

Checklists? You've got to be Kidding!

BY MARK W. TRIMBLE, P.E.

Checklists shouldn't be the entire quality program, but they shouldn't be left out of the program either.

BEFORE LEARNING TO FLY AIRPLANES, the creative side of my personality believed that being asked to follow checklists was demeaning and limited my creativity. To justify my resistance, I claimed to be looking for ways to improve the process through constant reevaluation. (Ha!)

Really, though, I just wanted to reduce the boredom of repetition—plus following someone else's way of doing things left the “me” out of the equation. It's amazing, though, how an out-of-routine experience can cause a profound change in thinking.

Learning to Fly

My first flying lesson was like that. Normally, during an introductory flight lesson, your instructor will have you doing tasks that you really don't feel ready to perform. In my case, these tasks included using my feet instead of my hands to steer the airplane during taxi and then trying to coordinate my feet and hands to accomplish smooth climbs and turns. During later sessions, I learned some very counterintuitive characteristics of airplanes, such as “sometimes when you want the airplane to go down, you point its nose up” and “the higher you fly, the faster you go—even if the airspeed indicator reads the same”.

During this very intense learning environment, I felt very overwhelmed, wondering if I would be able to pull it all together into a cohesive understanding. My instructor kept reminding me to use my checklist, but I was so used to pulling information from memory, I seemed unable to think of the checklist as a tool. But, in an effort to minimize my stress and speed up my understanding, I learned to let the checklist be my friend. I stopped trying to remember every detailed step and just tried to remember to follow the checklist. Soon, with consistent use of the checklist, everything made better sense and I could relax—a bit.

In aviation, checklists serve two important purposes. For a student pilot, checklists are “what to do” lists, providing a systematic, proven way of ensuring that all life-protecting tasks are completed. These checklists have been prepared by professional aviators who, through experience and training, have determined the best way to help pilots and their passengers are safe. As the student pilot gains experience, the second purpose surfaces as he or she becomes more familiar

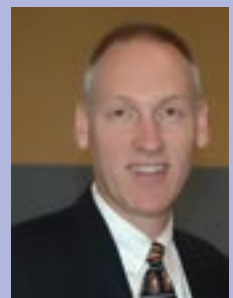
with the “flow” of each process and begins to use the checklist in a different way. The pilot now knows what steps to take, remembers to take them, and uses the checklist only as a “did I do it?” list to confirm that all vital tasks have been completed.

Replacing Experience

So, how does this high-flying example relate to my company and yours? All companies are faced with employee turnover and the resulting knowledge vacuum that occurs when experienced people leave and inexperienced people are hired. Those of us who are the “experienced pilots” in our companies have a lot to offer those “student pilots” that we have just hired. The typical way we share this knowledge is to put the new hire in the “copilot” seat to observe the way that our seasoned pilot magically performs his or her duties. Through observation, the student will begin to figure out what the pilot is doing and then mimic the behaviors. The student may have the foresight to take notes for future use, but during the first few “flights” is generally overwhelmed with sensory overload and will likely overlook some key steps. Many, many flights are necessary before the student has an ingrained knowledge of what to do and is able to proceed without supervision. This is the first frustration: The student wonders what step to perform next and just can't seem to remember what the instructor did under those same circumstances.

As experience increases, the new employee gains confidence, but is consistently forgetting to do important steps. This becomes the second frustration: The instructor wonders, “Why does the student continue to forget? We have been over this so many times!” During solo flight, this lack of consistency can lead to an accident. In our businesses, this delay in learning can be costly to

Mark W. Trimble serves on the executive management team of Huntington Steel and Supply, an AISC Member and Certified company in Huntington, W.V. He is also a student pilot with about 40 hours behind the yoke of a Cessna 172.



Quality Corner is a monthly feature that covers topics ranging from how to specify a certified company to how long it takes to become a certified company. If you are interested in browsing our electronic archive, please visit www.aisc.org/QualityCorner.

quality and profitability. Part of the blame for the student's inconsistency should be directed toward us, his instructors.

We seasoned folk often take for granted what we know. We forget that what we now consider to be common knowledge, we learned through many years of trial and error. This oversight is why we often question the actions of our new employees and we are disappointed when they do not make better decisions.

We cannot expect our new hires to know what we know, so why do we behave as if they do? If you want someone to make decisions like you would, then you must create an effective way for that knowledge to be transferred. The first step in that knowledge transfer should be creation of the checklist. Creating a checklist has benefits similar to other up-front planning activities; if you put most of the planning effort and decision-making at the beginning, the rest of your project will run much smoother.

Not a Measure of Quality

Before some of you get the impression that I am a supporter of checklist-based certification audits, let me take my aviation analogy a step further. A student pilot must be able to show compliance with the FAA's Practical Test Standards (PTS) before being allowed to become a licensed pilot or carry passengers. The PTS, in a manner similar to AISC's Certification Standard, provides an expectation of "quality" that the examiner compares the student's performance against. A checklist is not a measure of quality nor does it replace the Standard; it is simply an aid to use for training on existing processes and to provide your employees with a tool to verify that all steps in a process, procedure, or work instruction have been followed. Here are some things to consider when you create a checklist:

- Take the time to document each process you want to delegate
- Start with a simple list of questions that need to be answered before decisions are made
- Keep each checklist short. It is better to have several short checklists than one long one
- Group checklist items in small, easily memorized "chunks" of four to six items each
- Include all necessary decision-making and action steps
- Make your checklists outcome-based by

including confirmation/verification steps

- Provide a place for the user to place a check mark and date when the step is completed

After some initial training, most anyone who has access to your checklist can follow your steps, just like you would. The result: You will become more comfortable with delegation, and your new employee will become more effective a lot sooner.

One of the major obstacles to creating an effective checklist is that the person creating the list (often you) believes that the decision-making process is far too complicated to document. Don't let that stop you! This roadblock can be overcome when the process is broken down into smaller sub-processes where the number of variables is greatly reduced. You will know when the process is subdivided in enough detail, because the checklist will just fall into place.

The other major problem with checklists is that, to be effective, the checklist must actually be used. A simple way to ensure use of checklists is to require that they be initialed and then attached to any transfer of documents or fabrication components. This way if a process is not followed, the only reasonable cause is that the person did not follow the checklist through to completion. Then, you can remind the offending party of proper checklist use.

A convenient way to avoid these two roadblocks is to involve others in the checklist creation process. You probably don't have all the answers, so ask some others to help. You may be surprised what great ideas will result. A likely result of this collaboration will be a checklist with shared ownership and a much greater chance of being used. By the way, not all checklists need to be printed on paper. There are some very inexpensive (some free) web-based applications for checklist input and documentation.

Creative Outlet

If, after reading this article, the creative side of your brain is still not convinced that checklists are for you, think on this. Try leading a checklist creation team. Let all of that creative spirit that's bottled up inside you flow through the creative steps of your checklists. You and your company will greatly benefit.

MSC