

Chapter 3

Pedagogy and Andragogy, what is it?

The term Pedagogy is traditionally used to describe the teacher and student relationship, and is generally thought of as adult to child. Pedagogy represents a more rigid power relationship, where the teacher has the knowledge and the child (student) needs this knowledge. The teacher will attempt to educate the child with very little consideration for what the child already knows.

In contrast, Andragogy, as developed by Malcom Knowles, et al, and their predecessors, focuses on the differences between adult and child learning. Adults, according to Knowles, et al (2005), place value of experience in their lives at a premium, and that “authoritative teaching, examinations which preclude original thinking, rigid pedagogical formulae – all these have no place in adult education” (p. 37)

Knowles, et al (2005), defines the six principles of Andragogy as: “(1) The learners need to know, (2) Self-concept of the learner, (3) prior experience of the learner, (4) readiness to learn, (5) orientation to learning, and (6) motivation to learn” (p. 3).

The strength of Andragogy is that these core principles work best when the context of the training environment is considered, and the learning environments tailored to allow these principles to work for learning acquisition by the learner.

In the Andragogical view of adult education, the focus is not on educating, which is more educator centered, but on the learning, which is learner centered. This change in focus is at the heart of a learning culture. The teacher’s role is a more collaborative effort as both the teachers and adult-students “are searchers after wisdom and not oracles:” (Knowles, 2005, p. 38).

This is an important distinction for those developing and delivering training programs or courses to fire service personnel. Again, Knowles, et al (2005), clarifies that the effectiveness of Andragogical principles does not come from applying the theory to the situation. But by recognizing the contexts that the learning will take place within, and applying Andragogical principles to it.

An example that I used in 2006 of taking into consideration the context, then applying the Andragogical principles to that context was: When designing the July, 2006, Poudre Fire Authority Driver Operator (D/O) skills learning environment. The context was going to be a rural water pumping situation, where the drivers were to pump their own fire engines, from lake water.

There are many ways to present this, and I chose to relay heavily on the six Andragogical principles to complete the training in a very short time period – 45 minutes per station (2 stations per engine). In a Pedagogical model (teacher imparts knowledge to student), this same learning would require 2 – 4 hours. I'll address each of the Knowle's Andragogical -- six core principles, and how and why I developed this learning environment for PFA.

- (1) The learners need to know: My target audiences for the July D/O skills were the incumbent Driver Operators for the Poudre Fire Authority. These drivers are required to complete an annual skills packet. They also are very motivated to be skillful as driver operators, thus they needed to show competency as part of a required, and personally important training event.

(2) Self-concept of the learner: The training consisted of two separate scenarios, which required them to place their fire engine in a defined location, attach numerous hoses and appliances, and then perform the tasks as presented. These learning environments were prefaced by acknowledging that each driver was skillful, and this was an opportunity to learn from each other. The company captain was requested to be the primary facilitator for their company. No pressure was placed on the learners from our training staff. We were to be facilitators and resources for them to gain new knowledge from the learning environment. They were allowed to act autonomously as a fire company to construct their own learning.

(3) Prior experience of the learner: This rural water training was being performed in a novel location, under novel conditions. All the D/O's and crews should have had prior knowledge of how to perform all the requested events.

To enhance their prior experience, I built a web page to support this learning environment. Included were pictures of the training area, and a facilitator's guide. The facilitator's guide was to be used by the company to preview the required events, or for facilitating their own learning environment if they were unable to participate on their assigned date and time. This web page environment was the solid domain information that was to support the constructive learning environment.

They also would be performing the requested rural water pumping exercises as a fire company, not as an individual. Crews were encouraged to assist each other and benefit from other's experience.

(4) Readiness to learn: Our hope was that by providing the constructive learning environment that was completely in place, the companies could focus on their operations within the environment. We felt that by asking them to set up and tear down the equipment they would not have the time or energy to actually work the performance of the pumping skills. The data collected, via SurveyMonkey.com, from all PFA firefighters who participated, and our observations, validated this learning environment supported their readiness to learn.

(5) Orientation to learning: In our rural water pumping learning environments, the D/O's were given very relative and real life problems. We had a monitor (flows 500 gallons per minute) set up to flow a defined amount of water, just as they might find on a fire scene. It was realistic, and, they had to perform the skill to experience the positive result. In many cases they didn't perform well, but these were significant learning moments for all involved. Since these learning environments were in the context of a real world environment, the data collected revealed high self-efficacy from the D/O's that they could perform each function in a novel situation.

(6) Motivation to learn: Most of the D/O's and their crews were very engaged and actively working the learning environment scenarios. This was most likely the result of them being able to work a relevant scenario which replicates what they could face in their everyday response situations. We observed no lack of motivation, and the data validated a high degree of satisfaction with the learning environments for the July pumping skills (Appendix C).