What influences your teaching in class?
Learning Objectives

- Stated as learning outcomes in terms of students
- Usually includes only one verb, which indicates the level of complexity required
  - E.g. student will describe the life cycle of a butterfly
  - E.g., student will skip count by 2, from 1-10
- Focuses on product of learning (as opposed to the process of learning (e.g., “describes” or “applies” instead of “memorizes” or “learns”))
- It can vary in the degree of specificity
  - E.g., write a descriptive essay vs. use appropriate parts of speech in an essay
Why Learning Objectives?

- Provide direction for the instructional process (e.g., one can teach differently for two different outcomes – (a) explain how a microscope works; (b) use a microscope appropriately)
- Convey instructional intent to others
- Provide a basis for assessing student learning
We use learning objectives in this class

In the old days, they used to be very specific – used for independent and computer-based learning

Now, we do not make them this specific

- The focus is not on “doing” as much as it is on “cognitive” outcomes
- So, we use complex thinking as student outcomes like,
  - Apply, construct, problem solve, etc.
We use learning objectives in this class (contd.)

We now know that children learn best when they are actively involved in their own learning

- So, our learning outcomes are based on the view that learning is:
  - Comprehensive (over extended periods of time and over large bodies of knowledge)
  - Authentic (real-life)
  - Complex (inter-linked, higher level thinking)
Contrasting between a specific (behavioral) and general (cognitive) learning objective

Which is simpler?

- Student will add two single digits (total up to 10)
- Student will develop his/her own strategy to add two digits (total up to 10)

Teachers tend to emphasize the first rather than the second. We need to cultivate the type of thinking that goes into the second.
Types of Learning Outcomes

- Knowledge (facts, concepts, principles, procedures)
- Understanding (concepts, principles, methods, data, problem situations)
- Application (facts, concepts, methods, problem solving)
- Thinking skills (critical, scientific)
- General skills (lab, performance, communication, social)
- Attitudes (social, scientific)
- Interests (personal, educational, vocational)
- Appreciations (literature, art, music, social & scientific achievements)
- Adjustments (social, emotional)
Taxonomy of educational objectives

- Cognitive (thinking, memory, problem solving, application, analysis)
- Affective (e.g., interests, attitudes, social skills)
- Psychomotor (e.g., handwriting, typing, running and kicking ball, fitness)

Let’s look at cognitive domain--
Bloom’s Taxonomy of Cognitive Outcomes

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation
Criteria for evaluating learning

- Completeness (includes all important outcomes)
- Appropriateness (harmony with school and district goals)
- Soundness (harmony with sound principles of learning – age level, experiential background, needs and interests, generally applicable)
- Feasibility (realistic)
What are some outcomes you don’t see in Common Core?

One example is social skills.

Another is self-knowledge.

What outcomes do you think you might end up teaching, without intending to?

Learning can be directed by a student, when he/she expresses interest in an area—spontaneous learning!
How to write learning objectives

Decide if you want to focus on general or specific

- General – instructional objectives (e.g., interprets graphs) – does not suggest any specific teaching strategy
- Specific – learning objectives/outcomes (e.g., explains trends in tables) – implies a specific teaching and learning focus.
- Even more specific objectives are best for test development
How to write learning objectives (contd.)

For each instructional objective, try to have 2 or 3 learning objectives

- For example
  - Writes essays
    - Organizes thoughts and ideas in written form
    - Uses correct principles of grammar in writing
    - Uses appropriate capitalization
    - Writes for different audiences
    - Edits one’s own written work
How to write learning objectives (contd.)

Keep it relatively content-free

- For example, you do not need to state specific content (bad example – distinguishes between noun and verb; good example – distinguishes between parts of speech)

Focus on the verb to indicate level of thinking required (e.g., explains the process; vs. identifies the process)
How to write learning objectives (contd.)

Use only one verb per objective

For a given year, you will typically have about 10-12 instructional objectives. Under each instructional objective have an adequate sample (5-6?) of learning outcomes.

Use a third level of specificity - e.g., for testing, if you need to.
Editing your own learning objectives

For each learning objective you have developed,

- Identify if it is an instructional or learning outcome
- Did you use one verb?
- Were you overly specific?
- Did you state it in student terms?
- Does it give you an idea about teaching and testing focus?