

Creating Minimal Text with Visual Work Instructions

By Dr. Steven Blackwell

In this article, I would like to address a recurrent problem seen in creating visual work instructions, and share guidelines for solving the problem. With the advent of electronic cameras and memory sticks at reasonable prices, it stands to reason that we should add electronic images to our work instructions.

However, in creating these instructions we have observed layout problems, electronic images not demonstrating proper detail, and a need to edit the electronic images in a simple manner.

Perhaps the most significant problem with creating visual work instructions is this: the *written* portion of visual instructions is still too wordy. Creating too much text defeats the purpose of “visual” work instructions and creates the same confusion for the line worker as “text only” instructions.



In this example, the instructions for this step might read:

WORK-CONTENT: (Tools: You will need scissors for this next operation) Now that you have the #11 Conductor Flat Cable stretch to out across the measurement on the #11 Conductor Flat Cable fixture (making sure the cable does not slip out of place). Placing the scissors in your fingers, cut the cable at the 25.25" (+ or- .25) marked on the #11 Conductor Flat Cable fixture as shown. Place the scissors out of the way on the table when cutting the cable is complete.

Most of us understand the desire to limit excessively written text as in the example above, but old habits and a desire for thoroughness, inadvertently creates a hybrid of lengthy technical information with electronic images as well. We are not simplifying the work instructions enough for the average line worker to quickly understand and execute their work content. The probability is that the line worker will not read the excessive text.

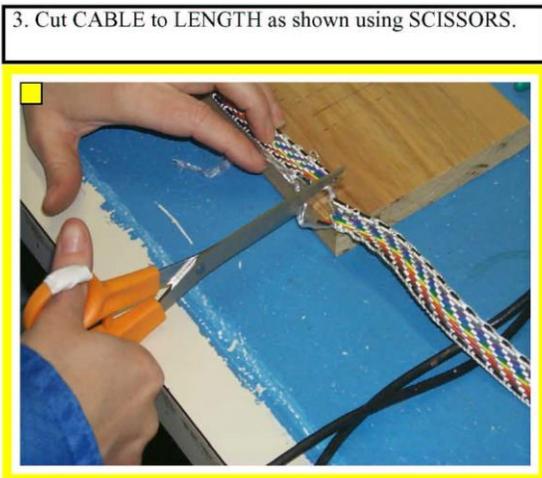
How do we know this? We have spent the last eight years observing line workers utilizing visual work instructions and asking them if they *read* the text. If the text is a short sentence, the answer is usually “yes.” If the text is excessive -more than one sentence- the answer is usually “no.”

Consistently, employees complain, “I don’t understand what I’m supposed to do here.” When the text is too wordy, employees have the tendency to look at the picture and *guess* what the instruction is. This is especially true when a worker is reading in his or her second language.

Most visual work instructions have too much text. The assumption behind visual work instructions is *minimal* text with electronic images as the major explanation of the instruction. The familiar saying, “A picture is worth a thousand words” means we are free and able to limit our written text because the picture itself explains the process in great detail. The problem is lack of a method or guideline for writing *minimal* text instructions.

Let me share the guideline we teach companies and use ourselves in writing effective, *minimal* text. We believe the goal should be one short sentence of text per electronic image as in the example below. If the text goes beyond one sentence, most often a new image is actually needed.

Here is the guideline we use to teach minimal text writing. “**Verb NOUN with NOUN using NOUN.**” Below is an actual example of a visual work instruction using this method:



Notice that the sentence starts with the action verb “Cut.” *Cut, turn, twist, screw, place, hammer, nail, insert, hook, strip, and tie* are just a few of the action verbs that immediately catch the eye of the worker to tell him/her the next step in the process. Action verbs, plain and simple, adhere to the mind. Seeing the action in a picture solidifies the action needed in the workers mind to perform the task accurately¹.

Second, add a noun following the verb. “Cut CABLE...” In two words, the line worker knows what they are expected to do.

Follow with the next noun. “Cut CABLE to LENGTH...” At this point, we have given the necessary details. It could be even more specific, for example, if a measurement is required such as “Cut CABLE to 25.25” (+ or- .5”)...”

Lastly, we add the final instruction of the guideline "...using NOUN." We've founded it efficient to precede tools or specific techniques with the word "using." So let's add that to our sentence. "Cut CABLE to LENGTH using SCISSORS." Or "Cut CABLE to 25.25" (+ or- .5") using SCISSORS."

It would be helpful to note here that we capitalize all NOUNS. This catches the eye of the reader and breaks up the text, which is especially good for those who are troubled readers, second language readers, or those struggling with dyslexia.

Here are some other examples of using the guideline with capital NOUNS:

- Attach FRONT COPY to PACKET using STAPLER.
- Write PERMIT # LABEL using PERMIT # LABEL TEMPLATE as shown.
- Apply ADHESIVE to back of CUSTOMER LABEL using SPRAY ADHESIVE.
- Check all INFORMATION is filled out on APPLICATION.
- Place APPLICATION in MANILLA ENVELOPE and place in MAIL.

It is permissible to drop out extra words in a sentence such as "that" and "the" as in this example: "Check (that) all INFORMATION is filled out on (the) APPLICATION." Notice that we dropped the words "that" and "the" from the sentence and it is still understandable. These types of words are not needed, and deleting them aids in shortening the sentence.

This is an example of the text necessary for a work instruction. The effectively captured electronic image tells the rest of the story.

Additionally, we have found that stating "as shown" is quite effective if the image is self explanatory. Added to our instruction, it reads, "Cut CABLE to LENGTH *as shown*, using SCISSORS," or "Cut CABLE to LENGTH using SCISSORS *as shown*" depending on the particular word you want to emphasize, length or scissors.

Using the "**Verb NOUN with NOUN using NOUN**" guideline is a simple rule for effectively writing minimal text. It is a helpful tool to stop that insatiable desire to write lengthy text. When we use an electronic camera to snap an image of the step to be done, and make sure we have enough detail, then the electronic image should tell most of the story and assist the worker in producing the desired output.

¹ *This connection of words and pictures to production is supported by Brain analysts at University of Oxford's Department of Experimental Psychology when they were asked, "How do visual instructions influence the motor system?" Their reply was, "We saw direct correlation of visual cues to motor skills responses." In other words, using visual aids combined with instructions creates a consistency in motor skills, the very response we desire in our line workers..*

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