The ABCs of Learning Objectives

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Our Learning Objectives

At the conclusion of this presentation, faculty should be able to:

• Distinguish between goals & objectives.
• Recognize the characteristics of useful learning objectives.
• List the 4 components of learning objectives.
• Identify observable, measurable verbs for writing objectives in the cognitive domain.
Background

• Activities required for successful instruction
  1. Analysis
     • Consider what students already know
     • Consider what students need to know
  2. Design & development
     • Clearly specify what you intend to accomplish by instruction
     • Select & design learning experiences
  3. Implementation
  4. Evaluation & improvement
     • Assessment of student
     • Assessment of lesson / instructor

Objectives

• 1962: Robert Mager’s *Preparing Instructional Objectives*

• Learning Objective:
  – “a description of a performance you want learners to be able to exhibit before you consider them competent” p.5
Why should we write objectives?

1. Needed to select & design appropriate materials, content, & methods
2. Provides evidence of objective accomplishment
3. Helps students organize study toward accomplishment of objectives

Goals vs Objectives

- Goals = broad, general, non-specific
  - Overall learning
    - SoP goal: Promote wellness and disease prevention.

- Objectives = specific, observable, measurable
  - Specific learning
    - In-class objective: Identify patient characteristics for which diabetes screening should be recommended.
Considerations in Objective Writing

1. Related to *intended outcomes*, not process for achieving outcomes

2. Concerned with *students*, not teachers

3. *Specific* & *measurable*, not broad & intangible

Outcomes vs. Process

• Teaching & lecturing = part of instructional *process*, *not the purpose*

  – *To provide a lecture on antihypertensives.*

Outcomes vs. Process

• Teaching & lecturing = part of instructional process, not the purpose

– Explain the basic pharmacology of ACE-inhibitors.

Specific vs. General

• If objectives aren’t specific enough, can’t determine if they have been met

   – *Discuss Medicare Part D.*

Specific vs. General

• If objectives aren’t specific enough, can’t determine if they have been met

• **Outline the 5 phases of Medicare Part D benefits related to cost structure.**

• **Describe standard and low-income provisions of Medicare Part D.**

• **Differentiate drugs that are categorically covered and excluded by Medicare Part D.**

Students vs. Instructors

- **LEARNING** objectives should describe student's performance, not instructor's
- Ask “Who are my students & what should they be able to do at the end of MY instruction in THIS course?”
  - P1 vs P2 vs P3 vs P4 vs PGY1 vs PGY2 vs PhD vs BCPS

Students vs. Instructors

- **LEARNING** objectives should describe student's performance, not instructor's
- Ask “Who are my students & what should they be able to do at the end of MY instruction?”

  - Outline the 5 phases of Medicare Part D benefits related to cost structure. (P2 - 4077)
  - Using the Medicare Plan Finder, justify the most appropriate stand-alone prescription drug plan for a given drug list. (P2 - 4099)

Students vs. Instructors

- **LEARNING** objectives should describe student's performance, not instructor's.
- Ask “Who are my students & what should they be able to do at the end of MY instruction?”

  - Given a patient’s list of medications and using the Medicare Plan Finder, provide Medicare prescription drug plan selection counseling and enrollment assistance. (P4)

Measurable vs. Unmeasurable

• Describe outcomes that can be observed

– Understand the physiology of aging.

Measurable vs. Unmeasurable

• Describe outcomes that can be observed
  – Identify age-related changes in pharmacodynamic sensitivity to medications.

Components of Objectives

- A = Audience
- B = Behavior
- C = Condition
- D = Degree*
Components of Objectives

• A = Audience
  – LEARNING objectives are for students, not teachers
• The student will be able to…

Components of Objectives

• B = Behavior
  - “skill or knowledge to be gained & the action or skill the student is able to do”
  - should be specific & singular

Components of Objectives

• B = Behavior
  – The verb that describes the desirable behavior must be **observable**.
    • What is the learner doing while demonstrating achievement of the objective?
  – Verbs can be categorized by domains of learning.
"The Verb"

• Helps to focus on what you will assess
• The student will **do** research.
  – Do = ?
    • State hypothesis?
    • Collect data?
    • Analyze data?
    • Interpret results?
    • Draw conclusions?
    • All of the above?
Domains of Learning

• Cognitive: emphasizes *knowledge*
  – What should the student know?
• Psychomotor: focuses on *skills*
  – What should the student be able to do?
• Affective: highlights *attitudes* & feelings
  – What should the student think or care about?

Cognitive Domain

Bloom, 1956

Knowledge
Comprehension
Application
Analysis
Synthesis
Evaluation

Anderson, 2001

Remembering
Understanding
Applying
Analyzing
Evaluating
Creating


Observable Behaviors

Evaluation / Creating
- compare & contrast,
- critique, defend,
- evaluate, justify

Synthesis / Evaluating
- categorize, collaborate,
- communicate, compare,
- contrast, formulate, intervene,
- reorganize

Analysis / Analyzing
- analyze, correlate, classify, differentiate,
- discriminate, distinguish, estimate, interpret,
- outline, prioritize, recognize, separate

Application / Applying
- apply, choose, construct, demonstrate, determine, develop,
- implement, participate, predict, prepare, solve, utilize

Comprehension / Understanding
- classify, cite, convert, describe, discuss, estimate, explain, extrapolate,
- generalize, identify, translate, summarize

Knowledge/Remembering
- cite, define, describe, identify, label, list, match, recognize, reproduce, select, state


Consider the Level

• **Lecture objectives:**
  – Discuss goals of management for osteoarthritis (OA).
  – Outline American College of Rheumatology (ACR) recommendations for management of OA.
  – Outline American Heart Association (AHA) recommendations for NSAID use.
  – Given patient-specific information, recommend appropriate non-pharmacologic therapy for OA.
  – Given patient-specific information, develop an appropriate pharmacotherapeutic regimen for OA.
  – Identify monitoring parameters for safety & efficacy of OA treatment regimens.
  – Outline patient education information for OA therapy.

• **Course objectives:**
  – List goals of management for osteoarthritis.
  – Based upon patient-specific information, recommend appropriate use of nonpharmacologic & pharmacologic therapies for osteoarthritis.
Components of Objectives

• **C = Condition**
  - Identifies any conditions under which performance is to occur; includes tools or assistance to be provided
  - Not always stated (if obvious)
  - Examples:
    • *Given a list of normal lab values*…
    • *Given patient-specific information*…
    • *Without the use of references*…
    • *At the conclusion of this module*…
Components of Objectives

• D = Degree
  – Defines criterion of acceptable performance
  – Not always stated (ex: 70% passing score)
  – Examples:
    • time limits, accuracy, quality

Recap

• The 4 components of objectives are:
  A = Audience
  B = Behavior
  C = Condition
  D = Degree
Recap

• Effective learning objectives should be:
  – Consistent with curricular goals
  – Specific & clearly stated
  – Clearly measurable
  – Realistic
  – Important & relevant
  – Appropriate for the level of the learner