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LEAN THOUGHTS

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Training Within Industry What Is Training Within Industry? –Description

The Training Within Industry method (TWI) is a technique that can be used for the development of supervisor skills. A supervisor is anyone who is in charge of people or who directs the work of others. TWI is based on the idea that supervision is the key role to assure that production goes smoothly, that quality products are made, that costs are under control and that people are always working safely. From experience, good supervisors generally have five needs:

- 1. Knowledge of the Work.** The information that distinguishes one company from another. For example: materials, machines, tools, operations, processes or technical skill.
- 2. Knowledge of Responsibilities.** The company's situation regarding: policies, agreements, regulations, safety rules, and interdepartmental relationships.
- 3. Skill in Instructing.** Even if we have a lot of knowledge and skill about the work, we cannot teach them well if we don't have skills in instruction.
- 4. Skill in Improving Methods.** This deals with utilizing materials, machines and manpower in an effective way. Supervisors must study each operation in order to eliminate, combine, rearrange and simplify details of the job. In this manner supervisors can make the best use of the materials, machines and manpower that are available.
- 5. Skill in Leading.** This helps supervisors to improve their ability in working with people, and causes workers to cooperate with them at work.

When these 5 needs are met, supervisors can deal with problems. Such as: mistakes, accidents, defects, rework, scrap, work delays, careless operators, variation in performing work, etc.

The Knowledge of the Work and the Knowledge of Responsibilities are different at each company and supervisors just gain this knowledge locally, at their company. Supervisors are not born with the three Skills of Instructing, Improving Methods and Leading but these skills can be acquired from actual practice. Three courses were developed to help supervisors develop these skills: Job Instruction (JI), Job Methods (JM) and Job Relations (JR). Each was 10 hours in length. Since supervisors are busy people, they were conducted in daily 2-hour sessions. Most of the content of each course was presented in the first 2-hour session and the other sessions were devoted to practicing and studying the method. Each supervisor was required to apply the method to a current, real situation or problem from the workplace. In other words, TWI was a learn-by-doing approach. Furthermore, each course was based on a method with 4 steps, which was patterned after work by Charles Allen in the First World War. Allen was an expert in adult and industrial education. Allen found that adults learned most successfully when there is preparation, presentation, application and testing.

Origin of the Training Within Industry Concept.

–History

During World War II, the organization Training Within Industry (TWI) (War Manpower Commission, US (Government) developed programs to help industry cope with the flood of new and unskilled war workers. Guided by representatives of the new profession of personnel management, and assisted by university-based social scientists, the organization developed innovative methods of industrial training that drew on both the scientific management tradition and the newer human relations approach fostered by the Hawthorne experiments.

After WWII, TWI was exported around the world to help nations rebuild their industry. It was particularly well received in Japan where it became a national program under the Ministry of Labour and has been continued until the present. Toyota adopted TWI. Over the years it has become the foundation of standard work, continuous improvement and employee involvement.

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Where “Lean Thoughts”
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Usage of Training Within Industry.

–Applications

Job training, work design and improvement by people who perform the work, gaining involvement of people through creating a collaborative and equitable workplace.

Steps in the Training Within Industry Process

• **Job Instruction.** 1: Prepare the Worker. 2: Present the Operation. 3: Try Out Performance. 4: Follow Up.

• **Job Methods.** 1: Break Down the Job. 2: Question Every Detail. 3: Develop the New Method. 4: Apply the New Method.

• **Job Relations.** 1: Get the Facts. 2: Weigh and Decide. 3: Take Action. 4: Check Results.

Strengths of Training Within Industry. – Benefits

- The four-step method of each program is simple, straightforward and easy to implement.
- If supervisors use a sure and reliable method of job training, this assures that work is standardized and is being followed.
- This creates basic stability in the operations because there is a predictable outcome for each job.
- When supervisors break down and study all the details of jobs, this enables them to eliminate waste and make the best use of the materials, machines and people that are available.
- The emphasis is on using your brains, not your pocket book.
- By gaining people's cooperation, this creates a collaborative environment instead of a hostile environment on the shop floor.
- Greater productivity and competitive advantage can be achieved when people are contributing the creativity of their minds.

Limitations of the Training Within Industry Model. –Disadvantages

- Lack of management commitment and constancy of purpose are the most important limiting factors.
- The application of all three programs must be encouraged and supported as part of a business system instead of isolated tools.

Assumptions of the Training Within Industry Theory. –Conditions

- Supervisors are the key role to achieve and maintain basic stability on the shop floor.
- It is part of everyone's job to continuously improve.
- People and their intellectual capabilities are a competitive advantage.

Source: 12Manage www.12manage.com

This little anecdote says a lot about the way we do business. It illustrates the difference between focusing on problems and focusing on solutions:

When NASA began the launch of astronauts into space, they found out that pens wouldn't work at zero gravity. Ink won't flow down to the writing surface. In order to solve this problem, they hired Andersen Consulting (Accenture today). It took them one decade and 12 million dollars. They developed a pen that worked at zero gravity, upside down, under water, on practically any surface including crystal and in a temperature range from below freezing to over 300 degrees C.

The Russians used a pencil

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The 10 Commandments of Improvement.

1. Abandon fixed ideas.
2. Think of ways to make it possible.
3. No excuses needed.
4. Go for the simple solution, not the perfect one.
5. Correct mistakes right away.
6. Use your wits, not your wallet.
7. Problems are opportunities.
8. Repeat 'why?' five times.
9. Seek ideas from many people.
10. There is no end to improvement.