Creating Deep Learning Experiences: Helping Students Make Connections
Prepared by Dr. Kristi Dickey

Thank you for choosing this professional development session. I have prepared this "notes with gaps" document to guide your experience through the content in this module. I recommend watching the videos and considering the questions in the order they are provided.

Research recommends hand-writing notes rather than typing them. For the best learning experience, please print this handout or use a device with surface writing capabilities.

We're going to begin with an exercise to activate prior knowledge. Please consider the following questions and jot down answers.

As a learner, when have you struggled to learn something new?

What might have been the underlying factor that caused the issue?

Were you able to overcome the obstacles? If so, how? And if not, why?

Watch the video *Creating Deep Learning Experiences Part I: Introduction*. After you complete the video, read the following scenarios and consider the questions that relate to each.

Scenario One: That Didn't Work Out the Way I Anticipated

For the past 12 years, I've taught the introductory Art History course. I present the material using a standard approach. That is, I begin with an introductory description of key terms and concepts, including a discussion of the basic visual elements (line, color, light, form, composition, space). Then, for each of the remaining 40 class sessions, I show slides of important works, progressing chronologically from prehistoric Europe to rather recent pieces. As I go, I identify important features that characterize each piece and point out associations among various movements, schools, and periods. I give a midterm and a final exam during which I present slides and ask students to identify the title of the work, the artist, the school, and the period in which it was produced. While the students seem to enjoy the class sessions, they complain about the amount of material they must memorize for the exams. I know there are a lot of individual pieces, but they naturally cluster by period, school, and technique. Once you categorize a work according to those groupings, it should be fairly easy to remember. Nevertheless, the students seem to be having a lot of difficulty in my exams identifying even some of the most important pieces.

Professor Rachel Rothman

Ambrose, S.A., Bridges, M.W., Lovett, M.C., DiPietro, M., Norman, M.K. (2010). *How learning works: Seven research-based principles for smart teaching.* San Francisco, CA: Jossey-Bass.

What are the problems that Professor Rothman is experiencing in her Art History course?

Before reading further, brainstorm some potential solutions for addressing the issues she is having with students.

Scenario Two: There Must Be a Better Way!

Anatomy and Physiology is one of the core courses required for our nursing, pre-med, and pharmacy students. The course is organized around the major systems of the body and requires students to identify and describe the location and function of the major organs, bones, muscles, and tissues in the body. On the whole, students attend the lectures and labs consistently, and most of them appear to work really hard. Indeed, I often find them in the student lounge poring over their notes or quizzing each other in order to memorize all the individual structures. With a lot of work, they learn to identify most of the parts of the human body and can describe the role of each part in its body system. However, when asked to explain the relationships among parts or higher-order principles that cut across systems, the students often fall apart. For example, on the last exam I asked them to identify and describe all the structures involved in the regulation of blood pressure. To my surprise, most of the students were unable to answer the questions correctly. I just don't get it—they know all the parts, but when it comes to how those parts fit together, they have a really difficult time.

       Professor Anand Patel

Ambrose, S.A., Bridges, M.W., Lovett, M.C., DiPietro, M., Norman, M.K. (2010). *How learning works: Seven research-based principles for smart teaching.* San Francisco, CA: Jossey-Bass.

Identify the problems that Professor Patel is experiencing in his Anatomy and Physiology course.

Quickly brainstorm and jot down some potential solutions for Professor Patel before reading further.

What are the similarities and differences between *Scenarios One and Two*?

Watch the next video *Creating Deep Learning Experiences Part II: The Science of Knowledge Organization* and consider the related questions.

Think back to when you struggled to learn something new. Was your struggle related to knowledge organization? If so, how?
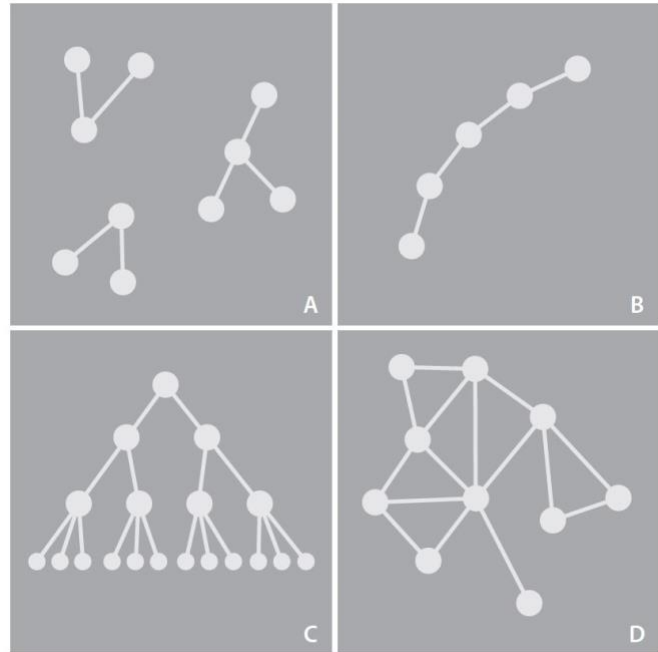
In what specific learning situation have your students had difficulties making connections to the content?

How might your students' struggles be related to their mental organization of knowledge?

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Watch the next video *Creating Deep Learning Experiences Part III: Strategies*. Consider how you might apply each of the strategies below.

Create a concept map of your course content.

Provide organizational frameworks.

Activate students' prior knowledge.

Make your thinking transparent.

Monitor student progress through practice.

Make the learning relevant.

Provide case studies or scenarios.