

COMPILATION: student journals

Date: Fri, 4 May 2001

From: Patrick Daisley <patrick@DAISLEY.NET>

I experimented somewhat this year with having my students in second year physics keep journals. I was concerned that many of them weren't processing ideas individually and were passive during whiteboard sessions (another topic needing attention). I bought them bound composition books and asked them to write in them each day.

I've noticed that the students who keep their journals updated seem to have a better understanding and scored higher on exams than those who didn't. I can't say if that is because they already understood it, and so it was easy to journal, or if the journal writing helped them to develop a better understanding. I am considering extending this to all of my classes next year.

I wanted to bring the subject up on this listserve and ask for feedback from any of you who have used journal writing. Did it help, what elements did you require, did you grade them?...

I am considering a format similar to this: (students should include the following)

- I. operational definitions of new terms (students write them, not me).
- II. Lab notes (I don't want to do too much duplication of the lab reports here)
 - A. pre lab discussions
 - B. lab summary
 1. what we did
 2. what we found
- III. Class discussions
 - A. post lab
 - B. derivations of new equations, etc.
- IV. problem solving
 - A. solutions to in class whiteboard problems.
 - B. notes on worksheets, other whiteboarding.
- V. Unit summary
 - A. description of the models developed
 1. verbal
 2. graphical/diagrammatic
 3. mathematical
 - B. real world examples of the model

What are your thoughts?

Date: Sat, 5 May 2001
 From: stan hutto <fizwiz2@YAHOO.COM>

That looks like a very nice list! I tried journals back in '95 - I had just returned from the Modern Physics Institute at FermiLab and the "journal keeping" was encouraged, but I wasn't very focused on exactly what should be included and I wasn't very good at keeping up with the grading.

Rich McNamara had the participants keep a journal alongside with our lab notes in our Modeling Workshop - the journal was more a running commentary of our thoughts about the process and what we were observing - i.e. a "true journal" that gave them better insight into what we participants were learning.

Last year I used an idea that had been posted here about having the students write a brief summary report each grading period. That was my first year at a new school and it gave me insight as to how the students perceived and received the modeling instruction. It was far superior to having an end-of-year evaluation, which is great for the next year but doesn't do the current students much good!

Your ideas of what to have the students include look so good that I think I will seriously consider incorporating it into next year. Personally at this moment I believe I would grade it more on a checklist rubric and count the score as a quiz grade. In my grading system all quizzes are averaged and count as 20% of the overall grade period score.

 Date: Sun, 13 May 2001
 From: Jane Nelson <nelsonjb@IX.NETCOM.COM>

I have been away from my personal email for a while and am just catching up now. In response to the note from Patrick about journal writing. I have been using journals for two years now.

During the first year, each Monday I put up a journal question or topic for the week and collected them each Friday. I gave them about the same weight as 20% of one lab write-up. I would ask for a short story about an electrifying event in their life, or how they can tell the difference between constant velocity from constant acceleration. Sometimes just to get to know the students, I would ask how things were going in general. I was surprised at how much I learned about my students that way. They spilled their guts, so to speak, sometimes. I graded grammar and physics. Near the end of the course I had them bundle all the journals together and write a journal in which they evaluated the quality of their writing and the value of the journals in general.

This year I had the students produce graphic organizers, or Venn diagrams, or compare and contrast lists rather than paragraph writing. And to save my life ... the others took so long to grade each weekend, I only assigned them every other week. When I got the final evaluation of the use of the journals from the students just last week, they admitted that they hated doing them, had a hard time organizing their thoughts, had to look back to see how things fit together, but felt that when they did a good job, they usually did better on the test.

So there you have it. If class sizes were smaller, and we had more time with the students in classes that lasted longer, we could do a better job teaching. The journals are a great idea, but take up much of the teacher's time if they are to be useful to the student. Otherwise the students don't know that some of the ideas that they write are confused and need rethinking. It does give the teacher insight into what to do next week to revisit some ideas if everyone is showing signs of taking a wrong turn.