Gaining Skills by Building Experience on Top of Knowledge
Sequence Training

HSI Industrial Skills — Reliability Matters

SEQUENCE TRAINING BEGINS WITH INDIVIDUAL SKILLS.

It involves closing the gap between current and potential skills.

Assembling something for the first time can be a headache. Are all the parts there? Where are the G and H labeled pieces? How are you supposed to hold this thing and bolt that thing at the same time? What seemed like clear instructions to the designer can often be confusing to the user because of a lack of knowledge and experience.

How often do you need to assemble the same item before you can do it without the instructions? Would you be able to assemble similar objects from your experience without labels or instructions? This process is an example of sequence training. Our minds can quickly acquire skills by building on existing knowledge. As the skill becomes more complex, more knowledge and practice are needed to master it. This approach is highly effective for training employees.

What is Sequence Training?

Sequence training begins with understanding what skills the individual has now and where they need to be. Training involves **closing the gap between current and potential skills** through a combination of factors. Unlike a linear model where tasks are completed one after another, this **training is organized in a developmental sequence**.

Training begins with the fundamentals, teaching individuals how distinct components work, then gradually moving them toward understanding the entire system. Knowledge is strategically organized to help individuals best use the information they have.

For instance, to effectively identify the correct course of action in an emergency, an individual must understand:

- How the equipment works
- How to correct an abnormal condition before it becomes an emergency
- How to recognize an emergency is occurring
- What the procedures are

- How emergency procedures should be followed
- How to know when the emergency is over
- What steps can be taken to prevent the situation in the future

Teaching all this information at once would be overwhelming, but breaking it down step by step makes learning manageable and understanding complete.

Without sequencing, training relies on the individual figuring out how all the pieces fit together and hoping they perform the right actions when needed. Sequencing removes this unreliable approach by ensuring the student understands everything before they must use it. Then, they practice using the knowledge to progress from novice to master.

How Do You Use Sequence Training?

To create an effective training sequence, **you need to understand the entire journey from beginner to expert. You also need to understand how all the moving pieces connect.** For example, training someone in sequence means the trainer must create a detailed process for students to practice performing their job tasks until they master them.

Creating a More Thorough Sequence Training Program

An organization was struggling to develop successful candidates for promotion through a training program. Candidates started well but would fizzle out and not meet job expectations. After a series of failures, the organization decided it needed to pause and restructure its training program.

They started the restructuring by establishing a foundation of industry-specific knowledge. They created a process map to show the path for the student and guide the mentor or supervisor in tracking the student's progress. The organization invested significant effort in presenting information in a sequential manner to avoid overwhelming the student. The evaluation rubrics included enough context to assess the student's knowledge in previous topics and address any difficulties in the current task.

Now, in the initial phase of the program, students start by learning about equipment used in the organization. While this broad knowledge has some overlap, it helps later when they begin learning how to use different equipment to manage various system components.

The detailed planning took time, but once the organization invested in creating a more thorough sequence training program, it provided the structure missing from the previous training.

How Do You Develop Sequence Training?

Just like learning to assemble something, **people need to train step by step**. Sequencing these steps into categories that build on each other helps trainers guide students efficiently and ensures they develop a strong skillset that can manage any task. **When the necessary job skills are well-defined, you can use the following framework to create the sequencing process:**

Step 1: Awareness

Why am I here?

- Job description
- Communication systems
- Responsibilities
- Chain of command

Step 2: Knowledge

What is all this stuff?

- Terminology
- System design and purpose
- Equipment function within each system
- Relationship between multiple components within each system
- Integration of multiple systems

Step 3: Practice

How do I do this?

- Procedures
- Performance expectations
- Accuracy
- Emergencies and contingencies

Step 4: Skill

When am I good enough?

- Situational awareness
- Critical thinking
- Best practices

Every training program, even for a single position, benefits from sequence training. It takes experience and time to build the framework – a time investment not all organizations are willing to make. However, when done right, **the long-term benefit is having confidence in your employee's ability to perform the necessary tasks** and knowing their success can be duplicated.

The main challenge in creating sequential training is the time it takes to plan and build the framework. **The training manager is responsible for this task** and may need to gather information from experienced employees to create a comprehensive framework. When the team fully supports this training approach, it can ultimately reduce the stress of supervision and on-the-job training, making everyone more effective.