UCI Extension
Continuing Education

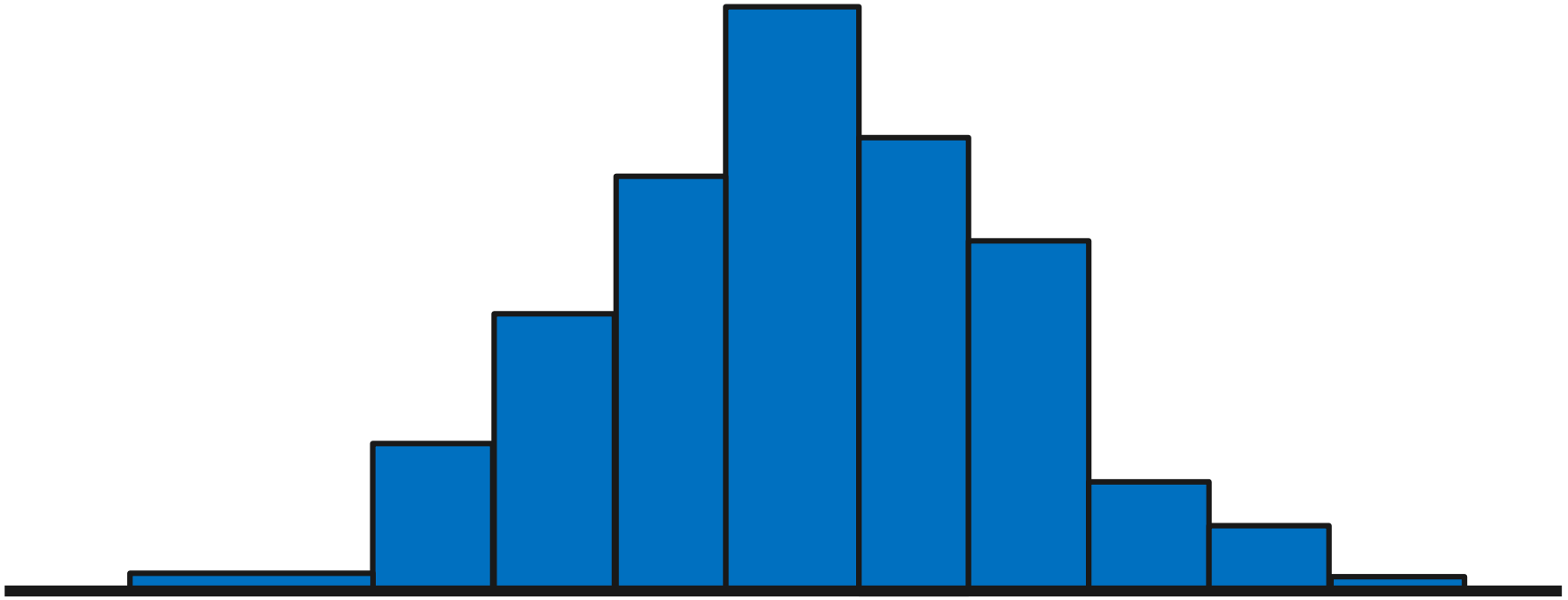
# Practical Management for Career Readiness

# Effective Problem Solving and Decision Making

## Module 2

with Rob Stone, M.Ed., PMP

# Histogram



# Histogram

A graphical display where the data is grouped into ranges and each bar is plotted as a range of data

# Histogram

Shows us information as it actually exists

Allows us to make decisions based on evaluation of available information

Helps us examine what is going on

A histogram displays:

**Shape**

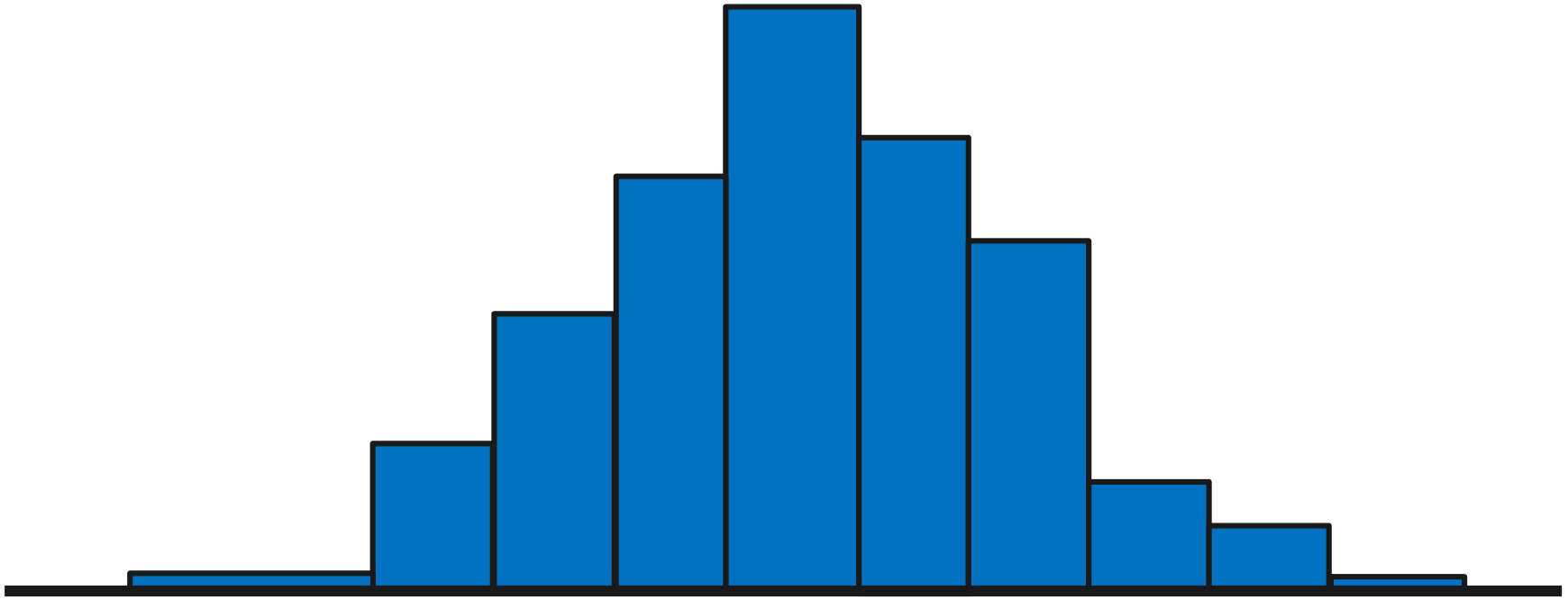
**Central Tendency**

**Dispersion**

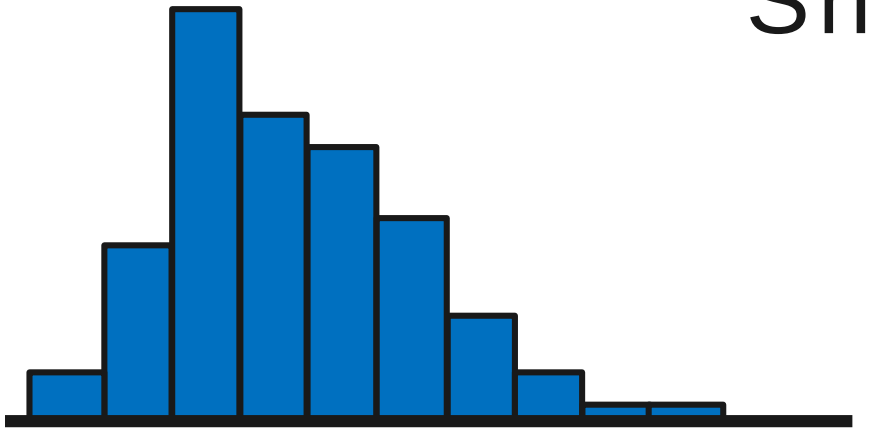
# Shape

The frequency in which the data occurs in each class interval will determine the shape of the histogram

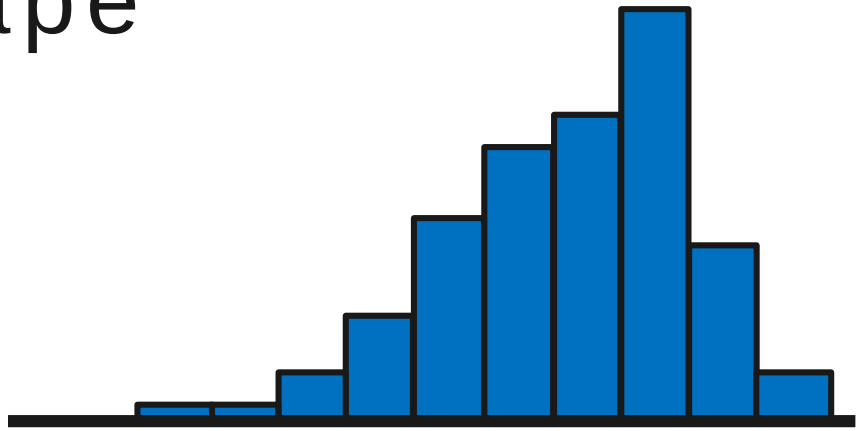
# Histogram



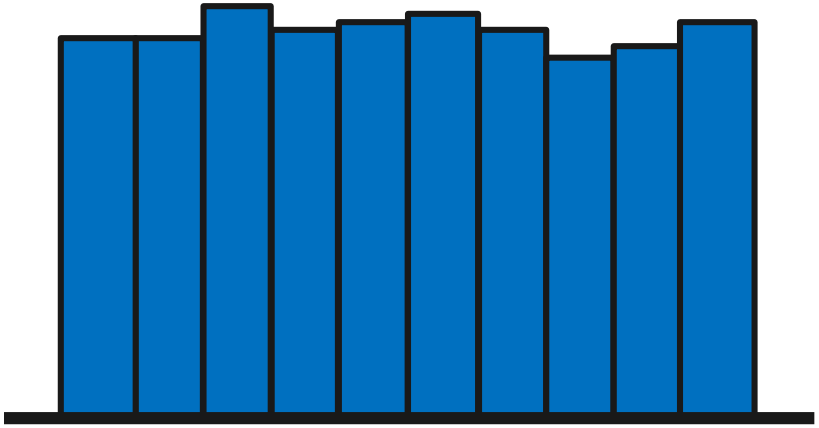
# Shape



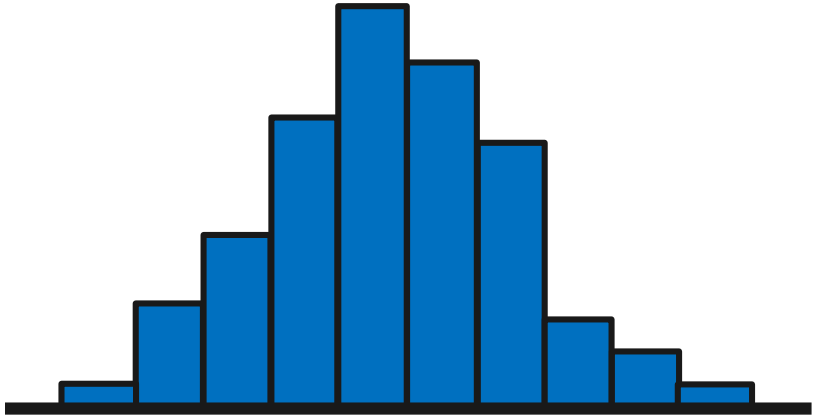
**Skewed Right**



**Skewed Left**

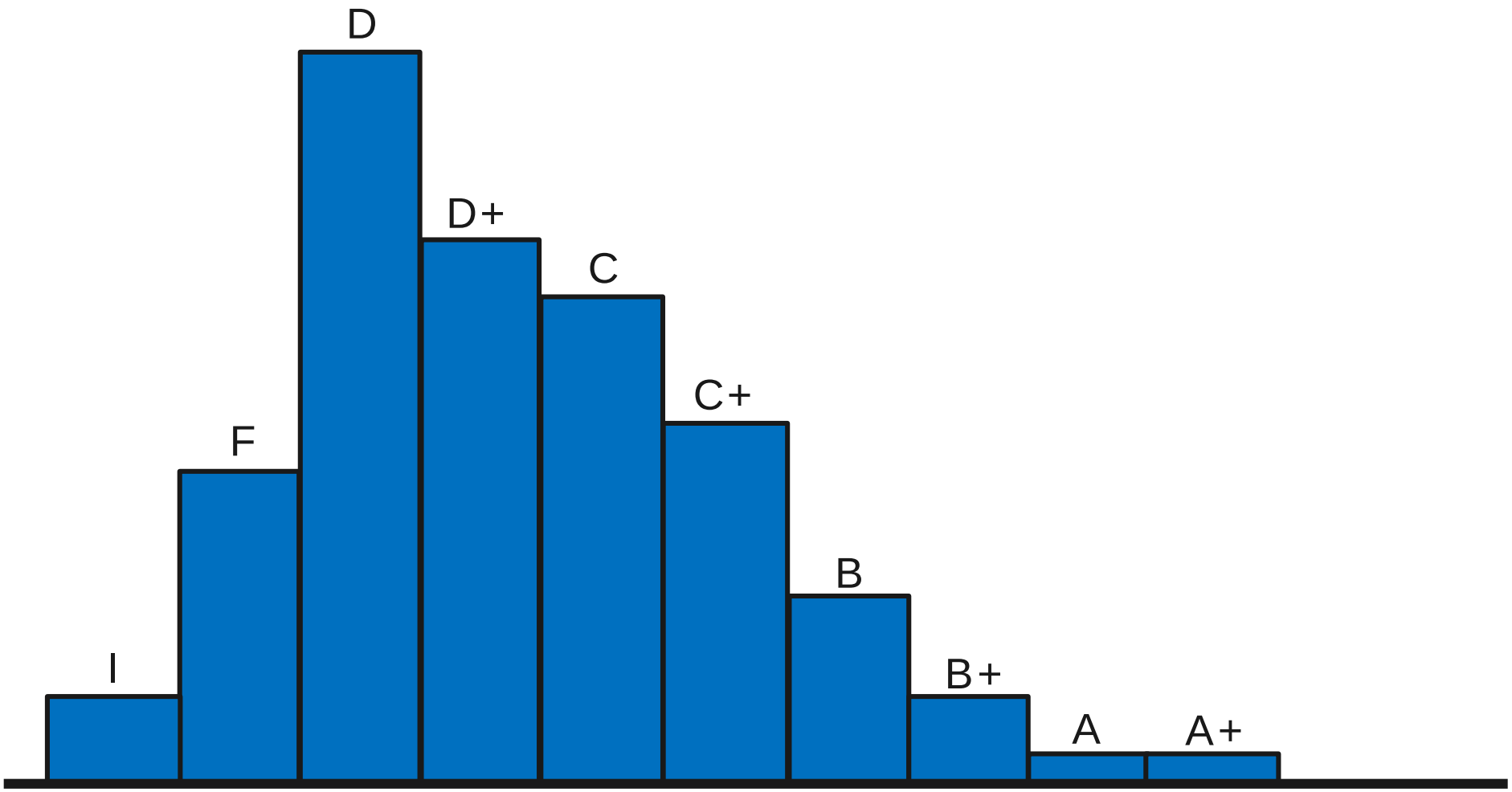


**Uniform**

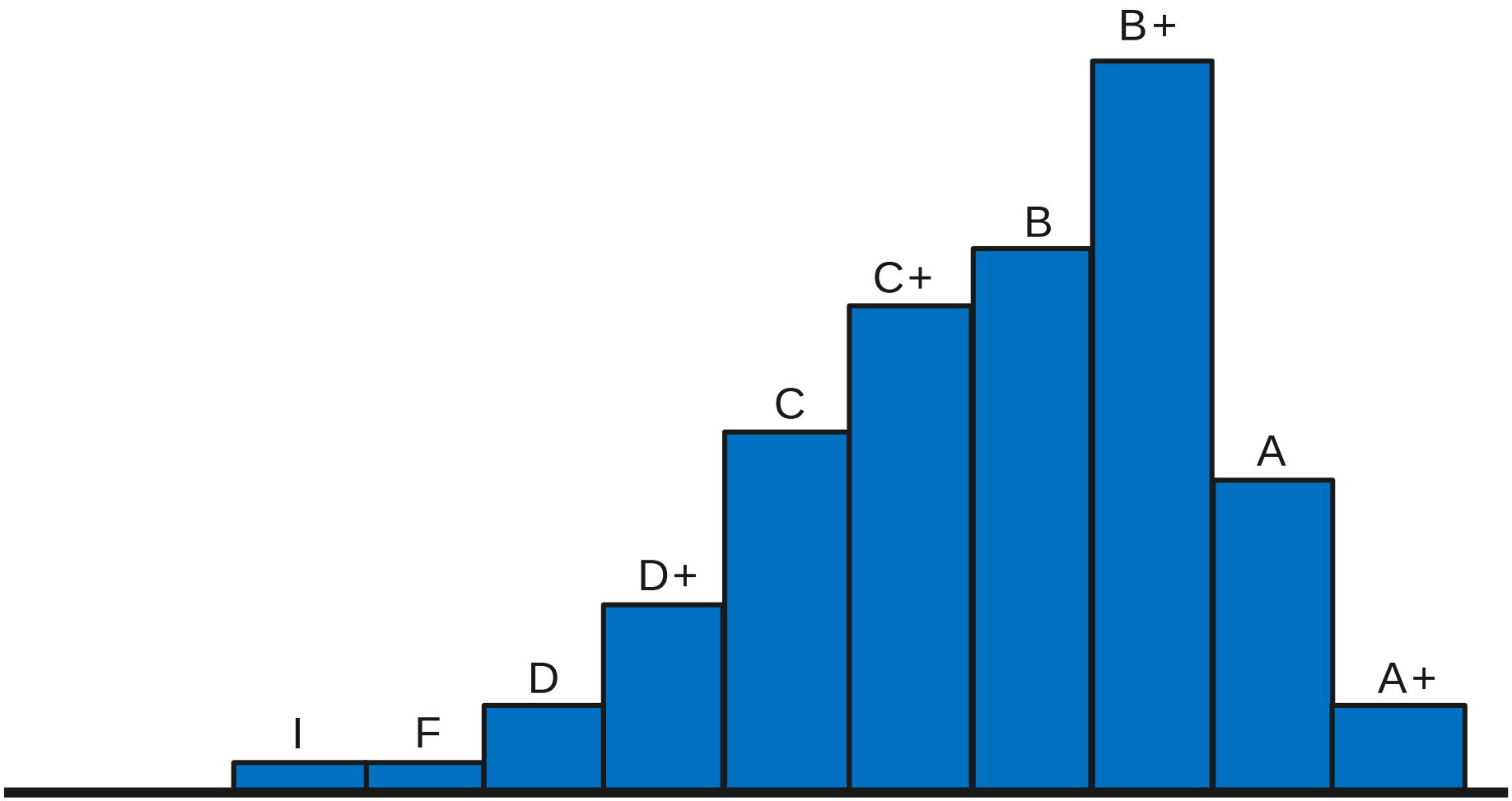


**Bell Shaped**

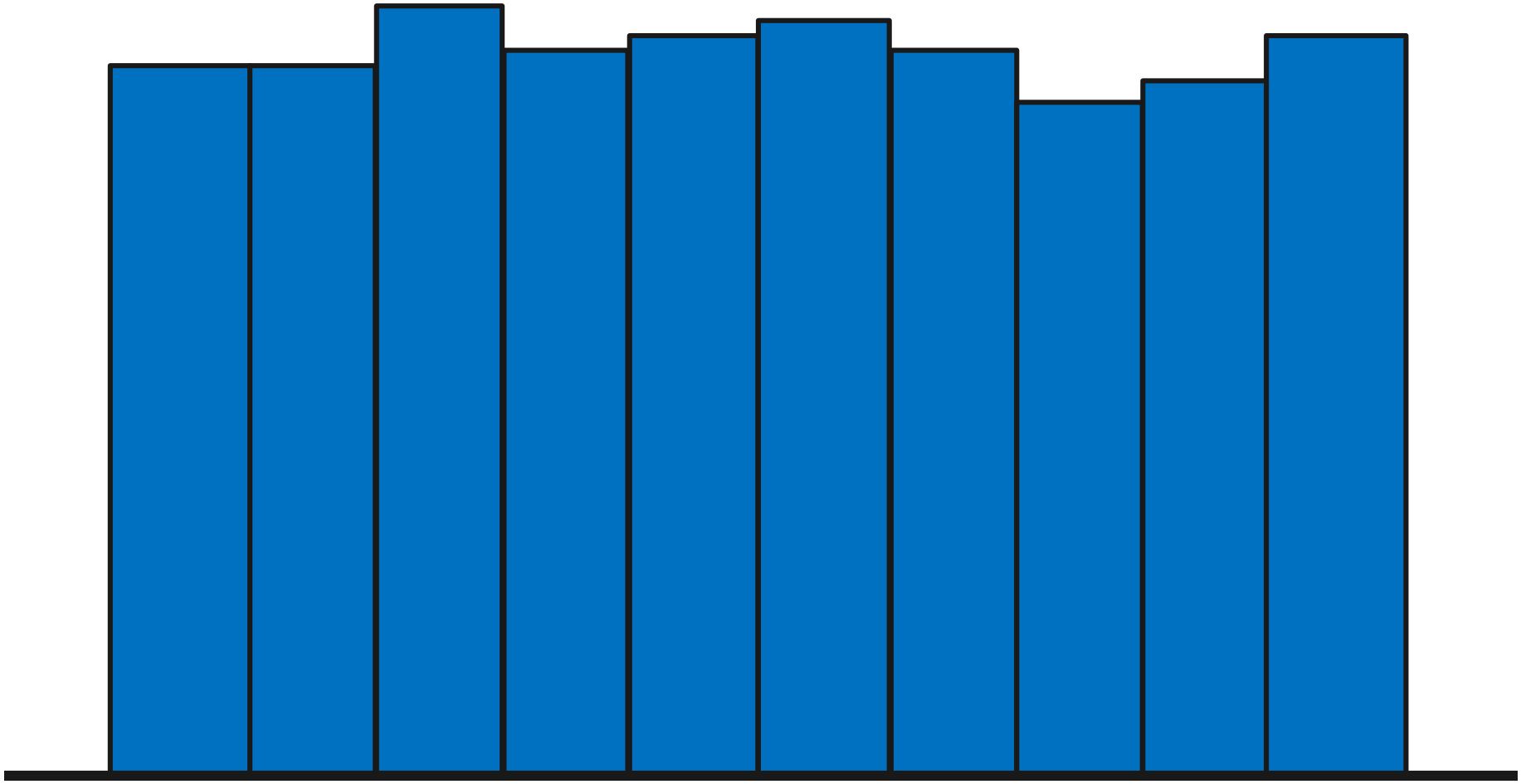
# Shape: Skewed Right



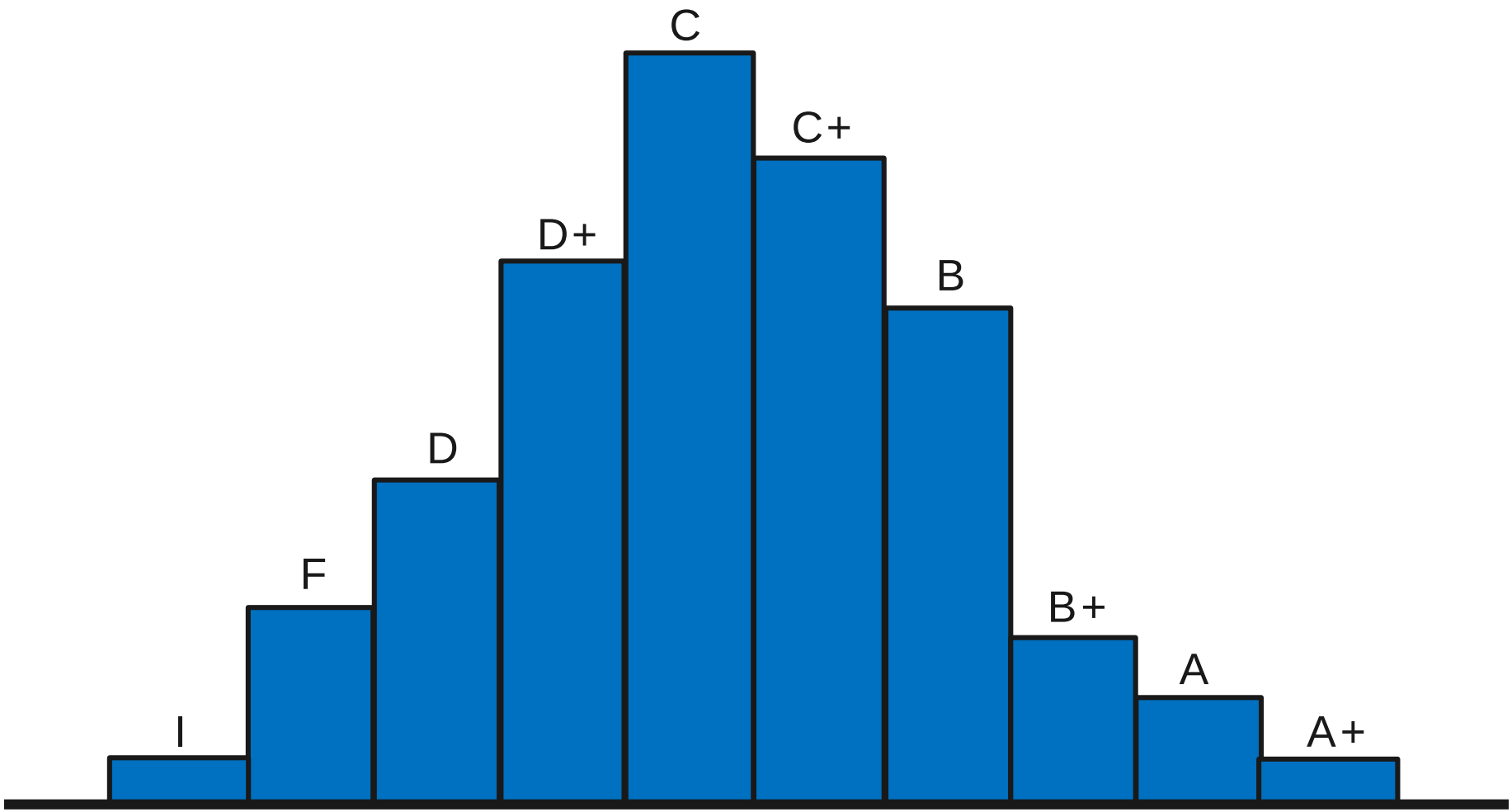
# Shape: Skewed Left



# Shape: Uniform

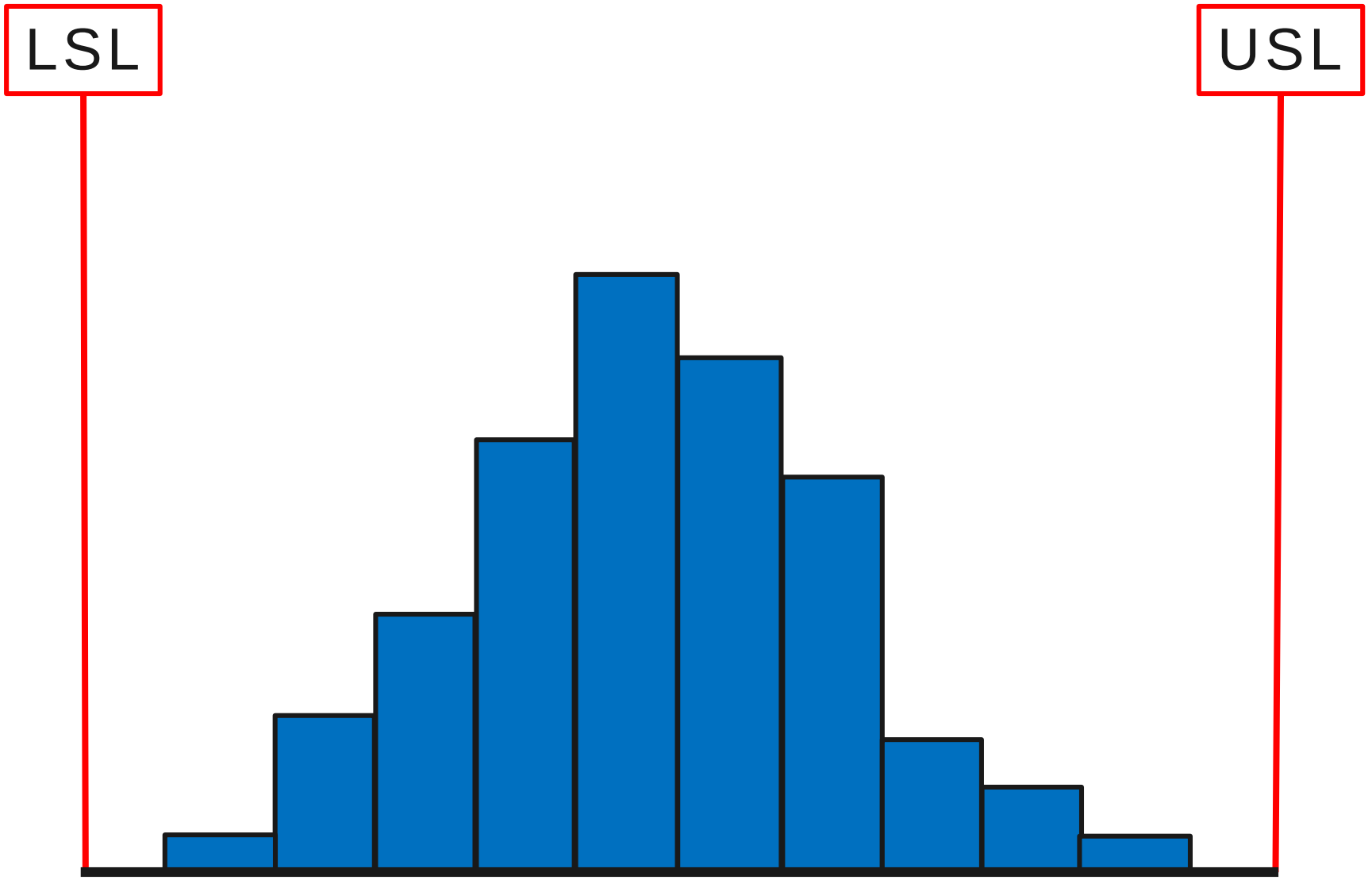


# Shape: Typical Bell Curve

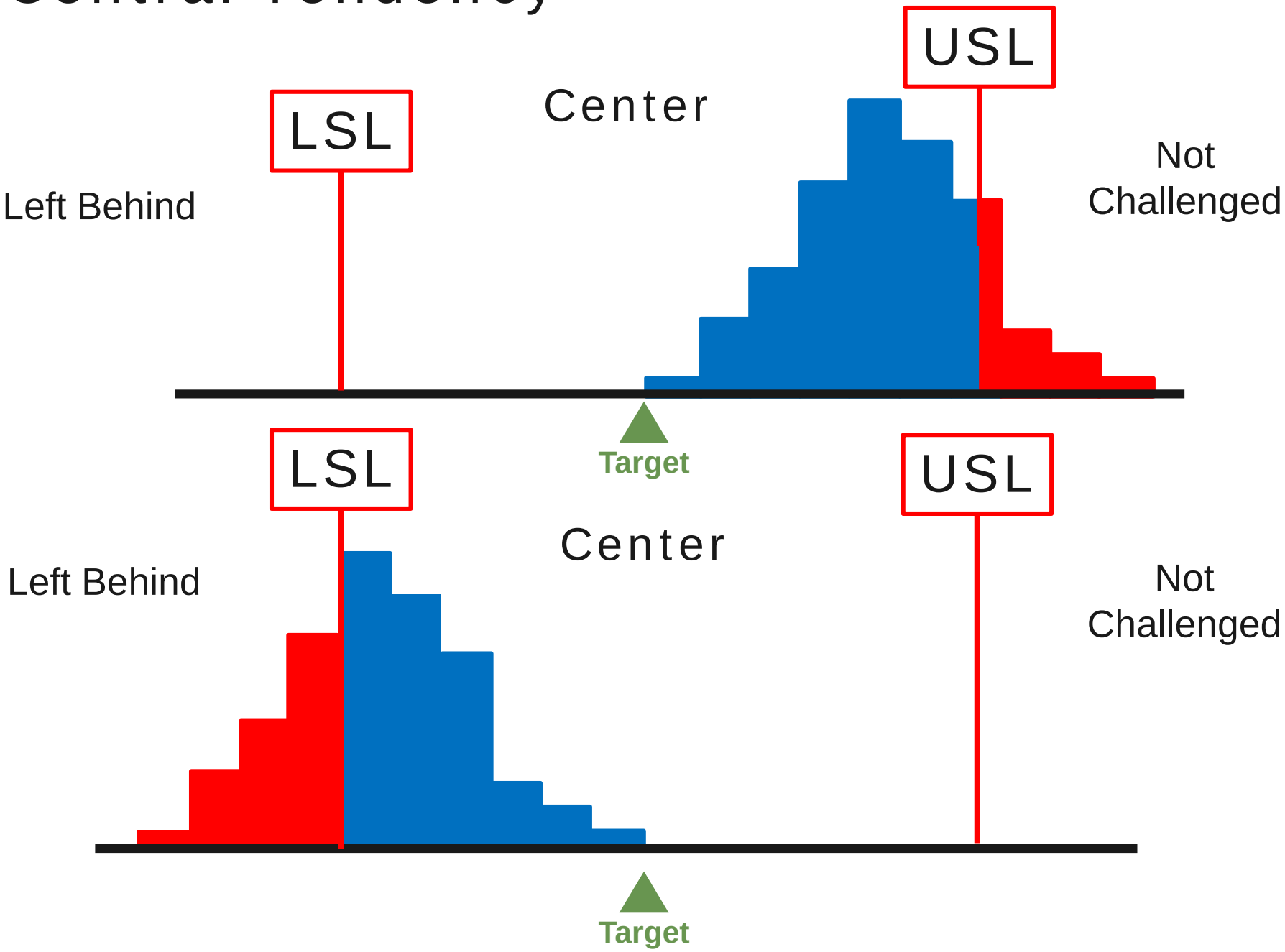


# Central Tendency

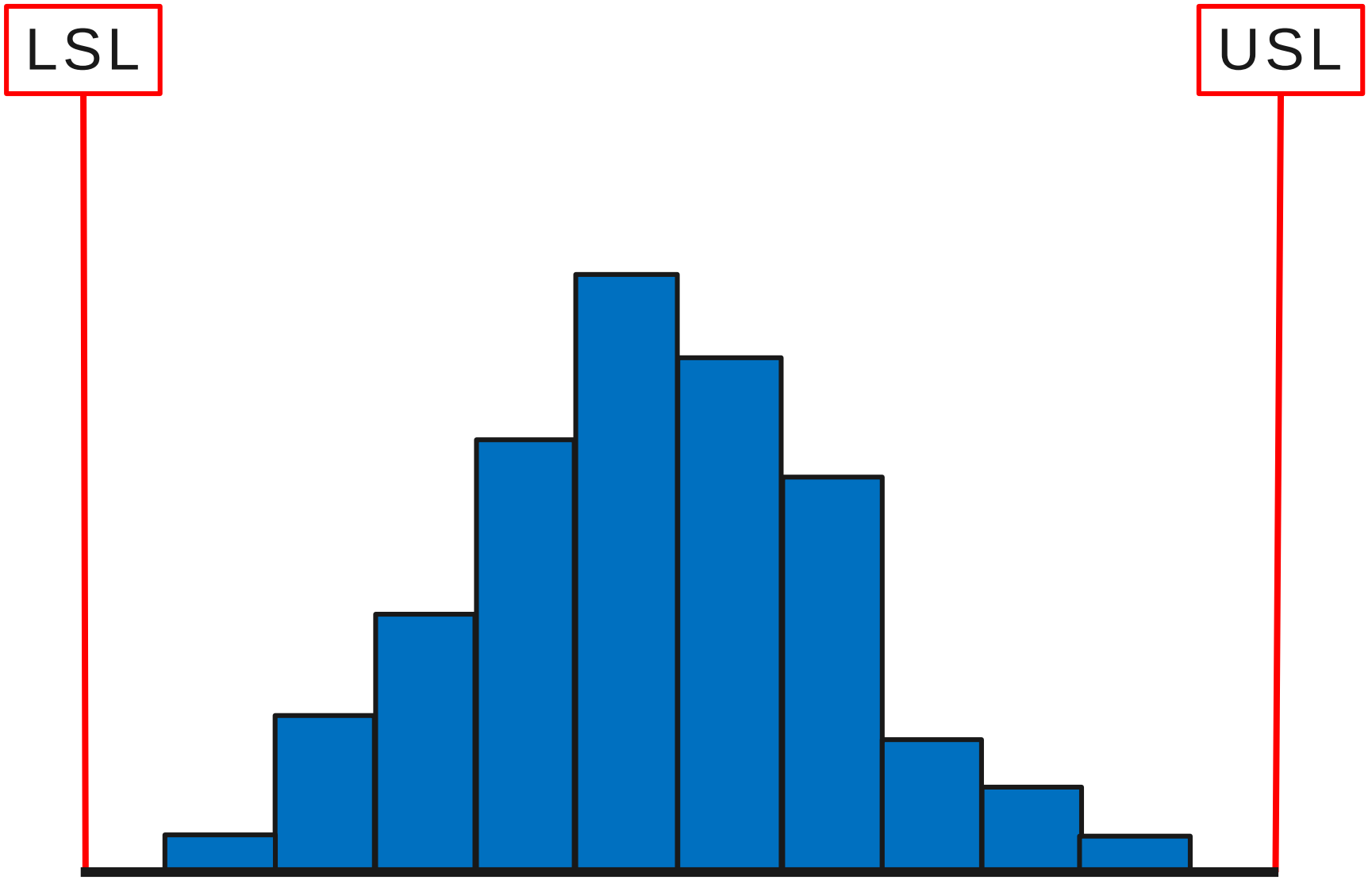
**Lower and Upper Specification Limits**



# Central Tendency



# Central Tendency: Normal Curve



# Central Tendency

Shows us how the data tend to cluster around a particular value

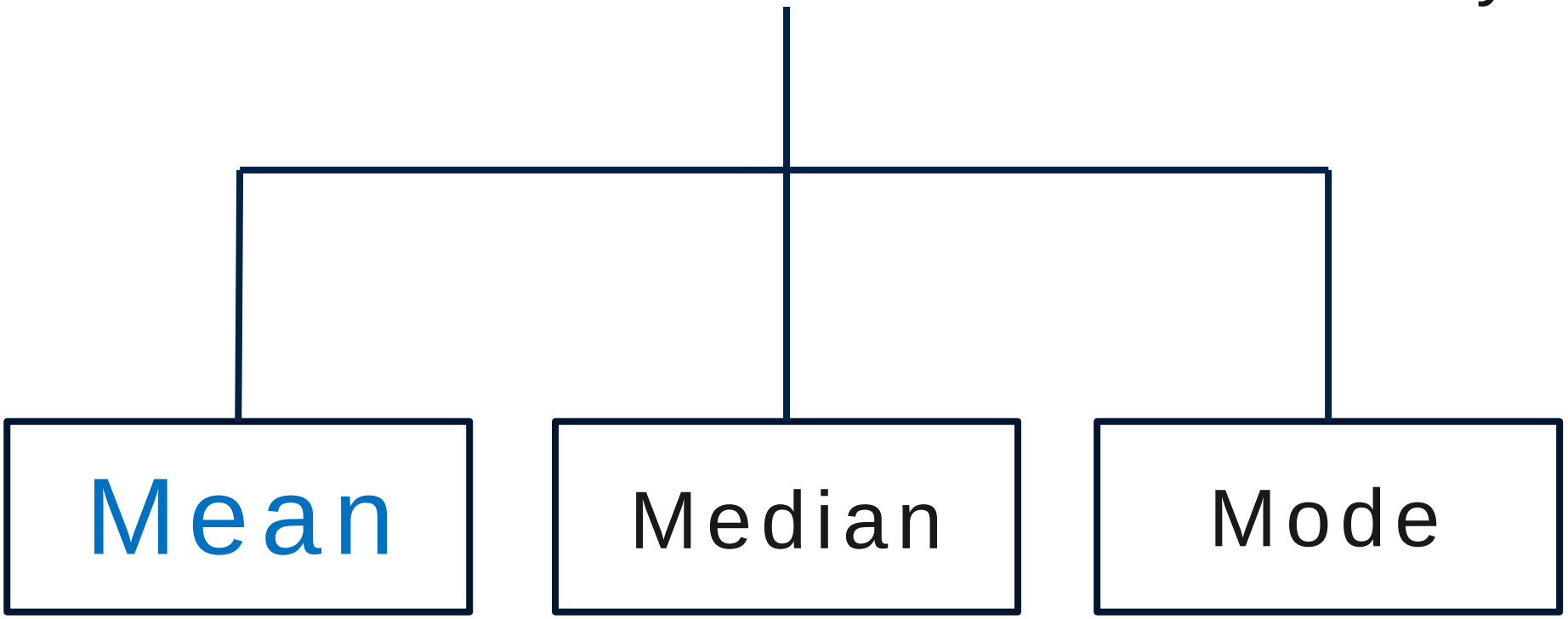
# Three Measures of Central Tendency

Mean

Median

Mode

# Three Measures of Central Tendency




$$\text{Mean} = \frac{\text{Sum of all the measurements}}{\text{Total number of measurements}}$$

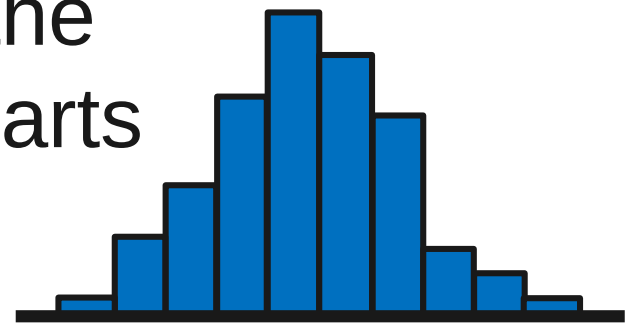
# Three Measures of Central Tendency

Mean

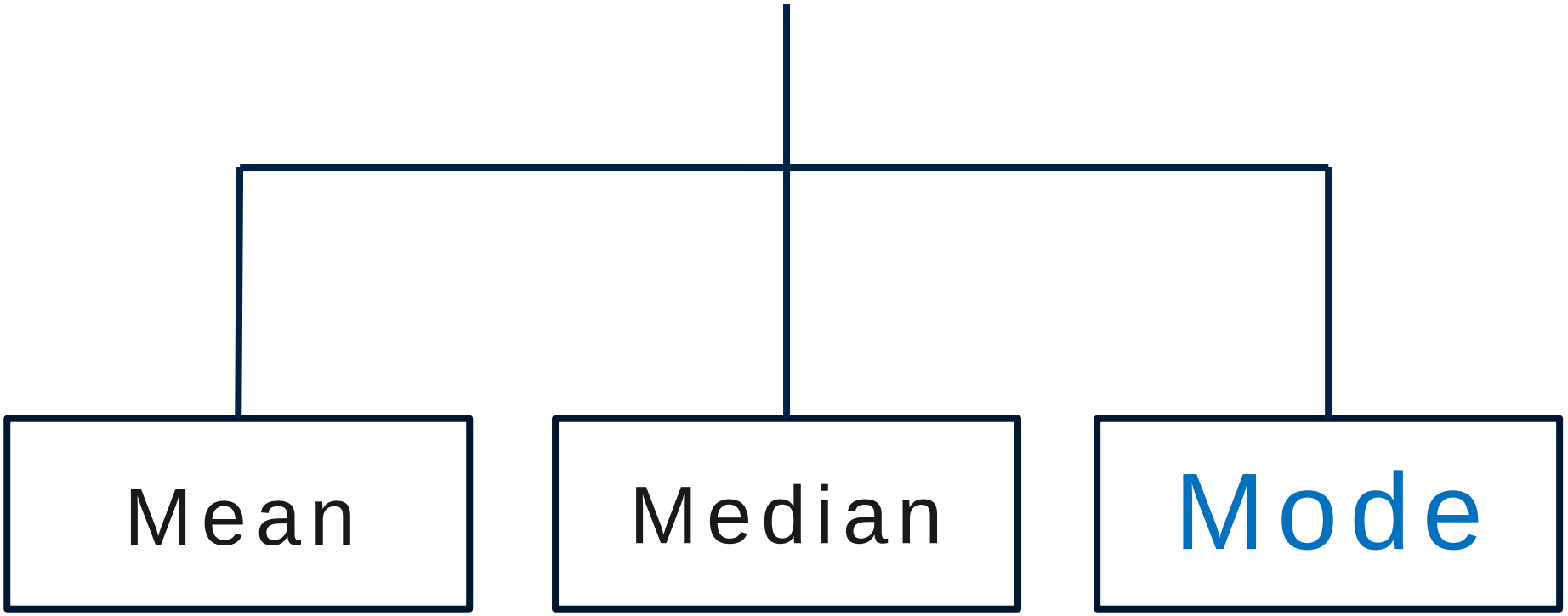
Median

Mode

The median divides the data into two equal parts



# Three Measures of Central Tendency

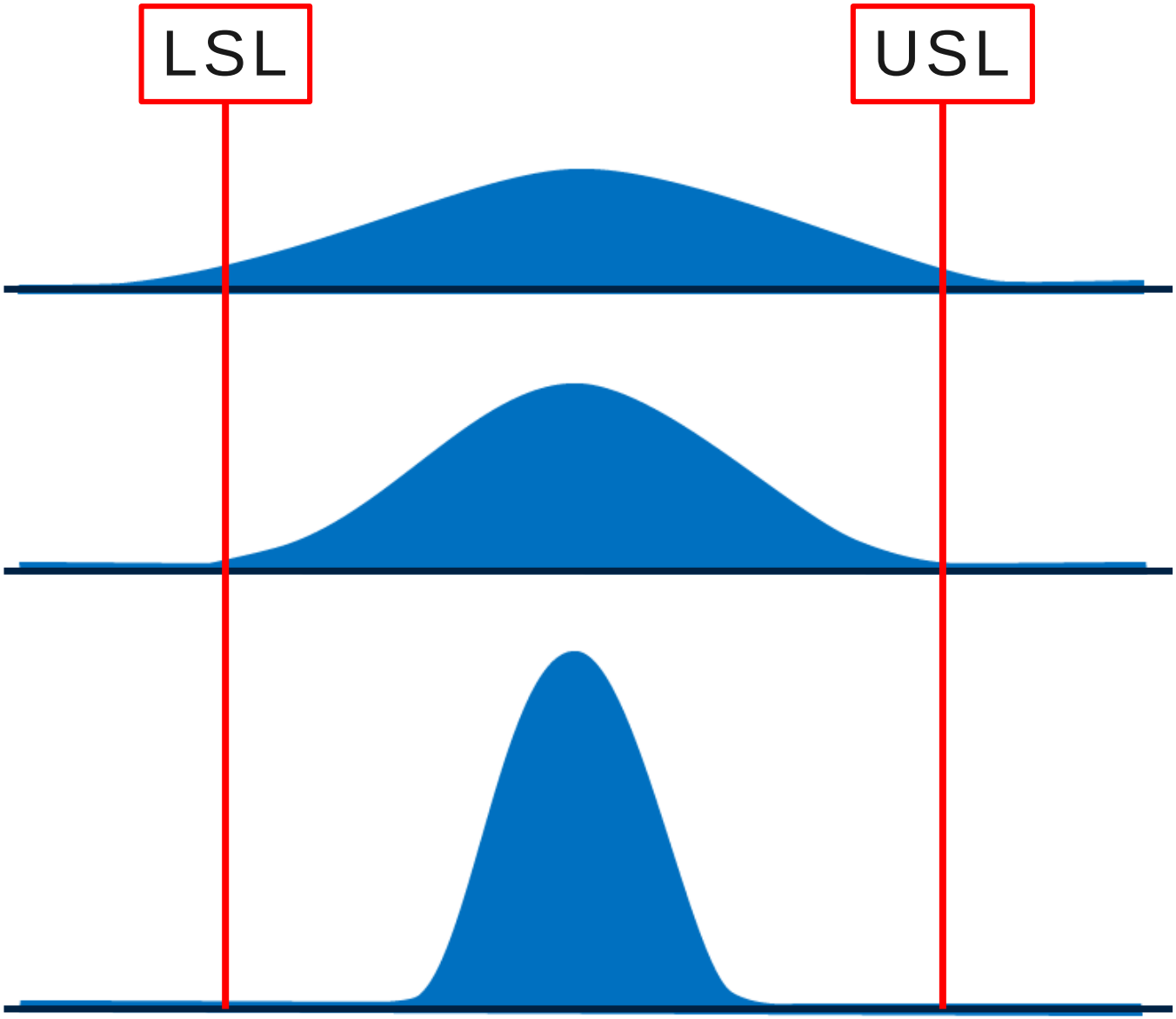



The value with the highest frequency

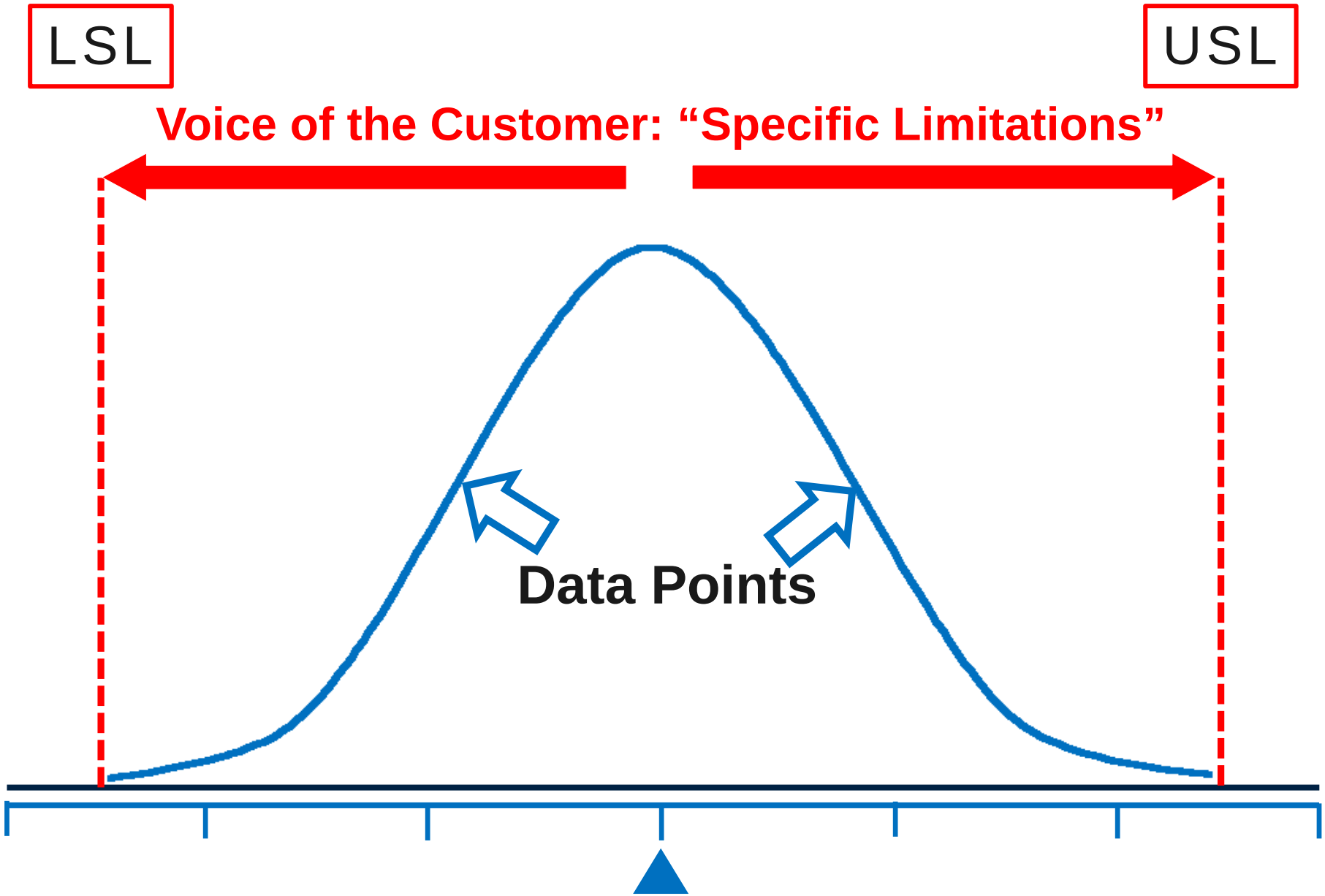
Easiest to identify

The least useful measure

# Dispersion



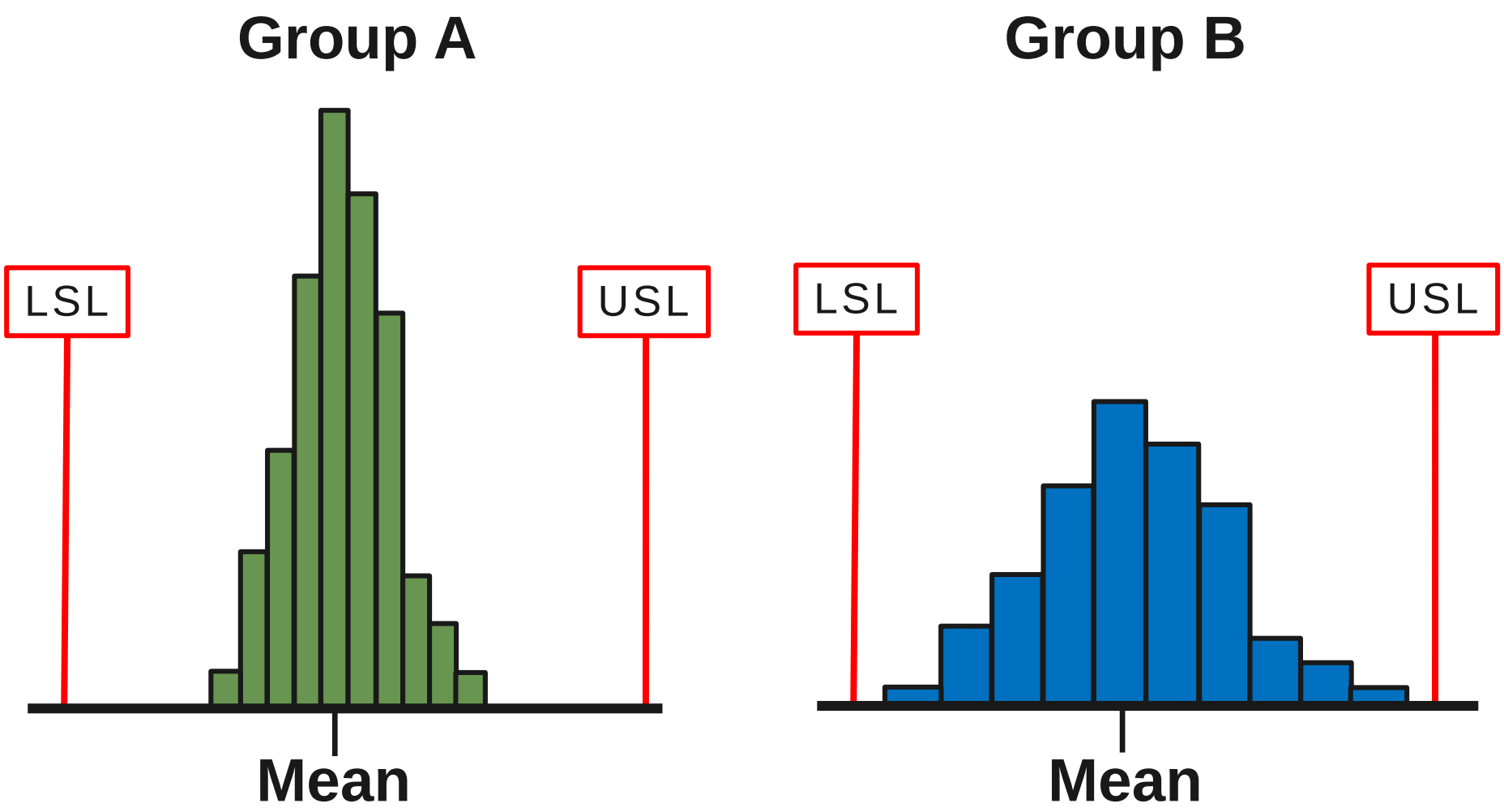
# Voice of the Process Data



# Dispersion: Standard Deviation

A typical distance from the mean

# Dispersion



# Value of Histograms

The three measures of

- Shape
- Central tendency
- Dispersion

… can help us make decisions and take effective actions.

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