
Presentation #9: Part I. Student Learning Outcomes:

What Do They Mean in the Classroom?

Janet Fulks, January 20, 2004

Ever since I started teaching Microbiology I have been challenged by my professional organization, the American Society for Microbiology Educators, to use active learning strategies and lesson objectives. I am an editor on the society's website for curriculum resources <http://www.microbelibrary.org> and have the privilege of teaching a 5 unit Microbiology Course at Bakersfield College that satisfies the allied health pre-requisite for the nursing program and is articulated as a biology major's course with many transfer campuses. There are required prerequisites for the course (a college level biology and a college level chemistry course) which influence the type of students that register and the strategies I employ.

During the past year I have developed student learning outcomes and an assessment plan for the Bakersfield College Microbiology course B16. In the process I have learned that feedback and dialogue with other faculty enriches my understanding of the process, so I am happy to share what I have learned and invite your comments. I want to add that the unique culture on each campus and in each department dictates that these outcomes uniquely fit the needs and expectations of that course, so I expect there will be a lot of variety and flexibility in the development of learning outcomes and the methods used to assess them.

For my purposes I simply define student learning outcomes as the main things a student can DO when they complete my course. A new revelation for me was that when active learning activities are employed, it is even more essential to articulate what the student is supposed to be able to do as a result of the activity and course. Otherwise the activity might become the end product, unrelated to something the student can DO or the learning outcome. I find it exciting to see how active learning strategies generate many varied and original perspectives when approaching a subject, however, these can be sidetracking at times.

I have found that while student discussion and contribution are never predictable they usually provide: 1) immediate feedback for students that really impacts deep learning, 2) an opportunity to construct their own understanding, 3) an environment where they must take a stand and 4) a long lasting link to other knowledge and disciplines. I found that my lesson objectives and student learning outcomes were essential for keeping the topics and activities on target. These days I work hard to fit each discussion, case study or lab investigation into the skills, knowledge, and ability that should be attained when the class is over, the large overarching student learning outcomes.

This is the first semester that I have included my student learning outcomes in my syllabus. I have clearly explained to my students how, when, and where I will assess their knowledge, skills, and abilities with regards to these specifically stated learning outcomes. This is fundamentally different from the old syllabus that I provided which described what I was going to cover. The old syllabus concentrated on the vast content from the lecture, the text, and the lab

activities and ultimately modeled my expectations for me, rather than my expectations for the students.

The new syllabus details the expectations I have for the students, the learning outcomes. The outcomes direct the student concerning where they can best invest their studying time and what they can do after they have completed the course work versus what I will do to them, or make available to them.

The Microbiology Outcomes are based on the core content areas identified by the American Society of Microbiology Educators modified to meet our local needs for our campus and students. After drafting the learning outcomes I asked other biology, chemistry, and nursing faculty to look at them for input. I also had the local CSUB Biology department chair comment.

The learning outcomes can be found at this link <http://www2.bc.cc.ca.us/tl/MicoSLOsi.htm>. You will notice that the outcomes are labeled DRAFT. I find the student and faculty input so valuable I foresee frequent updating or finessing to make the outcomes more explicit to my students and relevant to program needs.

Our campus is in the process of identifying learning outcomes for our general education program; until that process is finished I have also developed my own general education outcomes which I incorporate and assess in my class. I selected the general education expectations by looking at the general education core and reviewing general education learning outcomes on other campus websites. Adding these stimulated flexibility in my assessment techniques. For instance, I now have case study presentations done orally and several projects are completed using computer software and incorporate information competency skills. In the end these outcomes have provided many benefits which I will explain in the next listserv posting.

Please visit my website (always a work in progress) at <http://www2.bc.cc.ca.us/bio16>.