

From the Actor to the Script: A Human Factors Case Study

Jhumkee Iyengar, Human Factors Engineer
Pitney Bowes, Shelton, CT

Introduction

Having to put together a product that you buy in the market is a common bonus that comes with a lot of products and a common ordeal that we consumers have to undergo today. "Do-it-yourself" labels undoubtedly make you feel much in control of your destiny as you proudly walk away with your purchase and a smile on your face. Your excitement knows no bounds as you wait to get your hands on and reap the benefits of this long-awaited purchase.

That's when the fun begins The cursing, swearing, tearing hair and stamping feet because you just cannot figure out how to put this thing together.

The Task

I was recently charged with the challenging task of saving unsuspecting victims of a new mailing system purchase from suffering similar frustrations. The system comprised of a mailing machine interfaced with a postage meter. Products of this type had hitherto been accompanied by a Customer Service Representative who held the user's hand through the ordeal, or better still, performed the necessary setup procedure for them. This procedure involved a combination of several mechanical type assemblies as well as conducting a monetary transaction via a computer voice. All of this on a product of whose functions most customers are not aware and they are often not the ones to initiate the purchase. A typical example might be a doctor's office, where the doctor has ordered the product and the receptionist has to set it up.

What makes this different from any other technical documentation project?

- The fact that this is a means to an end, a means to get the task accomplished, unlike a product Operating Guide which is an end in itself.
- The fact that unlike any other product documentation which serves the purpose of "supporting" material, supporting the product through its life, this has a specific purpose and becomes virtually useless after its purpose is accomplished.
- The fact that this had a distinct measurable quality with regard to its effectiveness. If users could not follow it and accomplish their task within a

certain amount of time and without reaching a frustration level that warranted either calling the hotline or having a Customer Service Representative visit them to help out, then the Setup Guide has failed. Again, this is different from a product manual whose effectiveness cannot be measured separate from the attributes of the product itself.

Approach

The approach I took to this task is best described by the title of this article. I tried to imagine what could be closest to a Customer Service Representative being present at the scene of action without the Representative actually being there. The outcome of that exercise in imagination were seven 18" X 14" panels containing colored photographs of the

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installation steps. Each step consisted of several photos making up each individual action, similar to stills of a movie watched in succession. The text associated with the group of photographs was minimal, based on the philosophy "a picture is worth a thousand words" and my experience that in general, people dislike reading instructions. This is particularly true when they have to read instructions associated with a tool that is supposed to help them do their job more efficiently and the activity is not a part of their basic job itself.

Results

These panels were then used for informally testing in-house with clerical staff, and the pictorial information was progressively trimmed.

The testing revealed areas in which the required information was adequately conveyed in fewer photographic steps than were initially presented. Superimposing graphic elements like directional arrows in places to convey motion were used as part of the information trimming procedure.

The testing also revealed that people were very easily confused by photographs of the product taken

form varying angles since it has several protruding edges.

Another issue worthy of mention is the additions made to a worksheet that is used by customers to record their interaction with the computer voice at the Pitney Bowes Data Center. This interaction allows the customer to get postage money remotely for their meter. To each action requested by the computer and each suggested response by the user, a little explanation in parentheses in very small type was added (a whisper of an instruction) to the worksheet to let the user know what they were doing. Also, an inherent property of the Data Center program (that could not be changed and had to be worked around) is that it requires the user to press the # key on their telephone keypad at the end of each entry. Not only is this instruction not a part of the voice message program, it has also been a historical problem because of users forgetting to press the # key. I added a little note again in parentheses in very small type at every data entry point that said "press pound key at end." The well-known difficulties of interaction with the computer voice were largely resolved, as observed in the testing.

Testing was successively conducted and design changes were made iteratively to the Setup Guide.

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Words of Wisdom

My feelings at the end of this process were that it was a very effective "quick and dirty" approach to establishing the foundation to a procedure. It also enabled taking this procedure to testing very early with minimal up-front effort, so as to be able to confirm the concept before making it into a product. Installation instructions often get into long, drawn-out procedures of creating illustrations combined with textual details for ease of publishing and when completed, are in too finished a form to test for conceptual fidelity. This approach could easily be used even if illustrations are planned as the final outcome and very easily applied to any installation procedure.

In conclusion, I would like to say that this was a real commonsense approach and that it worked.