



Feature Article

Focus on Expert Analysis

By
Jay Orlin

Among the important steps in the instructional design process everyone probably has one or two which they enjoy or find more interesting than the others. I know that for me the process of expert analysis has provided exceptionally interesting and valuable experiences. In this article I will share some perspectives on this subject.

Early in the course of an instructional design process one inevitably encounters the necessity of working with people who know the most about the subject to be taught. These people are referred to as Content Experts, Subject Matter Experts (SME's), or at times "the person who seems to know all the answers". These people, the SME's, frequently have a great deal of influence on the ultimate content of the program.

If you are training on policies, specifications or other stable and fixed data you may be able to work from a pre-existing manual. When researching a training program of this nature much of your content information can be obtained predominantly from written documentation. In this case the role of the SME would be to help you identify and locate these documents as well as to clarify, amplify or otherwise

answer your questions about the data.

If you are trying to document an expert's skills in order to transfer them to others, or if the originator or designer of something is your SME, you must exercise a great deal more energy and caution when you capture the information. This category of content information must be acquired directly from people. It is basically this category of information we will talk about here.

Since the SME is your main source of information, the first task is to identify the best expert or set of experts. This is truly a crucial step. It should be taken with care and intentionality. Taking the first suggestion your customer offers may not be the best method for identifying your expert. Once you have asked your customer who the expert is you would appear to be doubting their judgment if you begin an organized process to find and qualify the experts. I recommend approaching your customer with your own methodology or criteria profile for identifying SMEs early in the process, thereby setting the expectation that you will be responsible for determining who is a viable expert.

Think creatively about sources for expert data. For example, if the task includes using equipment which requires routine maintenance the technicians who keep the equipment running may have some unique and important perspectives about the job. A computer help center may have some interesting insights about the way in which people use the resources

available to them. Equipment or product vendors may also possess documentation and experience which could be helpful. The point is to think beyond the obvious for resources.

In most cases where the tasks being trained include relatively complex skill sets, mixing the application of knowledge with motor skills or decision making, it may pay off to interview and observe several experts. You might identify an expert who performs the operation with the greatest speed, and another who is the quality leader, and perhaps another who seems to be the one people approach with their "little questions". If the same operation is performed in different locations or on different shifts it is prudent to sample all the possibilities.

Remember the problem of identifying the expert is basically yours. For example, if there is not a performance measurement system in place, or if there is one but it is not sufficiently refined for your purposes, you may need to get out a stop watch or otherwise measure performance. The same goes for quality measures. In the absence of an existing set of quality measures you may need to create something, working with your customer of course. If this situation does arise, plan on spending enough time to study what is occurring. It is best to collect sample data over a several week period, and across the different locations and/or shifts.

Data on a person's individual performance can be viewed as quite sensi-

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tive, so your charts and graphs should be coded such that the people being studied by cannot be identified from the documents. It is a good idea to show this system of privacy protection to the people who are under observation. In many of today's environments this type of analysis may appear to work against the "team culture" of the organization. It is up to you to explain the rationale and value of the data you collect.

When performing task analysis, jobs should be broken into the most logical slices for study. You may choose to study an entire segment or process step of a job, you may choose to study the sequences of activity within a segment. You can study the discrete elements of activity in a sequence or you may need to study the whole job from a system perspective.

Since your program will require measurable improvement in performance of some kind you will probably focus on the observable or measurable outcomes of what ever level you study. If we use a hypothetical car wash operation as an example there are identifiable sequences of activity. Sequence one is ensure that all supplies are available and in place. The elements in that step are: fill soaping tanks, fill wax tanks, check water pressure, complete check list of mechanical auto transport system, inspect brushes, fill wiping station with clean towels, check pressure on vacuums. The sequence is complete when everything at the work site is ready for operation.

However, we need to study the discrete components in each element. For example, fill soaping tanks. If you ask someone what is involved in the operation "fill soaping tanks" They might simply reply " You just take the five gallon soap concentrate and pour it into the tank. Then you

fill it with water." Your job is to dig deeper. Is there anything that must be checked before filling the tank? Is five gallons the correct amount of concentrate? What problems have occurred in the past with the soaping operation? What caused them? Is there any difference in equipment operation when one person versus another sets up the work area? You are looking for a formal or informal specification on how the job is performed, and you probably will have to create or at least verify the accuracy of the existing spec and look for the un-written hints and short cuts that the experts use.

If you discover that there is someone who consistently prepares the work area better than others they would be a good possibility for an SME. By interviewing them and observing them, after you have a fundamental understanding of the task, you can uncover valuable information and codify it into the training.

Use any and all techniques and technologies that you can to capture information. Video tape, audio tape, on-site observation, reviewing on-the-job "crib notes" or handwritten notices that people post for one another at the work stations, being trained yourself on the job, and anything else you can think of are appropriate techniques. Using your best interviewing skills and open ended questions goes a long way toward clarifying pertinent information. Once you have enough data collected you can correlate it and create a valuable "best known method" to teach others.

You can use any number of vehicles to make sense out of large amounts of data. For example you can use tables, charts, graphs or what ever best organizes the information for you. Your sorting of information is most valuable if it is based on criteria that the customer recognizes as essential to their business plans.

In the course of performing expert analysis you have the unique opportunity to gain some pretty in-depth exposure to all sorts of interesting information. I have sat in the cockpit of jet airplanes, studied odd little shapes through a microscope, analyzed the behavior that makes a successful team manager, and learned how to fix a bicycle, all while doing my work as a training professional. That is why I enjoy the expert analysis phase of our business. Expert analysis is of critical importance to insure the best content information and it is also an opportunity to expand your own mind.

A Call for Newsletter Contributors.

In the spirit of "getting everyone in the chapter involved", I am putting out a call to all those interested in sharing some of their insights with the rest of the chapter via The Networker.

Anyone interested in submitting an article please give me a call at 408-285-9592. I am looking for short articles 200 to 500 words in length that others in the Chapter will find helpful, interesting or insightful.

Thanks,

Jerry Bush
Vice-President Publications