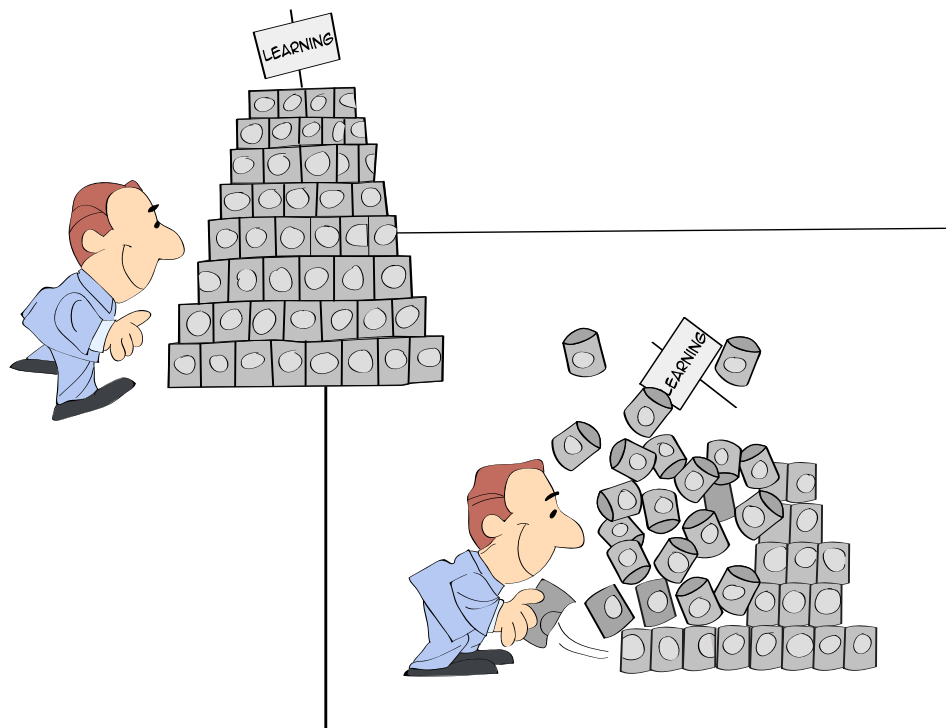# Workflow Learning

"TRY IT! TEST IT!"

Workflow Learning Is Trial and Error, and Experimentation

In workplace lunch rooms I often hear conversations to this effect:

"What went wrong?" Peter asks.
"I could not figure this out?" Mary answers.
"Did you check out the pressure (or something else)?" Peter asks.
"Nope. I missed trying that." Mary answers.

The conversation shows that workers are thinking through issues in a very casual way. They share problems and solutions. They go through the process of trial and error. They also check for quality results. There is an innocuous exchange of ideas.

Trial and error and experimentation sometimes have a bad reputation in L&D practice. In reality though, workers realize that they must test and try things out to know that a solution works. They continually refer to the process of elimination, workarounds, or handling exceptions. To them, this is normally accepted language while doing work.

Let me share with you some very interesting and insightful conversations I've had about trial and error.

Jonathan Workman, Instructional Designer at Flint Hills Resources, says trial and error is an opportunity to learn.

"Trial and error is a powerful way to learn. No question. Of course, you've got to apply it in the right context of trial and error and safety situations idea. I think you've got to have the attitude that, when you have an error or failure, it's certainly not a negative thing, because failure or that error part is an opportunity to learn. By having those failures and errors, you kind of find out what doesn't work. Maybe, it sparks ideas about things in a different way that could be beneficial. And so trial and error is absolutely essential to learning."

Raymond Jimenez on his experience with SpaceX and as a pilot, and the value of trying out ideas through experimentation, shares,

"In my mind, it's much more useful to get a quick experiment out the door, and see that it's kind of rough around the edges. But as long as the core thing that you're trying to observe that you can't make heads or tails of it, maybe not get an exact answer, but you know, get an answer that tells you, Hey, I'm going to be in, it's going to be in the ballpark of x, what you can do is take that rough experiment, run it, get in the ballpark of x, and then use that to further refine your experiments."

Ray Jimenez, Ph.D.
Workflow Learning Author

"Trial and error is a powerful way to learn."

Experimentation leads to solutions

Trial and error and experimentation is a context setting mechanism. The worker observes the problem, makes assumptions, arrives at a theory and applies the solution. They repeat the process until the goal is met. Russ Ackoff calls this the "Triple-Loop Learning." Trial and error is the "First Loop." The " Second Loop" is resetting our context and the "Third Loop" is being aware that our context is constantly changing. It deepens the worker's perspective and understanding of the problem which results in more reliable and in-depth solutions.

Allow opportunities for learning mistakes

"Allowing for opportunities for learning mistakes and experimentation" appears counterintuitive within L&D practice. Theoretically, the practice of scenarios, simulations, games, role playing, coaching, VR, AR and other methods allow for trial and error and discovery. The intent of these methods is praiseworthy.

Unfortunately, those practices tend to focus on transfer of knowledge and an overreliance on memorization exercises. We truly want learners to learn the correct answers. Yet at the same time, we don't train them how to handle the unexpected.

This causes a conflict. On one hand, many of us in the L&D profession believe, profess and even espouse trial and error as a valid method of learning. On the other hand, we don't always recognize that trial and error and failures are natural conditions in the actual workflow.

> "How do we allow and encourage experimentation and trial and error that is driven by the worker, without guidance from the L&D professionals or Subject Matter Experts?"

The challenge

"How do we allow and encourage experimentation and trial and error that is driven by the worker, without guidance from the L&D professionals or Subject Matter Experts?" It is worth asking this question since one of the major resources that we have in Workflow Learning is the L&D practitioner, whatever role they may take. If the L&D practitioner has a role in Workflow Learning, they must find a workable solution to this question. They must be like good parents who ought to "train kids to be independent thinkers and allow them to fly and take charge."