

Strategic Quality Management: "Using the Baldrige Model to sustain the teachings of the gurus"

MN ASQ

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Part 1: Gurus, Bedrock Principles, What We Have Learned

Part 2: Getting onto the field, practicing, applying Assertions Tool

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Builds on Confucius principle

- I hear and I forget
- I see and I remember
- I do and I understand



Confucius, 551-479 BC

So what?

So we want to:

- Go beyond simply knowing to using and doing

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Part 1: Gurus, Bedrock Principles, What We Have Learned

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Guru:

- one who is regarded as having great knowledge, wisdom, and authority in a certain area, and who uses it to guide others (teacher, sensei).



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Hypothesis: How Gurus Worked

- How did our Quality gurus develop, validate and put into practice their bedrock principles?
- Gurus developed their premise AFTER they had tried and burnt their fingers and developed a rule of thumb, an art, and then a science
- School of hard knocks has a high tuition cost, and takes a lifetime.

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"Grounded theory method" -- describes developing the principle after watching and years of hypotheses testing...

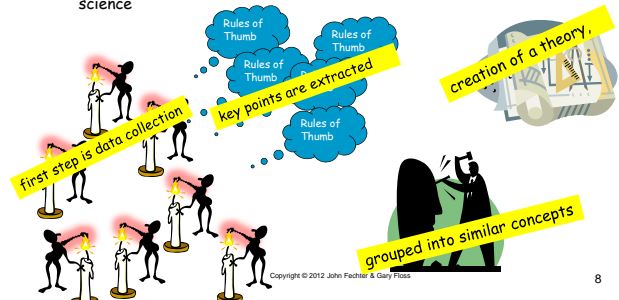
- Grounded theory method (GT) is a systematic methodology in the social sciences involving the discovery of theory through the analysis of data. It is mainly used in qualitative research, but is also applicable to quantitative data.
- Grounded theory method is a research method, which operates almost in a reverse fashion from traditional research and at first sight may appear to be in contradiction to the scientific method. Rather than beginning with a hypothesis, the first step is data collection, through a variety of methods. From the data collected, the key points are marked with a series of codes, which are extracted from the text. The codes are grouped into similar concepts in order to make them more workable. From these concepts, categories are formed, which are the basis for the creation of a theory, or a reverse engineered hypothesis. This contradicts the traditional model of research, where the researcher chooses a theoretical framework, and only then applies this model to the phenomenon to be studied

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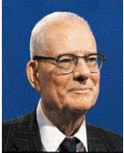






Hypothesis: How Gurus Worked

Gurus developed their premise AFTER they had tried and burnt their fingers and developed a rule of thumb, an art, and then a science



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 Phil Crosby 1926-2001	 Dr. W. Edwards Deming 1900-1993	 Dr. Armand Feigenbaum 1922-	 Dr. Kaoru Ishikawa 1915-1989
 Dr. Joseph M. Juran 1904-2008	 Dr. Walter A. Shewhart 1891-1967	 Dr. Genichi Taguchi 1924-	 Dr. Noriaki Kano 1940-

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Key Teachings from Gurus

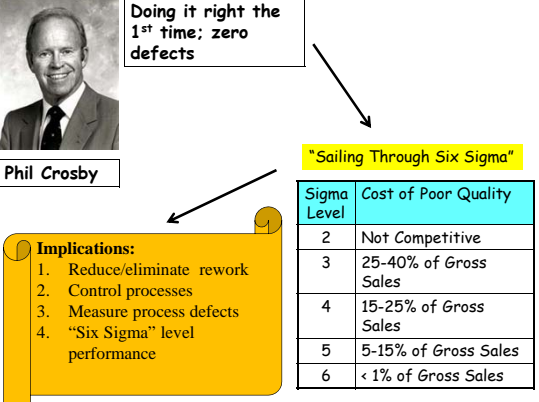
"Guru"	Some Elements Noted for:
1 Phil Crosby	Doing it right the 1 st time; zero defects; <i>Quality is Free</i>
2 W. Edwards Deming	Statistical methods; "red bead & funnel experiments"; Systems thinking; <i>Out of the Crisis</i>
3 Armand Feigenbaum	Total Quality Management (TQM); <i>Total Quality Control</i>
4 Kaoru Ishikawa	Ishikawa (fishbone) diagram; <i>What is Total Quality Control?</i>

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Key Teachings from Gurus

"Guru"	Some Elements Noted for:
5 Joseph M. Juran	Managing for Quality; Juran trilogy; applying Pareto Principle; <i>Quality Control Handbook</i>
6 Walter A. Shewhart	"father of SQC; 4-step PDCA cycle; <i>Economic Control of Quality of Manufactured Product</i>
7 Genichi Taguchi	Loss function; off-line QC - robust design; Design Of Experiments (DOE); <i>Quality Engineering Handbook</i>
8 Noriaki Kano	Kano Model (exciting quality); <i>Guide to TQM in Service Industries</i>

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Doing it right the 1st time; zero defects

Phil Crosby


"Sailing Through Six Sigma"

Sigma Level	Cost of Poor Quality
2	Not Competitive
3	25-40% of Gross Sales
4	15-25% of Gross Sales
5	5-15% of Gross Sales
6	< 1% of Gross Sales

Implications:

1. Reduce/eliminate rework
2. Control processes
3. Measure process defects
4. "Six Sigma" level performance

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Statistical methods; "red bead & funnel experiments"; Systems thinking

Dr. Deming

System of Profound Knowledge:


- Appreciation for a System
- Understanding of Variation
- Theory of Knowledge
- Psychology

Implications:

1. Describe work as a process; part of a system
2. Failure is an opportunity to learn
3. You must change; or not survive
4. You must cultivate good teams
5. People want pride & joy in work

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Total Quality Management (TQM)

Dr. Feigenbaum

Cost of Quality:


- Prevention Costs
- Appraisal Costs
- Failure Costs
 - Internal failure
 - External failure

Implications:

1. "hidden factory" to correct mistakes
2. Accountability for quality: everyone's job (may be nobody's job)
3. Concept of quality costs

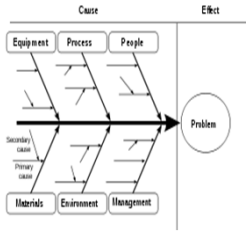
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Ishikawa (fishbone) diagram

Dr. Ishikawa

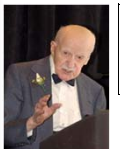


Implications:

1. Understand root cause
2. Cause & effect relationships
3. Form and prove/disprove hypotheses
4. Segment/prioritize (Pareto analysis)

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Managing for Quality; Juran trilogy; applying Pareto Principle

Dr. Juran

Despite the fact that customer needs can become very numerous, each requires:

- a means of measurement,
- a goal,
- a product, and
- a process design.

Implications:

1. quality planning
2. quality control
3. quality improvement;
4. Concept of "Big Q" not just "Little q"

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Dr. Shewhart

"father of SQC; 4-step PDCA cycle"

Implications:

1. Eliminate rework
2. Control processes
3. Measure process defects
4. Assignable (special) causes vs. chance (common) causes

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Dr. Taguchi

Loss function; off-line QC - robust design; Efficient analysis of variance designs

Implications:

1. Measuring financial loss to society from poor quality
2. Design robust products/processes
3. Statistical experimentation using Design of Experiments (DOE)

Opened the door for interest and use of Design of Experiments (DOE)

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Dr. Kano

Kano Model (exciting quality)

Implications:

1. Modeling elements of customer satisfaction
2. Not all attributes are equal in the eyes of the customer
3. Some attributes create higher levels of customer loyalty

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The Adult Learning Process

Some key principles generally well-accepted:


1. Adults learn differently.
2. "Practice makes perfect."
3. Appreciate the universal Laws of Cause and Effect.
4. Persevere.
5. Fight off impulsiveness.

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So, then what did the "gurus" do or not do?
What did we as "learners" do or not do?




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Strategic Quality Management Core Concepts

#	Core Concept
1	Driver-System-Results (DSR) Model
2	Applying DS
3	Plan-Do-Check-Act (PDCA) (aka Shewhart or Deming cycle)
4	$Y=f(x)$; rele
5	Underlying core values of the Baldrige Model
6	Compliance versus Continuous Improvement
7	Some key principles generally well-known:
8	1. Adults learn differently.
9	2. "Practice makes perfect."
10	3. Appreciate the universal Laws of Cause and Effect.
11	4. Persevere.
12	5. Fight off impulsiveness.
13	
14	
15	Turning Concepts & Ideas INTO ACTIONS & RESULTS

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Driving Continuous Improvement thru the PDCA Cycle




Do's?

Some key principles generally well-known:

1. Adults learn differently.
2. "Practice makes perfect."
3. Appreciate the universal Laws of Cause and Effect.
4. Persevere.
5. Fight off impulsiveness.

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Don'ts?



Dr. Juran

Another key teaching from Dr. Juran

Despite the fact that customer needs can become very numerous, each requires:

- a means of measurement,
- a goal,
- a product, and
- a process design.

Related concepts:

1. If you cannot measure it, you cannot manage it!
2. All work is a process!
3. Human nature generally is "goal-driven."

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Phil Crosby

- How did he get there?
- Gurus developed their premise AFTER they had tried and burnt fingers and got a rule of thumb, an art, and then a science
- School of hard knocks has a high tuition cost, and takes a lifetime.
- Crosby's "Grounded Theory" development...

- Crosby initiated the *Zero Defects* program at the Martin Company, Orlando, Florida plant.
- As the quality control manager of the Pershing missile program, Crosby was credited with a 25 percent reduction in the overall rejection rate and a 30 percent reduction in scrap costs.
- In 1979, after a career at ITT, Crosby started his management consulting company Philip Crosby Associates, Inc. He published his first business book, *Quality Is Free*.
- Crosby's response to the quality crisis of the 1970's was the principle of "doing it right the first time" (DIRFT). He would also include four major principles:
 - the definition of quality is conformance to requirements (requirements meaning both the product and the customer's requirements)
 - the system of quality is prevention
 - the performance standard is zero defects (relative to requirements)
 - the measurement of quality is the price of nonconformance
- His belief was that an organization that established a quality program will see savings returns that more than pay off the cost of the quality program: "*Quality Is Free*".

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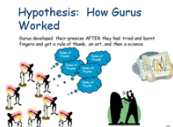
So!

"our grounded theory"

- John & Gary having certainly gone through our share of "hard knocks" and "burnt fingers" and teaching graduate course *Strategic Quality Management* at University of St. Thomas for 12 years
- a way for anyone to take a bedrock principle, a strategic goal, a best practice, a **key learning point**
- and translate it into terms that speak your organization's language and circumstances,
- giving you a list of roadblock busting projects expressed in the words of your process owners.

Hypothesis: How Gurus Worked

Some Gurus: After success AFTER they had tried and burnt fingers and got a rule of thumb, an art, and then a science



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Concept of an "Assertion"

Learning Point	Assertion
<p>Learning Point: A key takeaway, an "aha", a truth, a belief, a value statement garnered from a conversation, a reading, an experience, a benchmark, a story.</p>	<p>Assertion: If my organization lived the lifestyle described by this statement, the valued Learning Point would be a trait of my company, producing results that I value.</p>

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So, in our Juran Learning Point example:

Learning Point: Despite the fact that customer needs can become

v	Strongly Disagree	Strongly Agree
e	1 2 3 4 5	

measurement,

- a goal,
- a product,

and

- a process design.

"5" = No exceptions

Assertion: My organization establishes a measurable outcome for each customer-derived requirement and tracks the development path through the design, manufacturing process and delivery cycles.

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Segway? Segue -- a smooth transition from one topic or section to the next



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Part 1: Gurus, Bedrock Principles, What We Have Learned

Part 2: Getting onto the field, practicing, applying Assertions Tool

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Assertions Accelerate

- We have learned how to **accelerate**
 - how to take a learning point or goal or issue or problem or burning platform
 - and develop and deploy a tool that can test it as a principle,
 - and then make it real in our organizations

Theory  Practice

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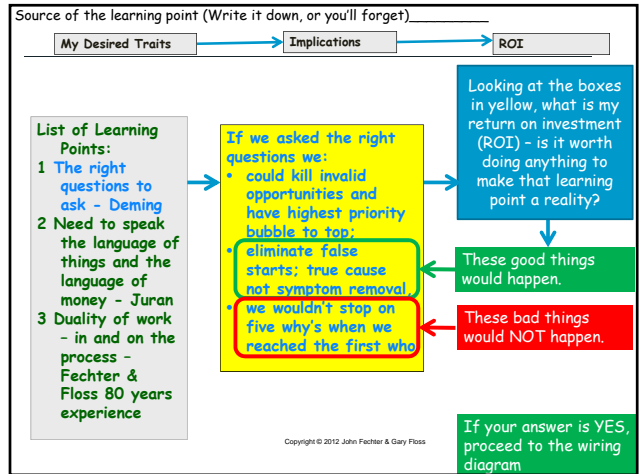
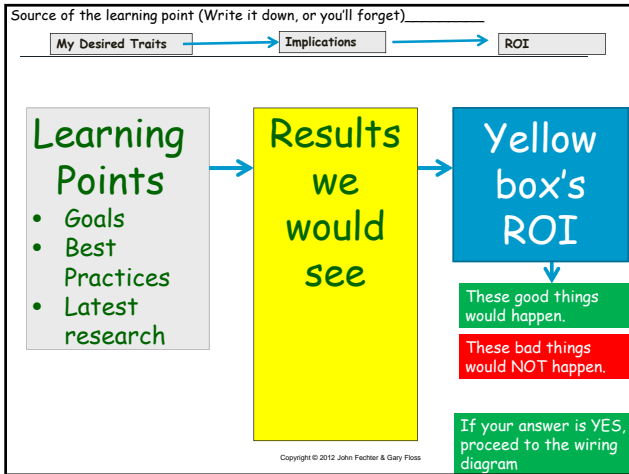
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The flow from idea or wish into reality

- Concept or learning point
 - Confirm that there is ROI
 - Develop an assertion -- a "To-Be" behavior
 - Scoring 1-5 - Why can't I score it higher?
 - Use their words -- Develop Start/Stop/KeeP (SSK) Action Plan

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ROI

Learning points → Results → ROI Calculation

- It's hard work to analyze and decide if a learning point, goal, best practice is worth pursuing to make it "our company behavior"
- We are not teaching detailed ROI tonight.
- Assume as we run through tonight's exercise, that your goal already passed the ROI snicker test and is worth achieving
- Change incurs costs. Do not proceed if you don't foresee a good ROI that makes the change effort worthwhile

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The wire diagram

Assertion statement -- If my organization lived the lifestyle described by this statement, the valued Learning Point would be a trait of my company, producing results that I value.

Strongly Disagree 1 2 3 4 5 Strongly Agree

STRENGTHS OFIs

OFI - I can't give a higher score because...

Project to change how we operate -- so that "Assertion Statement" is a 5 Level Strength/Fact

Start, Stop, Keep

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Gary & John Role model dialogue

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Deming - 14 points

#2

- Cease dependence on inspection to achieve quality.
- Eliminate the need for inspection on a mass basis by building quality into the product in the first place.

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Assertion exercise

- 6.2.4 Systematic methods are in place to effectively manage the organization's supply chain including supplier selection, qualification, performance assessment, and continuous improvement.

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The wire diagram

6.2.4 Systematic methods are in place to effectively manage the organization's supply chain including supplier selection, qualification, performance assessment, and continuous improvement.

Strongly Disagree 1 2 3 4 5 Strongly Agree

STRENGTHS OFIs

Start, Stop, Keep

OFI - I can't give a higher score because...

Project A -- to act on OFI #3 so that "Assertion Statement" is a 5 Level Strength/Fact

Project B -- to act on OFI #7 so that "Assertion Statement" is a 5 Level Strength/Fact

Project C -- to act on OFI #9 so that "Assertion Statement" is a 5 Level Strength/Fact

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5.2 Workforce Engagement

- Describe how your organization engages, compensates, and rewards your workforce to achieve high performance. Describe how members of your workforce including leaders are developed to achieve high performance. Describe how you assess workforce engagement and use the results to achieve higher performance.

Instructions for labeling discussion of assertion # 5.2.4
 1. Clearly name your assertion (1-10)
 2. Then, discuss scores with one member of your table
 3. Answer the table question
 4. Select one OFI of the table and discuss the SOI action that would improve it

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Core Value

- Valuing the people in your workforce means
 - committing to their engagement, satisfaction, development, and well-being.
- Increasingly, this involves
 - more flexible, high-performance work practices tailored to varying workplace and home life needs.

Instructions for labeling discussion of assertion # 5.2.4
 1. Clearly name your assertion (1-10)
 2. Then, discuss scores with one member of your table
 3. Answer the table question
 4. Select one OFI of the table and discuss the SOI action that would improve it

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5.2 Workforce Engagement Assertion

5.2.4

- The organization utilizes systematic methods and measures to determine the extent of workforce engagement and workforce satisfaction.
- Factors considered might include retention, absenteeism, grievances, safety, and productivity.
- Assessment findings are analyzed related to business results to identify ongoing opportunities for improvement

Instructions for labeling discussion of assertion # 5.2.4
 1. Clearly name your assertion (1-10)
 2. Then, discuss scores with one member of your table
 3. Answer the table question
 4. Select one OFI of the table and discuss the SOI action that would improve it

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The wire diagram

- 5.2.4 The organization utilizes systematic methods and measures to determine the extent of workforce engagement and workforce satisfaction. Factors considered might include retention, absenteeism, grievances, safety, and productivity. Assessment findings are analyzed related to business results to identify ongoing opportunities for improvement

Strongly Disagree 1 2 3 4 5 Strongly Agree

STRENGTHS OFIs

Start, Stop, Keep

OFI - I can't give a higher score because...

Project to change how we operate -- so that "Assertion Statement" is a 5 Level Strength/Fact

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Highlights from Table top discussions



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Highlights

- Bedrock principles from the experts
- How did gurus develop, validate and put into practice their bedrock principles?
- Gurus developed their premise AFTER they had tried and burnt their fingers and developed a rule of thumb, an art, and then a science
- Confucius - you practiced "I do and I understand"
- You can use the assertions and wire diagram tomorrow back at the office.

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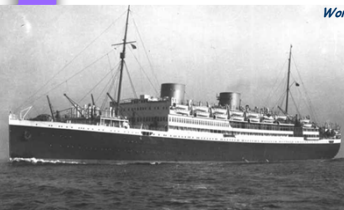
"Resistance

The largest motor liner on the seas, *Asturia*, lately sailed from Southampton. Although she has no use for funnels, she carries two. One contains only an exhaust pipe, the other is a mere dummy. They take up deck space and cut down the speed of the ship through wind resistance. But they have to be there because travelers are not used to seeing a ship without funnels.

Just so, many years ago, when the steamship was taking the place of the sailing vessel, it was necessary to cater to prejudice by putting useless sails on the steamers.

Thus does the human mind still resist the entrance of a new idea."

Women's Home Companion magazine, July 1926



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Please complete the evaluation forms

1. Tonight's presentation opened new thought processes for me. Yes No
 - If No, what changes would we need to make so that you could answer "Yes"
2. Assertion: "Our company regularly uses the assertion tool or its equivalent to develop and analyze our strategic goals."
 - The ROI for our company would be high if that assertion (lifestyle) was in place Yes No
 - Score 1 2 3 4 5
 - What would my company need to change to increase my score?

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The wire diagram

- 5.2.4 The organization utilizes systematic methods and measures to determine the extent of workforce engagement and workforce satisfaction. Factors considered might include retention, absenteeism, grievances, safety, and productivity. Assessment findings are analyzed related to business results to identify ongoing opportunities for improvement

Strongly Disagree	Strongly Agree			
1	2	3	4	5

STRENGTHS	OFIs
-----------	------

OFI -
I can't
give a
higher
score
because...

1. _____
2. _____
3. _____

Select one OFI at the table.
What is the most important OFI?
What should be Started and what
should be Stopped before you could
raise your score?

1. We should
Start _____
2. We should
Stop _____

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