

## Fear and Trembling...

By Ken Sipes



My junior-high math class was taught by one of the football coaches, and I was very happy about that. Seventh grade pre-algebra was going to be OK. We had our first class meeting outside by a big tree, sitting in a loose circle and talking about the slow pace we would take through the course, and how pre-algebra wasn't really that threatening. Unfortunately, I was re-allocated to the more advanced algebra class because of my high test scores, and I totally bombed.

I was convinced that I could never master algebra, or even pre-algebra, so I didn't invest much of myself in learning it. I spent most of my class time drawing and writing notes. When I did pay attention to the teacher, if I didn't "get" what she was saying after 5 minutes, I tried to escape into anything else that would help me block out the mental turmoil and survive the rest of the class session.

As we all know from experience, fear is a powerful motivator (or de-motivator). In my adult life, I once spent a sleepless night worrying about having to climb a utility pole as part of my cable installer training. It was important that I do well in the pole-climbing portion of the two-week course, because I would be teaching it three weeks later in my new job as Training Specialist. I've long been afraid of heights; particularly swaying heights in an exposed position.

Dave (Big Daddy), the trainer in charge of the class, had all of us begin to maneuver around the pole at six inches off the ground. His reasoning made sense: "If you can get around the pole at six inches high, you can get around it at six feet, or sixty feet." In fact, I became so confident in my ability to climb that I became careless and "gaffed out" on my way back down the pole – from about four feet high.

He knew something about defusing fear – overcoming it with the confidence that comes from practice. And as I've graduated from training cable installers to teaching people how to use databases, I've

learned a few more things about helping students overcome fear. Some of these lessons have even helped me deal with my own fears.

For me, fear of being unable to master a complex system like the PeopleSoft database (in which I spend most of my training time these days) kept me from committing more of myself to fully understanding the system. However, Dave's pole climbing lesson came back to me, and I remembered that I had finally mastered a couple of simpler database applications, and I knew that all databases have the same basic structure. If I could write equations in Lotus Approach, and teach MS Access, I could learn to use and teach PeopleSoft. Heck, I could even learn to use and teach PS Query.

One of the interesting things that my wife (a college algebra instructor) taught me is that showing beginning algebra students the bigger picture helps allay their fear of the concepts and techniques they're currently learning to use. Once the students really grasp that there is math far beyond the level they're on now, their current challenges seem less daunting. She tells them, "Where we're at right now is not the pinnacle – there's a lot more to be learned."

Most of us also fear confusion, which occurs naturally in our minds when we try to hold in tension lots of unconnected concepts and techniques. But algebra is often taught in just that way: "Push these symbols around in this way, and you'll get the correct answer to a question like this." With no larger idea to provide a framework for what they're currently learning, there's no place to "hang" the information, and it's left to float around and bump into the other unconnected math information, leading to the mental "friction" of confusion.

I also learned from other trainers that students need to feel smart – to make connections and draw conclusions on their own. When I teach trainers, I remind them that, at the end of a course, their students need to be impressed at their own intelligence – not at how smart the instructor is. I tell them not to emphasize the simplicity of the material, but to instead emphasize that the students can master it.

To support this effort, I begin each Q&A segment with very simple, closed-end questions, allowing individuals to quickly gain confidence in their own comprehension and to get comfortable with engaging the class. We then progress to more open-ended questions, requiring more involved consideration and communication. When a discussion is working well, it becomes very dynamic. What's really fun is when a student teaches me something I hadn't noticed, or makes a connection that I haven't yet made.

Relating some of my own experiences with fear seems to help some people deal with their fear of new concepts. I tell them how I dealt with my fear of climbing the utility pole, and that I was still nervous every time I climbed. My habit was to climb a pole in the center of the training yard before any of the students climbed, to reinforce proper technique, then critique each student's technique from my perch. I was fine as long as I wasn't ascending or descending.

Proper technique eventually becomes a habit. Before climbing, each student went through a "pole evaluation", which involved "sounding" the pole with a claw hammer, probing its weak spots with a screwdriver, and viewing the length of the pole to determine which way it curved. This preparation helped give the new climbers confidence in the soundness of the material into which they would angle their climbing spikes, and allowed them to climb the "high" side of the pole – which was much easier than taking any route up.

In the same way, I teach PeopleSoft Query students good techniques, which soon become good habits. They learn to plan out a query on paper before beginning to build it, they learn to use pre-determined joins when possible, and they learn to think systematically about each of the elements they'll need to utilize to answer the question being asked. These good habits make the query much more likely to work properly, thus building students' confidence in their ability to use the tool effectively, and making them more comfortable with "stretching" to learn more complex techniques.

As I demonstrate how to run, adapt, and build queries, the practiced smoothness I display delivers the tacit message that queries can be mastered. This bit I learned when training construction tool salespeople. To support her contention that a powder-actuated tool saves time, the salesperson must become very efficient at using it to install an anchor in a concrete wall.

Finally, I tell funny stories and dumb jokes throughout the class, especially when they apply to the point at hand. I taught an inventory control class several years ago, in which I related my embarrassment at putting hot sauce and black pepper on my mother-in-law's baked apples – I thought they were fried potatoes. If she hadn't thought I was odd before that, she certainly did from then on. This story is supposed to illustrate the importance of knowing what you have.

But often, the jokes I tell have no particular connection to the subject being taught. But they relax the students, relax me, and ease the tension caused by venturing into the unknown. They also create good feelings that become linked, in students' subconscious, to the concepts they're learning. Good feelings make good memories, which we retain more readily.

And I have fun, which is important. When students see me having fun while exploring new concepts, they get the idea that those concepts are manageable. I even have fun hearing students groan at a really dumb joke, then laughing that I had the nerve to tell it. In one of my recent classes, I told a football joke, and a lady seriously asked whether what I'd just recited was a story or a joke. (I decided to take that joke out of my repertoire.)

So, what kinds of things can we do to allay students' fear? Here's a partial list:

- **Present a manageable learning plan**
- **Start small**
- **Show the bigger picture**
- **Connect new concepts to old ones**
- **Set a participatory environment**
- **Display our "humanness"**
- **Encourage confidence-building habits**
- **Demonstrate comfort**
- **Have fun!**

And feel free to ask me about the blonde who gets a call from her husband while driving down the freeway.

***About the author:***

**Kent Sipes lives a relatively normal life with his wife and dog in Indiana, when he's not traveling to exotic locations (such as the magical land of Ohio) as a PeopleSoft consultant for CedarCrestone. He enjoys weightlifting, bicycling, pizza, and decaf coffee.**