

Granite State ASQ 0104

Activity Based Training Exercises

January 23, 2013

Jack Meagher - NHBB

New Hampshire Ball Bearings

- Founded in 1946 in Peterborough, NH
- Acquired by Minebea (Japan) in 1985
- Three U.S. manufacturing facilities
 - Precision Division, Chatsworth, CA
 - Astro Division, Laconia, NH
 - HiTech Division, Peterborough, NH
- First bearing company to register all of our manufacturing divisions to ISO 9000 and the first company to register at least one division to ISO 9001.



Agenda

Agenda - **NOT** today!

Why? We want you to concentrate on what is happening right NOW and not be thinking ahead to something that caught your attention.

Let's see how that feels.

Before we start ...

Ego - leave it at the door!

Take an index card, put your name on it and then write "My ego".

Place the card in the envelope, put your name on the outside and place the envelope. Hand it in - you can pick it up later.

Ground Rules

Data over opinion.

Analysis before action.

Non-judgmental thinking.

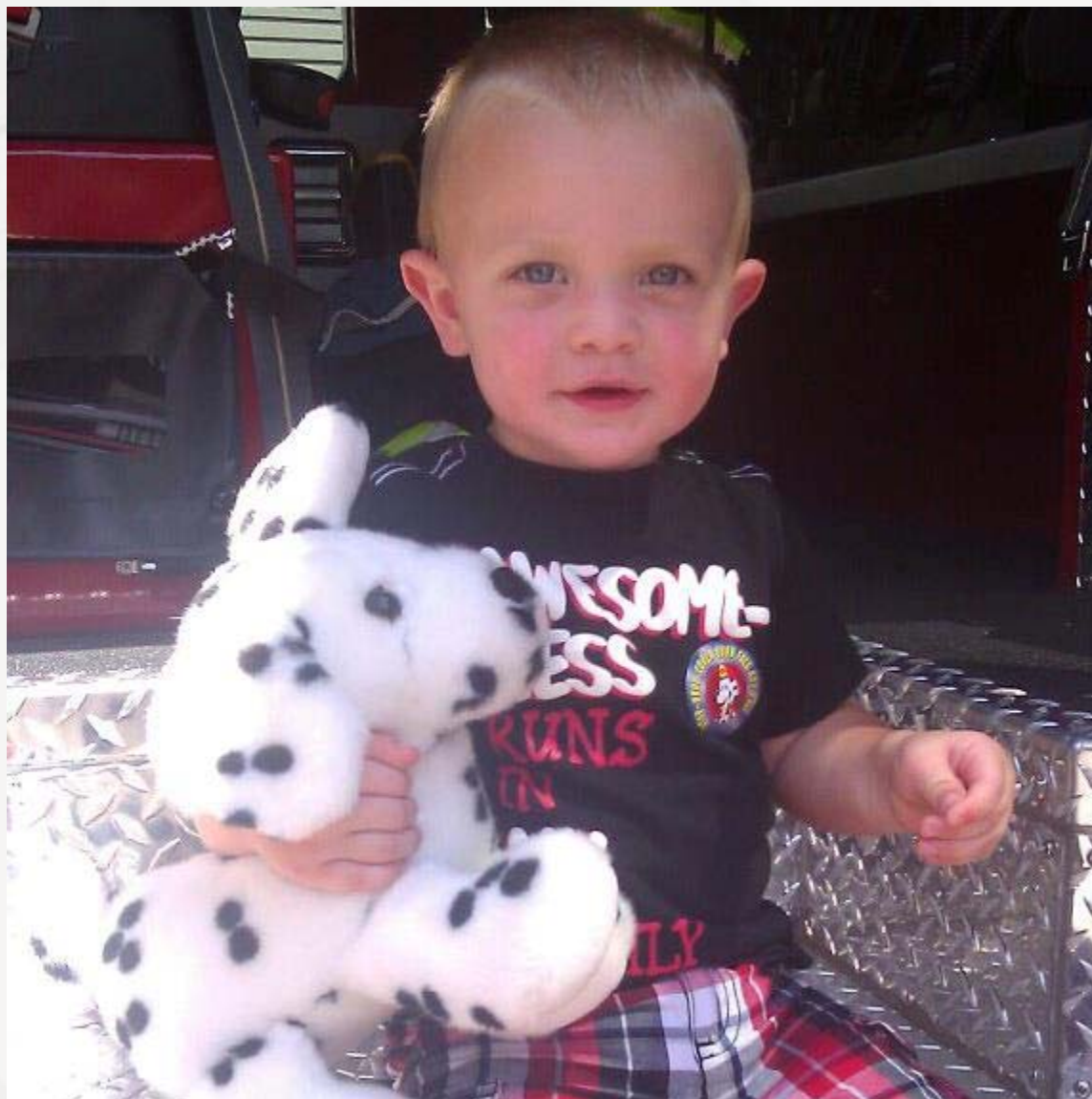
Involve those **closest** to the process.

Keep a **positive attitude** and an **open mind**.

One person, one vote - no position, **no rank**.

Create a **team** environment - **no EGO** allowed!

*Find something that
makes you
Smile ...
... look at
it to start
your day
and then
again to
start your
afternoon.*



Why smile?

Smiling is **GOOD** for you!

Changes Our Mood

Is Contagious

Relieves Stress

Boosts Your Immune System

Lowers Your Blood Pressure

How about a laugh?



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DUDE

I'm JOKING you are NOT adopted !!!

Part 1



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Individual exercises

How do we think?



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Problem # 1

A bat and ball cost \$1.10.

The bat cost one dollar more than the ball.

How much does the ball cost?

How do we think?

Problem # 2

1000

40

Add the numbers

1000

30

1000

20

1000

10

How do we think?



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Problem # 3

You are competing in a race on a straight racetrack, and overtake the runner lying in second place.

Which position are you in now?

How do we think?

Problem # 4

Marie's father has five daughters:

1. Chacha
2. Cheche
3. Chichi
4. Chocho
5. ????

What is the fifth daughter's name?

How do we think?



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Problem # 5

How much dirt is in a hole that is
one-foot high,
one foot long,
and
one foot wide?

Answers



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Problem # 1

A bat and ball cost \$1.10.

The bat cost one dollar more than the ball.

How much does the ball cost?

\$0.05 \$1.05 minus \$0.05 = \$1.00

Answers

Problem # 2

Add the numbers

Answer: **4,100**

$$40+30+20+10 = 100$$

1000

40

1000

30

1000

20

1000

10

Answers

Problem # 3

You are competing in a race on a straight racetrack, and overtake the runner lying in second place.

Which position are you in now?

Answer: **Second place**, you are still behind the first place runner.

Answers

Problem # 4

Marie's father has five daughters:

1. Chacha
2. Cheche
3. Chichi
4. Chocho
5. ????

Answer: **Marie**



What is the fifth daughter's name?

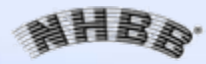
Answers

Problem # 5

How much dirt is in a hole that is one-foot high, one foot long, and one wide?

Answer: **None** -
there is no dirt in a
hole.

Were you surprised?



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If you've answered NONE of these questions correctly, then you're probably in good company!

How does this happen?



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"Thinking, Fast and Slow" -Daniel Kahneman

System 1 thinking -fast, intuitive, and sometimes wrong

System 2 thinking -slower, more deliberate, more accurate

How does this happen?



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System 1 - jumps to conclusions, makes connections and not prone to doubt. It sidesteps ambiguity and does its best to draw a conclusion on the available information.

Have you heard of



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WYSIWYG

"What you see is what you get"

What about:

WYSIATI

"What you see is all there is"

How does this happen?

System 1 thinking keeps us functioning

- by making fast decisions, usually right enough -
- but - it is gullible and biased

How does this happen?



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System 2 makes deliberate,
thoughtful decisions

- in charge of doubt and unbelieveing
- but is often lazy - and - difficult to engage

Part 2

Team exercise

Please read by yourself the scenario on the paper you have been given and follow the instructions.

Once you are done, please pass your results in without sharing your results with others.

Team exercise



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Now, as a team, read the same scenario. Have a discussion and agree on a rating.

Team exercise



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Questions:

What were the ratings for Team Alpha and Team Uno?

If there is a difference between the two ratings, why?

Team exercise



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Framing - different ways of presenting the same information to evoke different emotions (what we see is all there is).

Team Alpha - "positive"

Team Uno - "negative"

Team exercise

Anchoring - a short cut to making a decision. This is the process where we use an existing reference point as a springboard for starting the analysis.

Team Alpha - "97%, 80%, etc."

Team Uno - "3%, 20%, etc."

Team exercise

Now, let's see how the individual ratings match up to those of the teams (high, low and average).

If they do not match the team's ratings, what could cause that?

Was this a consensus decision or one driven by a leader?

Part 3

Activity based exercises

A different type of learning using kinesthetic movement, designed to create a social atmosphere and a full mind and body experience making it easy and fun to learn.

Cone of Learning (Edgar Dale)

After 2 weeks
we tend to remember...

10% of what we read

20% of what we hear

30% of what we see

50% of what we
hear and see

70% of what
we say

90% of
what we
say and
do

Nature of
Involvement

Reading

Hearing Words

Looking at Pictures

Watching a Movie

Looking at an Exhibit

Watching a Demonstration

Seeing It Done on Location

Participating in a Discussion

Giving a Talk

Doing a Dramatic Presentation

Simulating the Real Experience

Doing the Real Thing

Verbal Receiving

Passive

Visual Receiving

Receiving/
Participating

Active

Doing

Activity based exercises



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Line up (1)

Need one GOOD Manager

Have everyone line up by color of hair - light (or no hair) to dark - your Manager will tell you what to do.

This will be timed

Activity based exercises



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Line up (2)

Need everyone to manage themselves

Everyone line up by length of hair - shortest (or no hair) to longest

This will be timed

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Any difference in times?

If so why?

Did it feel different between the two scenarios? Which felt more natural?

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Count the steps

Manager - four commands -
forward, left, right, stop

Operator - count your steps

Then everyone is an operator -
same commands - count your
steps

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Pick 1

Everyone pick one other person (secretly) and keep between 5 and 10 feet from them at all times.

Activity based exercises



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Pick 2

Everyone pick two other people (secretly) and keep between 5 and 10 feet from them at all times.

Feel any difference?

Activity based exercises

Pick 1, Pick 2, Pick ...

Create Factorial Design - Display Available Designs

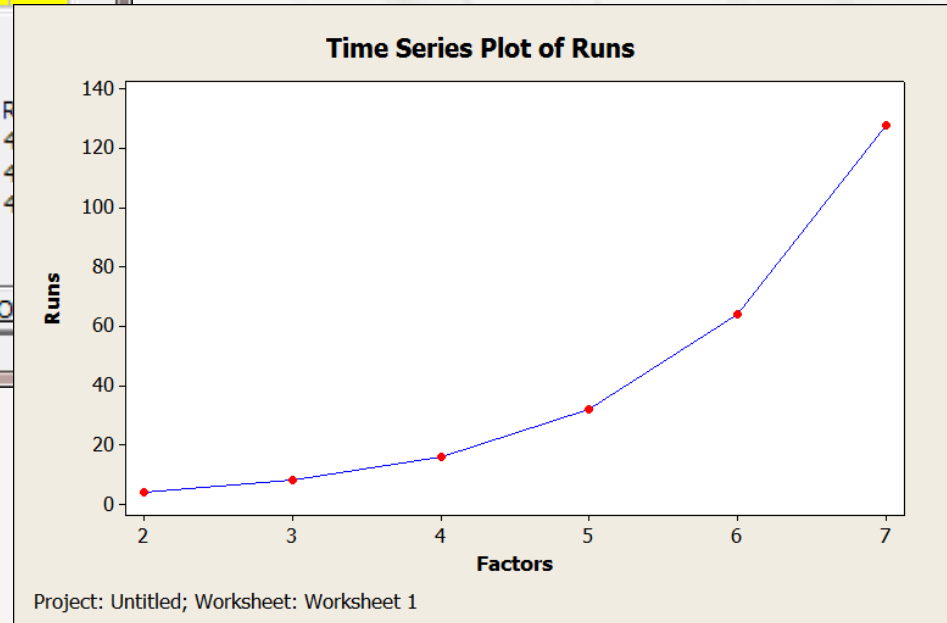
Available Factorial Designs (with Resolution)

| Run | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-----|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| 4 | Full | III | | | | | | | | | | | | |
| 8 | | Full | IV | III | III | III | | | | | | | | |
| 16 | | | Full | V | IV | IV | IV | III | III | III | III | III | III | III |
| 32 | | | | Full | VI | IV | IV | IV | IV | IV | IV | IV | IV | IV |
| 64 | | | | | Full | VII | V | IV | IV | IV | IV | IV | IV | IV |
| 128 | | | | | | Full | VIII | VI | V | V | IV | IV | IV | IV |

Available Resolution III Plackett-Burman Designs

| Factors | Runs | Factors | Runs | Factors | Runs |
|---------|--------------------|---------|--------------------|---------|----------|
| 2-7 | 12,20,24,28,...,48 | 20-23 | 24,28,32,36,...,48 | 36-39 | 40,44,48 |
| 8-11 | 12,20,24,28,...,48 | 24-27 | 28,32,36,40,44,48 | 40-43 | 44,48 |
| 12-15 | 20,24,28,36,...,48 | 28-31 | 32,36,40,44,48 | 44-47 | |
| 16-19 | 20,24,28,32,...,48 | 32-35 | 36,40,44,48 | | |

Help



Leading/Lagging Indicators

Leading indicators -
process inputs, forward
looking
(machine, operator,
speeds, feeds)



Lagging indicators -
process outputs,
rearward looking
(profit, scrap,
rework, delivery)



*Shouldn't you always be
looking at what's coming?*



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Need 3 volunteers, capable of walking backwards without falling over.

1st trials - looking at inputs

2nd trials - looking at outputs

Need to record time and deviation from straight line

How did they compare?

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Human knots (only if everyone agrees and is feeling well!)

Make two groups, form two circles, move together and shake hands (both hands) with different people.

Now - untangle yourselves!

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The Human Histogram

Everyone work together to identify the shortest and tallest individuals. Starting with the shortest individual, line up in 1 inch increments ending with the tallest individual. How did that feel?

Closing Comments



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1-2-3 Clap!

No agenda - how did that feel?

Which worked best - individual, group or active learning?

Have you used any of these before?

Would you like another session like this?

Thank you for coming.

Comments/questions?

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