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 with which we do this. 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.

Random thoughts are not as easily remembered or understood as are organized cognitions.

Attaching random information to an already-existing structure provides meaning.

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.***

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.

Training, which forces accommodation, often:

- Threatens pre-existing beliefs and values.
- Threatens identity and self-esteem.
- Creates anxiety and uncertainty

Cognitive Overload

Span of apprehension: The amount of information the mind can simultaneously cope with, without generating confusion. Range: 6-11. Average, 7-8.

Requires that we prioritize and sequence curriculum to assure that the 5-7 most important points get covered to the best level of depth possible.

Can occur when there are too many words on PPT, too many words in lecture, too many concepts thought without application-level discussions or exercises.

Can occur when we expect participants to apply too many concepts at a time.

<u>To manage cognitive overload</u>:

- Keep PPT simple, only a few words
- Keep stories "short, sweet, to the point". Tell stories after explaining the concept, not in the middle of the explanation
- Logically sequence content
- Keep lecture "pithy", you can add more detail during report out of small group discussion
- Use stair-step architecture