

**Examples of Mayer's Multimedia Principles**

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### **Multimedia Learning**

Multimedia learning is defined as a form of computer-aided instruction the combination of visual and audio to learn a concept (DeBell, 2022). In my video about two-digit by two-digit multiplication with an area model, I used both visuals and audio for the student to learn with multimedia. Visuals are an effective learning tool for learners to grasp the concept better than reading the information alone. When combined with audio to explain the visual the learner has a greater opportunity to understand the information presented. The two-digit by two-digit multiplication with an area model does follow the multimedia learning definition.

### **Temporal Contiguity Principle**

The Temporal Contiguity Principle states that humans learn best when corresponding words and visuals are presented together, instead of in consecutive order (DeBell, 2022). For example, in my video about two-digit by two-digit multiplication with an area model, I meticulously made sure that the audio fit what was being shown on the screen. That the correct words lined up with a visual to match and describe the next step.

### **Modality Principle**

The Modality Principle states that humans learn best from visuals and spoken words than from visuals and printed words (DeBell, 2022). The way the Modality Principle is integrated into the video about two-digit by two-digit multiplication with an area model is by putting a minimum amount of words on a page and adding visuals for the learner to see what should be done throughout the process.

### **Redundancy Principle**

The Redundancy Principle states that humans learn best with narration and graphics. In my two-digit by two-digit multiplication with an area model video there is only text as needed (DeBell, 2022). For example, the steps are titled for each slide. There are vocabulary words put on the screen at the beginning of the video after objectives have been stated. The Redundancy Principle was applied and followed in this video with narration and graphics.

### **Coherence Principle**

The Coherence Principle states that humans learn best when extraneous, distracting material is not included (DeBell, 2022). Throughout the two-digit by two-digit multiplication with an area model video, the learner is not bombarded with too many words. For example, there are few words on the slides. The visuals are used to enhance the understanding so the learner can focus on the topic being presented. Several times, I watched the video to make sure there was not too much information on one page.

### **Personalization Principle**

The Personalization Principle states that humans learn best from a more informal, conversational voice than an overly formal voice (DeBell, 2022). In my video about two-digit by two-digit multiplication with an area model, I used a lighthearted informal tone to put the learner at ease about a big concept. There was the use of formal language so that math vocabulary was being used to come across, but the tone was informal. For example, I made sure in the middle to have a screeching sound to gather the 4th Graders' attention if already distracted. It gives them the sense that this is important information you are about to hear so pay attention. 4th Graders will find this engaging.

### **Segmenting Principle**

The Segmenting Principle states that humans learn best when information is presented in segments (DeBell, 2022). In my video about two-digit by two-digit multiplication with an area model, the learner is able to control the video with the speed of the video and the ability to pause when needed. For example, there is a reminder in the directions on the Google Form that they can pause and go back in the video as needed to make sure they are grasping the concept.

### **Pre-training Principles**

The Pre-Training Principle states that humans learn more efficiently if they already know some of the basics (DeBell, 2022). For example, in my video about two-digit by two-digit

multiplication with an area model, there is a “Terms to Remember” slide of vocabulary taught prior to this concept. The slide only has the terms needed to be able to multiply two digit numbers.

### Reference

DeBell, A. (2022, December 14). *How to use Mayer's 12 principles of multimedia learning [examples included]*. Water Bear Learning.  
<https://waterbearlearning.com/mayers-principles-multimedia-learning/>