

PHY1600S - Effective Communication for Scientists

Assignment #2

Tuesday, 16 January 2018

DUE: 9:00 PM, Tuesday, 23 January 2018

This assignment has two parts.

- A. Write a critique (a critical assessment) of the article *Spare me the lecture* by Kendall Powell in Nature magazine, and briefly compare the assertions made there to your own experience of lectures. Remember, keep your critique to 2 pages maximum! (See next page for some suggestions.)
- B. With one (or more) of your classmates, attend a lecture in a 1st or 2nd year Physics course in the coming week, and assess the instructor's classroom behaviour. You may choose to use the *Classroom Teacher Behaviours* (Page 8 of the Course Overview) or the form at the end of Murray's article; if you notice any behaviours that are not listed, add them. Enter your assessments and comments on the sheet and come prepared to discuss your findings in class.

(Note: I will let my colleagues in Physics know you may visit. However, it is only polite to contact your target ahead of time to get permission to sit in on the lecture.)

I duplicate below assessments of two different instructors as *possible* models. The students who prepared these critiques used Murray's categories to organize their comments. You may prefer to use your own method.

INSTRUCTOR 1

- Affect:* (+): maintained poise, confident, calm
- Organization:* (+): handouts clear and useful, slides naturally used;
(-): No clear statement of lecture purpose, slide hard to see, ideas poorly organized, no clear ending
- Explanation:* (+): good use of examples, questions answered effectively, offer definite suggestions for application;
(-): lack of answer to ESL issues and grading, majority of content self-evident, didn't go through handout, gave out handout too late in the class
- Speech:* (+): speech clear, expressive;
(-): spoke softly
- Mannerisms:* (+): good eye contact and hand gestures;
(-): little movement (stood still), only eye contact with few students
- Interactions:* (+): attentive to non-verbal cues of class, engages class through application to personal experience;
(-): initially difficult to obtain answers from class, first question vague, pause after question too short

INSTRUCTOR 2.

- Affect:* (+): *shows enthusiasm and was dynamic*
- Organization:* (+): *good use of handouts; good use of slides; well-organized;*
(-): *slides generally good but text size could be increased*
- Explanation:* (+): *good concrete examples given; good examples/ handouts; explained handouts as to their usefulness; clear objectives for the talk presented; good use of multiple sources of information*
- Speech:* (+): *fairly loud voice- was attention getting; good voice projection;*
(-): *focused too much on speaking loudly and clearly and thus seemed to overdo a good approach; spoke a little nervously; sometimes ran sentences together as though out of breath; when reading from text-spoke too quickly*
- Mannerisms:* (+) *facial expressions and body language were attention-getting; moved while speaking;*
(-) *too expressive in an effort to entertain-distracted from presentation*
- Interaction:* (+) *engaging; good use of exercises to work through issues with students; asks class to participate and waits sufficient time to discuss results*
- Interest:* (+) *used humor/ anecdotes; used true-life examples*

Suggestions for the Critique of the Article.

Most of you will have your own ideas for composing your critique of the article. In case you are looking for guidance, here are some suggestions from Tony Key (who developed this course) that you may find useful.

Read the article through before you begin. Then read it again, noting areas that call for comment.

Your critique could have the following form:

1st paragraph. Briefly summarize the article. In particular concentrate on general conclusions; obviously you can mention only one or two of those that you believe are the most important.

2nd, 3rd and 4th paragraphs. This is the guts of your critique. Discuss what you think about the paper. Is it well organized? Is it well argued? Are its conclusions backed by observation? Do its recommendations appear to address the issues raised? More generally, what did you like about the paper, what could have been improved, what questions remain unanswered (if any)?

Penultimate paragraph. How well do the assertions about physics teaching agree with your own experience of physics classes? Quote specific cases, for and against.

Last paragraph. Summarize your essay. Repeat, more briefly and concisely your main findings, and arguments. Finish with a strong sentence.

The overall length limit of two pages (~600 words) will force you to concentrate on the essentials!