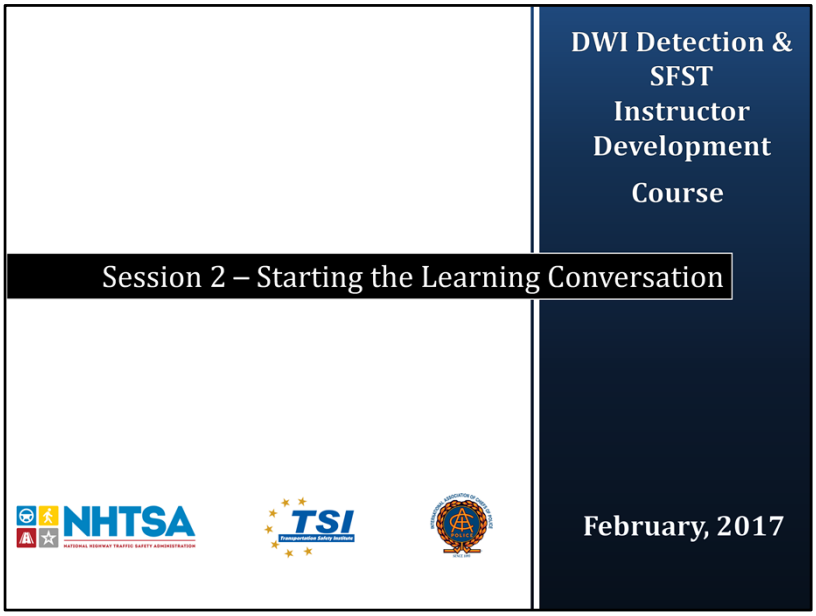
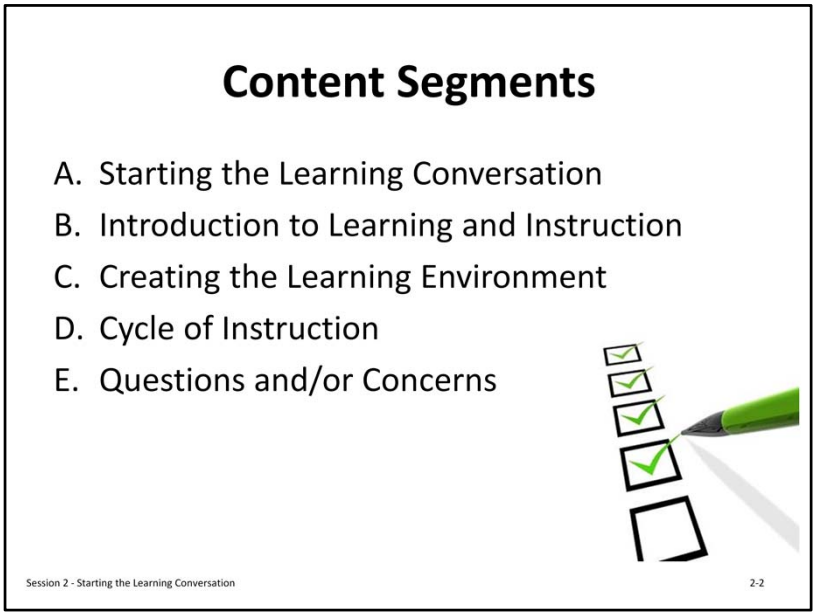

DWI Detection & SFST Instructor Development Course
Session 2 – Starting the Learning Conversation
NHTSA
TSI
February, 2017

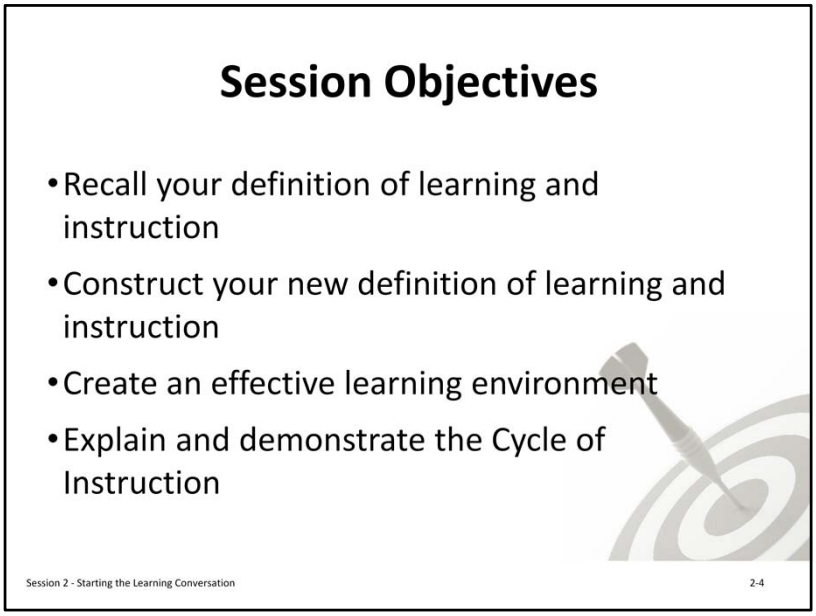


Session 2: Starting the Learning Conversation
Estimated time for Session 2: 2 Hours (depending on class size)

Session Objectives
- Recall from experience your definition of learning and instruction
- Construct your new definition of learning and instruction
- Create an effective learning environment
- Explain and demonstrate the Cycle of Instruction

Contents
A. Starting the Learning Conversation
B. Introduction to Learning and Instruction
C. Creating the Learning Environment
D. Cycle of Instruction
E. Questions and/or Concerns

Session 2: Starting a Learning Conversation

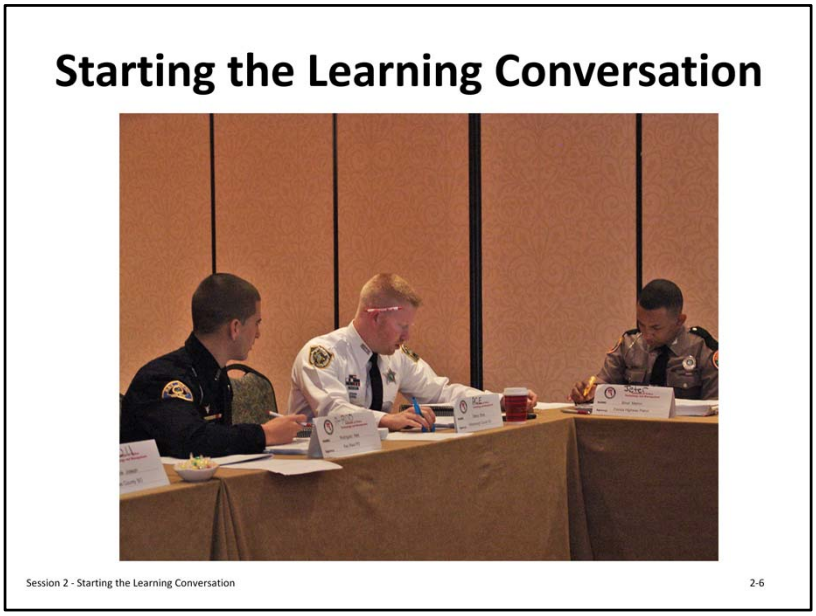


Session Objectives

At the conclusion of this session, participants should be able to:

- Recall from experience your definition of learning and instruction (Activation)
- Construct your new definition of learning and instruction (Application)
- Create an effective learning environment (Demonstration and Application)
- Explain and demonstrate the Cycle of Instruction (Activation and Demonstration)

A. STARTING THE LEARNING CONVERSATION



Team Activity

- Share a brief example of a time when you learned something important or exciting
- Relate how you had a positive experience with the subject matter, the instructor, and with the learning environment in general
- Tell how this high-quality instruction made you feel
- State some of the benefits received from it

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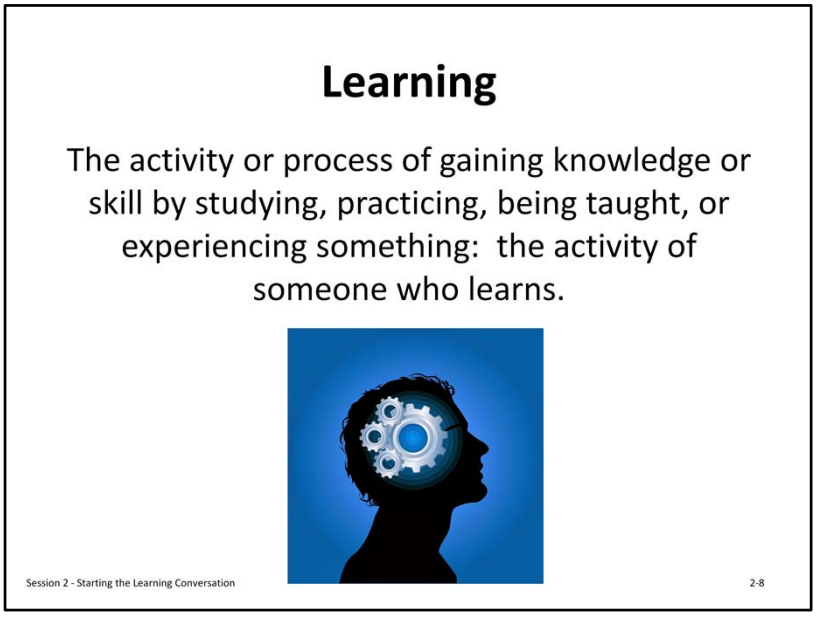
B. INTRODUCTION TO LEARNING AND INSTRUCTION



What is learning?

Definition: The activity or process of gaining knowledge or skill by studying, practicing, being taught, or experiencing something: the activity of someone who learns.

At its core, the learning process is about _____.

Learning is a natural process through which lasting physical changes are made to the human brain and nervous system that result in new knowledge, skills and attitudes.

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Domains of Learning

The three DOMAINS OF LEARNING are:

- Cognitive Domain
- Psychomotor Domain
- Affective Domain

Every job requires learning in all three Domains and involves:

- Knowledge
- Skills
- Attitude

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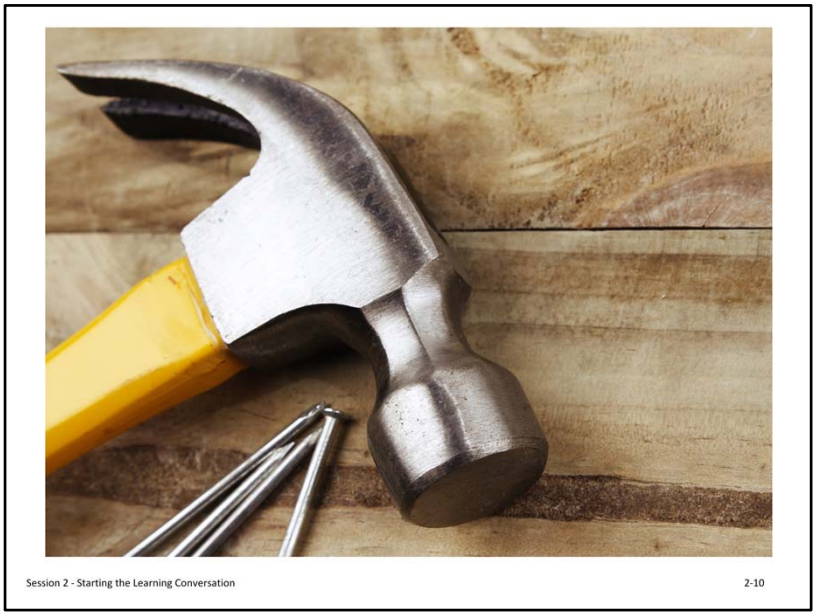

Every job, no matter how basic, requires the person who performs the job have some basic knowledge that can be used. If you don't possess that knowledge, you won't perform the job very well.

Every job, no matter how simple, requires the job performer be able to carry out some type of skills. If you don't have some skills, you won't perform the job well.

Every job requires the person doing it has some particular attitudes. If you don't have those attitudes, you simply won't do a job very well.

For every job you can perform well, somewhere along the way you learned the knowledge the job requires, and you learned the skills it requires, and you learned the attitudes it requires.

DWI practitioners need special knowledge, special skills, and special attitudes.

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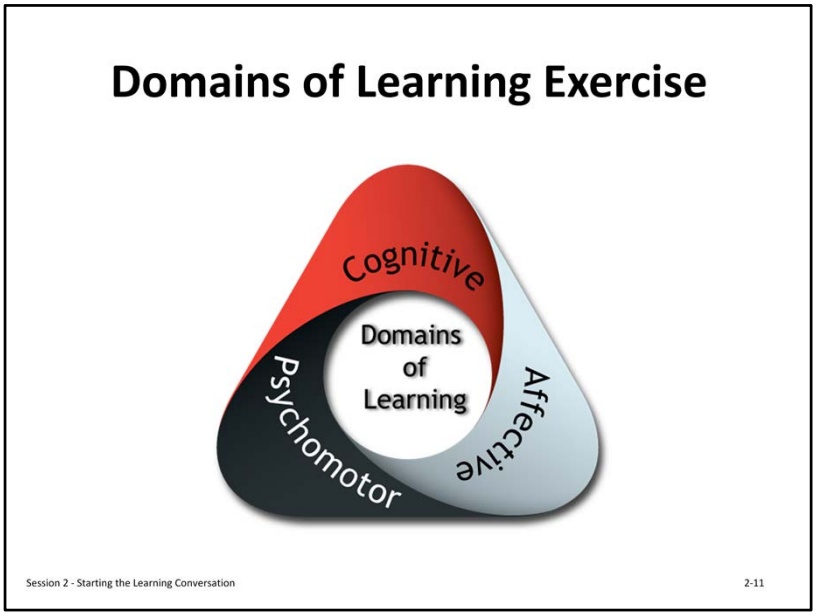
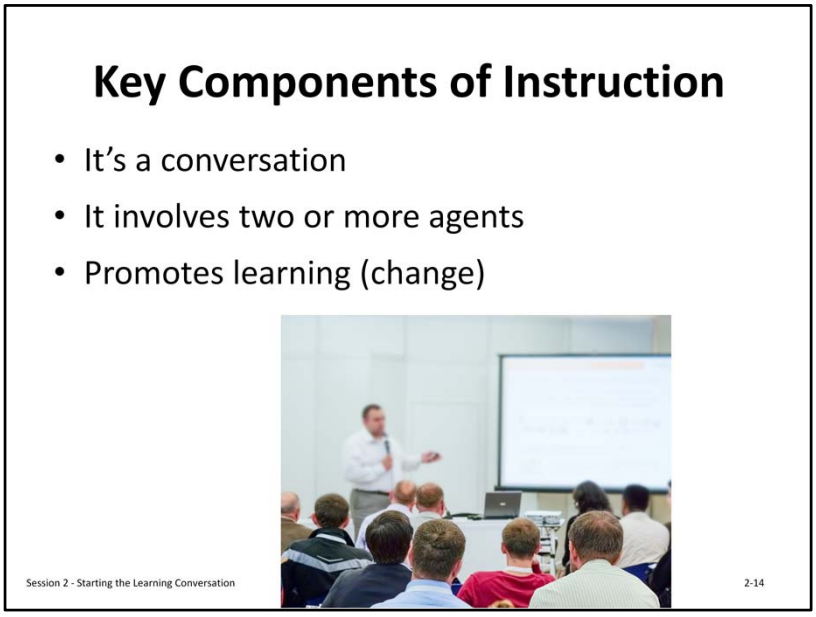

Domains of Learning Exercise
Cognitive
Domains
of
Learning
Affective
Psychomotor
Session 2 - Starting the Learning Conversation
2-11

Maximizing Efficiency in Learning

Session 2 - Starting the Learning Conversation 2-12

What is instruction?



"At it's core, instruction is a learning conversation." We have explored the difference between learning and instruction. Next, we are ready to consider some of the ways the physical environment can impact learning.

The three key components in the definition of instruction are:

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2. _____

3. _____

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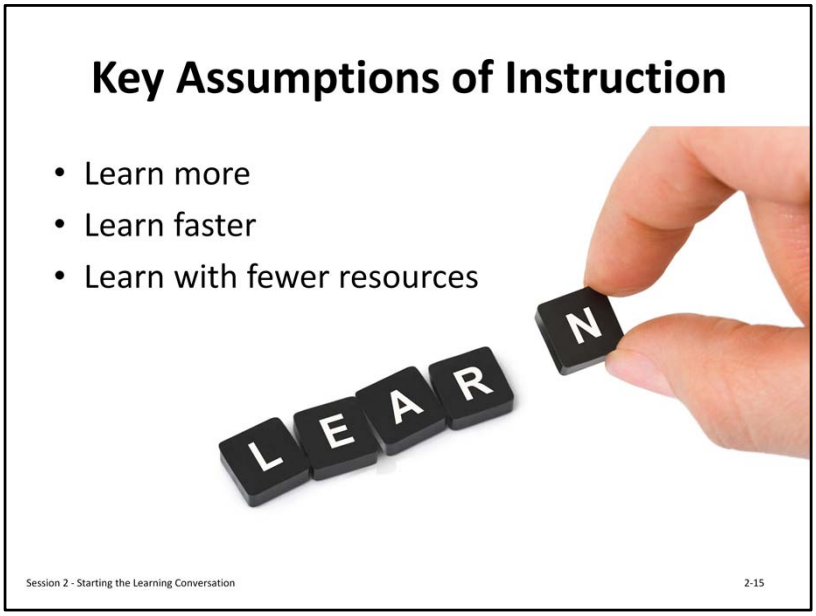
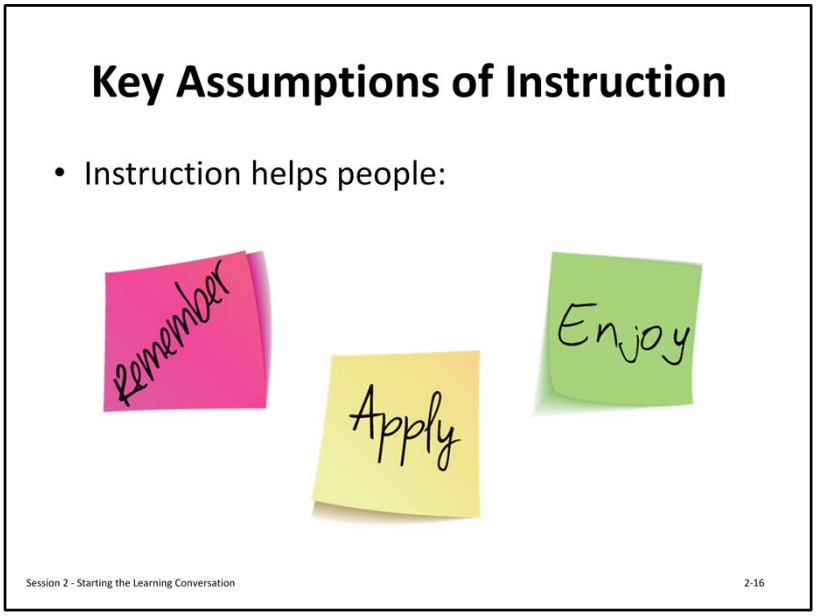


Instruction is NOT a natural process. It is an artificial process designed by human beings to help people:

- Learn more
- Learn faster
- Learn with fewer resources



In addition, instruction helps people by:

- Remembering what has been learned longer
- Applying what has been learned to achieve a goal
- Having a more enjoyable learning experience

C. CREATING THE LEARNING ENVIRONMENT

It is the instructor's responsibility to create, within reason, an effective learning environment. The physical environment may include:

- Training location (academy vs. hotel)
- Safety concerns (exits, fire alarms, medical equipment)
- Safety protocols
- Room size
- Room temperature
- Seating arrangement (U-shaped vs. classroom style)
- Audio visual equipment
- Training materials
- Visibility of visual aids
- Break areas
- Restrooms
- Availability of food and refreshments

The psychological environment may include elements to make it:

- Friendly
- Encouraging
- Helpful
- Non-Intimidating
- Limiting distractions

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Learning Environment Activity
Session 2 - Starting the Learning Conversation
2-19

An instructor's basic responsibilities for creating an effective learning environment include:

- Ensure the learning environment is safe and participants follow all safety protocols
- Design or be familiar with the full content of the training to ensure overall quality and cohesiveness
- Manage and coordinate the learning process so the participants are focused and free of distractions, i.e., enhance maximum comprehension
- Understand the participants' motivations and help them to participate fully in the learning activities
- Review and evaluate the effectiveness of the learning environment

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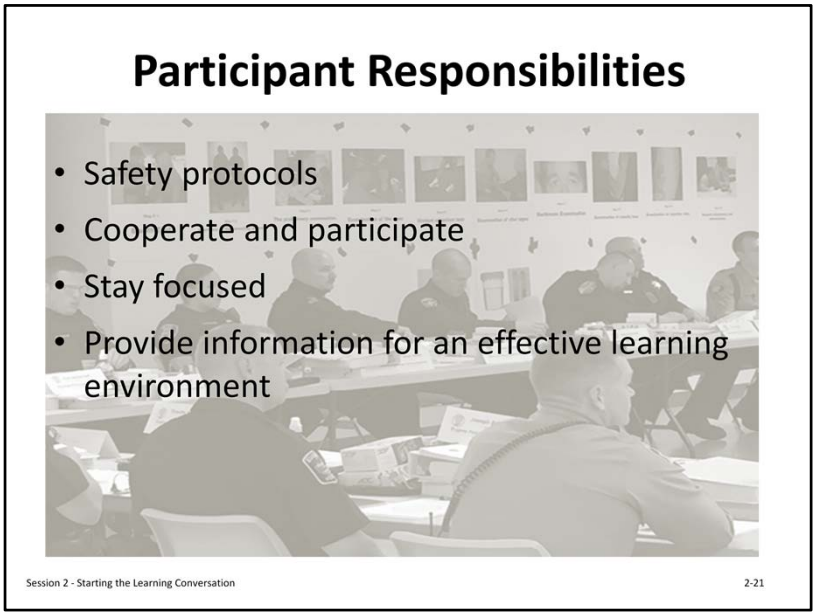

The participant's basic responsibilities for creating an effective learning environment include:

- Assist the instructor in keeping the learning environment safe and follow all safety protocols
- Cooperate with the instructor and participate fully in the planned activities
- Stay focused on the assigned instructional tasks and do not do anything that keeps others from learning (Don't be a distraction)
- Provide the instructor with information that can be used to evaluate the effectiveness of the learning environment

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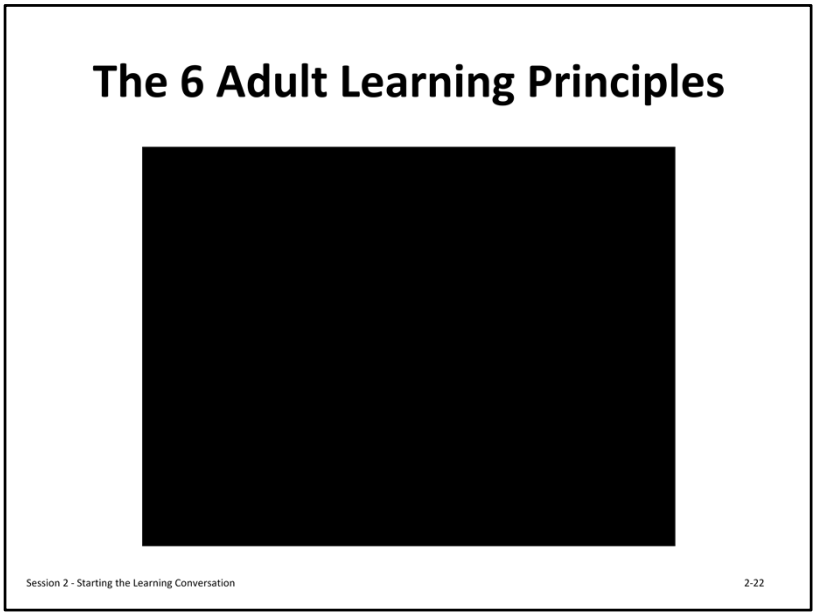
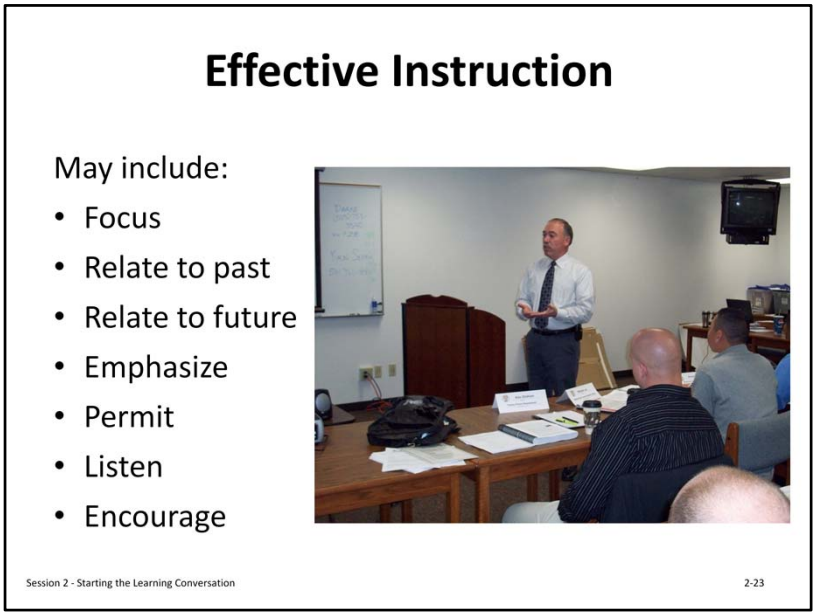


Six Adult Learning Principles:

1. Adults are internally motivated and self-directed
2. Adults bring life experience and knowledge to learning experiences
3. Adults are goal-oriented
4. Adults are relevancy-oriented
5. Adults are practical
6. Adult learners like to be respected



Everyone has different life experiences that can affect how they learn. In order to embrace those experiences, effective instruction may include these points:

- Focus on real world problems
- Relate the materials to the participants' past experiences
- Relate the lesson to the participants' goals and experiences
- Emphasize how the lessons can be applied
- Permit participants to challenge ideas
- Listen to and respect the participant
- Encourage participants to be resources to the instructors and to each other

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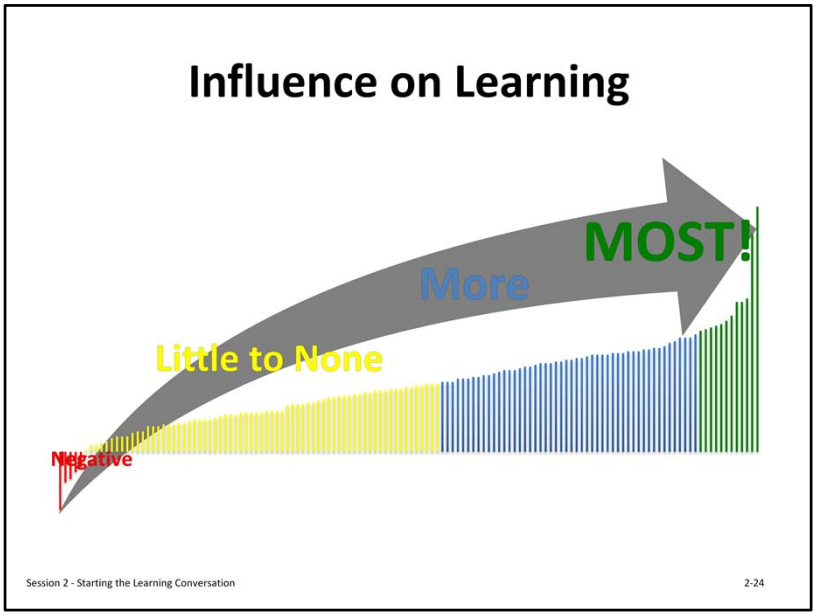

D. <u>CYCLE OF INSTRUCTION</u>

Throughout human history, people have invented thousands of different instructional processes. Some work very well; some work only a little bit or not at all; and, some actually make people less receptive to learning!

Research has shown over 130 different factors influencing achievement for students of all ages (see Appendices for reference). This graph represents findings from over 900 different meta-analyses of these factors involving thousands of research studies and millions of people. As you can see, most of the things we do will have some effect on learning. If you are looking for an instructional process that is guaranteed to increase learning and your only question is "What works?" the answer is "Almost everything!" You can select almost any instructional process that has been invented and you will find it will help people learn more than if you just left them to try to learn something on their own. But "What Works?" is really the wrong question to ask. What you want to know is "What works best?"

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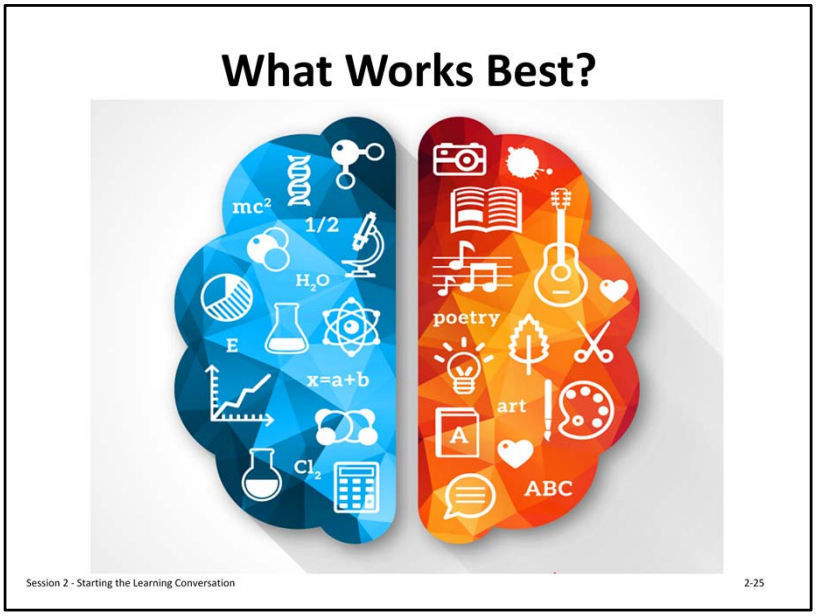

As you might imagine, learning researchers and instructional theorists have many different opinions about which instructional process works best. That's because the answer to "What works best?" is "It depends." It depends upon hundreds of factors, including:

- The participant's present level of knowledge and skill
- The participant's level of motivation
- The types of knowledge, skills, or attitudes that need to be learned

These factors may change from moment to moment. What works best for participants one day may not work for them at all a year from now. This means it is up to you to analyze your particular training situation and determine which instructional process will work best.

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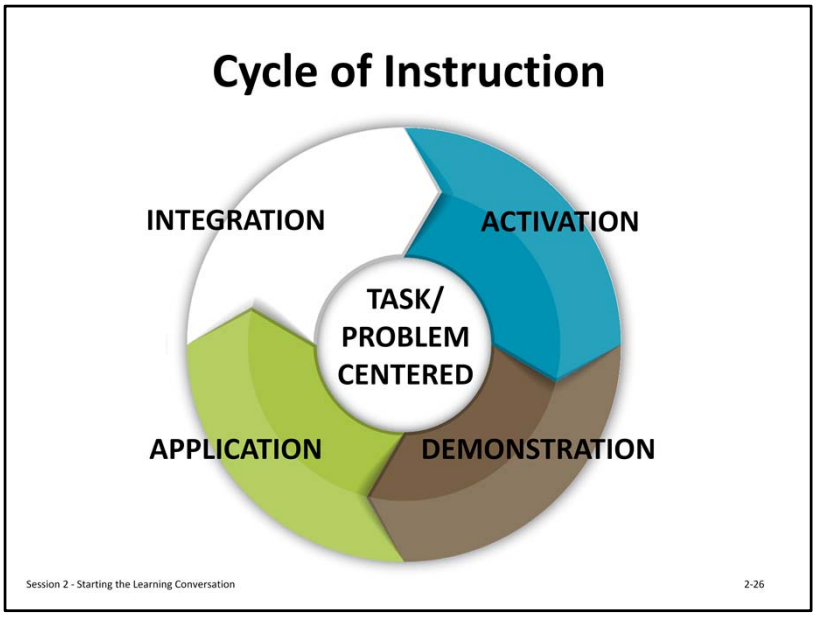


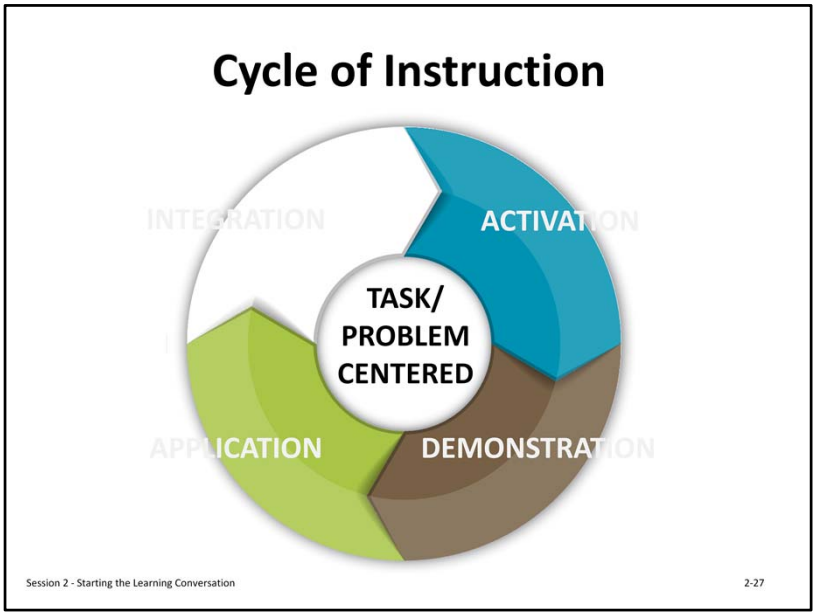
After a careful study of many different instructional design theories and after a thorough review of the research supporting these theories, most of the instructional design theories was found to have five principles in common. These "First Principles of Instruction" include:

- **Problem-Centered Principle:** Learning is promoted when participants acquire skill in the context of real-world problems
- **Activation Principle:** Learning is promoted when participants recall existing knowledge and skill as a foundation for new skills
- **Demonstration Principle:** Learning is promoted when participants are shown the skill to be learned
- **Application:** Learning is promoted when participants use their newly-acquired skill to solve problems
- **Integration:** Learning is promoted when participants reflect on, discuss, and defend their newly-acquired skill

These first principles provide us with a new answer to the question "What works best?" The answer is "It still depends, but it will most likely include the first principles of instruction."

These principles may be applied to create a 4-phase cycle of instruction in which the participant identifies the Problem and then proceeds from Activation to Demonstration to Application and finally to Integration. Of course, it is possible to mix these phases in different sequences, but they are generally followed in this order. We will use these five principles during this training and refer to them as the "Cycle of Instruction."

We will now review each of these principles in more detail.



At the center of every learning conversation, there needs to be a goal, a task to be performed, a problem to be solved, or a concept to be learned. There is something to be changed. In the Cycle of Instruction, that component is referred to as the Problem-Centered principle.

This principle states learning is promoted when it occurs within the context of real-world tasks or problems. Participants increase their knowledge and skills best when they progress through a sequence of related tasks or problems. In most cases, they start with simple tasks or problems and gradually advance to more complex tasks or problems.

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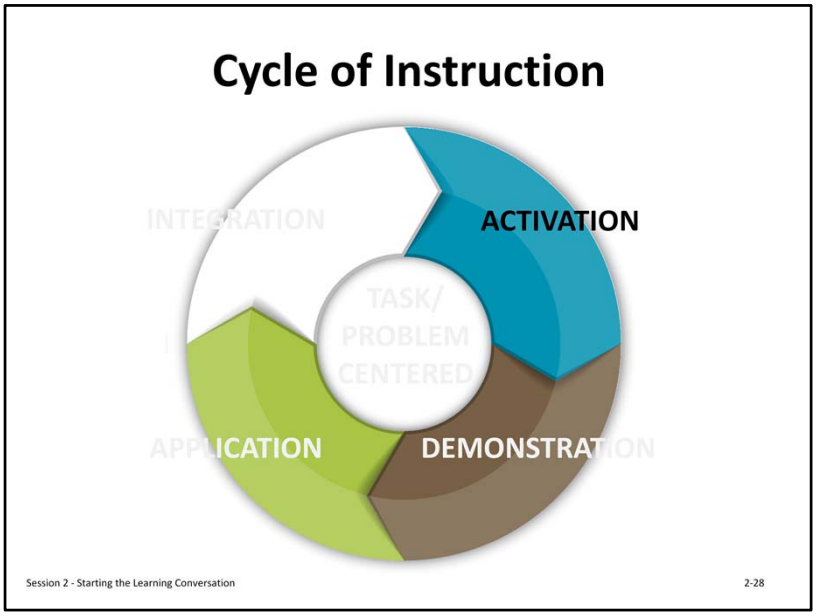
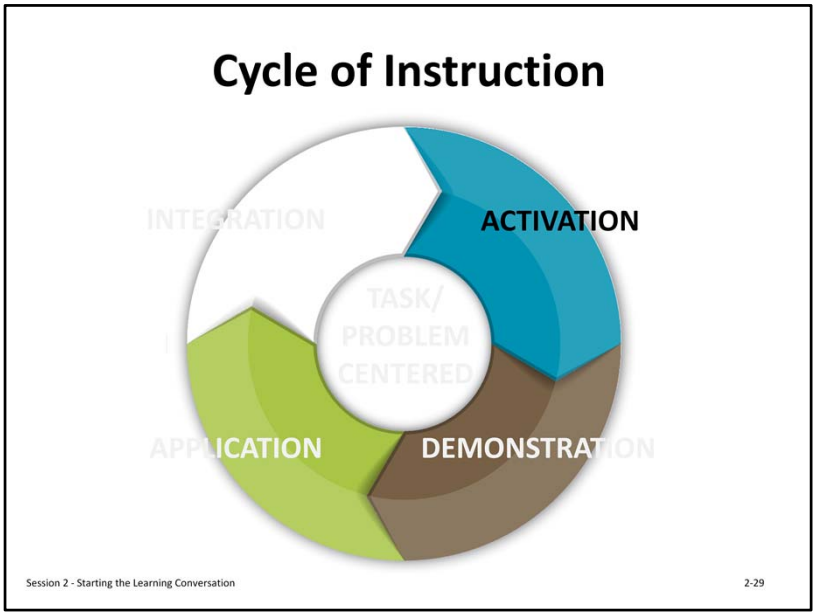

Cycle of Instruction
ACTIVATION
DEMONSTRATION
Session 2 - Starting the Learning Conversation
2-28



The Activation Principle states learning is promoted when it activates relevant prior knowledge or experience. In this phase, the participant answers the question "What do I already know about this task, problem, goal?" The participants activate relevant prior knowledge or personal experience related to the learning goal.

Trainers may tell a story, show a video, use a demonstrative aid, or use other teaching tools in order to activate prior knowledge or experience. The Activation Principle allows the instructor to do the following:

- Gives the participants a "hook" on which they can "hang" the new learning. This can be done by asking participants to recall or describe something they have previously learned.
- Gives participants an opportunity to demonstrate a skill they have previously mastered
- Participants can also share their prior knowledge or experience with others
- It can be extremely helpful if you help the participant activate some kind of organizational structure or framework they have previously learned and then use it as a foundation upon which you continue to build new knowledge, skills, and attitudes.

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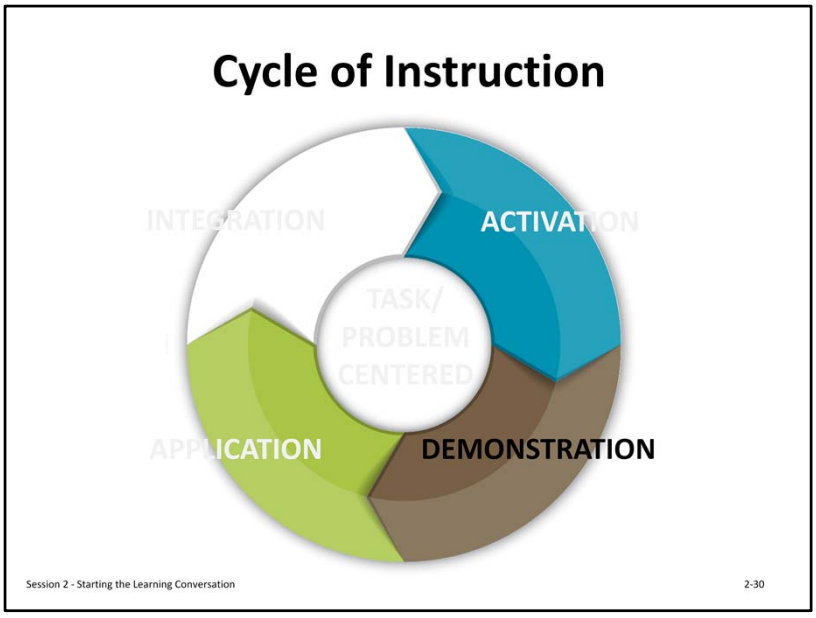

The purpose of the Demonstration Principle includes:

- Learning is faster and easier when participants are guided by a demonstration
- Information may be shared in this phase, but it is important to provide specific portrayals of the information so participants can see how the information can be applied in the context of a real-world task or problem
- Demonstrations or worked examples make later practice activities more effective. People learn more from examples AND practice than they do from practice alone. Research shows that in almost every training situation, guided instruction works better than non-guided "discovery" learning.

The Demonstration Principle should be incorporated in the design of every learning conversation due to the following:

- The Demonstration Principle states learning is promoted when participants can observe a demonstration of the task or see a worked example of how to solve the problem
    - A "worked example" is an observable example of a problem that has already been solved. Participants can study the worked example and use it as a model to follow as they try to solve a similar problem.
- Demonstrations should also provide sufficient information and guidance to help the participant focus on key elements of the task or problem
- In addition, participants may be given information on how the knowledge and skills may be applied to other types of tasks or problems

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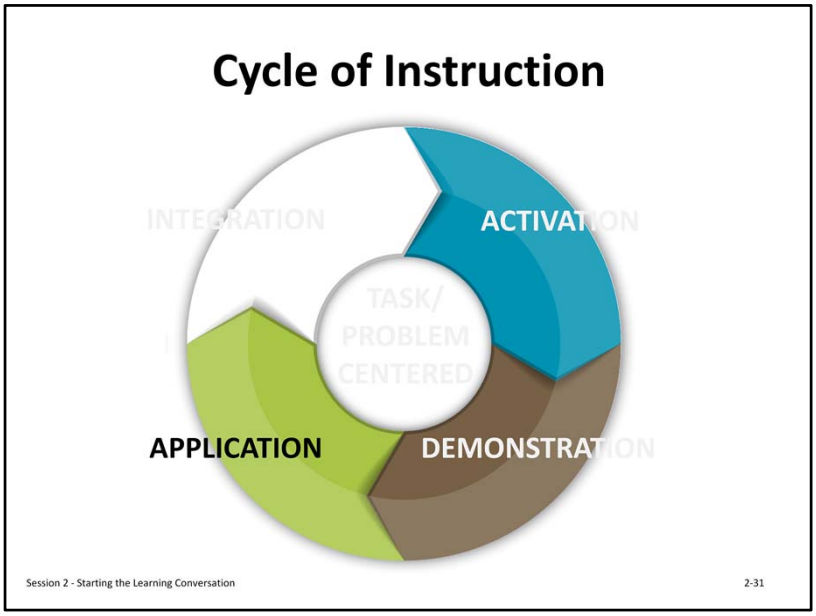

The Application Principle should be incorporated in the design of every learning conversation due to:

- The Application Principle states learning is promoted when participants must apply knowledge, skills, and attitudes to carry out similar tasks or solve similar problems
- Participants gain much more from this if they receive corrective feedback and coaching from the instructor
- They may also receive feedback from other participants as they collaborate on the task or discuss various aspects of the problem

The purpose of the Application Principle includes the following points:

- Participants need multiple practice opportunities before they will be able to perform a skill fluently. Without practice, they cannot effectively learn the skill, nor will they retain what they learn very long.
- Novice participants will need guidance and corrective feedback, but the instructor's support and coaching should fade away as expertise increases. The Application Principle ensures participants have opportunities to receive feedback that will make their learning more effective and efficient.

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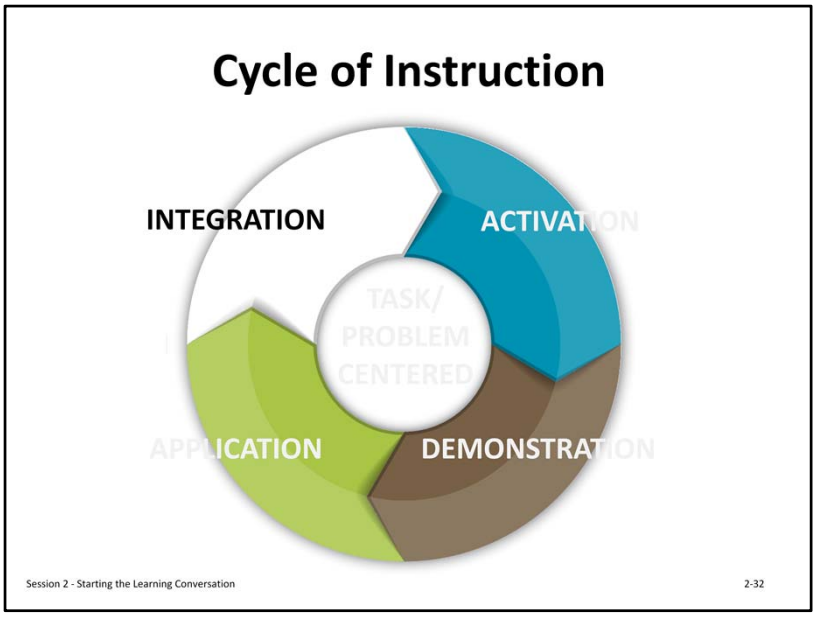

The Integration Principle should be incorporated in the design of every learning conversation:

- Integration Principle states learning is promoted when the participant integrates their new knowledge, skills, or attitudes into their personal or professional lives in some meaningful way
- Peer discussions or critiques can provide opportunities to reflect on what they have learned and explore new ways to use their knowledge and skills
- If appropriate, participants may demonstrate what they have learned to more than just their classmates and their instructor
- They may engage in public demonstrations or presentations of their knowledge and skills

The purpose of the Integration Principle includes the following:

- Purposeful integration of the new skills into regular work tasks ensures the skills will continue to be improved
- Periodic reflection and review of previous learning increases the ability of the participants to retain their knowledge and skills in long-term memory. The integration of the skills into professional and personal activities will provide opportunities for reflection and review.
- Knowing the skills will be performed before others in real-world situations increases motivation to continue to learn and become more fluent in the skill

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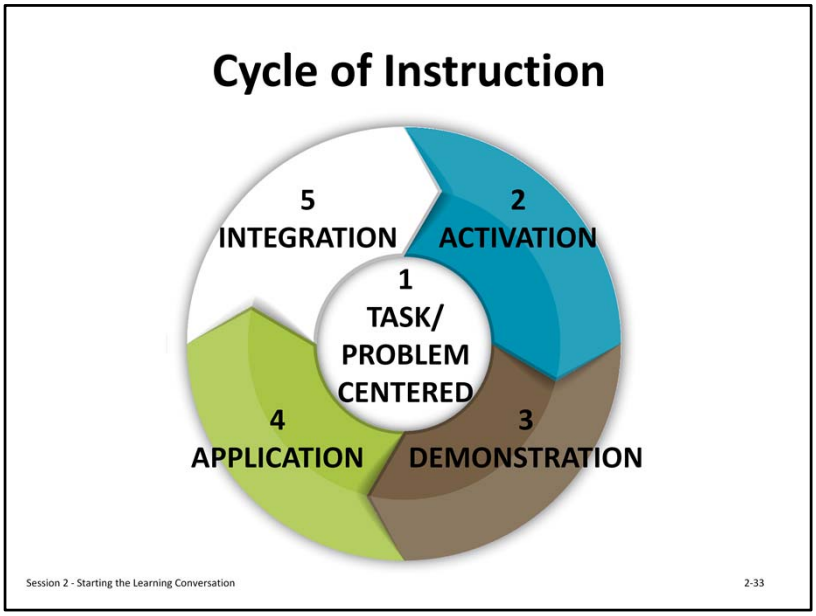

These five principles may be used together to form a Cycle of Instruction in which participants engage in a Task or Problem as they advance from Activation to Demonstration to Application to Integration, in sequence. The Cycle of Instruction may continue the learning conversation when a more complex task or problem—one that is related to the first task or problem—is given to the participants, and they go through the cycle again.

E. QUESTIONS AND/OR CONCERNS