



WHITE PAPER

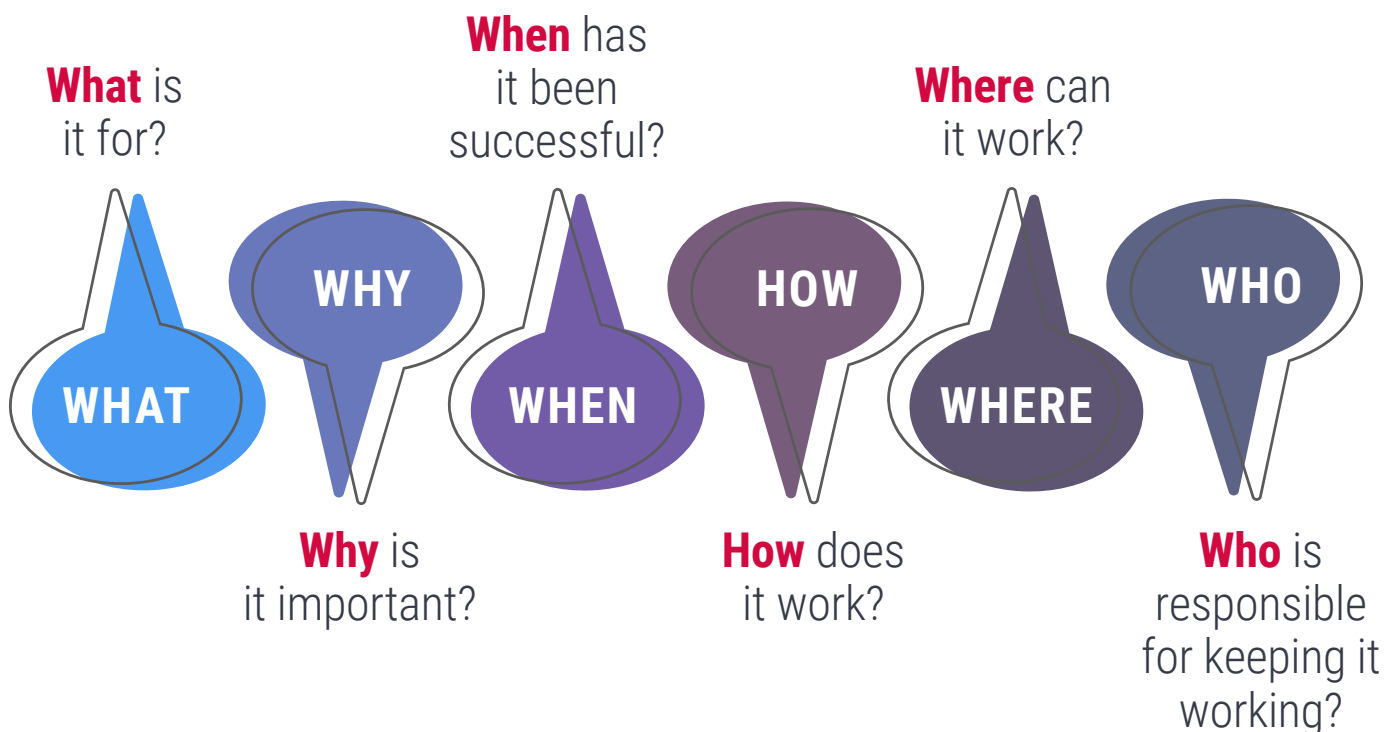
# Effective On-the-Job Training

**HSI** Industrial Skills – Reliability Matters

# Effective On-the-Job Training (OJT) programs must be organized and structured

*“Go sit next to Joe,”* is the phrase that launched a thousand careers in the utility industry. This routine has long been the standard for OJT. Like an apprenticeship, the goal is to take new and unproven employees and have them sit beside the veterans to gain experience and eventually competency to go at it on their own. Although this idea makes sense, it comes with a lot of obstacles to consistency, rigor, and accountability. Advancements in education research have revealed that sitting beside someone is not an effective training process. In fact, the teacher is often the one benefiting the most from this exchange.

**For effective OJT, a program must be organized and structured with activities such as scenario-based training and simulations to accompany book learning.** Every position must have specific skill development that challenges the individual to perform the responsibilities of their job before they are put in a position to do so unsupervised. This process allows the trainee to make mistakes and learn from them in a safe environment until they have mastered the situational awareness to make the best decision for every situation, every time.



## What is it?



Observing the right way to do things is only the first step in developing competence to make the best decisions. Intuitive responses in a difficult situation may seem like a good idea at the time, but could turn out to have unintended consequences. Knowing the difference between a good decision and the best decision requires the hands-on experience of OJT.

Effective OJT is part of the development and application process of training. OJT requires an understanding of how to combine book knowledge with real-world knowledge, then how to structure the exercise and testing of that knowledge.

With the right combination of exercise and evaluation, an individual can be rapidly trained to make the best decisions in any situation.

An effective OJT program prepares operators to work independent of their instructors quickly and with fewer mistakes.





## Why is it Important?

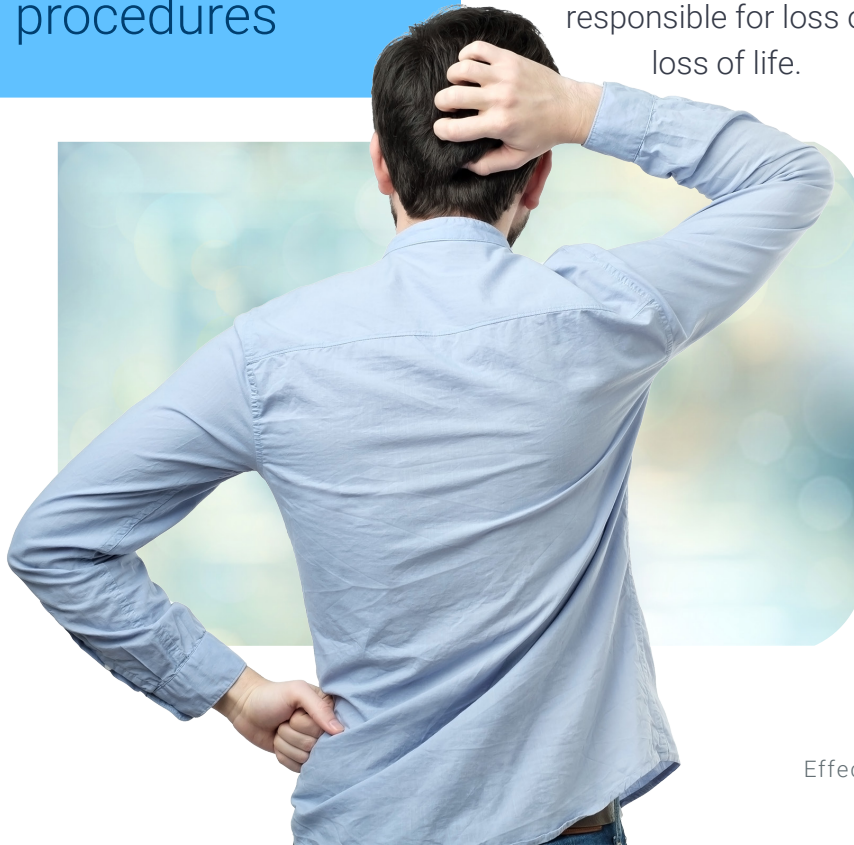


Worst case scenarios have a way of proving whether or not training was effective. In these extreme cases, stress pushes people to their limits and exposes if they were truly prepared to make the best decisions when they had to. In the utility industry, these situations can happen at any time. **Operators must always be prepared to make the best decision no matter how unlikely the scenario.** This level of training is possible with a combination of education and exercise.

Trainees usually aren't challenged by their education or understanding of a situation, but their ability to make the best decision. Making the best decision is a process which requires skills beyond memorizing procedures, including identifying situations accurately and understanding the long-term impact of their actions. Decision making must be challenged and tested in real world scenarios through realistic simulation. Contingencies can be organized and prepared for through rigorous hands-on practice that allows the supervisor to challenge the trainee to prove their competence.

Making the best decision is a process which requires skills beyond memorizing procedures

Utilities cannot afford to wager the reliability of their service and the safety of their personnel on the chance an operator will make the right decision. Utilities must be able to rely on the effectiveness of their training programs to ensure best practices are always followed, and no human element is responsible for loss of service or loss of life.



## When has it been successful?



OJT is a valuable addition to any program. It ensures **knowledge can be acted on in routine moments or during an emergency**. The following example explains how an organization responded to relying on unstructured OJT by increasing effectiveness after analyzing and improving their practices.

A training manager was struggling with what to do with new hires when they came on board between scheduled new hire classes. The current solution was to just throw them into an unstructured OJT, specifically, the “*sit here and watch how it’s done*” process. Because the OJT Instructors were not trained in the process, the trainees were either ignored, taught “*this is what they are going to tell you, but this is how I do it,*” or treated as an additional operations resource that could do whatever they were assigned, without any training, as long as a senior person was with them. For obvious reasons, this practice was a failure.

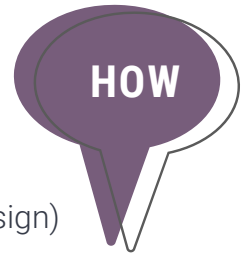
After trial and error, the organization finally created, organized, and implemented an effective system – the OJT Instructor position. This responsibility was given to a Senior Operator in real-time operations. How specific tasks should be performed was



documented, a timeline was provided for the multiple discussions, documented observations were made of the task being performed, demonstrations of the task being performed were signed off on, and sign-offs were created for the trainee performing the task on either the simulator or in real-time. Ensuring the task was performed correctly was the responsibility of the OJT Instructor who signed off on the Qual card. Management immediately saw the results were worth the extra time.

OJT continues to be a vital part of the organization’s learning process, as the hands-on experience is a key component of taking the knowledge transfer out of the classroom and into the workplace. **OJT must be structured, organized, documented, and consistently applied** to give each trainee the same opportunity to benefit from the experience.

# How does it work?



Using the **ADDIE process**, effective OJT requires these steps:

- Find the problems and create a plan to make changes (Analysis & Design)
  - Catalog the characteristics of the current OJT
  - Compare those characteristics to the best practices of effective OJT
  - Identify which areas need improvement
  - Create a map and timeline for making changes
- Make the changes (Development & Implementation)
  - Collect and create materials for instructing and assessing the improved OJT
  - Lesson plans
  - Qualification cards
  - Examinations
  - Record-keeping procedures
  - Conduct OJT with the new standards and procedures
- Make sure the changes are working (Evaluation and Adjustment)
  - Review the new records and see if the results meet the objectives
  - Test the outcomes of individual performance
  - Apply corrections as needed
  - Create a timeline for assuring effectiveness

## ADDIE Development Process

- Analysis
- Design
- Development
- Implementation
- Evaluation



## Where can it work?



Structured OJT is effective in all areas of training. **Nothing can replace learning from experienced operators.** And since the best experience and wisdom comes from failure, providing a safe environment for individuals to make mistakes and learn from them is invaluable. **Experiencing these failures, but making sure they don't happen in the real world is the best way to teach situational awareness and avoid mistakes.** Veteran operators must work with training managers to identify a progression of challenges from mundane to extreme. Then, they must map out the contingencies for these situations into training scenarios.

As a component of operator training, the lead operator or trainer uses this progression to systematically expose the trainees to increasingly challenging exercises. While in the control room, these exercises simulate real world attributes from routine events such as communication protocols to extreme contingencies such as load shed. Operators who can consistently practice proper procedures, even long after they are no longer trainees, ensure they are prepared for every obstacle, unusual or not.



## Who is responsible for keeping it?



While training managers bear the ultimate responsibility for training programs, they need support from management to create a structured program and veteran operators to break down and organize their experience.

**OJT requires a tremendous amount of planning for an organization. Waiting to train until situations occur leaves the training to chance, but a well mapped training program builds the trainee's skill to negotiate challenges one step at a time** – building each day on the activities from the day before.

This structure must be consistently evaluated by the training manager for effectiveness and accuracy to ensure a well-trained operator who is prepared for every contingency. As needed, training managers can adapt the OJT to challenge operators' ability to assess and solve new problems.



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