

## Approaches for Developing Outcomes

*Source: Ball State University, Assessment Workbook (1999)*

- 1. Have open discussions with department faculty on one of the following topics or similar topics**
  - Describe the ideal student in your program at various phases throughout your program. Be concrete and focus on those strengths, skills, and values that you feel are the result of, or at least supported and nurtured by, the program experience. Then ask:
    - What does this student know?
    - What can this student do?
    - What does this student care about?
    - List and briefly describe the program experiences that contribute most to the development of the ideal student.
  - List the achievements you implicitly expect of graduates in each major field.
  - Describe your alumni in terms of such achievements as career accomplishments, lifestyles, citizenship activities, and aesthetic and intellectual involvement.
- 2. Collect and review instructional materials**
  - Try sorting materials by the type of learning each one is designed to promote: recognition/recall, comprehension/simple application, critical thinking/problem-solving. Use any of the following:
    - Syllabi and course outlines
    - Course assignments and tests
    - Textbooks (especially the tables of contents, introductions, and summaries)
- 3. Collect and review documents that describe your department and its programs**
  - Brochures and catalogue descriptions
  - Accreditation reports
  - Curriculum committee reports
  - Mission statements
- 4. Review and react to outcomes from another unit that is similar but external**
  - Try grouping the statements into broad categories of student outcomes (e.g., knowledge, attitudes, behavior).
- 5. Use the 25 percent problem to refine or reduce a set of outcomes statements**
  - Imagine that you want to reduce program or course material by 25 percent. What goals would you keep and which would you discard?
- 6. Use a Delphi technique or modification**
  - Choose an impartial facilitator to mediate a panel discussion about possible program goals. In a brainstorming session, ask each panel member to build a list of criteria that he or she thinks is important for program goals. For each criterion, have each member anonymously rank it as: 1-very important; 2-somewhat important; or 3-not important. Place the criteria in rank order and show the (anonymous) results to the panel. Discuss possible reasons for items with high standard deviations. Repeat the process among the panelists until the panel can reach consensus. The objective is to reach consensus before writing goals and objectives.

## Wording Outcomes

*Source: California State University, Bakersfield, PACT Outcomes Assessment Handbook (1999)*

### At what cognitive level should students be able to demonstrate their learning:

<b>Cognitive Level</b>	<b>Cognitive Behaviors</b>
1. Knowledge	to know specific facts, terms, concepts, principles, and theories
2. Comprehension	to understand, interpret, compare and contrast, explain
3. Application	to apply knowledge to new situations, to solve problems
4. Analysis	to identify the organizational structure of something; to identify parts, relationships, and organizing principles.
5. Synthesis	to create something, to integrate ideas into a solution, to propose an action plan, to formulate a new classification scheme
6. Evaluation	to judge the quality of something based on its adequacy, value, logic, or use

### Examples of active verbs to describe student learning outcomes:

<b>Knowledge</b>	<b>Comprehension</b>	<b>Application</b>	<b>Analysis</b>	<b>Synthesis</b>	<b>Evaluation</b>
define	classify	apply	analyze	arrange	appraise
identify	describe	compute	appraise	assemble	assess
indicate	discuss	construct	calculate	collect	choose
know	explain	demonstrate	categorize	compose	compare
label	express	dramatize	compare	construct	contrast
list	identify	employ	contrast	create	decide
memorize	locate	give examples	criticize	design	estimate
name	paraphrase	illustrate	debate	formulate	evaluate
recall	recognize	interpret	determine	manage	grade
record	report	investigate	diagram	organize	judge
relate	restate	operate	differentiate	perform	measure
repeat	review	organize	distinguish	plan	rate
select	suggest	practice	examine	prepare	revise
underline	summarize	predict	experiment	produce	score
	tell	schedule	inspect	propose	select
	translate	shop	inventory	set-up	value
		sketch	question		
		translate	relate		
		use	solve		

## Examples Outcomes

### Students can...

- identify the role that cultural diversity plays in defining what it means to be a social being.
- evaluate the validity and limitations of theories and scientific claims in experimental results.
- analyze the meaning of major texts from both Western and non-western culture.
- distinguish between correct and incorrect applications of scientific principles when given examples of each on an objective exam.
- use the conventions of Standard Written English in all writing assignments.
- clearly demonstrate an understanding of curriculum theory and standards by preparing a two-page curriculum plan and providing justification from the literature for the chosen curriculum method.
- consider and use multiple choices, beliefs, or diverse ethical frameworks when making decisions to respond to ethical dilemmas or problems.
- identify and analyze real-world ethical problems or dilemmas, and identify those affected by the dilemma.
- correctly use various measurements, data-gathering techniques, sampling, probability, and descriptive and inferential statistics to support or reject claims of size, relationship, or relative accuracy.
- create generalizations from observed patterns and develop specific examples from general statements.
- apply new and prior information to the planning and creation of a particular product or performance.
- communicate orally and in writing to business audiences, including colleagues, supervisors, and clients, in appropriate ways about business issues.
- construct a marketing plan and prepare written and oral communications appropriate to a client firm.
- conduct original biological research and report results orally and in writing to scientific audiences
- write an essay in which they select and defend a position on a debatable issues, support their position with evidence from their readings, and address counterarguments.
- review the literature and propose a research question and a research project that might move the field forward.
- recognize common biotic and abiotic stresses, their potential effects on plants at various stages or plant development, and options for reduction of stresses with minimal disturbance to the environment and human beings.
- write a five-page essay reflecting on the work of an author of their choice that presents a clear and well-organized argument and uses examples from the author's work to support the argument.