

Aligning Learning Objectives to Activities and Assessments

CENTER FOR
TEACHING AND LEARNING
EXCELLENCE



Are These Learning Objectives?

- To give every citizen the information he needs for the transaction of his own business;
- To enable him to calculate for himself, and to express and preserve his ideas, his contracts, and accounts in writing;
- To improve, by reading, his morals and faculties;
- To understand his duties to his neighbors and country, and to discharge with competence the functions confided to him by either;
- To know his rights;
- To exercise with order and justice those he retains, to choose with discretion the fiduciary of those he delegates;
- And to notice their conduct with diligence, with candor, and judgment;
- And in general, to observe with intelligence and faithfulness all the social relations under which he shall be placed.

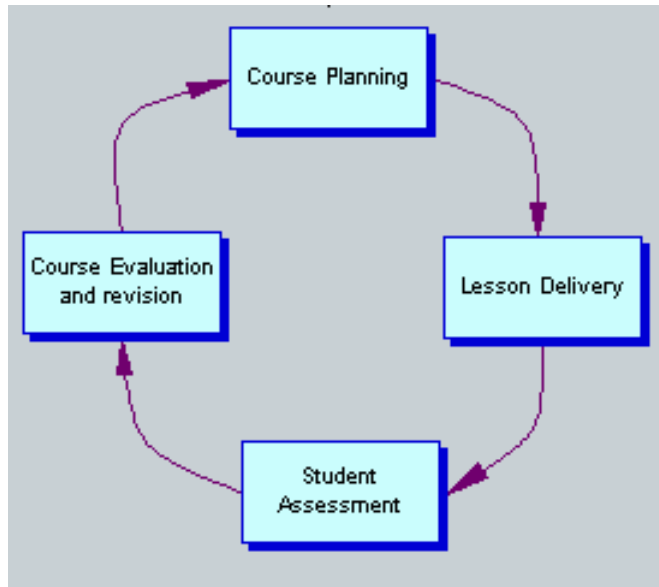
“The Purpose of Education”

- To give every citizen the information he needs for the transaction of his own business;
- To enable him to calculate for himself, and to express and preserve his ideas, his contracts, and accounts in writing;
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Thomas Jefferson, Report for
University of Virginia, 1818



Objectives and Course Planning



1. What will you teach?
2. Teach it
3. Did they learn it?
4. Why or why not?
5. (repeat as needed)

(analogous to PDCA cycle of Plan-Do-Check-Act for continuous quality improvement in Total Quality Management)

Parts of an Objective

$(\Delta / T) Q$

Parts of an Objective

$$\left(\frac{\Delta}{T} \right) Q$$

Change over Time at a level of Quality

Parts of an Objective



How do you want the student to be different after the course?

Parts of an Objective

- Givens + Action + Criterion
- “From a set of 50 invoices (**givens**), the student will file them alphabetically by last name of client (**action**), in less than 10 minutes with 96 percent accuracy (**criterion**).”
- Establishes the starting conditions, the operation to be performed, and the standard for success
- State as outcomes, not outputs of processes.

Sequencing Objectives

- Terminal Objective: an end goal, may be larger in scope or higher level activity
- Enabling Objective: an intermediate goal, may be a portion of a terminal objective or a fundamental activity
- “Objective” is to “Course” as “Course” is to _____?

Sequencing Objectives

- Terminal Objective: an end goal, may be larger in scope or higher level activity
- Enabling Objective: an intermediate goal, may be a portion of a terminal objective or a fundamental activity
- “Objective” is to “Course” as “Course” is to “Curriculum”

Class Participation

- State a terminal objective for this situation.



- State an enabling objective for this situation.

Bloom's Taxonomy (1956)

- Knowledge – Primarily concerned with students' ability to memorize or recall certain specific facts.
- Comprehension – Usually involves the ability to interpret, paraphrase, and extrapolate, thus demonstrating students' basic understanding of ideas that they did not originate.
- Application – Includes activities in which the student applies concepts and principles to new and/or practical situations.
- Analysis – Concerned with breaking down a piece of information into its constituent parts, differentiating and denoting.
- Synthesis – Involves the blending of elements and parts to form a whole. Students should be able to create a structural pattern that was not previously present.
- Evaluation – At this highest level, students might judge the value of a work, the logical consistency of written data, or the adequacy of someone else's conclusions.

Bloom, B., Englehart, M. Furst, E., Hill, W., & Krathwohl, D. (1956).
Taxonomy of educational objectives: The classification of educational goals.
Handbook I: Cognitive domain. New York: Longmans, Green.



Action Verbs for Objectives

KNOWLEDGE: Define, list, name, describe, tell, identify, show, label, quote (tell the “who,” “when,” “where”)

COMPREHENSION: Explain, describe, summarize, interpret, contrast, predict, distinguish, estimate, give examples

APPLICATION: Relate, determine, apply, demonstrate, calculate, examine, modify, discover, show

ANALYSIS: Identify, analyze, explain, arrange, discriminate

SYNTHESIS: Integrate, modify, rearrange, plan, create, design, compose

EVALUATION: Decide, rank, convince, judge, summarize, evaluate

Class Participation

- Write two learning objectives for your course (Be sure to identify your course by number and title):
 - The first will be at the level of KNOWLEDGE
 - The second will be at the level of EVALUATION
- Link the content so that the first objective (knowledge) is an enabling objective and the second (evaluation) is a terminal objective.

From Objectives to Activities

- Find alternatives to lecture
- Validity = Does the activity actually have the students do what the objective describes?
- Reliability = Are the instructions sufficiently clear that different students will still follow them the same way?

Class Participation

- Draft a learning activity that is not a lecture that you could use to convey the content of one of the objectives you wrote previously.

Four Levels of Assessment

- Reactions: emotional responses to the activity
- Learning: actual recall, as on tests
- Transfer: using the new information on-the-job
- Results: impact of the learning on an activity

Kirkpatrick, D.L. (1994). *Evaluating Training Programs: The Four Levels*. San Francisco: Berrett-Koehler.

From Activities to Assessments

- Does every activity need to be graded?
- Does every activity have to be done individually?
- Are the assessments in a similar format to the activities?
- Are there rubrics for grading the assessments that match the criteria of the objectives?

Class Participation

- Design an assessment item (i.e. a test question, but not necessarily) to assess student learning from the activity you just wrote.
- Design it so it measures the same performance from the original objective.