

**Southern Nevada Regional  
Professional Development Program  
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## **Using the Learning Process for Effective Instruction**

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**Give a person a fish & you feed them for a day;  
teach them how to fish & you feed them for a  
lifetime.**

**~~Ancient Chinese Proverb~~**

# Objectives

- Review and apply the learning process
- Understand why process works
- Link the process to instruction

**Schools shouldn't be a place where  
young people come to watch old  
people work!**

# Stop, think and write...

Think of something you have learned.  
Describe **HOW** you learned it.

Share with a partner.

"If teachers become distant from their own learning, they will most certainly become distant from the learning of their students."

~~Alisa Wills-Keely~~

# What is the Learning Process?

*Learning involves a 3-step process:*

- **Initiate**
- **Construct**
- **Utilize**

# Initiate

- Set the stage
- Build background knowledge
- Connect to existing knowledge
- Motivate

*“A student’s prior knowledge is the single most important resource in learning....Reading and learning are constructive processes...we actively draw on prior knowledge and experience to make sense of new information.”*

*Vacca & Vacca*

***There's a bear in a plain brown wrapper doing flip-flops on 78, taking pictures, and passing out green stamps***

Answer the following questions:

- What is this sentence about?
- Is this difficult to read?
- Do you understand the meaning?
- What hinders comprehension?



# Construct

- Active engagement in developing new knowledge/understandings
- Task analysis
- Construct new meaning and develop new skills by...
  - Reading, writing, discussing, creating, solving, investigating, exploring....
  - Must use all modalities, including reacting and responding to the reactions of others

# Utilize

- Apply new learning
- Demonstrate new knowledge
- Act upon meanings
- Connect to other contexts
- Reflect upon learning & thinking (metacognition)

***Once students understand HOW they think, they can apply the process to new situations.***



# The Learning Process is like...

Can you think of something you do that has steps similar to those in the learning process?

Write an extended analogy for the learning process. You may draw or illustrate your analogy.



# Why Process Works

*A look at their brains...*



***We are all born with a brain, but the mind  
is developed.***

# Linking Brain Research to Your Instruction...

- Read through *The Components of an Effective Lesson*
- Note how this documents represents the learning process
- Fill in the brain facts that correspond to each component.

# Attention!

**There is no such thing as a student who is not paying attention.**

- Physical/emotional need
- Self-made choice
- Relevance
- Novelty
- Your name

**Our brain retains only about one percent of the information that bombards us daily.**

# Memory & Time

*The brain is not designed for continuous attention*

- Attention span-1 minute for each year; stops at 20 minutes
- BEM principal—beginning/middle/end
- Review 10 min – 24 hours – 7 days
- Takes sleep for a skill to “imprint”
- Frequent, specific feedback from various sources— minimum every 20 minutes

# Memory & Connections

*What fires together wires together*

- Brain seeks meaning by connecting to existing knowledge
- Use multiple pathways-there is no all-purpose memory path
- Explicit (declarative) & Implicit (procedural)

*“Practice doesn’t make perfect; it makes permanent.” M. Hunter*

- Strengthen existing connections
- Provide reflection and discussion

# STOP!

Jot down two things YOU do to help your students connect to and remember new information

**Now...**

- Stand up
- Make eye contact
- Pair-up
- Share one idea

# The Brain Needs Mental Models

- How the mind holds abstract information (no sensory registry)
- All subject areas have their own mental models
- Explain
  - Why, structure, purpose, process
- Stories, analogies, models
- Space, time, part to whole



# Teaching Mental Models

- Sketch a word/concept
- Writing
- Mental modeling
- Teach the process
- Students writing questions
- Relational learning

***“The key process to educate now is autonomous and competitive. It needs to change to be relational learning.”***

***Ruby Payne***

# Emotion

- Must feel safe
- Energy is re-directed—fight or flight
- Difficult to think or remember
- Brain can not differentiate between emotional and physical danger
- If rejected, it takes 32x before they feel safe

# Social

*A student's brain physically changes every day; the way we teach either enhances or impairs it.*

- We are social learners.
- Rat studies have shown:
  - 3 rats in a small cage with no toys showed more gains
  - 1 rat with toys and lots of stimulation
  - When cage conditions were changed, it took only four days for the rats' brains to change.

# **Learning follows the 70/20/10 formula**

- 70% of learning is doing, making and correcting mistakes, problem solving & inquiry
- 20% of learning comes from feedback, reflection and observation
- 10% of learning comes from formal training

**How does instruction in your classroom look?**

Too often in education we focus on the WHAT of learning rather than the HOW.

Teach a student HOW TO learn and they can learn for a lifetime!



***“If we are intent on covering everything, we can be certain that most kids won’t learn. We have to get them involved with learning; not just in the classroom, but in their homes and on their streets.”***

***~~Howard Gardner~~***