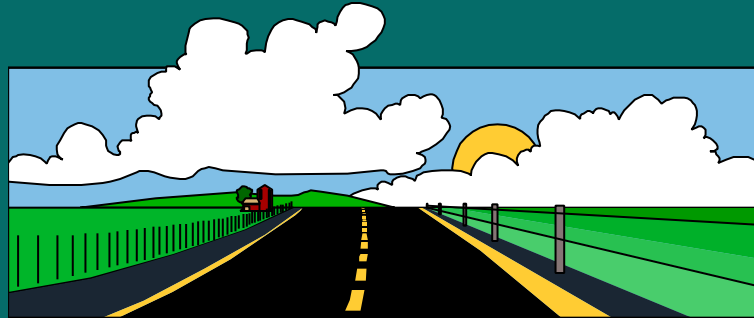


Writing Learning Objectives: Beginning With The End In Mind



Learning Objectives

Participants will be able to:

- Compare and contrast learning objectives vs. learning goals.
- List the 3 parts of the “ideal” learning objective.
- Write learning objectives that contain a measurable verb and communicate clearly to the student.
- Develop learning objectives which demonstrate Bloom’s higher levels of thinking.

Some History

Objectives are statements which describe what the learner is expected to achieve as a result of instruction.

Because they direct attention to the student and the types of behaviors they should exhibit, sometimes these statements are called “behavioral” objectives.

History

- Objectives were conceptualized and used during WWII as a way to make teaching and learning more efficient.
- In the late 1950s and in the 1960s this approach was applied to the public schools.
- By the 1960s health professions schools were developing behavioral objectives.
- 1962 = publication of Preparing Instructional Objectives by Robert F. Mager

Goals

- **Definition**
 - A statement that describes in broad terms what the learner will gain from instruction
- **Example**
 - Students will gain an appreciation of the role of the family medicine physician in the health care system

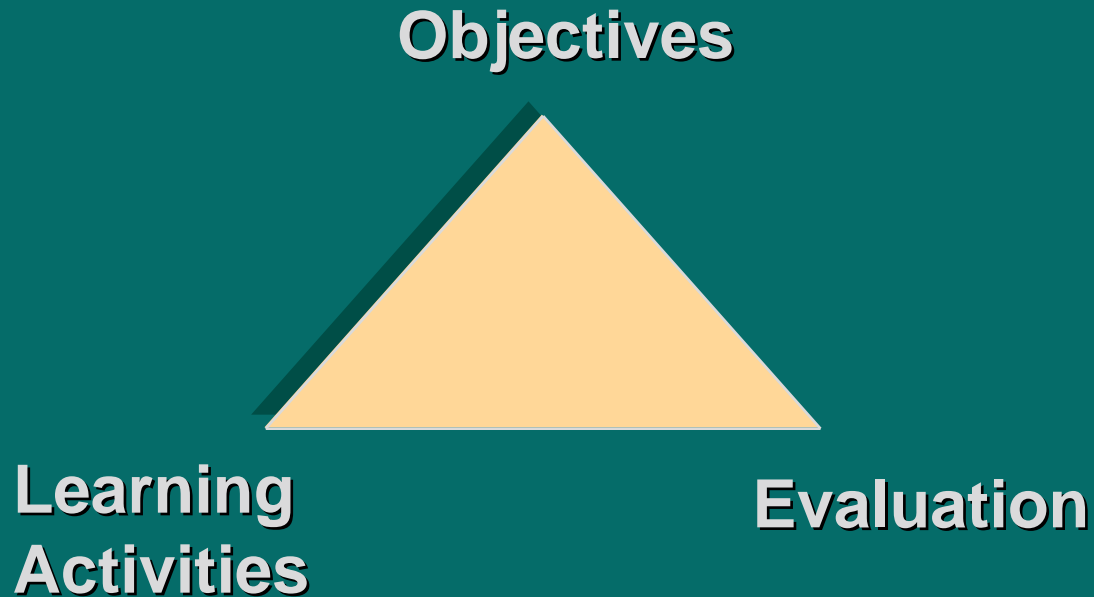
Learning Objective

- **Definition**
 - A statement in specific and measurable terms that describes what the learner will know or be able to do as a result of engaging in a learning activity.
- **Example**
 - Students will list three characteristics that make the family medicine physician distinctive from other specialists in the health care system.

Purposes of Objectives

- **Purposes of Objectives**
 - By knowing where you intend to go, you increase the chances of you and the learner ending up there
 - Guides the teacher relative to the planning of instruction, delivery of instruction and evaluation of student achievement.
 - Guides the learner; helps him/her focus and set priorities
 - Allows for analysis in terms of the levels of teaching and learning

Magic Triangle



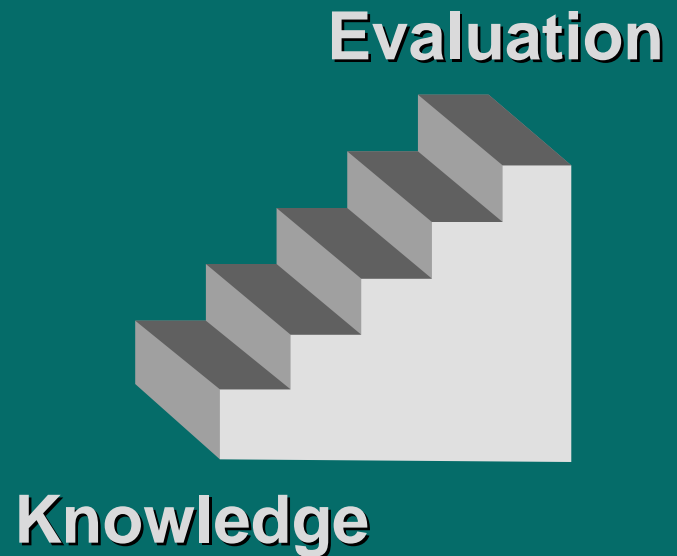
Learning Objective Domains

- Cognitive (knowing)
- Psychomotor (doing)
- Affective (feeling)

Statements of affective outcomes include:
“show sensitivity to” ... “accept
responsibility for” “be willing to”
“demonstrate commitment to”

Levels of Objectives

- **Bloom's Taxonomy**
 - Knowledge
 - Comprehension
 - Application
 - Analysis
 - Synthesis
 - Evaluation



Levels of Objectives

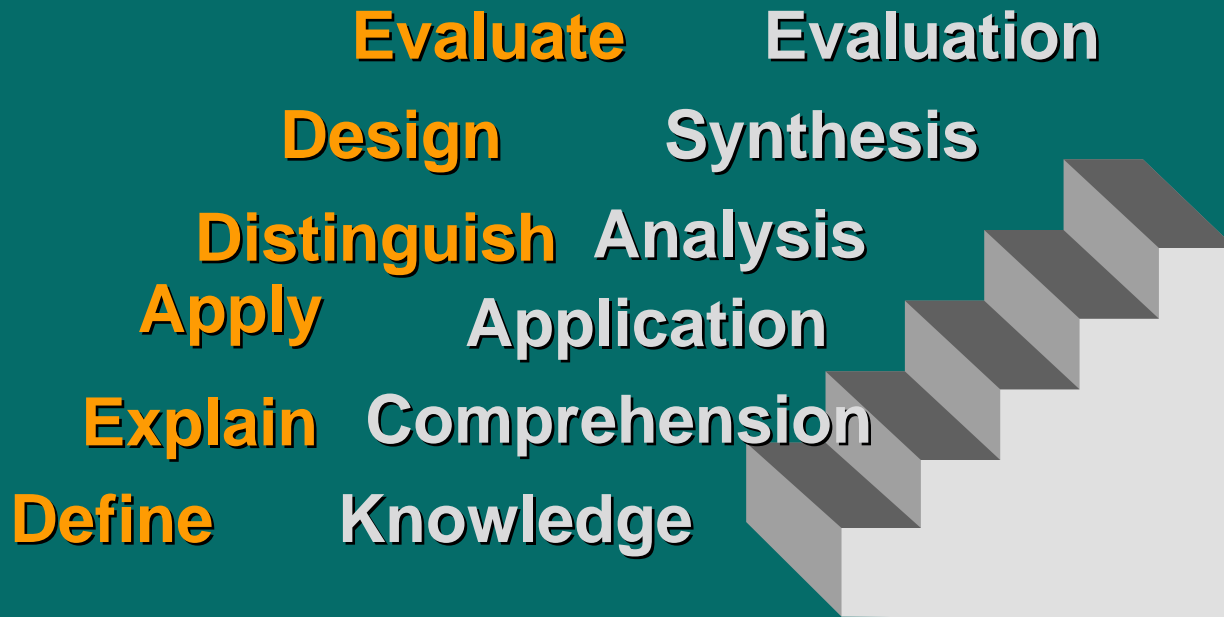
- **Name and describe the components of the Kemp Model.**
- **Utilize components of the Kemp Model to design an instructional sequence.**

Levels of Objectives

- Name the five causes of dizziness.
- Given a patient case description, determine the three most likely causes of dizziness.



Relating the Measurable Verb to Bloom's Levels



Knowledge Verbs (1st level)

- Define
- Memorize
- List
- Recall
- Repeat
- Relate
- Name
- Repeat

Comprehension Verbs (2nd level)

- Restate
- Discuss
- Describe
- Identify
- Locate
- Report
- Explain
- Express
- Recognize
- Review

Application Verbs (3rd level)

- Translate
- Interpret
- Apply
- Practice
- Illustrate
- Operate
- Demonstrate
- Dramatize
- Sketch
- Employ
- Schedule
- Use

Analysis Verbs (4th level)

- Distinguish
- Differentiate
- Appraise
- Analyze
- Calculate
- Criticize
- Compare
- Contrast
- Examine
- Test
- Relate
- Experiment

Synthesis Verbs (5th level)

- **Compose**
- **Plan**
- **Propose**
- **Design**
- **Assemble**
- **Create**
- **Prepare**
- **Formulate**
- **Organize**
- **Manage**
- **Construct**
- **Set-up**

Evaluation Verbs (6th level)

- Judge
- Appraise
- Evaluate
- Revise
- Score
- Select
- Measure
- Value
- Estimate
- Choose
- Compute
- Assess

The Evolution of An Objective

Original Objective:

Using Fick's Law for Diffusion, contrast the movement of oxygen and glucose from the plasma to the intracellular space. Based on their chemical properties, predict which of these substances would show diffusion limited movement, and which would show flow limited movement.

The Evolution of an Objective

The author's statement of intent:

I expect the students to review the factors influencing diffusion (presented earlier in the course), and contrast the movement of two different agents from the blood to the cell. I also expect a working definition of flow limited and diffusion limited transport.

The Evolution of an Objective

What the committee said:

Glucose movement is tissue specific, and entry into the cell by any of a variety of glucose transporters further obscures my intent (transport from the blood to the cell. Identify a tissue, and delete intracellular space. Finally transport is a poorly defined term, replace with exchange (the term used in the text)

The Evolution of an Objective

Final revised version:

Using Fick's Law for Diffusion, contrast the movement of oxygen and glucose from the plasma to a skeletal muscle cell. Based on their chemical properties, predict which of these substances would show diffusion limited exchange, and which would show flow limited exchange.

How Could This Objective Be Improved?

- The resident will demonstrate the ability to make empathic responses to patient statements that reflect particular emotions such as anger, sadness, concern, etc.

How Could This Objective Be Improved?

- During an encounter with a simulated patient, the resident will demonstrate the ability to make empathic responses to patient statements that reflect particular emotions such as anger, sadness, concern, etc. The following specific empathic responses in the following sequence should be demonstrated.
 - 1. Reflective statement
 - 2.
 - 3.
 - 4.

Effective Learning Objectives

- Consistent with the goals of the curriculum
- Clearly stated
- Clearly measurable
- Realistic and doable
- Appropriate for the level of the learner
- Worthy (Important stuff)

Some Examples of Some Pretty Good Objectives?

- The learner will be able to: orally present a new patient's case in a logical manner, chronologically developing the present illness, summarizing the pertinent positive & negatives findings as well as the differential & plans for further testing & management.
- The learner will be able to: describe the mechanisms of action for each of the two classes of neuromuscular blocking agents (depolarizing agents & competitive agents)

Some Examples of Some Pretty Good Objectives?

- The learner will be able to: describe suppurative arthritis. Include the usual pathways of joint infection, most common organisms, clinical manifestations, including lab diagnosis and the natural history.
- Given a ventriculogram and cath lab data of pressures, cardiac outputs and ejection fraction, identify the states of normal hearts, aortic stenosis and mitral regulation.

Some Examples of Some Pretty Good Objectives?

- Given a case problem, including history, physical findings, diagnosis, and list of prescribed drugs, state the physiologic, pathophysiologic and pharmacologic factors that could modify the drug response in that patient.
- Given the calculated results of tests compared with predicted normal values, determine the presence or absence of abnormal pulmonary function and classify it as to type and severity.

The End

Good luck in your efforts to write clear and measurable objectives that communicate well to learners and colleagues.