

PRINCIPLES OF COGNITION THAT IMPACT CURRICULUM DEVELOPMENT

The role of training is to *modify cognitive systems*, that is, to promote learning by introducing new information and expanding what trainees already know, or by changing previously held conceptions that contradict what we want trainees to know.

The *curriculum* is the tool for modifying cognitive systems. A properly developed curriculum works with the cognitive structure of the trainees, not against it. Good training challenges, changes, supports, and reinforces trainees' thinking, all at the same time.

The following cognitive principles underlie curriculum development:

Everything that is ever learned and remembered is organized into a congruent system.

Every piece of new information gets sorted through the existing cognitive system. To be retained it has to fit into the pre-existing structure. Human beings strive toward cognitive balance (equilibrium). Incorporating new knowledge and information into an existing cognitive structure, without changing the cognitive structure, is called *assimilation*.

Information that is not consistent with the pre-existing cognitive system sets up cognitive tension (dissonance).

When new information contradicts or conflicts with the existing cognitive structure, an individual can either *accommodate* the new information, which means altering the existing cognitive structure to incorporate the new information and changing the way one thinks about the issue, or *reject* the new information as inaccurate, which preserves and reinforces the old system.

Some people are better than others at accommodating new information. We can say that their cognitive systems are more flexible.

Concrete thinkers tend to be more rigid in their cognitive systems. They are less able to tolerate incongruities in knowledge. Persons who think at formal operational levels, and who are able to consider more than one perspective at a time, are more likely to tolerate or accept inconsistencies in information or concepts.

Emotionally threatening information is more likely to be rejected. Barriers must be broken down in a safe environment and within a scope that is appropriate for training. We are not doing therapy.

A stronger stimulus is more likely to be perceived and remembered. Concepts to increase perception and retention:

- ❖ Frequency
- ❖ Intensity – Information Stands Out
- ❖ Proximity in Space and Time
- ❖ Similarity

Span of Apprehension - Defined as how many elements the mind can simultaneously cope with, without generating confusion. Range: 6-11 Average: 7-8