

USE VS. FUNCTION: FLIPPING THE SWITCH

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ABSTRACT

The purpose of this paper is to cause the reader to understand the fact that people learn and think Use rather than Function. This paper shares examples and techniques used for teaching Function understanding in place of Use in Value Methodology Workshops. Solid Function examples and active participation from the workshop participants is crucial. Many believe they think and understand Functions, however; they actually think in terms of Use. In our workshops we stress the importance of Function thinking vs. Use thinking and provide examples that prove to the participants they think in terms of Use not Function. When people learn to “flip the switch” from Use to Function they change their paradigm and have the freedom to be creative and the opportunity for breakthroughs. This paper explains how to “flip the switch” and cause true Function understanding and thinking.

INTRODUCTION

Function understanding is crucial when conducting a Value Methodology Workshop. It is the heart of the Value Methodology, so we must be sure that the Function message is clear and understood. In today’s society, especially in the business world, it is commonplace to hear the word Function spoken. I submit that the word Function is misused. How many

people (outside of the Value Methodology World) truly think about what the Function of something is or care? They aren’t aware that in reality it is a Function that the “thing” is intended to perform.

Why is it we say Function and think or describe Use? From birth we are taught Use and not Function. Therefore, we learn and think Uses. Our thinking process is established and we think within the Use paradigm.

Our Theory is that people think of Use when they honestly believe they are thinking of Functions. To extrapolate my theory, I propose that we can create the paradigm shift from Use thinking to Function thinking by providing examples that are thought provoking yet, are every day common items, physical in nature that everyone can grasp and understand. The heart of the Value Methodology is Function, therefore, we must insure that Function is being used correctly and it’s power understood.

SIMPLE YET SOUND

In a Value Methodology workshop examples should be kept simple, especially up front, but should challenge the participant to shift their thinking and understand Function. It is important to have an easy to understand example. A personal computer and clip art projected on a video screen works well with the Function lesson. On a few charts insert clip art items with two columns after the items. One column titled Use and the other Function. Ask the attendees what the Use is, but don't dwell on Use. Then, using an active verb and a measurable noun, ask the participants what the Function of the item is. When you ask you will most certainly be given the Use again not the Function of the item!

The Use is not the Function, there is great difference between the two. The Use I'm talking about is the "Design Use", what the item was designed and built to be "Used" for. The focus should not be there, but on the Function being performed. This will most certainly spawn discussion as the workshop participants begin to learn the lesson. Now, provide them the Function explaining the difference from Use. Continue this with the next example and the next and so on, until the participants begin to see the logic and "flip the switch" from Use to Function.

One example that we find useful and thought provoking for a Function example is a Camera. When asking the Use, the answer is "Take Picture." When asking the Function, the answer is "Record Image." Now the point can be made that Function thinking and Use thinking are different! If you think of the Use of a Camera then you are bound by the Camera design and therefore, you confine yourself and your team to ways to "Take Picture." When you think Function (Record Image), you have changed the paradigm and now have the opportunity to think of many other concepts. Some other ways to "Record Image" are:

- ◆ Drawing
- ◆ Hieroglyphics
- ◆ Painting
- ◆ Statue
- ◆ Digital Camera
- ◆ Computer Scan
- ◆ Video Camera
- ◆ Digital Imaging
- ◆ Copier

OTHER FUNCTION EXAMPLES

Another effective example we use in our workshops is a Door. First, ask the Use of a door. The most likely answer is "Enter and/or Exit". The Function is "Permit or Restrict Access". The questions can then be asked: if you focus on the Use you will think of several different designs of a door. If you think about Permitting or Restricting Access, (Function) you can ask different questions and shift the focus from the Door to the Function questions. One question could be; "what if you only wanted to Permit Access?" You would not need the door at all, just an opening.

Another question might be "What if you only wanted to Restrict Access?" You would not need a door or even a doorway, simply a solid wall or structure. It appears to be elementary in its application, but in fact it is this simplistic approach that allows even the least "Functionally Literate" person to change their understanding of Functions. Continue with examples until all are thinking about Functions and not Uses. (see Function example 1.0)

BASIC/SECONDARY/COST

Another good Function example is a Chair. This example is particularly helpful when attempting to explain the difference between Basic Functions and Secondary Functions. It is also useful as you begin to relate cost to Functions.

Make an example out of the chairs in the room. Most often the chairs are of good quality and have several Secondary Functions. First ask what is the Basic Function of the chair. Be ready for some to give you the Use which is "To Sit." Once you have gotten the Function answer "Support Weight" ask if these chairs provide the Basic Function. You are now at the point where you can suggest that there are other ways to "Support Weight." A block of wood, a three-legged stool, a bucket turned upside down, a Cinder Block can perform the Basic Function of "Support Weight".

It is the Secondary Functions that contain the highest Cost. Ask the participants to identify Secondary or Supporting Functions. The chairs found in conference rooms or facilities equipped to support a Value Methodology Workshop will have many Secondary Functions. Most chairs have material and foam used to cushion the sitting area. Point out that

they are Secondary Functions. If the chair has arms, are they padded? Is the frame made of steel with chrome overlay? Does the chair have height adjustments, swivel, recline or is it equipped with casters? All of these items are Secondary, Supporting Functions that help sell, provide comfort and contain the majority of the cost. It is the Functions that are identified (and classified) that shape the Workshop and, in turn, sets the tone for achieving "better value."

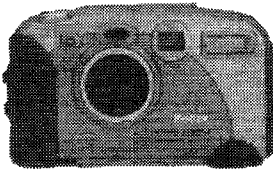

FUNCTIONS TO WORK

In our Workshops, this is the point where we discuss the Pareto Principle. For those unfamiliar with this principle, it is based on the research and findings from Vilfredo Pareto, 1848–1923 an Italian Economist, who postulated that 80 percent of Italy's wealth was controlled by 20 percent of the population. This principle is valid even today. It applies to the items under study. When they apply the 80/20 principle they are able to identify the areas they will focus on in the Workshop. The message here is clear, focus on the 20 percent. This is where you have the greatest opportunity for value improvement.

WORKSHOP EXAMPLES

When we think about workshops where Function really needed to be the focus several come to mind. However, the Workshop with the U.S. Army at Ft. Belvoir, Va. spring of 1999 on the Nightvision Monocular stands out. The teams had several ideas coming into the workshop, however, they did not know which would be most beneficial in the workshop. When we approached them with Function they typically struggled at first. They soon began to understand Function and the focus shifted. They realized that there were other opportunities for improvement not previously considered.

The User community (U.S. Army Paratroopers) had representation in this particular Workshop and they had some concerns that they wanted to address. Much money went into a protective case (back pack) for the Monocular. Its Function is "Protect Monocular." The problem was that the Paratroopers jump from an airplane (at night) and need to use this Monocular as soon as they land. There is much gear on their backs including the monocular case. It is not practical to have the Monocular on their back. They felt that if they had a small, simple case attached by a lanyard that they could put around their neck and allow to hang in front of their chest it would be more useful. Had they not focused on customer needs but only on cost and design they would have targeted the backpack and the Monocular itself for improvement.

	<u>USE</u>	<u>FUNCTION</u>
	TO TAKE A PICTURE	RECORD IMAGE
	TO SIT ON	SUPPORT WEIGHT

Function example 1.0

In this Workshop the Item (Monocular) was the focus of the Workshop. Due to the fact that Function was introduced, the participants began to examine the total package and explore their Functions as they related to customer acceptance.

FUNCTION FOCUS

Value Methodology Workshops should result in breakthroughs. What sets the Value Methodology Workshop apart from any other type of workshop is the Value Job Plan, an organized systematic approach to problem solving. The key ingredient in this plan is Function. What would happen should you conduct a Workshop and not get the Function message across. Yes, the participants will continue with the next phase of the job plan, Speculation. Unfortunately, they would Speculate and brainstorm the old ideas and will not brainstorm from new ideas that would have been generated from Function thinking.

Simply getting together with Subject-matter Experts is not enough. There has to be something different, something that enables new ideas to flow. Function thinking opens up the Workshop to new ideas. This is the very reason why you must be sure that the Function message and way of thinking is emphasized.

FOCUS HAS SHIFTED

By now most of the individuals should be truly thinking in terms of Function and are beginning to use the two-word abridgment (active verb and measurable noun) to define Functions and not Uses. Even participants without a mechanical background will catch on to the Function way of thinking. Many of the Workshops we facilitate have participants from various disciplines. For example, there may be a team made up of individuals from Engineering, Marketing, Finance, Logistics, Test and Management. With all of these experts on one team the subject matter should be well covered.

The question is will these individuals understand the concept of Function at the same time? The answer is No. It is a good idea to tell this fact to the participants up front. Then as you work through the Function lesson those that are having more difficulty will not feel inferior or simply bury their head in the sand. Draw these individuals out and work closely with them until they understand. Patience will get

you much further than simply forcing the information on them and moving on to the next phase.

Now you are ready to take the next step. The light bulb is coming on and the power of Function is beginning to be understood. Ask the participants to begin to think of other ways of performing the Functions they are identifying. Explain that without Function understanding they are unknowingly limiting opportunities. In an effort to improve something you are actually trying to achieve a higher level of performance. You now have a creative environment, a synergistic free flowing of ideas. This is possible because the participants are viewing opportunities from a totally new and different vantage point; Function.

TIME TO REFLECT

You may want to take a few minutes and ask the participants to reflect on the first example or two and suggest that they really did not know how to think in Function terms previously. However, they now do and are armed with the knowledge and power to help improve, create and enhance. Regardless of the item or system or process under study even the folks who may have originally been negative and closed minded to Function are participating, and quite possibly, may now be very excited and vocal when they are placed on teams and begin to work their live project. We have conducted numerous Workshops where this very thing has occurred. Strong, dominant and vocal personalities speak out against a new way of looking at things, prior to understanding the message. A big reason for this behavior quite simply is past experience and years of having ideas shot down.

The more experienced we become the more Judicial we become. To overcome negative personalities and keep them from becoming roadblocks, continue to use Function examples and encourage all of the participants to actively participate during the Function lesson. Your goal here is to ensure that the Function message and way of thinking is received and understood. Quite possibly the negative personalities are not participating with the group as a whole, but will on their teams. They may look at how Functions, interact and make suggestions. This lets the Facilitators know that they have done their job. It has been our experience that some of the more negative personalities at the front of a workshop, begin to change their position throughout the week and by the end become advocates suggesting other programs that can benefit from a workshop.

CONCLUSION

Of all the tools in the job plan, Function within the Information phase, is the key to maximizing opportunities. In a Value Methodology Workshop the entire job plan must be followed, however, Function allows one the freedom to view problems, opportunities, challenges or issues from a different perspective. Using common every day items as Function examples will be very beneficial. Remember most, if not all, of the participants have not been in a Value Methodology Workshop and have not been exposed to Function thinking. They need an elementary approach, up front, in order to understand and grasp the concept.

Those of us with working knowledge of Function may sometimes forget that it may take some individuals quite a while to grasp the Function way of thinking. Whenever you facilitate a Value Methodology Workshop try to keep this fact in mind. Spend enough time, use several examples and teach Function, remembering that Function takes time to learn. Look back to the first time that you, yourself, first learned Function.

I believe that Function is the most important tool within the Value Methodology. If the Methodology and the Society of American Value Engineers International is going to thrive spread the word about Function. The power of the Value Methodology must be taught and "Function Thinking in place of Use Thinking" is the key. Complex problems must be addressed and solved, however, the tools used to solve the problems should NOT be complex. The beauty of the **Function Thinking: It creates a paradigm shift that leads to breakthroughs.**