E-Learning and the Science of Instruction

Chapter 10 – Applying the Segmenting and Pretraining Principles

*Break a continuous lesson into bite-size segments (p. 207)*

*Ensure learners know names and characteristics of key concepts (p. 212)*

Sometimes learners must engage in too much essential cognitive processing and their cognitive system is overwhelmed. Segmenting and pretraining are ways to reduce this cognitive load. (p. 205)

**Segmenting Principle**

Break a continuous, complex lesson into smaller parts that are presented one at a time. These segments should either convey steps in the process/procedure or describe major relations among the elements. Only include between one and three elements in each segment. (p. 209)

**Why should we follow the segmenting principle?**

Too much essential processing is required for novice learners to receive a continuous stream of information containing a lot of interrelated concepts. (p. 210)

Segmenting allows the learner to engage essential processing without overloading the learner’s cognitive system. (p. 210)
Pretraining Principle

Provide pretraining in the names and characteristics of the key concepts in the lesson and the various elements in the virtual classroom, especially if the material to be taught is complex. (p. 212)

Why should we follow the pretraining principle?

“Pretraining can help beginners to manage their processing of complex material by reducing the amount of essential processing they do at the time of the presentation.” (p. 215)
Additional Reading:


