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## Job Instruction

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Adapting from Training Within Industry

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## What does TWI do?

- We'll primarily look at front line leadership opportunities
    - Need for increased flexibility
    - Need for steep learning curve
    - Need for standard work
    - Need to improve accountability
    - Need to improve competency and development
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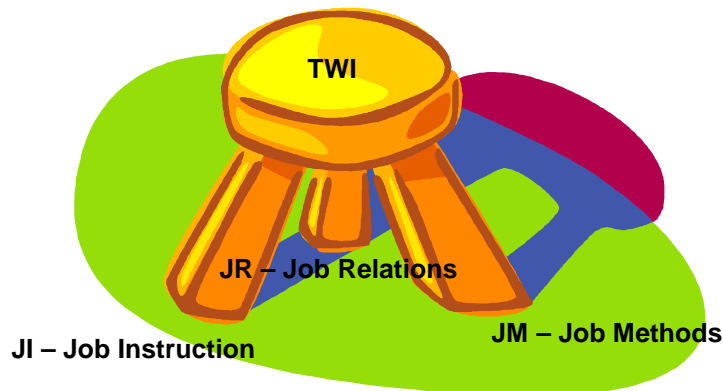
## What does TWI have to do with Six Sigma?

- TWI is the foundation for building standard work
  - You can't improve a process until it is stable
    - A process without standard work is not stable
    - Therefore, TWI must be implemented *before* "people processes" are improved.

**Build standard work (Lean),  
then identify process  
improvements (Sigma).**

## TWI – the “J’s”

- 3 elements address all of these issues



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## Training Within Industry – *A brief history*

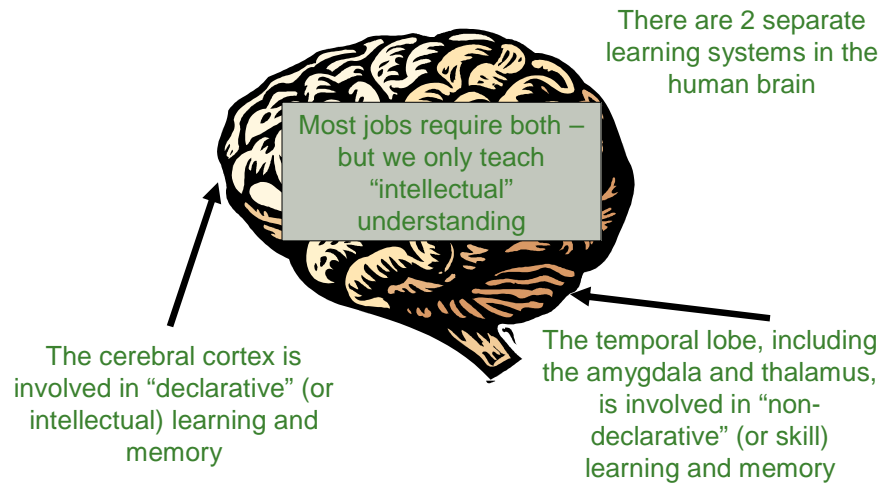
- Initiated during World War I
  - Heavy implementation during World War II
    - “Four hundred workers who had had no experience in directing the work of other people were being appointed as supervisors every day.”<sup>1</sup>
  - MacArthur’s staff takes TWI to Japan during postwar occupation.
  - Toyota has been using TWI continually since 1951.
    - “The Toyota Way of going to the source, observing in detail, and learning by doing were all very much influenced by TWI and became the backbone of Toyota’s standardization philosophy.”<sup>1</sup>
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## The KISS Principle

- Four essential requirements to implementing
    - The program must be simple.
    - The program must be prepared using a minimum amount of presentation time.
    - The program must be built on the principle of demonstration or learn by doing.
    - The program should provide a multiplier effect so that a group of employees who have been trained can, in turn, train other employees.
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## The Psychology



## TWI Results in Intrinsic Motivation

The main aim of the Lean Manufacturing philosophy is empowerment of the individual.<sup>2</sup>

People do a good job because of pride in their work, a sense of professionalism, love for their work, and self-respect.<sup>2</sup>

Intrinsic motivation is the engine for improvement.<sup>2</sup>

# Job Instruction

- **Make a time table for training**
  - Who will be trained at what by when
- **Create the *Job Instruction***
  - List Important Steps
  - Select Key Points
  - Provide Reasons
- **Get everything ready**
- **Instruct**
  - Prepare the Worker
  - Present the Operation
  - Try-Out Performance
  - Follow-Up

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No. \_\_\_\_\_

**JOB BREAKDOWN SHEET**

Operation: \_\_\_\_\_

Parts: \_\_\_\_\_

Tools & Materials: \_\_\_\_\_

IMPORTANT STEPS	KEY POINTS	REASONS
A logical segment of the operation when something happens to advance the work.	Anything in a step that might— 1. Make or break the job. 2. Injure the worker. 3. Make the work easier to do, i.e. "knack," "trick," special timing, bit of special information.	Reasons for the key points

The "boss" is responsible for the effectiveness of the training.

# Job Methods

- Breakdown the Job
- Question every detail
- Develop the new method
- Apply the new method

Kaizen Events: Often identified through the Job Instruction.

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**IMPROVEMENT PROPOSAL SHEET**

Submitted to: _____	Department: _____
Made by: _____	Date: _____
Product/Part: _____	
Operations: _____	

The following are proposed improvements on the above operations.

1. Summary

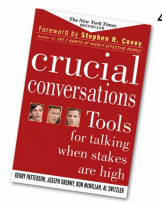
2. Results

	Before Improvement	After Improvement
Production (one worker per day)	X	
Machine Use (one machine per day)		
Reject Rate	✓	
Number of Operators		
Other		

3. Comment

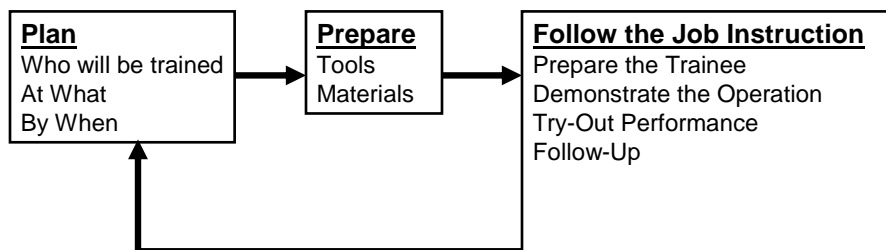
## Job Relations

- Give feedback to everyone
- Give credit when due
- Tell people in advance about changes that will affect them
- Make the best use of each person's ability
- Treat people as individuals
- When problems arise
  - Get the facts
  - Weigh and decide
  - Take action
  - Check results



## The Job Instruction Method

**Leaders build trust.**  
**They help but do not judge.**  
**They encourage everyone to improve.**  
**They work to create an environment where employees can experience pride**



If the trainee isn't performing the job correctly, the training isn't complete.



## Let's try an exercise

Job Instruction		
<b>Instruction Name</b>	Human base blister shield installation	
<b>Tools &amp; Materials</b>	One shield per trainee	
<b>Important Steps (What)</b>	<b>Key Points (How)</b>	<b>Reason (Why)</b>
1 Prepare shield for installation	Evenly place shield between fingers and thumb with both hands.	Faster installation
2 Cover human base with shield	Use a smooth, single motion, while releasing excess fabric.	Even tension---too much will cause tears, too little tension will cause sags
3 Adjust tension and placement		
<b>Job Master</b>		<b>B. Doll</b>
<b>Job Instruction History</b>		
<b>Date of Change</b>	<b>Description</b>	<b>Revised By</b>
1/1/2007	Shield reinforcement removed	S. Sandall

## Exercise Debrief

- Did the trainer prepare the trainee?
- Did the demonstration help?
- Did the student understand the key points and reasons?
- Other observations?

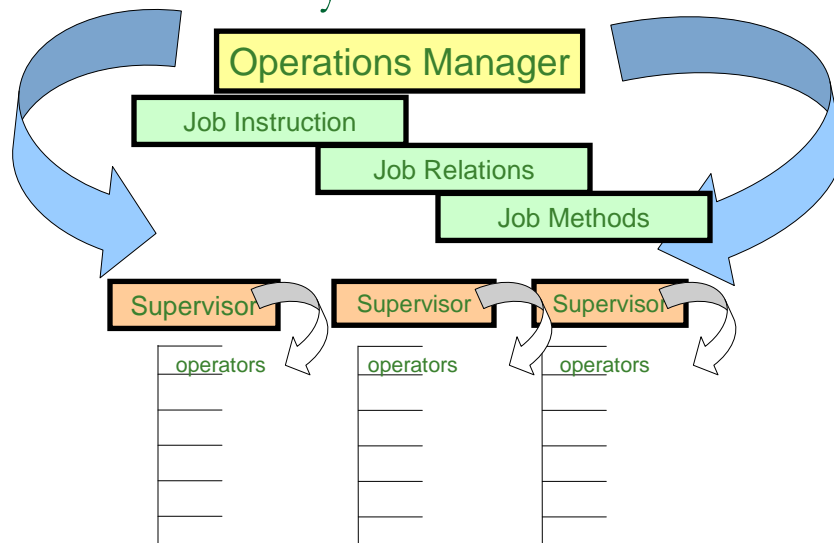
## Back to Intrinsic Motivation

### ■ Obstacles Preventing Pride in Work

- Lack of direction ←
- Arbitrary decision by boss
- Lack of clear goals and objectives
- Unclear how contribution is valued ←
- Insufficient information available ←
- Lack of work product definition ←
- Lack of communication ←
- Lack of resources
- Short-term objectives
- Poor training ←
- Non-uniform application of policy ←
- Organizational fear ←

Training Within Industry addresses many of these *Intrinsic Motivators*

## Our Case Study



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## Bibliography

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