

Writing Student Learning Objectives

Student learning objectives serve as a guide to the curriculum for both students and faculty. Learning objectives relate to the cognitive level of the course content as well as the teaching modalities and assessment activities used in a module.

Student objectives stem from an early evaluation of the appropriate content for the module. In developing the content, the educator must consider the knowledge, skills, attitudes and behaviors required for the course. Most professional societies offer guidelines for medical school objectives in their specific discipline. It's also useful to review topics from other medical schools (while remembering that in order to become the "premier 21st Century medical school" you may have to add topics to the list).

Next the content list must be translated into student learning objectives. The following domains may be addressed in a set of objectives for a module or course:

- Cognitive level – Decide at what level each topic is to be addressed (see Bloom's taxonomy)
Example – The student will describe the integration of various tissues into organs of the human body, and relate these structures to the unique physiological functions of the organs.
- Achievement – Write objectives in performance terms
Example – The student will demonstrate an age-appropriate physical examination
- Affective – Decide what values are to be addressed
Example – The student will demonstrate a commitment to improving H&P skills by seeking feedback on write-ups.
- Professionalism – Decide what behaviors are to be addressed
Example – The student will act in an ethically responsible manner, displaying integrity, honesty, and appropriate boundaries with patients, patients' representatives, and fellow health care professionals.
- Psychomotor – Decide what movements are to be addressed
Example – The student will prepare the patient for surgery.

Most courses in medical education focus on the cognitive domain, thus it is important to examine the levels of cognitive understanding. Bloom identified six categories: knowledge, comprehension, application, analysis, synthesis and evaluation. Most courses will design learning objectives to target a range of levels of student understanding. Use the most relevant verb (from the list below) in developing objectives at various cognitive levels.

Emphasis	Relevant Verbs
Knowledge	Recall, identify, recognize, acquire, distinguish, state, define, name, list, label, reproduce, order
Comprehension	Translate, extrapolate, convert, interpret, abstract, transform, select, indicate, illustrate, represent, formulate, explain, classify, comprehend
Application	Apply, sequence, carry out, solve, prepare, operate, generalize, plan, repair, explain, predict, demonstrate, instruct, compute, use, perform, implement, employ, solve
Analysis	Analyze, estimate, compare, observe, detect, classify, discover, discriminate, explore, distinguish, catalog, investigate, break down, order, determine, differentiate, dissect, contrast, examine, interpret

Synthesis	Write, plan, integrate, formulate, propose, specify, produce, organize, theorize, design, build, systematize, combine, summarize, restate, argue, discuss, derive, relate, generalize, conclude, produce
Evaluation	Evaluate, verify, assess, test, judge, rank, measure, appraise, select, check, judge, justify, evaluate, determine, support, defend, criticize, weigh, assess

To develop a strategy for writing student objectives consider the following:

- Always start with the program objectives (M.D. program objectives) provided by UCFCOM. If the module/course objectives are not in line with the college objectives the overall goals of the college will not be met.
- Write objectives in general but measurable terms. Objectives are tied to evaluation so this is an important strategy.
- Consider the learning context. Do you want students to interact with the material? Is the classroom conducive to discussions? Are there time limitations?
- After coming up with a general list of objectives, re-evaluate each objective and make them more specific. Check for measurable verbs and meaningful outcomes.
- Always ask for feedback. This can be from students, faculty or other educational resources at UCF.

Would you like to apply the concepts presented above? Visit the objective writing self-study module on the faculty development site.

Additional Objective-Writing Resources:

Association of American Medical Colleges (1998). *Learning Objectives for Medical Student Education - Guidelines for Medical Schools: Report I of the Medical School Objectives Project*. Washington, D.C. https://services.aamc.org/publications/showfile.cfm?file=version87.pdf&prd_id=198&prv_id=239&pdf_id=87.

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Baiocco, S.A. & DeWaters, J.N. (1998). *Successful College Teaching: Problem-Solving Strategies of Distinguished Professors*. Needham Heights, MA: Allyn and Bacon.

Bloom, B.S. (Ed.) (1956) *Taxonomy of Educational Objectives: The classification of educational goals: Handbook I, Cognitive Domain*. New York ; Toronto: Longmans, Green.

Bruning, R. H., Schraw, G. J., & Ronning, R. R. (1995). *Cognitive Psychology and Instruction (2nd Edition)*. Englewood Cliffs, NJ: Prentice Hall, Inc.

Gallagher, R.E., Smith, D.U. (1989). Formulation of Teaching/Learning Objectives Useful for the Development and Assessment of Lessons, Courses, and Programs. *Journal of Cancer Education*, 4 (4), 231-234.