## Strategies for Responding to Student Laboratory Writing Assignments

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## **Extended Abstract**

It is well documented that writing is an effective means of both engaging students in active learning as well as assessing student knowledge. However, instructors often approach writing assignments with intense dread because of the extensive time anticipated to grade them. This mentality only reinforces the lack of writing practiced inside and outside the classroom. In fact, an instructor can assign a variety of writing assignments that assess different levels of learning and that do not require extensive time to grade. Biology laboratories are no exception to this notion; writing is an excellent component of active learning laboratory exercises. This includes not only learning to write (i.e. in the discipline of biology) but also writing to learn (i.e. to express how to do and think about biology). Recently, the Biology Division at the University of Georgia (UGA) adopted the guidelines of the Writing Intensive Program (WIP) in two introductory biology laboratory courses (one non-majors course and one majors course). Created by the Franklin College of Arts of Sciences (UGA), WIP guidelines are designed to be adopted by any discipline and aim to help improve 1) students' abilities to compose text, evaluate peers' writing and critically think about writing styles: 2) teachers' abilities to grade and give feedback to student writing; and 3) teachers' own writing. Our goals for this mini-workshop were to give ABLE participants strategies to approach grading and responding to student writing with less dread and in an efficient, yet more substantial way. By learning and practicing WIP responding strategies, we expect that lab instructors can incorporate improved and/or additional writing opportunities into their biology lab classes. We planned for our mini-workshop to be comprised of 1) a 15-minute overview of the WIP program and WIP guidelines as they pertain to responding to student work; and 2) 30 minutes for participants to a) compare TA responses to student work and b) practice responding to student work.

The overview we provided first described the development of the WIP program and was followed by a holistic view of the principles that WIP advocates. A specific focus was given to those principles which pertain to improving teachers' abilities to provide students with focused, constructive feedback in a time-efficient manner. We described how instructors can respond to a continuum of types writing assignments and emphasized the importance of utilizing specific responding strategies depending upon the particular type of writing assignment assigned. For instance, "low stakes" (or "writing-to-learn") assignments, which tend to be informal assignments worth few or no points, can be used by instructors as quick checks for student comprehension (i.e. formative assessment). Responding to these assignments can be as simple as a check/check +/check – system, or one written comment. "High stakes" (or "learning-to-write") assignments, such as lab papers or research proposals, emphasize writing as a process to convey students' understanding of a lab activity and its outcome (i.e. summative assessment). These assignments tend to have multiple drafts, and depending on the draft stage, require certain types of feedback. Comments on early drafts should focus on approximately three global issues related to the student work, such as presence/absence of a thesis statement or logical order to sections, while later drafts necessitate comments that are more finely focused, such as editing or sentence-level issues.

We described and provided examples of rubrics which can be used to provide feedback that is appropriate to these two dramatically different levels of writing. We also discussed how changing the ways in which we provide comments to student writing can result in more focused and useful feedback for students. Further, by utilizing these strategies, lab instructors can respond to student work in a time-efficient manner. Participants were given student work to read (high stakes assignment, second draft) with TA comments on them in order to compare how well the TAs were implementing WIP responding strategies. A discussion was planned to summarize comments and thoughts about the TAs' comments, but due to the number of questions asked throughout the presentation, we ran out of time and participants were not able to engage in practicing responding to student work. A take-home packet that included examples of rubrics for different types of writing assignments, examples of student work, and examples of instructor responses to student writing was provided. Evaluations indicated that participants were extremely interested in the topic, frustrated by the standing-room only, and wished for a major to be offered on the same topic. Specific comments were given as to parts of the presentation to keep for the major, parts to expand upon, parts to deemphasize, and parts to add.