TechTalk

A 12-STEP PROGRAM FOR TBT SUCCESS

Before you jump into technology-based training, be sure to get some expert guidance.

I stood there, palms sweaty, and looked at the crowd. I leaned toward the microphone: "Hello. My name is Bart, and I'm responsible for implementing technology-based training."

"Hello, Bart!" the crowd said in unison.

I felt relieved. Everyone had said the first step would be the hardest. It was. But now that I had admitted I was involved with TBT, I knew I could get some real help.

I looked over the crowd again. The faces were friendly and everyone seemed glad that I was there—except for one woman in the front row who raised her hand to speak.

I was a little concerned, but I nodded at her to go ahead.

"Excuse me," she said, "but why are you standing there in your underwear?"

I looked down and gasped. I was on stage in front of what seemed like a million people, and I was wearing only my skivvies—my old stringy ones, at that. I looked back at the crowd, and everyone began to laugh. It was horrible—humiliating!

Just then I heard my wife: "Honey, wake up. You're having a bad dream."

Well, if the truth be known, I may not have had that actual dream, but anyone involved with large TBT projects can empathize with the moral: When you have responsibility for implementing TBT projects (multimedia, CBT, electronic performance support, and so forth), you can usually benefit from others who have been there. In fact, without the right type of help, you might get caught with your proverbial pants down.

> I LOOKED AT THE CROWD, AND EVERYONE LAUGHED

(OK, I might be stretching things a bit, but try to hang in there.)

How do you start learning? If you buy into the idea that you can avoid TBT implementation problems by learning from others, then the next logical questions is this: How do I start learning?

Some of us may be lucky enough to know a wise friend or colleague. For others, benchmarking is good alternative, but you have to have the right contacts and a lot of time. Wouldn't it be nice if we had a list of the factors that the experts thought were important before we tried to implement TBT?

This issue is near and dear to my heart, so I've come up with a 12-Step Program, of sorts, that you might wish to consider.

First of all, there is certainly no single way to implement TBT successfully. That may be part of the problem: There are so many variations that sometimes it's hard to know where to start. On the other hand, no one with any experience wants to try a cookie-cutter recipe, because what works in one company or situation is likely to flop in another.

What we need, I think, is a flexible implementation approach—one based on precepts or principles that we can adapt to each unique situation and environment. Of course, the principles should be tried and true, based on research as well as practice—not just on opinion, although that is important too.

Most of the solid research regarding factors that contribute to the success or failure of large TBT projects comes out of the literature on business and on management of information, with training publications bring-

ing up the rear. (We in training need to do a better job of researching in this area.)

Twelve precepts. After reviewing a couple hundred individual papers, and several books and theories, I put together a list of 12 precepts that I believe may be useful to those charged with implementing large TBT programs. I've listed the precepts in the box on this page.

The research and theories of several authors were instrumental in creating the list: Dorothy Leonard Barton's (Harvard) Mutual Adaptation Theory, F.D. Davis' (MIT) Technology Acceptance Model, Kailash Joshi's (University of Missouri) Equity Implementation Model, Eric Trist's (Tavistock Institute, in London) sociotechnical systems, and various change theories (discussed in Peter Senge's *The Fifth Discipline* and in the work of Kurt Lewin).

Along with the 12 precepts, I've consolidated the common themes in each of those theories into a Unified Technology Implementation Model (or UTIM—a modest name), and empirically tested the precepts in a 1994 field study at Federal Express. In nonstatistical terms, using multiple regression, parts of the UTIM model and precepts were shown to be significantly related to measures of successful implementation of TBT.

The full model, which includes four phases of implementation, with recommended issues to be addressed in each, is too lengthy to get into here. But the 12 precepts serve as the model's foundation and are of value in their own right.

A change process. Of all the precepts, I believe the first is the most important: The people who are responsible for technology implementation should view it as a change process.

Since the beginning of the industrial era, businesspeople and academics have tried to identify ways to implement and use new technology successfully. Unfortunately, many have ignored change theory. Instead, they have taken the approach that implementing a new technology is a simple, self-contained mechanical task, which once complete will result in the technology being used to its fullest.

The vast number of failed attempts

Twelve Implementation Precepts

1. People who are charged with implementing new technology view the implementation as an organizational development change process. All actions taken should conform to this paradigm.

2. Multiple key constituent groups are involved during each phase of implementation.

3. As much or more emphasis is placed on social issues, including politics, and on corporate values than it is on technical issues; key constituent groups are given autonomy and control of the technology.

4. Training (initial and recurrent), information services, and technical support are viewed as critical components of technology implementation.

5. Key constituent groups perceive the technology as being highly relevant to their job functions.

6. Key constituent groups perceive the technology as being useful to their jobs and as having a positive net effect on their job performance.

7. Key constituent groups perceive the technology as easy to access and use.

8. Key constituent groups perceive the technology as having advantages over other available systems.

9. Key constituent groups view their physical environment and work schedules as conducive to using the technology.

10. Key constituent groups perceive the benefits and hardships resulting from the technology as being equitably distributed between themselves and other constituent groups.

11. Key constituent groups perceive the benefits and hardships resulting from the technology as being equitably distributed between individuals and the corporation.

12. Key constituent groups perceive that management strongly supports the use of the technology.

to implement and use new technology, including TBT, suggests that this approach is not effective. Instead, people who are charged with implementing technology should consider trying the tools, techniques, and theories used for successful change efforts.

If you haven't read the early change theorists, such as Lewin and Ronald Lippitt—or, more recently, Peter Senge, you may consider putting their works on your reading list.

The current love affair with quality-improvement processes brings up my second precept: Implementation should involve multiple key constituent groups during every phase.

Some people argue that the one and only focus should be the end-user, or customer. Focusing on internal and external customers is extremely important, but it is not sufficient.

You must also actively involve any influential group that can support, fail to support, or outright attack the project. No one wants to talk about politics. But it is real—and it's in every organization.

How will you deal with the mass of stand-up instructors who believe that they are being de-skilled and displaced?

People's fear of being de-skilled was a major factor that contributed to failure in several of the implementation studies I reviewed. What about the mainframe computer group that, for good or bad, is being squeezed out of the picture as you move to a client-server environment? What about senior managers who think the money should be spent on other capital investments?

Numerous groups should be involved, but in different ways. In my view, developing specific plans

to involve these groups and address their concerns is critical to your project's success.

Many of the other precepts appear to be self-evident. It makes sense that users should perceive the technology as being beneficial to them. But in many cases, the end-users don't believe it. Some TBT systems make sense from a senior-management perspective, but not from the user perspective.

For example, the projected ROI may be high because of compressed learning time, but the employees may not perceive any net benefit because they get less time away from the job. The key is to identify this type of misalignment early in the project and take steps to address it.

In fact, the main idea is that the higher the alignment between key groups' perceptions and the 12 precepts, the more successful the project implementation is likely to be. To gauge that alignment, you must measure group perceptions on the 12 precepts at various implementation stages, and take action to correct any misalignments you identify.

To do that, you first determine how the precepts apply to the operations of your own organization and project (no small task). Then, you must have the resolve and the resources to act on the information gained.

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