

# Supplemental Material

*CBE—Life Sciences Education*

Beck and Blumer

## Revised Instructional Practices Survey -- Post-Test

The following 24 items are those that had sufficient factor loadings and were grouped in the five constructs used in the Instructional Practices analysis.

### Instructional Strategies

**How often were the following true about the laboratory portion of your class? We are only interested in the laboratory part of the class, rather than the lecture portion.**

Please choose the appropriate response for each item: Never, Seldom, Often or All the Time

1. You participated in whole-class discussions where your instructor talked less than the students. (Science Process Skills)
2. You are asked to apply prior knowledge to new tasks. (Science Process Skills)
3. You work on activities that have a range of possible outcomes and solutions rather than a single correct response. (Science Process Skills)
4. You make presentations to explain what you have learned. (Science Process Skills)

**To what extent was the following true about the laboratory portion of your class? Again, we are only interested in the laboratory part of the class, rather than the lecture portion.**

### I worked on projects...

Please choose the appropriate response for each item: Not at All, Very Little, Somewhat or A Great Deal

5. Requiring a significant investment of time and intellectual resources. (Scientific Synthesis)
6. Requiring me to apply knowledge from one or more disciplines or content areas. (Scientific Synthesis)
7. Using research methods from one or more disciplines. (Science Process Skills)
8. That allow me to figure out what the information means. (Scientific Synthesis)
9. In which the correct results are already known. (Instructor-directed Teaching)
10. Grounded in real life and work. (Scientific Synthesis)
11. Requiring me to develop my own experimental procedures. (Science Process Skills)
12. Requiring me to learn and use skills that are expected of practicing scientists (e.g. technology, teamwork, problem solving) (Scientific Synthesis)
13. Requiring me to arrive at a specific experimental design that my instructor has in mind. (Instructor-directed Teaching)

14. In which my instructor provides me with experimental design protocols. (Instructor-directed Teaching)
15. Requiring me to use various methods, media and sources to conduct an investigation. (Scientific Synthesis)
16. Requiring me to justify my results with evidence from my experiments. (Scientific Synthesis)

### **Assessment Strategies**

**How often were the following true about your laboratory portion of your class? Again, we are only interested in the laboratory part of the course, not the lecture portion.**

Please choose the appropriate response for each item: Never, Seldom, Often, or All the Time

17. I used project criteria (rubrics) that I helped establish to gauge what I am learning. (Science Process Skills)
18. My instructor graded students through methods such as presentations, portfolios, and exhibitions. (Science Process Skills)
19. I knew exactly how my work would be assessed. (Feedback and Assessment)
20. My instructor provided me with examples of exemplary work and scoring guidelines. (Feedback and Assessment)
21. My instructor provided me with specific, descriptive feedback focused on next steps. (Feedback and Assessment)
22. I can define what it looks like to master each topic. (Metacognition)
23. I can describe what I was supposed to learn. (Metacognition)
24. I can describe what comes next in my learning. (Metacognition)