The Importance of Learning Styles In Training

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I have always been interested in learning styles and how people learn. If you read the literature on this subject, there is a lot of academic research on everything from neuro-linguistic programming to basic cognitive skills. Academics don't seem to agree on a particular model, and appear to love writing theoretical research papers more than finding practical applications for education and training.

I worked many years in the automation field (palletizers and robot systems). It was very technical, and we had to train engineers, machinists, fabricators, assembly technicians, and field servicemen. These were all very high skilled employees, and training and education were a big challenge. In the developing training programs for our employees and sales reps, I noticed classroom training alone seldom worked for everybody, and that people seemed to learn in a variety of different styles.

The learning model that made the most sense for our kind of training was the VARK Model developed by Neil Fleming. This model is simple and describes three kinds of learning styles – visual, auditory, and kinesthetic.

The visual learners were those people who could see and think in pictures like slides, diagrams, charts, photos etc. Auditory learners are very good at listening and do very well at understanding classroom lectures, on-line presentations, recordings etc. Kinesthetic learners tend to learn by doing, touching, and active exploration. Most people use some combination of the three styles, which makes discovering their primary learning style difficult to assess. Since most classroom education is some combination of auditory and visual learning, I want to make the point that there are more kinesthetic learners than we think and they are often overlooked.

I once worked for a manufacturing company that was managed by three brothers. They had started the company during World War II and all three were trained as machinists. The company was going through a transition of adopting modern systems, and there was a genuine lack of understanding of business concepts. When I tried to advise them on markets, customers, cost accounting, and pricing, they would listen for a few minutes but then I would lose their attention.

If I put a machined gear on the desk, I could provoke a three hour argument on what went wrong in the machining process with intense focus and attention. They were not auditory learners, and we used to say if you couldn't mill it, drill it or weld it; it didn't exist to them. This was my first real encounter with learning theory. I quickly learned to take a different approach than what I had learned in college so I could communicate better with the three brothers.

In our company there was a definitive left brain bias and we had many technical jobs. I learned early on that classroom instruction was seldom adequate. In training

our field servicemen, I noticed that we simply lost their attention during a long lecture. They were very dependent on visuals in the training, but to make the concept penetrate their frontal cortex, they had to go to a machine in the shop and do “hands-on” learning. They were very kinesthetic learners, and once they touched the machine the concept was imprinted in their brains permanently.

Another example was training our independent reps salesman. We had an ongoing product development program with new machines, options, and accessories being added to the pricelist continuously. So every two years we called in all of our sales reps for a week-intensive product training program. It was a very in-depth program that included a large amount of technical information. Most all of these reps were college graduates and had proved they were capable of auditory learning by getting through college. However, I noticed that if they didn’t immediately apply the information in terms of quotations, proposals, and presentations, the concepts they had learned quickly faded away. I saw that they had to do something (hands-on) with the information to retain the learning.

In the 1950s most grade schools and high schools in Portland Oregon had shop classes. The boys who were not very motivated in the classroom were often the stars of the shop learning. I noticed that the best kids in the shop class were very kinesthetic and they advanced easily to more complicated projects.

On the other hand, Charles, one of the smartest kids in the grade school, failed shop class because he couldn’t square a board with a shop plane given a whole year of time to do it. Many of these gifted kinesthetic learners went on to our technical high school and became journeyman machinists, tool, and die makers, eventually starting and owning their own manufacturing companies.

But as everyone knows, shop classes are gone and have been replaced by computer classes. In fact, other classes that require working with your hands like art and music are being cut or downsized. This is at a time when American manufacturing is facing skilled-worker shortage, and it is getting worse as the baby boomers retire.

I have tried to make the point that learning styles really make a difference, and people with kinesthetic learning styles are very valuable. We need machinists, tool and die workers, mold makers, and other advanced craftsman who are excellent at working with their hands. I am not overlooking the fact that to qualify for these kinds of training programs requires that they also must have an adequate understanding of math, science, reading, and writing, but most important they must be good at working with their hands.

So what are the problems that need solutions?

Evaluate your training programs – If you think you may have employees or customers that are kinesthetic learners, it may be time to re-evaluate your training programs.

You can often identify them by doing a long segment of classroom training

– they are the people playing with their cell phones or looking out the window. To get more out of your training, you may need to design more “hands-on” training where the student actually operates the product or does something with their hands during the training.

Evaluate your operation and maintenance manuals – This includes installation, operation, and maintenance manuals. If your instruction manuals are mostly words, you may need to invest in some photos or drawings showing a person executing an instruction.

Apprentice programs – I have always believed the biggest advantage of apprentice programs is that so much of the program is dedicated to hands-on learning in the shop. In many apprentice programs, to demonstrate that you understand a concept like calibrating and instrumentation, you may learn the principles in the classroom, but you must go out to the shop and demonstrate how to do it.

More vocational training and bringing back shop classes – It appears that the “college is the only educational answer” school of thought is beginning to wane. The government wants to increase community college and vocational training, which is good but the tendency of community colleges will always be a focus on classroom training (because that is what they do). To make their vocational training useful to manufacturers it should also include “hands-on” skill training. I think this will only be done if the manufacturers help them design the training or supplement the class room training with “hands-on” training back at the plant.

One final thought about unmotivated high school students: In a previous article on STEM programs I suggested that about 1/3 of the high school students are general track students who are bored, not interested in going to college, and only want to do enough work to get a graduation diploma. It is impossible to say whether they are visual, auditory, or kinesthetic learners but it is very obvious that they don’t respond to lectures or textbooks.

Instead of letting them languish in their classes, why not try to get these people more hands-on training like more shop training, helping build a local house, or doing an internship in a local business. You are never going to make them read Beowulf, so why not try something that may help them get a job. Appealing to the different types of learning, particularly kinesthetic learning may be a solution for the people who are not college bound.

Mike Collins is the author of "Saving American Manufacturing" and its companion book, the "Growth Planning Handbook for Manufacturers." To learn more about the author or these titles, visit http://www.mpcmgt.com/ *[1].*

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