
Key factors for TQM implementation
Key factors for TQM impact

Unit IV: TQM Implementation Issues

Unit V: System Standard

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PDCA Cycle

Plan: Establish the objectives and processes necessary to deliver result in accordance to customer's requirements and organizations policies.

Do: Implement the process.

Check: Monitor and measure process and product against policies, objectives and requirement for the product and report result.

Act: Take required actions to continually improve process performance.

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5 S

S.N	Japanese (5S)	English (5C)	Meaning
1	Seiri	Clear cut (organize)	Determine what is necessary and unnecessary and dispose of the unnecessary one.
2	Seition	Configuration (systematise)	Provide a convenient, safe and orderly place for everything and keeping it there.
3	Seiso	Clean and check	Monitor and restructure the condition of working areas during cleaning
4	Seiketsu	Conform (standardisation)	Set standard, train and maintain.
5	Shitsuke	Custom and Practice (Discipline)	Develop the habit of routine maintenance and strive for further improvement.

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5 S implementation

- Participation by all people
- The program requires top management commitment
- The CEO should take leadership of the program
- The program should be supported by all
- 5S program should be self sustaining
- The CEO should take a periodic organization tour in person
- The program should generate sufficient impact at the initial stage
- Implementation of 5S should so hand in hand with other QM program.

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Seven Waste

1. Stock	Stocking more than required	·Reduce Lead Time ·Improve skill of worker ·JIT productions
2. Waiting	Wait of job to be performed	·Balance and even loads to the equipments ·Flexible workers
3. Overproduction	Producing more than required	·Fair prediction of demand ·Reducing set up times. ·Use of small specialized production rather than large.
4. Transportation	Un-necessary material Dispatch & transport to location	·Efficient material handling system. ·Better location layout decision.
5. Processing	All parts are processed at a time for production	·Put into process what is required only. ·Suitable technology
6. Motion	Motion for productivity & quality consistency (Automating waste)	·Improve the motion and then apply automation ·Group Technology
7. Defective products	More defective outputs making	·Quality at source ·Technology improvement ·Skilled manpower

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5 Why??

´**Example: The problem is that client is unhappy. Using the 5 Whys, you go through the following steps to get to the cause of the problem:**

´**1. Why is our client unhappy? Because we didn't deliver our services when we said we would.**

´**2. Why were we unable to meet the agreed-upon timeline or schedule for delivery? The job took much longer than we thought it would.**

´**3. Why did it take so much longer? Because we underestimated the complexity of the job.**

´**4. Why did we underestimate the complexity of the job? Because we made a quick estimate of the time needed to complete it, and didn't list the individual stages needed to complete the project.**

´**5. Why didn't we do this? Because we were running behind on other projects. We clearly need to review our time estimation and specification procedures.**

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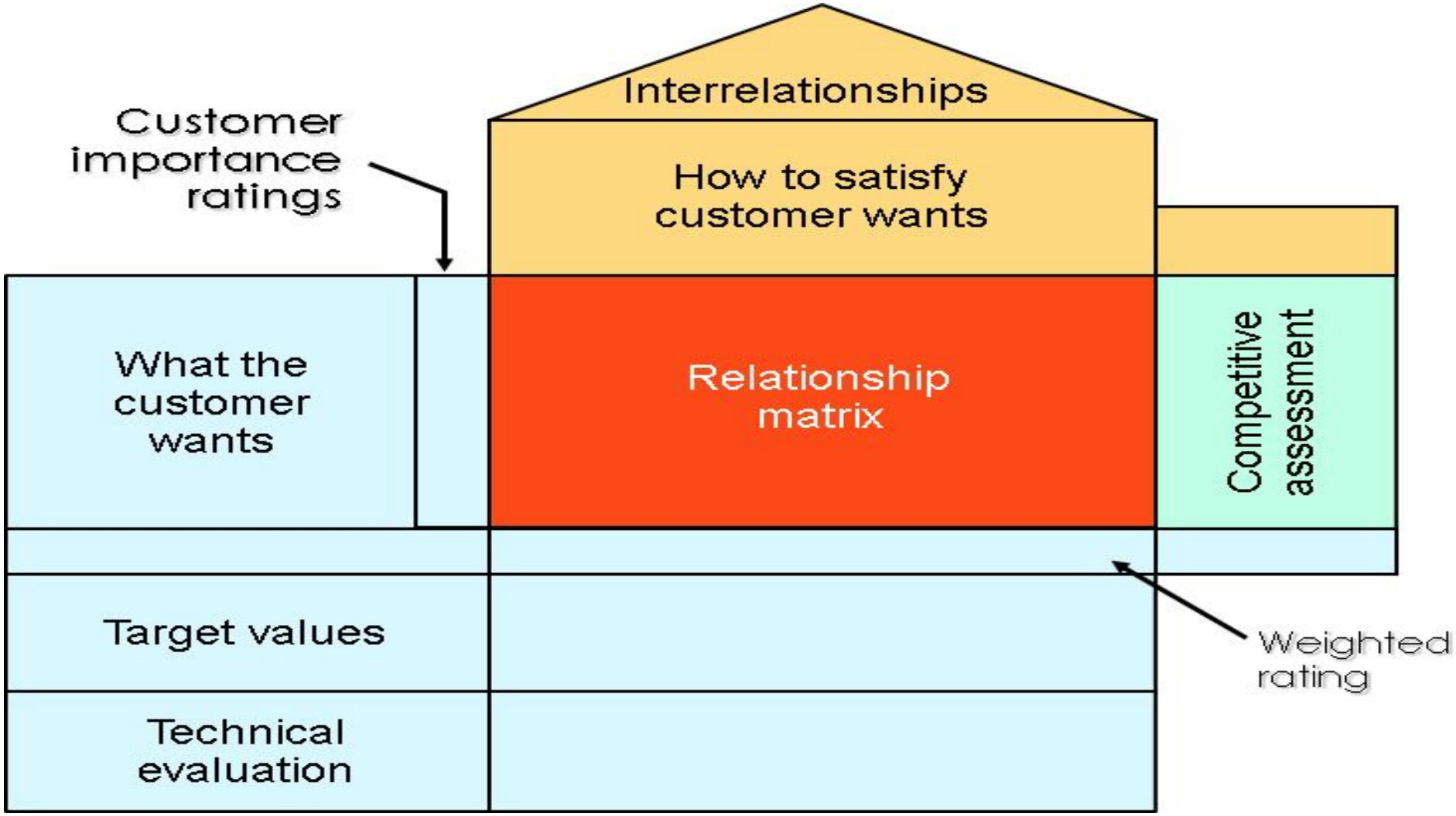
House of Quality



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Why some organization fails??

- Failing to consider customer wants and needs
- Failing to establish good internal communications
- Too much emphasis on short-term financial performance
- Failing to take advantage of strengths and opportunities
- Neglecting operations strategy
- Failing to recognize competitive threats
- Too much emphasis in product and service design and not enough on improvement
- Neglecting investments in capital and human resources

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Seven Basic Tools

Cause-and-effect diagram (also called Ishikawa or fishbone diagrams): Identifies many possible causes for an effect or problem and sorts ideas into useful categories.

Check sheet: A structured, prepared form for collecting and analyzing data; a generic tool that can be adapted for a wide variety of purposes.

Control chart: Graph used to study how a process changes over time. Comparing current data to historical control limits leads to conclusions about whether the process variation is consistent (in control) or is unpredictable (out of control, affected by special causes of variation).

Histogram: The most commonly used graph for showing frequency distributions, or how often each different value in a set of data occurs.

Pareto chart: A bar graph that shows which factors are more significant.

Scatter diagram: Graphs pairs of numerical data, one variable on each axis, to look for a relationship.

Stratification: A technique that separates data gathered from a variety of sources so that patterns can be seen (some lists replace stratification with flowchart or run chart).

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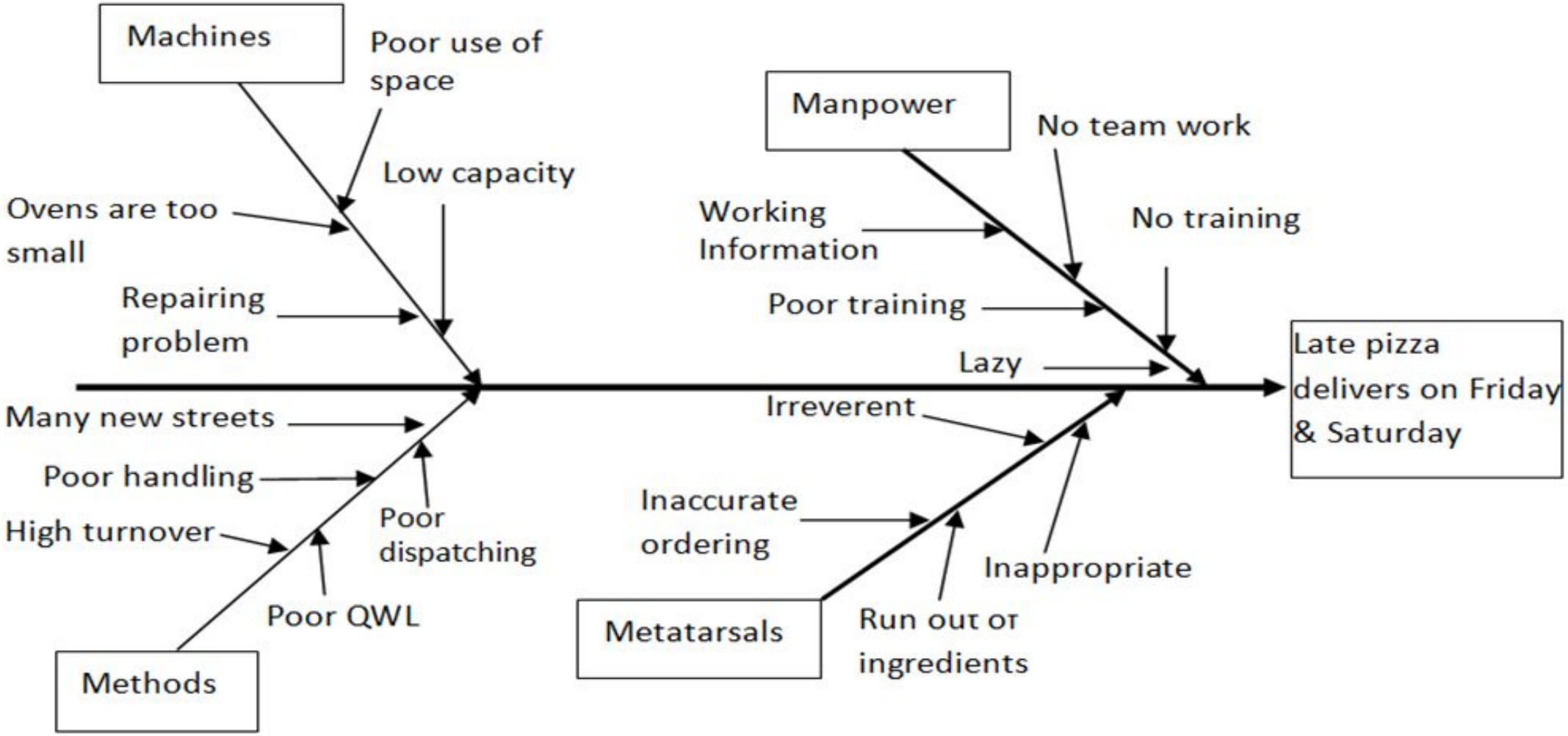
Cause Effect Diagram



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Check Sheet

COMPLAINT TYPE	TALLY	TOTAL
QUALITY	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII	39
PACKAGING	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II	47
INFESTATION	𝍸 𝍸 I 𝍸 𝍸	21
FOREIGN MATERIAL	𝍸 𝍸 𝍸 IIII	19
OTHER	𝍸 I 𝍸	11

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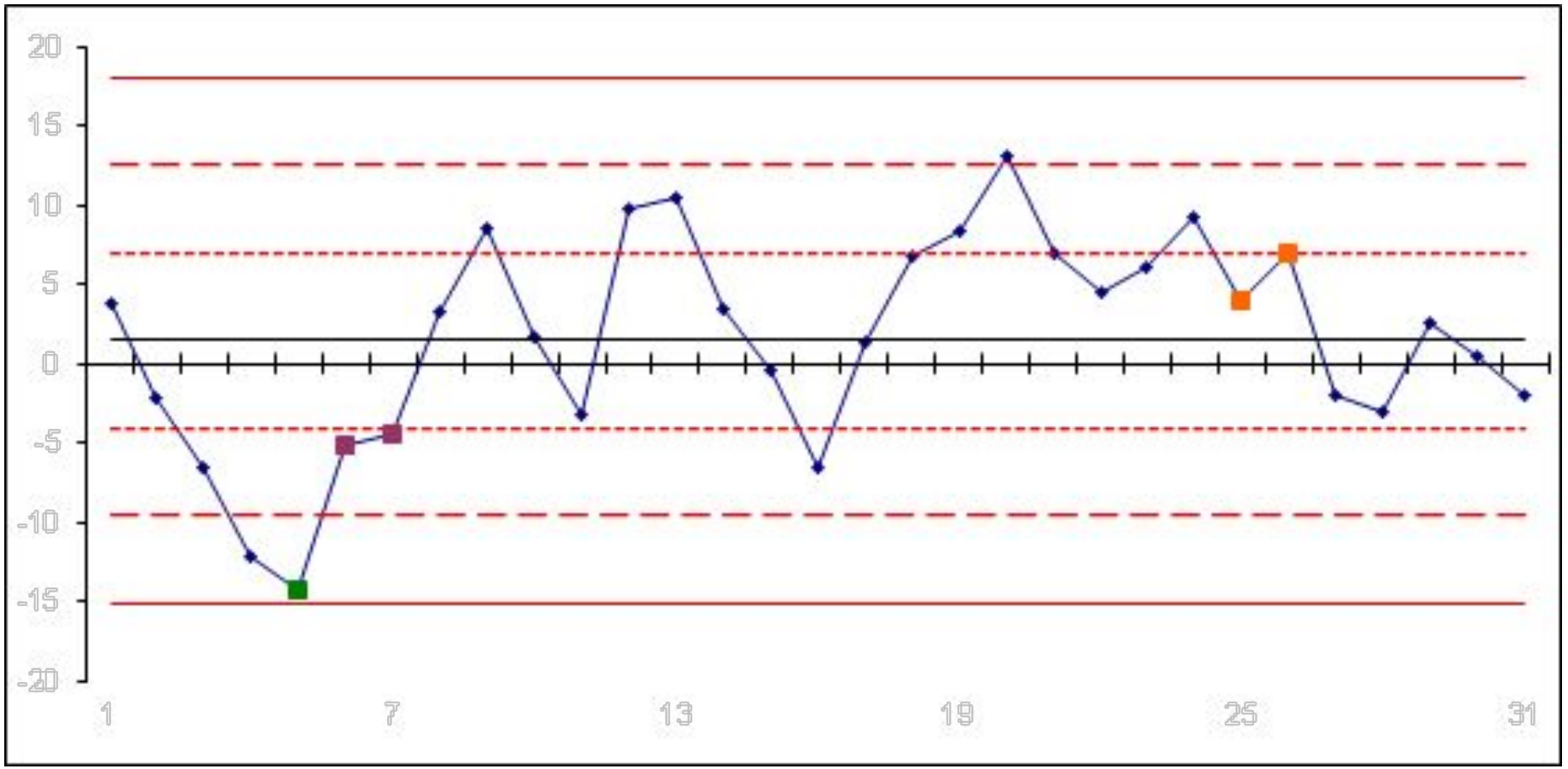
Control Chart



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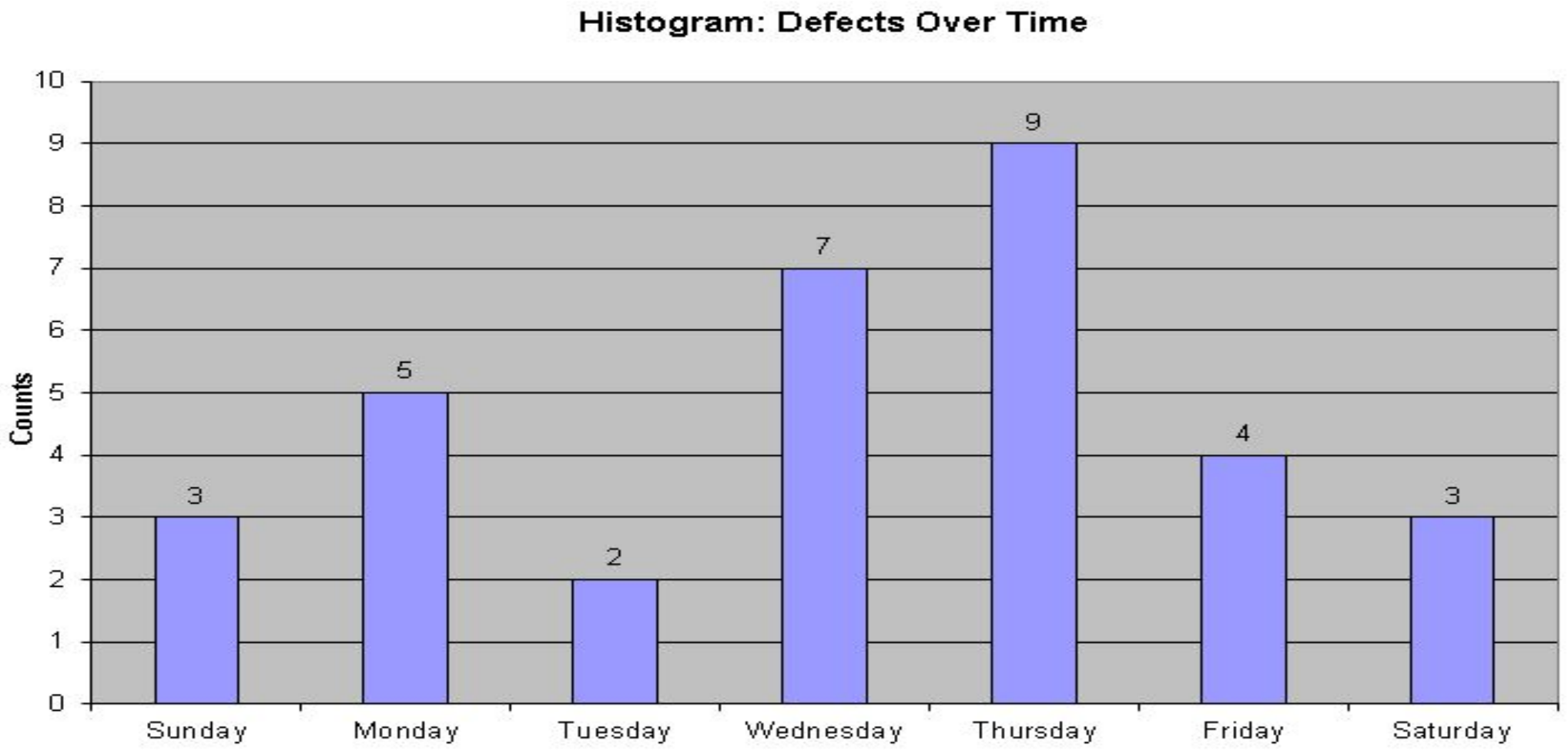
Histogram



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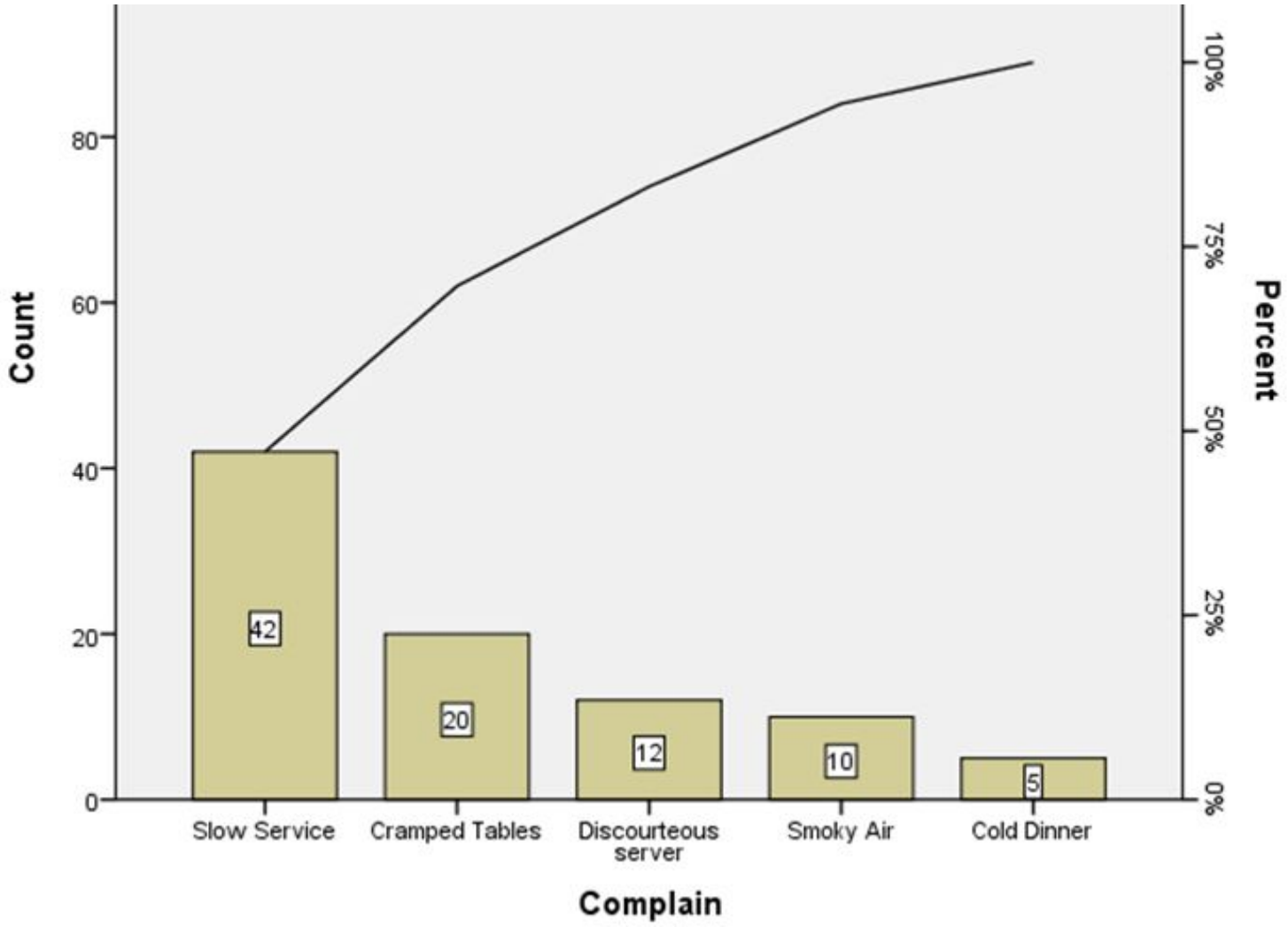
Pareto Chart

Complaint	Frequency
Discourteous server	12
Slow service	42
Cold dinner	5
Cramped tables	20
Smoky air	10



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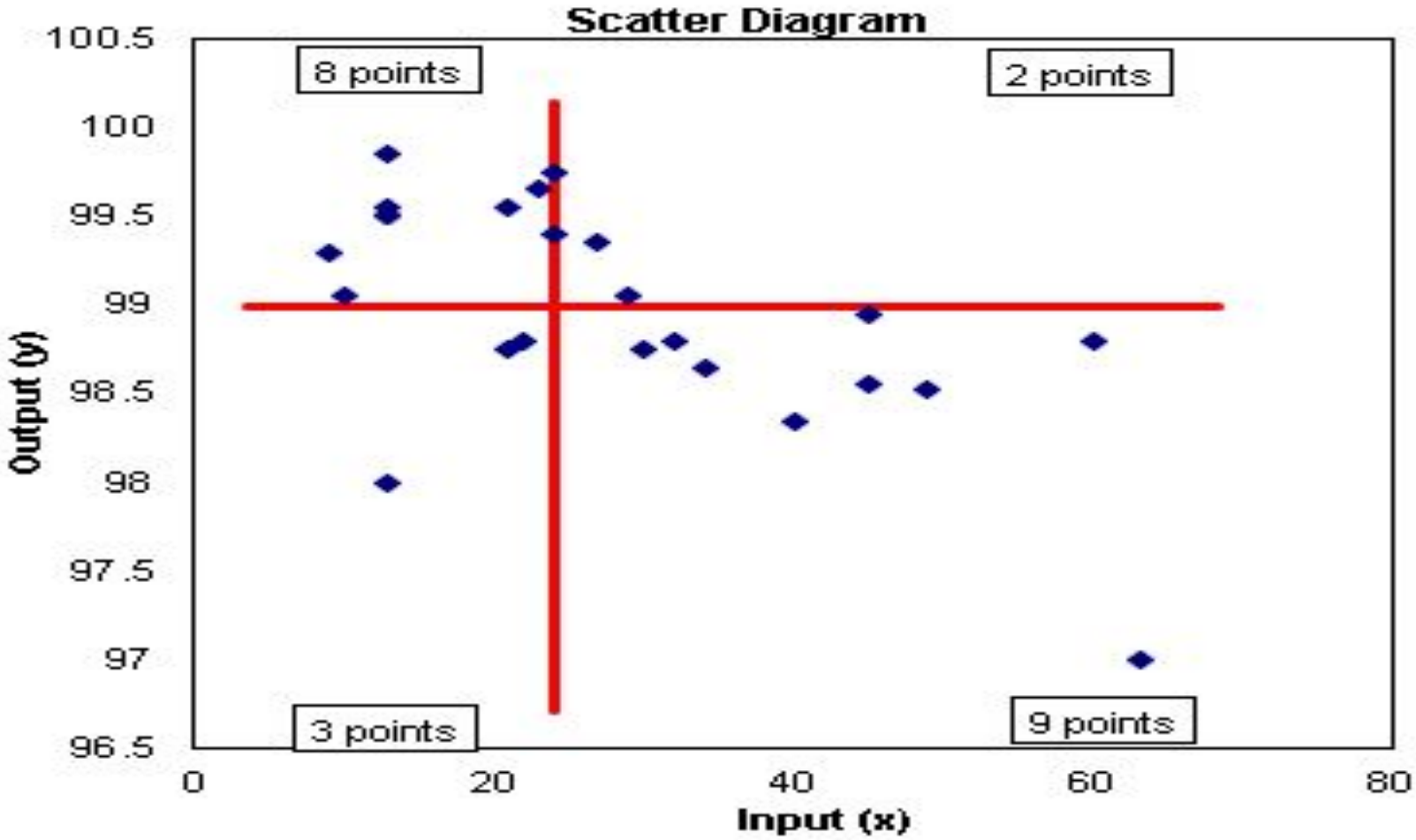
Scatter Diagram



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Stratification