Quality Analytics Using Minitab

with Richard Chua



Resources

Further Learning

Chapter 1

Create Attribute Agreement Analysis Worksheet in Minitab

If you'd like a quick tutorial on **attribute agreement analysis**, I recommend the video <u>"Measurement System Analysis (MSA)"</u> in the LinkedIn Learning course <u>Six Sigma: Green Belt</u>.

Attribute Agreement Analysis Using Minitab

If you're new to attribute agreement analysis or you need a refresher on the topic, watch the video <u>"Measurement Systems Evaluation"</u> in the course <u>Quality Management for</u> <u>Operational Excellence</u>.

Chapter 2

SPC Variable Charts for Individuals

If you're new to SPC or you'd like a refresher, check out the video <u>"Statistical Process</u> <u>Control (SPC)"</u> in the course <u>Quality Management for Operational Excellence</u>.

SPC Variable Charts for Subgroups

If you're new to SPC variable charts, or if you need a refresher, I recommend the video <u>"SPC Charts for Variables"</u> in the <u>Six Sigma: Green Belt</u> course.

Chapter 3

Normal Process Capability Using Minitab

Want more explanation? Watch the <u>"Process Capability"</u> video in the course <u>Quality Management</u> for Operational Excellence.

Capability Analysis between and within Subgroups

If you are new to this topic or need a refresher, I recommend watching the <u>"Statistical Process</u> <u>Control Charts"</u> video in the <u>Six Sigma: Green Belt</u> course and the <u>"Process Control vs. Process</u> <u>Capability"</u> video in the <u>Quality Management for Operational Excellence</u> course.

Chapter 5

Design of Experiments: Analyze Screening Design

If you want or need a refresher on fractional factorial designs, I recommend watching the video "Two-Level Fractional Factorial Experiments" in the Six Sigma: Black Belt course.

Design of Experiments: Create Factorial Design and Design of Experiments: Analyze Factorial Design

For more information on full-factorial experiments, watch the video <u>"Full-Factorial Experiments"</u> in the <u>Six Sigma: Black Belt</u> course.

Design of Experiments: Create Response Surface Design
For a good introduction to response surface methods, watch the first half of the video

"Response Surface Methods" in the Six Sigma: Black Belt course.

A good website for **definitions of quality concepts and quality tools** is the American Society for Quality site at <u>ASQ.org</u>.

If you want more details and explanations on **Minitab commands and outputs**, an excellent resource is the Minitab site at support.minitab.com.

Data Sources

Thanks to the National Institute of Standards and Technology (NIST) for making the following example data available:

- Data for the Reactor example originally came from page 379 of Box, Hunter, and Hunter's "Statistics for Experimenters" (1978).
- https://www.itl.nist.gov/div898/education/datasets.htm#dex
- https://www.itl.nist.gov/div898/education/dex/boxreac2.dat
- https://www.itl.nist.gov/div898/education/datasets.htm#dex
- https://www.itl.nist.gov/div898/education/dex/boxsprin.dat